

**PERFORMANCE**



**2019**

**HIGH PERFORMANCE VALVETRAIN**



since 1939

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DISTRIBUTING**

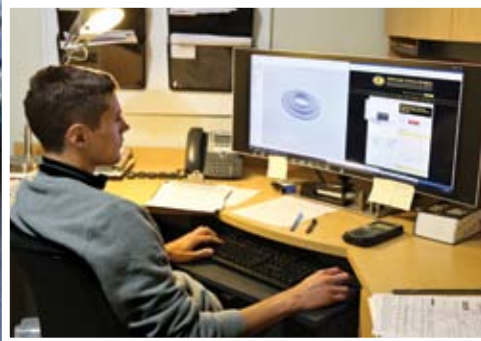
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# KPMI® ENGINEERING & MANUFACTURING VALVETRAIN FOR 80-YEARS & 2-GENERATIONS



**KPMI®**  
Designs and manufactures longevity into valvetrain

**Our Primary**  
Engineering product that

## Company

Kibblewhite Precision Machining, Inc. (KPMI®) is a 80 year old valvetrain manufacturing company supplying the Motorsport Industry and select OEM's. We stock and distribute over 3,000 items to customers around the world. No other company in the world has our product coverage for the motorsport industry. You will not find any other company with such an extensive product line solely dedicated to the motorsport industry.

KPMI® not only manufactures ready-made parts, we also provide contract manufacturing for OEM and other parties. Our expert services include engineering, prototyping, and limited or full production runs.

## Legacy

Kibblewhite Precision Machining, Inc. was founded by James L. Kibblewhite in 1939. In 1989 the operation was taken over by William F. Kibblewhite, Jim's son. William Kibblewhite took the solid foundation created by his father and dramatically expanded the product line to provide the vast coverage that it offers today.

KPMI® is known by its trademark and registered marks: Black Diamond™, White Diamond®, Tensilite®, KPMI® Kibblewhite®, and Spin True®. Know that when you purchase products under these brands you are purchasing product that has been engineered by a company that's been doing so for 80 years and 2 generations. This wealth of knowledge can be seen in the product detail, fitment, material choices, processes and the uniqueness in which all systems and components are expected to achieve the mechanical work they will be asked to do.

## Employees

Kibblewhite valvetrain and custom engineered components are second to none. KPMI® employs twenty six employees and fosters a work smart culture. The dedication of top notch employees (A-players) in Engineering and Customer Service is the reason why we are the industry leader in valvetrain development. Putting our customers first can be found in every element of product development and you will see that precision level of detail in every single package that is shipped out of our warehouses. This type of commitment is found in the class of employee, equipment, and investment in emerging technologies.

# MADE IN USA



Focus is :  
that exceeds expectations

At KPMI®  
There are no exceptions for quality

## Facility

Kibblewhite encompasses five locations and over 20,000 square feet of Machine Shop, Office, Engineering, and Warehouse space. KPMI® has spent the past five years aggressively updating our operations. Our complete facility has eleven of the latest model CNC lathes (2010 & later), CAD, CAM, and custom machining equipment. Our Engineering Department and machinists are ready and waiting to assist you with your custom requirements and drive our ongoing production of high performance valvetrain systems for 4-stroke engines.

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## Quality Control

It is our sole intent to provide our customers with product that works right the first time and gives maximum value for the dollar in terms of reliability and performance. None of our product achieves final approval without first traveling through a grueling development flow process. Final reviews require three engineering signatures and a signature from production. What this means is that there are three independent reviews following each and every product through all phases of development before the final review and production signature can be granted. I am very proud of what we do and of every single employee that has been hand selected to contribute to the success of KPMI®.

We measure our success by our satisfied customers and for this we are truly grateful. Without our loyal customers and their continued demand for consistent, high quality valvetrain and engineering services, we would not be the company that we are today. Because of this we thank each and every one of our customers and future customers.



Sincerely,  
William Kibblewhite

# KPMI<sup>®</sup> ENGINEERING & MANUFACTURING VALVETRAIN FOR 80-YEARS & 2-GENERATIONS

KPMI<sup>®</sup>

Designs and manufactures longevity into valvetrain

Our Primary focus is:  
Engineering product that exceeds expectation

At KPMI<sup>®</sup>  
There are no exceptions for quality



World  
Top Fuel Champion  
*Larry "Spiderman" McBride*

European  
SuperTwin Champion  
*Ton Pels*

European  
Top Fuel Champion  
*Ian King*

**Valvetrain That The Top Champions of The World Rely On**

# VALVES LIGHTWEIGHT HIGH FLOW

TRADEMARKS: BLACK DIAMOND™ WHITE DIAMOND® & TENSILITE® TITANIUM



- 220 Different Applications
- F.E.A Designed
- Titanium, Inconel, Ev8 SS, Bi-Metallic
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- Black Nitride Coated (Black Diamond™)
- Hard Chrome stems (White Diamond®)
- Hollow stem and custom



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## Top End Service Kit Includes:

- Forged 2618-Alloy Piston
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- Complete Top End Gasket Kit & Seals
- Full Set of KPMI® Std. Valves
- KPMI® High Performance Ti. Spring Kit

## Cylinder Head Service Kit Includes:

- Complete Top End Gasket Kit
- Full Set of KPMI® Std. Valves
- KPMI® High Performance Ti. Spring Kit
- Complete Set of KPMI® Std. Bronze V/Guides
- Set of KPMI® Viton® Valve Stem Seals



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- Treated 100% with Black Oxide



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USED IN ALL OUT RACING APPLICATIONS AND STOCK REPLACEMENT



- 24mm to 57mm
- 80 - Different part numbers
- Small I.D.
- Extra tall
- Call for Custom Seat Sizes



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# TAPPETS H.T. STEEL DLC COATED



Shim in Tappet (SIT)



Shim on Bottom (SOB)

- Billet Aircraft Alloy Steel
- F.E.A Designed
- H.T. Steel Coated
- H.T. Steel Plus DLC Coated



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# VALVE STEM SEALS

**INSIST ON THE RED ONES!**



- *Contact surfaces designed for improved sealing*
- *High temperature Viton® and Teflon® materials*
- *Improved tolerances over OEM*
- *100% Quality Controlled*
- *Available in a variety of sizes*



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**FOR OVER 40-YEARS THESE HAVE BEEN THE SPRINGS OF CHOICE**



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# TOOLS & COMPONENTS

**KPMI CAPABILITIES ARE NOT LIMITED TO VALVETRAIN**

- Seal Installation Tools
- Exhaust Spigots
- Head Nuts
- Tappets
- Push Rods
- Tappet Blocks



- Lash Caps
- Ball Hones
- Reamers
- Shims
- Keepers
- Washers



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**CALIFORNIA COMPLIANT "LEAD FREE" WHEEL WEIGHTS**



- CNC Machined, Chrome Plated Stainless Steel
- .25oz, .5oz, .75oz, 1oz, 1.25oz and 1.5oz
- Symmetrical Halves Lock Onto the Nipple
- Fits .250" to .350" Nipple Diameters



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# ENGINEERING

FULL SERVICE. DESIGN-BUILD. MANUFACTURING CAPABILITIES



For 80 years KPMI® has continued to be at the forefront of innovation, manufacturing, and development of high performance valve train. KPMI® is constantly investing in new technologies in order to maintain our position as one of the foremost authorities in valve train development.



## Software

Utilizing the advances in power, speed, and user interface of modern software, KPMI® employs an arsenal of software programs to plan, design, simulate, fabricate and test all aspects of development and production.

- **3D Modeling/FEA:** Every KPMI® component is designed using the latest in 3D modeling technologies, allowing KPMI® engineers to assemble entire valve train systems virtually to verify fitment and clearances. Once assembled, each system is subject to a rigorous Finite Element Analysis (FEA) that allows KPMI® engineers to validate designs and isolate areas of stress concentration. This FEA analysis ensures that KPMI® parts are both light and strong enough to stand up to the rigorous environment inside a modern racing engine.
- **Valve train Simulation:** Once a KPMI design has been modeled and refined the entire system is simulated using valve train simulation software. This allows KPMI® engineers to “tune” each system to ensure that it will work harmoniously in the engine.
- **Spring Design:** Each of KPMI's valve springs are designed using advanced spring design software that allow KPMI® engineers to balance designs for the perfect blend of performance and longevity.

## Prototyping

KPMI® has integrated the use of 3D rapid prototyping technologies into the many aspects of design process. This technology allows KPMI® engineers to almost instantaneously create working plastic prototypes of designs that can be used to check fitment, clearances and design validity.



## Flow Testing

Before a design is complete, test valves are made with different tulip profiles and each design is flow tested on our FlowData 700 computerized flow bench to optimize airflow characteristics for that application. This often leads to improvements not only in flow characteristics, but in weight reduction as well.

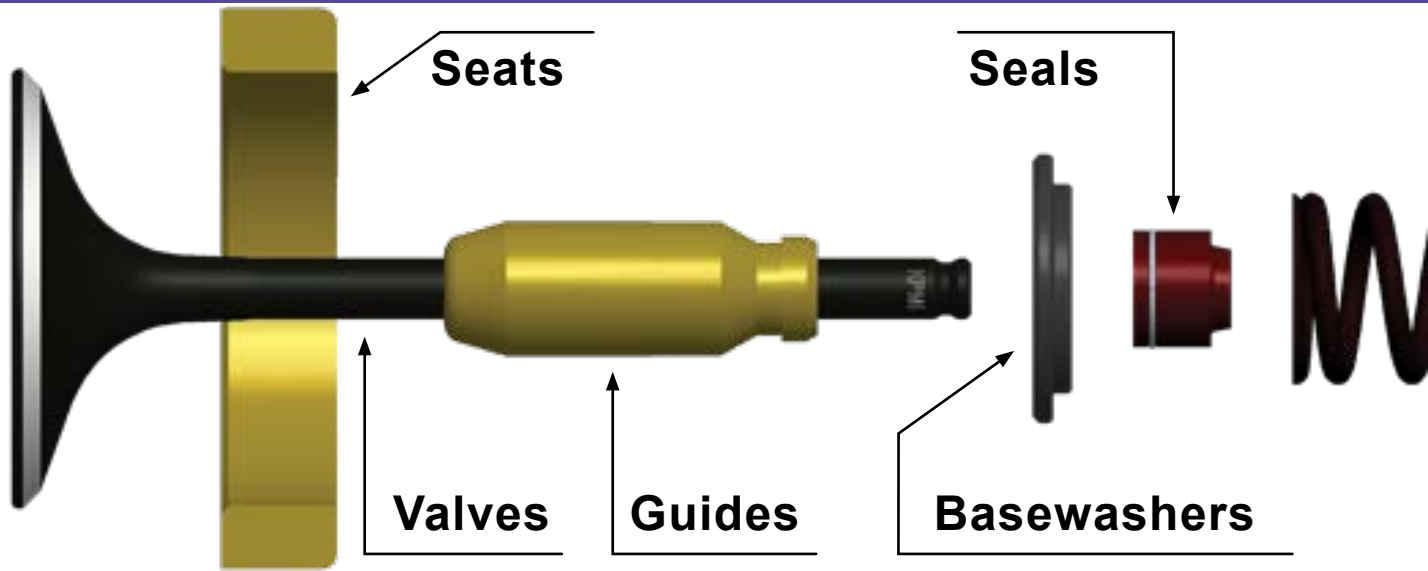
## Testing

When it comes to testing our product, KPMI® does not hold back. We pride ourselves in supplying the consumer with a product that works right the first time, keeping this in mind when it comes time to test, KPMI® looks at every aspect of the design under several different criterion. The springs are brought to failure under fatigue testing and shake table dynamics, whereas the heat-treated materials are destructively tested to insure that they did not become brittle during the manufacturing process; we do not, however, stop there. When we are sure that our product lives up to the name, we go one step further and supply the product to our test riders to see how it performs under real world riding conditions. Only once all of this information has been compiled and we are sure that the product is ready for sale, is it released to our vast network of world-wide dealers and distributors.



# THE KPMI® SYSTEM

THE KPMI SYSTEM



## Valves

**Light and strong with optimum airflow**  
A combination of FEA stress analysis and flow bench testing of prototype valves allows KPMI® engineers to optimally balance valve mass, strength, and airflow characteristics. A unique tulip and dish are designed for each application.

### Stellite tips for rocker applications

Stellite is welded to the valve tips in rocker actuated applications for resistance to the impact and abrasive wear common in rocker arm systems. This welded stellite can never come loose.

### Black Diamond™ Valves

KPMI® Black Diamond™ one piece forged stainless steel valves are impregnated by a special German process to improve wear properties and reduce friction. This process provides resistance to corrosion and wear that is superior to that of hard chromium and electrolysis nickel plating.

### White Diamond® Valves

We fully CNC machine our White Diamond® valves from a one-piece forging of either EV8 Stainless Steel or Inconel-751. These materials have proven heat and corrosion resistance properties and are hard chromed with a 360 degree anode to produce the highest possible grade of hard chrome finish.

### Tensilite® Valves

KPMI® Tensilite® titanium valves are one piece forgings made from 6AL4V or 6-2-4-2 titanium alloy. These are the latest developments in titanium valve alloys and have superior hardness, strength, and thermal characteristics when compared to other titanium valve alloys. Tensilite® valves are covered with a chromium nitride (CRN) PVD coating. This coating adheres exceptionally well to titanium, has a low coefficient of friction, and is impact, abrasion, and corrosion resistant.

## Seats

### Repair /Modify

Seats are tall, offered in several sizes, and have ample material on the ID for shaping, making them universal in application. They allow the builder to repair damaged seat bores, or to increase the seat size for larger racing valves.

### Ease of installation

Seat ODs are ground for a smooth uniform surface finish to insure good contact with the cylinder head for optimal heat transfer and smooth installation. Seats also have a generous radius on the leading edge to prevent galling during installation.

### Powdered metal seats

With the latest in powdered metal technology, KPMI's R&D team was able to create a high density seat with exceptional wear resistance, resistance to micro welding, and good thermal qualities. This material is compatible with all types of fuel blends, resists corrosion and burning, and is machinable with standard tooling.

### Nickel aluminum bronze seats

The product of a two year KPMI® R&D effort, this proprietary high copper, beryllium free bronze alloy is designed specifically for use with titanium valves in high performance applications.

## Guides

### Superior airflow

Guide profiles are designed to have as little effect on the airstream as possible, while maintaining critical cross sectional thickness in high temperature areas. Promoting both high performance and endurance.

### Oversize ODs

Multiple oversizes are available.

## Guides cont.

### Tight tolerances

High concentricity tolerances are held to insure the best possible geometry between the seat and guide is maintained when the guides are replaced. This means minimal material removal from the seat, time savings, and consistent chamber volumes, when valve jobs are performed.

### C630 bronze guides

C630 is a blend of copper, nickel, and aluminum. The high copper content gives excellent thermal qualities, the nickel makes the guide tough and wear resistant, and the aluminum brings work hardening characteristics. This bronze alloy allows for tighter clearances than other materials, creating better valve and seat sealing, as well as superior oil control. The expansion qualities of C630 bronze make it especially compatible with aluminum cylinder heads.

### Cast iron guides

KPMI® R&D has produced a proprietary cast iron blend that thrives in the tough operating conditions of today's engine. KPMI's certified cast iron provides excellent wear resistance and a superior guide bore finish that is easy on valve stems.

### Manganese guides

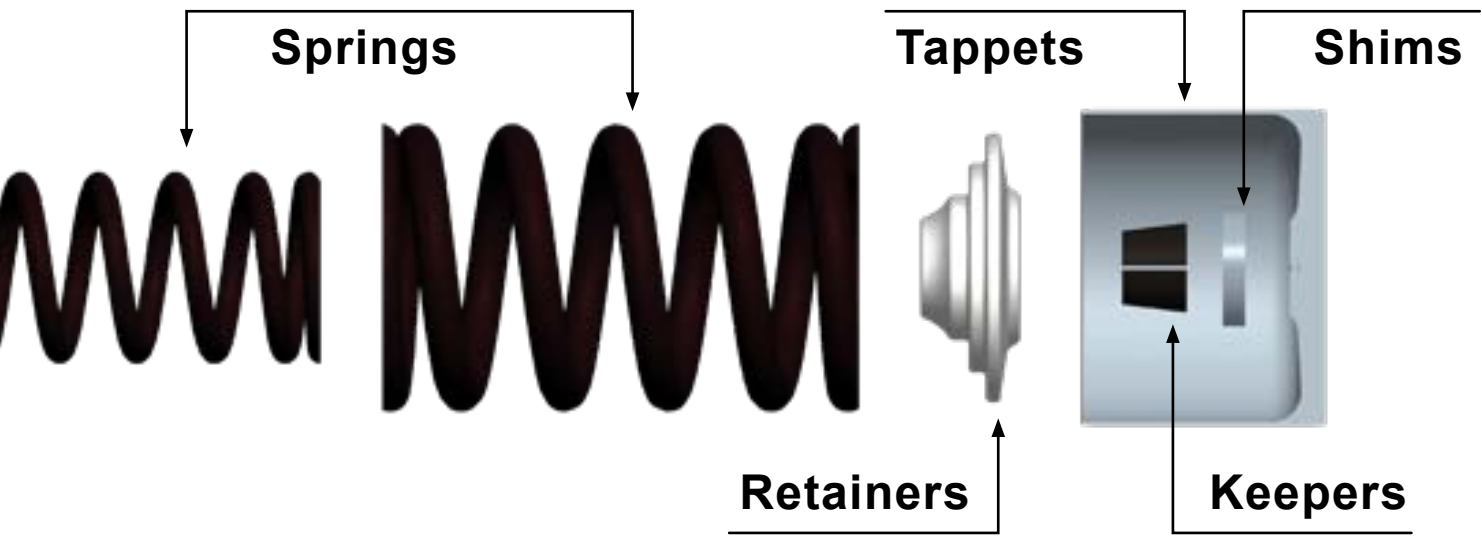
These Engine Builder valve guides have been designed with the price conscious builder in mind. Expect the same exacting KPMI® tolerances, but with a reduced toughness / wear-ability when compared to premium "C630" Nickel Aluminum Bronze valve guides. The softer Manganese guides are easily reamed, and then can be delicately finished with our high quality ball hones. Now, with any battery operated or electric drill you can ream and hone manganese valve guides in less time and in the absence of expensive honing equipment required to properly size "tough" Nickel Bronze guides.

ORDER 650-557-2046

# THE KPMI® SYSTEM



THE KPMI SYSTEM



## Seals

### High operating temperature

KPMI® Red Viton® seals operate at a higher temperature than other seal materials.

### Chemical resistance

Viton® seals are resistant to petroleum products, and by-products of combustion. Retaining pliability in situations where other materials would become hard and lose their sealing capability.

## Springs

### Advanced spring design

Springs are engineered for each specific application using proprietary advanced spring design, simulation, and analysis software. Engineers pay special attention to cam and spring harmonics, stress, mass, and operating rpm.

### Premium grade, super clean ground chrome silicon wire

X-Rayed at regular intervals to check for inclusions, heat treated, and shot peened. Insuring maximum spring life.

## Basewashers

### Proprietary heat treatment process

Creates a hard outer shell with a non-brittle core, resisting wear and maximizing toughness.

### Tight tolerance for precise fit

Manufactured to tolerances that allow no excessive lateral movement. Correct fitment promotes longer component life and optimizes performance of the entire valve train.

## Retainers

### Engineered with advanced computer software

FEA stress analysis allows engineers to lighten retainer without sacrificing strength.

### Tight tolerance for precise fit

KPMI® Engineers specify tight tolerances that allow no excessive lateral movement. Correct fitment promotes longer component life and optimizes performance of the entire valve train.

### Heat treated steel retainers

KPMI's proprietary heat treatment process creates a hard outer shell with a non-brittle core, resisting wear and maximizing toughness.

### Titanium retainers

To further reduce reciprocating mass, KPMI® offers titanium retainers as an alternative to steel.

### Custom retainers available

KPMI® is ready to design a custom retainer to your specifications.

## Keepers

### Wide variety of styles

KPMI® offers radius bead, triple radius bead, and square bead steel keepers. See keeper section in back of catalog for full selection.

### High tensile heat treated steel

Forged or single point machined.

## Tappets

### Machined from billet aircraft quality steel

### Proprietary heat treatment process

Creates a hard outer shell with a non-brittle core, resisting wear and maximizing toughness.

### Engineered with advanced computer software

FEA stress analysis allows engineers to lighten tappet without sacrificing strength.

### Racing performance

KPMI® tappets are run in high performance automotive and motorcycle racing applications including Motocross, Flat track racing, Road racing, Drag racing, and land speed racing

### Many stock sizes available

See KPMI® Tappet Section in back of catalog for full selection.

### Custom tappets available

Send KPMI® your requirements so we can develop your next tappet.

## Shims

### Ground to a precise height

KPMI® offers valve adjustment shims in 7.5mm, 9.5mm, and 13mm diameters, with heights increasing in increments of 0.05 mm. See KPMI® Shim Section in back of catalog for full selection.

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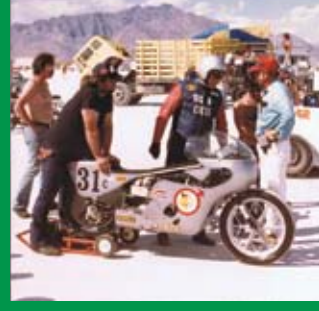
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**Dealer Inquires: Contact Us at 650-557-2046**

or

**Visit Our Website [www.kpmi.us](http://www.kpmi.us)**

# ARCTIC CAT® H2™ V-TWIN 2008-'18



ARCTIC CAT

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift		Installed Height		Seat Pressure	Open Pressure	@ Lift
	88-88000	Intake	.450"		1.200"		49#	159#	.450"
		Exhaust							
Kit Includes			8	CrSi Valve Springs	8	Titanium Retainers	8	H. T. Steel Basewashers	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	88-88012	Intake	31.62mm	1.245"	0.1960"	14°	3.695"	Standard
	88-88013	Intake	32.62mm	1.284"	0.1960"	14°	3.695"	Oversize
	88-88016	Exhaust	27.94mm	1.100"	0.1955"	20°	3.670"	Standard
	88-88017	Exhaust	28.94mm	1.139"	0.1955"	20°	3.670"	Oversize

## Valve Guides • C630 Bronze For H2 V-Twin 2008-2013

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.420"	0.445"	0.730"	1.110"	0.455"	0.1955"	0.4163" / Std		88-88020	
								+0.001"		88-88021
								+0.002"		88-88022
								+0.010"		88-88029

Use O.E.M. Seal

# ARCTIC CAT® VARIOUS 1056cc TWINS 2008-'16

- All 2014 5000 & 9000 C-TEC4 Engines
- Bearcat™ Z1 XT (Incl. Limited)
- TZ1™ (All Models Incl. Turbo)
- Z1™ (All Models Incl. Turbo)
- ProCross™ F & XF 1100 (All Models Incl. Turbo)
- ProClimb™ M 1100 (All Models Incl. Turbo)
- Jaguar™ Z1
- M / XF / ZR 9000's 2014-2015
- M 9000 2016

## Valve Spring Kit • Turbo Racing • High Performance

	KPMI P/N	Type	Max Valve Lift		Installed Height		Seat Pressure	Open Pressure	@ Lift
	88-88050	Intake	.380"		1.440"		70#	184#	.380"
		Exhaust							
Kit Includes			8	CrSi Valve Springs	8	Titanium Retainers	8	H. T. Steel Basewashers	

Both our Turbo spring kit and "Shim in Tappet" Turbo spring kits are designed for applications with up to 35psi of boost.

VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)



# ARCTIC CAT® VARIOUS 1056cc TWINS 2008-'16

ARCTIC CAT

- All 2014 5000 & 9000 C-TEC4 Engines
- Bearcat™ Z1 XT (Incl. Limited)
- TZ1™ (All Models Incl. Turbo)
- Z1™ (All Models Incl. Turbo)
- ProCross™ F & XF 1100 (All Models Incl. Turbo)
- ProClimb™ M 1100 (All Models Incl. Turbo)
- Jaguar™ Z1
- M / XF / ZR 9000's 2014-2015
- M 9000 2016

## Valve Spring Kit • Turbo Racing • "Shim in Tappet" High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	88-88100	Intake	.380"	1.440"	70#	184#	.380"
		Exhaust					
Kit Includes	8	CrSi Valve Springs		8	Titanium Retainers		
	8	H. T. Steel Basewashers		8	H. T. Steel Tappets		

"Shim in Tappet" valve spring kits provide a solution to the common ovaling of retainers and shim spitting in higher performance applications. By locating the shim in the heat treated steel tappet instead of the titanium retainer, wear is greatly reduced, and reliability is increased. These tappets were designed and analyzed using the same Finite Element Analysis software used in the development of our valves in order to maintain the same strength and mass as our high performance traditional tappet/retainer system.

## Valves • Black Diamond™ • Black Nitroneg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	88-88062	Intake	36.00mm	1.417"	0.2160"	10°	3.880"	Standard
	88-88063	Intake	37.00mm	1.457"	0.2160"	10°	3.880"	Oversize
	88-88066	Exhaust	33.00mm	1.299"	0.2155"	20°	3.525"	Standard
	88-88067	Exhaust	34.00mm	1.339"	0.2155"	20°	3.525"	Oversize

## Valve Guides • C630 Bronze For H2 V-Twin 2008-2013

	A	B	C	D	E	F	G	Intake	Exhaust
	0.620"	0.655"	0.645"	0.825"	0.460"	0.2155"	0.4167" / Std.	88-88070	
							+0.001"	88-88071	
							+0.002"	88-88072	
							+0.010"	88-88079	

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	88-88057	Intake Exhaust	H. T. Steel	28.00mm	1.1017"	1.038"	0.763"	--	0.098"

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71016-4			Pkg. of 4		0%		
	71016-8			Pkg. of 8		0%		
	71016-16			Pkg. of 16		Less- 10%		
	71016-50			Pkg. of 50		Less- 15%		
	71016-100			Pkg. of 100		Less- 20%		

**ORDER 650-557-2046**

# BMW® R60™ / 2 1960-1969



BMW

## Valve Spring Kit • O. E. M. Replacement • High Performance

	KPMI P/N	Type	Kit Includes							
			H. T. Steel Retainers		H. T. Steel Keepers		CrSi Valve Springs		H. T. Steel Basewashers	
	90-9082	Intake	4	90-9084	4	90-9085	4	90-9086	4	90-9087
		Exhaust								
Max Valve Lift	Installed Height	Seat Pressure		Open Pressure		@ Lift				
.450"	1.355"	58#		152#		.450"				

The springs in these kits are wound from super clean chrome silicon wire that has been heat treated and shot peened. These components offer optimal fitment, keeping lateral movement to a minimum. They work together as a system, providing long life, and maximum performance. Parts in this kit can be purchased individually as OEM replacements.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	90-9060	Intake	34.00mm	1.339"	0.2730"	23°	3.425"	Standard
	90-9062	Exhaust	32.00mm	1.260"	0.2720"	29°	3.415"	Standard

Our valves are the quality you expect from Kibblewhite®, manufactured to exact O.E.M. specifications.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.600"	0.650"	1.000"	1.200"	0.620"	0.2730"	0.5140" / Std.		90-9070
								+0.001"	90-9071
								+0.002"	90-9072
								+0.004"	90-9074
								+0.010"	90-9080

No seal required

For all the applications available for Kibblewhite®'s BMW® line of products, please refer online to the BMW® section of the [www.kpmi.us](http://www.kpmi.us) website, under **Sport Bike**.



# BMW® 5 / 6 / 7 / R80™ / R90™ / R100™ 1970-1995

## Valve Spring Kit • Lightweight • Performance Upgrade

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	90-9034	Intake	.500"	1.445"	104#	196#	.367"	
		Exhaust						
<b>Kit Includes</b>			4	CrSi Valve Springs	4	H.T. Steel Retainers	4	H. T. Steel Basewashers

The springs in these kits are wound from super clean chrome silicon wire that has been heat treated and shot peened. These components offer optimal fitment, keeping lateral movement to a minimum. They work together as a system, providing long life, and maximum performance.

## Valves • Black Diamond™ • Black Nitroneg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	90-9035	Intake	42.00mm	1.654"	0.3130"	23°	3.885"	Standard
	90-9054	Intake	44.00mm	1.732"	0.3130"	23°	3.885"	Standard
	90-9037	Exhaust	34.00mm	1.339"	0.3125"	29°	3.885"	Standard
	90-9036	Exhaust	38.00mm	1.496"	0.3125"	29°	3.885"	Standard
	90-9045	Exhaust	40.00mm	1.575"	0.3125"	29°	3.885"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.600"	0.650"	0.980"	1.400"	0.620"	0.3125"	0.554" / Std.	90-9000		
							+0.001"	90-9001		
							+0.002"	90-9002		
							+0.003"	90-9003		
							+0.004"	90-9004		
							+0.010"	90-9009		
		0.600"	0.650"	0.980"	1.300"	0.620"	0.3125"	0.554" / Std.		90-9020
								+0.001"		90-9021
								+0.002"		90-9022
							+0.003"		90-9023	
							+0.004"		90-9024	
						+0.010"			90-9029	

## Wrist Pin Bushings • Nickel Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	90-9030	Bronze	0.9515"	0.8555"	0.9325"	Standard	Pkg. of 1

These wrist pin bushings have been machined from solid nickel bronze bar stock with a superior surface finish and are designed to be direct OEM replacements. The nickel content gives these bushings improved wearability when compared to the OEM bushing. All of these bushings are 100% quality controlled.

# BRP® • CAN AM® DS 450™ 2008-2015



• 450X™

• 450XXC™

• 450XM™

• 450 EFi™

BRP

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	91-91100	Intake	.450"	1.385"	75#	235#	.450"
		Exhaust					
	Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers
			4	H. T. Steel Basewashers	4	H. T. Shims	

## Valves • Black Diamond™ • Black Nitroleg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	91-91112	Intake	38.00mm	1.496"	0.2350"	20°	3.550"	Standard
	91-91116	Exhaust	31.00mm	1.220"	0.2347"	29°	3.565"	Standard
	91-91117	Exhaust	32.00mm	1.260"	0.2347"	29°	3.565"	Oversize

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.315"	0.520"	5	A	B	C	D	Intake
				0.435"±0.002"	0.395"	0.120"	0.210"	Exhaust
				Part Number	Quantity	Quantity Discount		
				71029-4	Pkg. of 4	0%		
				71029-8	Pkg. of 8	0%		
				71029-16	Pkg. of 16	Less- 10%		
				71029-50	Pkg. of 50	Less- 15%		
				71029-100	Pkg. of 100	Less- 20%		

# BRP® • CAN AM® 400 / 500 / 650 / 800 / 1000 2006-'14

• Renegade™

• Outlander™

• Commander™

## Valve Spring Kit • Lightweight Racing

For Outlander 500 2007-2014 / Outlander 650 2006-'14 / Outlander 800 2007-'14 / Outlander 1000 2014 / Renegade 500 2008-'14 / Renegade 500 2008-'14 / Renegade 800 2007-'14 / Renegade 1000 2012-'14 / Commander 800 2012-2014 / Commander 1000 2012-'14

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	91-91150	Intake	.445"	1.275"	58#	171#	.445"	
		Exhaust						
	Kit Includes			8	CrSi Valve Springs	8	Titanium Retainers	8

It may be necessary to use KPMI® Shortened Valve Guides (KPMI® # 91-91170 & # 91-91180) to achieve higher than stock lift.



# BRP® • CAN AM® 400/500/650/800/1000 2006-'14

• Renegade™

• Outlander™

• Commander™

## Valve Spring Kit • Lightweight Racing For Outlander 400 2006-'13

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	91-91156	Intake	.445"	1.275"	58#	171#	.445"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

It may be necessary to use KPMI® Shortened Valve Guides (KPMI® # 91-91170 & # 91-91180) to achieve higher than stock lift.

## Valves • Black Diamond™ • Black Nitroeng Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	91-91162	Intake	31.12mm	1.225"	0.1958"	22°	3.585"	Standard
	91-91163	Intake	32.12mm	1.264"	0.1958"	22°	3.585"	Oversize
	91-91166	Exhaust	27.00mm	1.063"	0.1953"	16°	3.520"	Standard
	91-91167	Exhaust	28.00mm	1.102"	0.1953"	16°	3.520"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	---	0.470"	0.780"	0.895"	0.433"	0.1958"	0.4362" / Std.		91-91170	
								+0.001"	91-91171	
								+0.002"	91-91172	
								+0.010"	91-91179	
	---	0.470"	0.680"	0.895"	0.433"	0.1953"	0.4362" / Std.			91-91180
								+0.001"		91-91181
								+0.002"		91-91182
							+0.010"		91-91189	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.320"	0.435"	5	A	B	C	D	Intake
				0.305"±0.002"	0.265"	0.100"	0.195"	Exhaust
				Part Number		Quantity		Quantity Discount
				71041-4		Pkg. of 4		0%
				71041-8		Pkg. of 8		0%
				71041-16		Pkg. of 16		Less- 10%
				71041-50		Pkg. of 50		Less- 15%
			71041-100		Pkg. of 100		Less- 20%	



# BRP® • CAN AM® MAVERICK™ 2013-2018



BRP

## ALL MODELS EXCEPT MAVERICK™ X3 and TRAIL MODELS

### Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	91-91200	Intake	.470"	1.370"	57#	177#	.470"	
		Exhaust						
Kit Includes			8	CrSi Valve Springs	8	Titanium Retainers	8	H. T. Steel Basewashers

### Cylinder Head Service Kit **NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	90-91400	Intake	.470"	1.370"	57#	177#	.470"	
		Exhaust						
Kit Includes			8	In / Ex Titanium Retainers	8	In / Ex CrSi Valve Springs	8	In / Ex H. T. Steel Basewashers
			4	In Std. Black Diamond™ Valves	4	Ex Std. Black Diamond™ Valves		
			8	In / Ex Std. C630 Valves Guides	1	Top End Gasket Kit		

### Components • Replacement • Cylinder Head Service Kit **NEW PRODUCTS**

KPMI P/N	Description	Specification
91-91200	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
91-91212	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
91-91216	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
91-91220	Intake/ Exhaust Standard Valve Guide	Valve Guide • C630 Bronze
90-91401	Top End Gasket Kit	<b>Includes:</b> Head Gasket 92mm (2), Valve Stem Seal (8), Cam Chain Tensioner O-ring (1), Cam Adjuster O-ring Header Gasket (2)

### Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	91-91212	Intake	36.50mm	1.437"	0.2160"	14°	3.620"	Standard
	91-91213	Intake	37.50mm	1.476"	0.2160"	14°	3.620"	Oversize
	91-91216	Exhaust	31.00mm	1.220"	0.2155"	25°	3.515"	Standard
	91-91217	Exhaust	32.00mm	1.260"	0.2155"	25°	3.515"	Oversize

### Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	---	0.515"	0.745"	0.935"	0.433"	0.2155"	0.4361"/ Std.	91-91220		
								+0.001"	91-91221	
								+0.002"	91-91222	
								+0.010"	91-91229	

### Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.315"	0.455"	5	A	B	C	D	Intake
				0.325"±0.002"	0.310"	0.110"	0.220"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71042-4			Pkg. of 4		0%		
	71042-8			Pkg. of 8		0%		
	71042-16			Pkg. of 16		Less- 10%		
	71042-50			Pkg. of 50		Less- 15%		
	71042-100			Pkg. of 100		Less- 20%		

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# BRP® • CAN AM® MAVERICK™ X3 2017-'18

## Valve Spring Kit • Beehive

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	91-91300	Intake	.350"	1.180"	60#	161#	.350"	
		Exhaust						
Kit Includes			12	CrSi Valve Springs	12	Titanium Retainers	12	Viton® Seals

Note: KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution.

## Valves • White Diamond® • Hard Chrome Stems • Inconel®

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material
	91-91312H	Intake	29.01mm	1.142"	0.1960"	15°	3.305"	Stainless
		Standard						
	*91-91316K	Exhaust	25.00mm	0.984"	0.1955"	15°	3.345"	Inconel®
Standard								

\*Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous. Also, It's recommended for Turbos.

## Valve Guides • Manganese Bronze

**NEW PRODUCTS**

		A	B	C	D	E	F	G	Intake	Exhaust		
		0.290"	0.340"	0.850"	1.010"	0.490"	0.1955"	0.3565" / Std.		<b>91-91320M</b>		
										+0.001"	<b>91-91321M</b>	
										+0.002"	<b>91-91322M</b>	
										+0.010"	<b>91-91329M</b>	

## Valve Guide Seals • OEM Replacement • Tophat

**NEW PRODUCTS**

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.460"	0.975"	3	A	B	C	Spring shoulder Ø	Intake
				0.355 ± 0.005	---	0.290"	0.674"	Exhaust
	Part Number			Quantity		Quantity Discount		
	<b>71047-4</b>			Pkg. of 4		0%		
	<b>71047-8</b>			Pkg. of 8		0%		
	<b>71047-12</b>			Pkg. of 12		0%		
	<b>71047-16</b>			Pkg. of 16		Less- 10%		
	<b>71047-50</b>			Pkg. of 50		Less- 15%		
	<b>71047-100</b>			Pkg. of 100		Less- 20%		

# BRP® • CAN AM® DS™ 650 2000-2007



## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	91-91010	Intake	.500"	1.405"	69#	196#	.500"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

## Valve Spring Kit • Lightweight Racing with Shim Under Conversion

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	91-91000	Intake	.500"	1.390"	74#	216#	.400"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers
			4	H. T. Steel Tappets		4	H. T. Steel Shims	

## Valves • Black Diamond™ • Black Nitroeng Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	91-91015	Intake	36.00mm	1.417"	0.2350"	23°	3.565"	Standard
	91-91016	Intake	37.00mm	1.457"	0.2350"	23°	3.565"	Oversize
	*91-91017	Exhaust	31.00mm	1.220"	0.2347"	29°	3.565"	Standard
	*91-91018	Exhaust	32.00mm	1.260"	0.2347"	29°	3.565"	Oversize

\*Note: The factory supplied the exhaust valves for this application with 30° valve face angles. KPMI® designed their lightweight, one piece stainless steel valves for this application with standard 45° face angles. Any concerns of flow loss at low lift numbers can be overcome by maximizing the port throat area, an advantage provided by the 45° face.

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
6.0mm	0.400"	0.560"	5					Intake
				0.435"±0.002"	0.400"	0.120"	0.280"	Exhaust
				Part Number	Quantity		Quantity Discount	
				71025-4	Pkg. of 4		0%	
				71025-8	Pkg. of 8		0%	
				71025-16	Pkg. of 16		Less- 10%	
				71025-50	Pkg. of 50		Less- 15%	
				71025-100	Pkg. of 100		Less- 20%	



# BRP® • ROTAX® AIR COOLED SINGLES 500/600 1982-'06

BRP

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	91-9400	Intake	.450"	1.305"	106#	266#	.450"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.440"	0.490"	0.785"	1.165"	0.495"	0.2745"	0.4752" / Std.	91-0478	
							+0.002"	91-0479	
							+0.004"	91-0480	
							+0.006"	91-0481	
							+0.015"	91-4036	
							+0.027"	91-0499	
	0.440"	0.490"	---	1.240"	0.495"	0.2745"	0.4752" / Std.		91-0482
							+0.002"		91-0483
							+0.004"		91-0484
							+0.006"		91-0485
							+0.015"		91-4037

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
7.0mm	0.374"	0.560"	4	A	B	C	D	Intake
				0.475"±0.005"	0.430"	0.115"	0.240"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71019-4			Pkg. of 4		0%		
	71019-8			Pkg. of 8		0%		
	71019-16			Pkg. of 16		Less- 10%		
	71019-50			Pkg. of 50		Less- 15%		
71019-100			Pkg. of 100		Less- 20%			

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	91-9411	Intake	H. T. Steel	33.00mm	1.298"	1.235"	1.025"	0.340"	0.115"
	Exhaust								


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ORDER 650-557-2046

# BRP® • SEADOO® "1503" 4-TEC ENGINES 2006-'16




## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	91-91051	Intake	.390"	1.360"	75#	185#	.390"
		Exhaust					
Kit Includes			12	CrSi Valve Springs			


This spring kit is designed specifically for this supercharged application. This spring kit drops into the cylinder head, working with the O.E.M. components to provide the correct pressure and harmonic range for this high performance supercharged power plant

## Retainer Set • O.E.M. Replacement • H. T. Steel NEW PRODUCTS


	KPMI P/N	Type	Material	Quantity
	91-91052	Intake	H. T. Steel	Pkg. of 12
		Exhaust		

By utilizing FEA software and a special blend of heat treated alloy steel, it was possible to reduce mass while maintaining strength and wear resistance. These retainers are intended as an OEM replacement and are completely compatible with the OEM springs, keepers, and basewashers. The spring shoulder diameter has been designed to match the OEM retainer and spring as well as KPMI's high performance spring (P/N 91-91051), making this retainer your high performance OEM alternative.

## Valves • Black Diamond™ • Black Nitroreg Stems NEW PRODUCTS

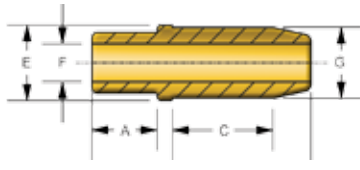

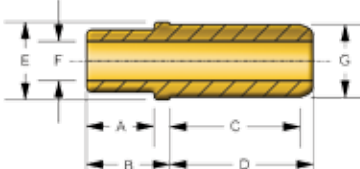

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	91-91062	Intake	38.00mm	1.496"	0.2350"	20°	3.555"	Standard
	91-91066	Exhaust	31.00mm	1.220"	0.2345"	25°	3.565"	Standard

## Valves • White Diamond® • Inconel® NEW PRODUCTS

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	91-91096K	Exhaust	31.00mm	1.220"	0.2345"	28°	3.555"	Standard

Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures, where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

## Valve Guides • C630 Bronze NEW PRODUCTS

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.405"	0.500"	0.625"	0.860"	0.465"	0.2350"	0.4360" / Std.	91-91070		
								+0.001"	91-91071		
								+0.002"	91-91072		
									+0.004"	91-91074	
									+0.010"	91-91079	
		0.405"	0.500"	0.785"	0.860"	0.465"	0.2345"	0.4360" / Std.		91-91080	
									+0.001"	91-91081	
							+0.002"	91-91082			
							+0.004"	91-91084			
							+0.010"	91-91089			



# BSA® A10™ 1950-1962

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.585"	0.765"	0.675"	1.335"	0.620"	0.3105"	0.5632" / Std.		<b>10-4132</b>	
								+0.002"		<b>10-4133</b>
	No seal required.							+0.004"		<b>10-4134</b>

## Wrist Pin Bushings • Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	<b>10-10350</b>	SAE660 Bronze	0.8775"	0.7480"	0.950"	Standard	Pkg. of 1
	<b>10-10352</b>	SAE660 Bronze	0.8795"	0.7480"	0.950"	+0.002"	Pkg. of 1

Designed and manufactured by Kibblewhite® to original OEM specifications with Kibblewhite® quality and precision.

## Crankshaft Bushings • Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	<b>10-5020</b>	SAE660 Bronze	1.690"	1.372"	1.075"	Standard	Pkg. of 1
	<b>10-5021</b>	SAE660 Bronze	1.690"	1.362"	1.075"	-0.010"	Pkg. of 1
	<b>10-5022</b>	SAE660 Bronze	1.690"	1.352"	1.075"	-0.020"	Pkg. of 1
	<b>10-5023</b>	SAE660 Bronze	1.690"	1.342"	1.075"	-0.030"	Pkg. of 1
	<b>10-5024</b>	SAE660 Bronze	1.690"	1.332"	1.075"	-0.040"	Pkg. of 1
<b>10-5025</b>	SAE660 Bronze	1.690"	1.322"	1.075"	-0.050"	Pkg. of 1	

Machined from high quality mill certified SAE660 Bearing Bronze (custom sizes available).

# BSA® B25™ 1968-1971

## Valve Spring Kit • Lightweight Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>10-10300</b>	Intake	.500"	1.375"	80#	258#	.500"	
		Exhaust						
<b>Kit Includes</b>			2	CrSi Valve Springs	2	H. T. Steel Retainers	2	H. T. Steel Basewashers

The springs in these kits are wound from super clean chrome silicon wire that has been heat treated and shot peened. These components offer optimal fitment, keeping lateral movement to a minimum. They work together as a system, providing long life, and maximum performance.

## Valves • Black Diamond™ • Black Nitro Neg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	<b>10-10312</b>	Intake	36.91mm	1.453"	0.3105"	27°	3.660"	Standard
	<b>10-10313</b>	Intake	37.92mm	1.493"	0.3105"	27°	3.660"	Oversize
	<b>10-10316</b>	Exhaust	33.40mm	1.315"	0.3100"	24°	3.645"	Standard
<b>10-10317</b>	Exhaust	34.39mm	1.354"	0.3100"	24°	3.645"	Oversize	

**ORDER 650-557-2046**

# BSA® B25™ 1968-1971



## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.330"	0.570"	0.630"	1.030"	0.560"	0.3095"	0.5010" / Std.		<b>10-10320</b>
							+0.001"		<b>10-10321</b>
							+0.010"		<b>10-10329</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.465"	0.550"	1	A	B	C	D	Intake
				0.500"±0.010"	0.445"	0.230"	0.280"	Exhaust
	Part Number			Quantity		Quantity Discount		
	<b>71012-2</b>			Pkg. of 2		0%		
	<b>71012-4</b>			Pkg. of 4		0%		
	<b>71012-8</b>			Pkg. of 8		0%		
	<b>71012-16</b>			Pkg. of 16		Less- 10%		
	<b>71012-50</b>			Pkg. of 50		Less- 15%		
<b>71012-100</b>			Pkg. of 100		Less- 20%			

## Keeper Set • H. T. Steel • O.E.M. Replacement

	KPMI P/N	Style	A	B	C	D	E	Quantity
	<b>51023-2</b>	Single Radius Bead	0.310"	10.0°	0.235"	0.285"	0.417"	2 Pr.

## Pushrods • Steel • Chrome Moly Tube NEW PRODUCTS

	KPMI P/N	Type	Material	A	B	Quantity
	<b>10-10410</b>	Intake	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	6.915"	6.775"	Pkg. of 2
		Exhaust		6.873"	6.733"	
Custom length push rods available upon request.						

## Blank Pushrods • Steel • Chrome Moly Tube NEW PRODUCTS

	A	Ø.371" OD		
	B	9.120" Overall Length		
	C	Ø.305" ID Before Machining		
	D	E	F	G
	R.124	0.675"	0.375"	0.310"
KPMI P/N	Model	Material	Kit Includes	
<b>90502-2</b>	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	2 Female Ended Pushrods / 2 Male Endpieces	
<b>90502-4</b>	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	4 Female Ended Pushrods / 4 Male Endpieces	

Blank Pushrods Kits (sets of 2 and 4) can be machined to desired length and assembled by KPMI® for a flat fee of \$120.00. Orders can be placed by using the Custom Pushrod Order Form found on our website at [www.kpmi.us/forms.html](http://www.kpmi.us/forms.html).



# BSA® VARIOUS B44™ 1967-1970

## Push Rod • Steel • Chrome Moly Tube NEW PRODUCTS

	KPMI P/N	Model	Type	Material	A	B	Quantity
	10-10415	Round Barrel 1967- Earlier	Intake	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	8.205"	8.065"	Pkg. of 2
			Exhaust				
	10-10420	Square Barrel 1968-1970	Intake	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	8.355"	8.215"	Pkg. of 2
			Exhaust				

Custom length pushrods available upon request.

## Blank Pushrods • Steel • Chrome Moly Tube NEW PRODUCTS

		A	Ø.371" OD		Machining Information:  1. Break ID edge only at .015 x 45°
		B	9.120" Overall Length		
		C	Ø.305" ID Before Machining		
	D	E	F	G	
	R.124	0.675"	0.375"	0.310"	
KPMI P/N	Model	Material		Kit Includes	
90502-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips		2 Female Ended Pushrods / 2 Male Endpieces	
90502-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips		4 Female Ended Pushrods / 4 Male Endpieces	

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# BSA® 650™ TWIN

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
		0.465"	0.675"	0.910"	1.215"	0.560"	0.3100"	0.5010" / Std		10-0347
							+0.002"		10-0348	
							+0.004"		10-0349	
							+0.006"		10-0350	
							+0.050"		10-4055	

No seal required.

For all the applications available for Kibblewhite's BSA® line of products, please refer online to the BSA® section of the [www.kpmi.us](http://www.kpmi.us) website, under **Motorcycle Valvetrain Components**.

**ORDER 650-557-2046**



# BSA® A50™ 1966-1970



## Wrist Pin Bushings • Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	10-10350	SAE660 Bronze	0.8775"	0.7480"	0.950"	Standard	Pkg. of 1
	10-10352	SAE660 Bronze	0.8795"	0.7480"	0.950"	+0.002"	Pkg. of 1

Designed and manufactured by Kibblewhite® to original OEM specifications with Kibblewhite® quality and precision.

## Crankshaft Bushings • Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	10-5010	SAE660 Bronze	1.815"	1.501"	1.005"	Standard	Pkg. of 1
	10-5011	SAE660 Bronze	1.815"	1.491"	1.005"	-0.010"	Pkg. of 1
	10-5012	SAE660 Bronze	1.815"	1.481"	1.005"	-0.020"	Pkg. of 1
	10-5013	SAE660 Bronze	1.815"	1.471"	1.005"	-0.030"	Pkg. of 1
	10-5014	SAE660 Bronze	1.815"	1.461"	1.005"	-0.040"	Pkg. of 1
	10-5015	SAE660 Bronze	1.815"	1.451"	1.005"	-0.050"	Pkg. of 1
10-10000	SAE660 Bronze	1.835"	1.451"	1.005"	+0.020" OD	Pkg. of 1	

Machined from high quality mill certified SAE660 Bearing Bronze (Custom sizes available).

## Crankshaft Thrust Washer • Bearing Bronze

**NEW PRODUCTS**

	KPMI P/N	Outside Diameter A	Inside Diameter B	Thickness C	Locating Flats D
	10-1000	2.115"	1.690"	0.065"	1.900"

- Designed and manufactured by KPMI® specifically for use with various BSA® applications
- Improved from OEM parts to include KPMI® design standards and precision machining
- Manufactured from bearing bronze for increased wear resistance compared to OEM

## Pushrods • Steel • Chrome Moly Tube

**NEW PRODUCTS**

	KPMI P/N	Type	Material	A	B	Quantity
	10-10400	Intake	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	6.148"	5.868"	Pkg. of 4
		Exhaust		7.421"	7.141"	

Custom length pushrods available upon request.

## Blank Pushrods • Steel • Chrome Moly Tube

**NEW PRODUCTS**

	A	Ø.371" OD	Machining Information: 	
	B	9.120" Overall Length		
	C	Ø.305" ID Before Machining		
	D	E	F	G
	R.156	0.420"	0.120"	0.310"
1. Break ID edge only at .015 x 45°				
KPMI P/N	Model	Material	Kit Includes	
90512-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	2 Female Ended Pushrods / 2 Female Endpieces	
90512-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	4 Female Ended Pushrods / 4 Female Endpieces	

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**VISIT US AT WWW.KPMI.US**

BSA

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# BSA® B50 GOLDSTAR™ 1971-1973

## Valve Spring Kit • Lightweight Racing NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	10-10050	Intake	.500"	1.375"	80#	258#	.500"
		Exhaust					
Kit Includes	2	CrSi Valve Springs	2	H. T. Steel Retainers	2	H. T. Steel Basewashers	

The springs in these kits are wound from super clean chrome silicon wire that has been heat treated and shot peened. These components offer optimal fitment, keeping lateral movement to a minimum. They work together as a system, providing long life, and maximum performance.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	10-10062	Intake	44.45mm	1.750"	0.3105"	20°	4.080"	Standard
	10-10063	Intake	45.97mm	1.810"	0.3105"	20°	4.060"	Oversize
	10-10066	Exhaust	38.86mm	1.530"	0.3100"	24°	4.025"	Standard
	10-10067	Exhaust	40.39mm	1.590"	0.3100"	24°	4.005"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.465"	0.675"	0.910"	1.215"	0.560"	0.3100"	0.5010" / Std.		10-10070
							+0.002"		10-10072
							+0.004"		10-10074
							+0.006"		10-10076
						No seal required.	+0.050"		10-10079

## Push Rod • Steel • Chrome Moly Tube NEW PRODUCTS

	KPMI P/N	Type	Material	A	B	Quantity
	10-10425	Intake Exhaust	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	8.642"	8.502"	Pkg. of 2

Custom length pushrods available upon request.

## Blank Pushrods • Steel • Chrome Moly Tube NEW PRODUCTS

	A	Ø.371" OD						
	B	9.120" Overall Length						
	C	Ø.305" ID Before Machining						
	D	R.124	E	0.675"	F	0.375"	G	0.310"
	KPMI P/N	Model	Material	Kit Includes				
90502-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	2 Female Ended Pushrods / 2 Male Endpieces					
90502-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	2 Female Ended Pushrods / 2 Male Endpieces					

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**ORDER 650-557-2046**

# BSA® B50 GOLDSTAR™ 1971-1973



## Keeper Set • H. T. Steel • O.E.M. Replacement

	KPMI P/N	Style	A	B	C	D	E	Quantity
	51023-2	Single Radius Bead	0.310"	10.0°	0.235"	0.285"	0.417"	2 Pr.

# BSA® A65™ 1971-1972

## Valves • Black Diamond™ • Black Nitroneg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	10-4148	Intake	40.64mm	1.600"	0.3110"	R 1.500"	3.600"	Standard
	10-10100	Intake	42.14mm	1.659"	0.3110"	R 1.500"	3.580"	Oversize
	10-4150	Exhaust	35.81mm	1.410"	0.3105"	25°	3.555"	Standard
	10-10104	Exhaust	37.31mm	1.469"	0.3105"	25°	3.535"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.760"	0.840"	0.685"	1.135"	0.680"	0.3105"	0.5010" / Std.		10-4135
							+0.002"		10-4136
							+0.004"		10-4137

No seal required.

## Wrist Pin Bushings • Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	10-10350	SAE660 Bronze	0.8775"	0.7480"	0.950"	Standard	Pkg. of 1
	10-10352	SAE660 Bronze	0.8795"	0.7480"	0.950"	+0.002"	Pkg. of 1

Designed and manufactured by Kibblewhite® to original OEM specifications with Kibblewhite® quality and precision.

## Crankshaft Bushings • Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	10-5010	SAE660 Bronze	1.815"	1.501"	1.005"	Standard	Pkg. of 1
	10-5011	SAE660 Bronze	1.815"	1.491"	1.005"	-0.010"	Pkg. of 1
	10-5012	SAE660 Bronze	1.815"	1.481"	1.005"	-0.020"	Pkg. of 1
	10-5013	SAE660 Bronze	1.815"	1.471"	1.005"	-0.030"	Pkg. of 1
	10-5014	SAE660 Bronze	1.815"	1.461"	1.005"	-0.040"	Pkg. of 1
	10-5015	SAE660 Bronze	1.815"	1.451"	1.005"	-0.050"	Pkg. of 1
10-10000	SAE660 Bronze	1.835"	1.451"	1.005"	+0.020" OD	Pkg. of 1	

Machined from high quality mill certified SAE660 Bearing Bronze (Custom sizes available).



# BSA® A65™ 1971-1972

## Crankshaft Thrust Washer • Bearing Bronze

	KPMI P/N	Outside Diameter A	Inside Diameter B	Thickness C	Locating Flats D
	10-1000	2.115"	1.690"	0.065"	1.900"

- Designed and manufactured by KPMI® specifically for use with various BSA® applications
- Improved from OEM parts to include KPMI® design standards and precision machining
- Manufactured from bearing bronze for increased wear resistance compared to OEM

## Push Rod • Steel • Chrome MolyTube **NEW PRODUCTS**

	KPMI P/N	Type	Material	A	B	Quantity
	10-10405	Intake Exhaust	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	6.391" 7.667"	6.111" 7.387"	Pkg. of 4

Custom length pushrods available upon request.

## Blank Pushrods • Steel • Chrome Moly Tube **NEW PRODUCTS**

	A	Ø.371" OD	<b>Machining Information:</b>  1. Break ID edge only at .015 x 45°	
	B	9.120" Overall Length		
	C	Ø.305" ID Before Machining		
	D	E	F	G
	R.156	0.420"	0.120"	0.310"

KPMI P/N	Model	Material	Kit Includes
90512-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	2 Female Ended Pushrods / 2 Female Endpieces
90512-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	4 Female Ended Pushrods / 4 Female Endpieces

Blank Pushrods Kits (sets of 2 and 4) can be machined to desired length and assembled by KPMI® for a flat fee of \$120.00. Orders can be placed by using the Custom Pushrod Order Form found on our website at [www.kpmi.us/forms.html](http://www.kpmi.us/forms.html).

## Keeper Set • H. T. Steel • O.E.M. Replacement

		KPMI P/N	Style	A	B	C	D	E	Quantity
		51023-4	Single Radius Bead	0.310"	10.0°	0.235"	0.285"	0.417"	4 Pr.

# BSA® ROCKET III™ 1968-1973



## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	10-10200	Intake	.400"	1.350"	94#	240#	.400"	
		Exhaust						
Kit Includes			6	CrSi Valve Springs	6	Titanium Retainers	6	H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroneg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	10-10212	Intake	38.86mm	1.530"	0.3097"	R 1.500"	3.975"	Standard
	10-10213	Intake	40.39mm	1.590"	0.3097"	R 1.500"	3.950"	Oversize
	10-10216	Exhaust	33.40mm	1.315"	0.3100"	25°	3.915"	Standard
	10-10217	Exhaust	35.56mm	1.400"	0.3092"	25°	3.890"	Oversize

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.460"	0.560"	0.760"	1.310"	0.560"	0.3100"	0.5010" / Std.		10-10220	
									+0.002"		10-10222
		No seal required							+0.015"		10-10230
		A	B	C	D	E	F	G	Intake	Exhaust	
		0.330"	0.430"	0.765"	1.315"	0.560"	0.3100"	0.5010" / Std.		10-10240	
									+0.002"		10-10242
									+0.004"		10-10244
									+0.006"		10-10246
Machined for seal. One seal supplied with each guide.							+0.015"		10-10250		

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.465"	0.550"	1	A	B	C	D	Intake
				0.500"±0.010"	0.445"	0.230"	0.280"	Exhaust
		Part Number				Quantity	Quantity Discount	
		71012-4				Pkg. of 4	0%	
		71012-6				Pkg. of 6	0%	
		71012-8				Pkg. of 8	0%	
		71012-16				Pkg. of 16	Less- 10%	
		71012-50				Pkg. of 50	Less- 15%	
71012-100				Pkg. of 100	Less- 20%			



# DUCATI® VARIOUS 750-916 1971-'98

## Valve Guides • C630 Bronze • For 750 GT 1971-1974

	A	B	C	D	E	F	G	Intake	Exhaust
	0.345"	0.415"	0.810"	1.110"	0.644"	0.3140"	0.5152" / Std.		<b>92-9600</b>
							+0.001"		<b>92-9601</b>
							+0.002"		<b>92-9602</b>
							+0.004"		<b>92-9604</b>
						+0.010"		<b>92-9610</b>	

## Valve Guides • C630 Bronze • For 750 FI Special / Paso 1986-1988 / 906 Paso 1988-1990

	A	B	C	D	E	F	G	Intake	Exhaust
	0.115"	0.160"	1.050"	1.300"	0.560"	0.3140"	0.5152" / Std.		<b>92-9640</b>
							+0.001"		<b>92-9641</b>
							+0.002"		<b>92-9642</b>
							+0.004"		<b>92-9644</b>
						+0.010"		<b>92-9650</b>	

## Valve Guide Seals • Viton® For 750 GT 1971-'74 / 750 FI Special / Paso 1986-'88 / 906 Paso 1988-'90

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
8.0mm	0.285"	0.555"	1	A	B	C	D	Intake
				0.466"-0.475"	0.411"-0.430"	0.040"	0.135"	Exhaust
	Part Number		Quantity		Quantity Discount			
	<b>71043-4</b>		Pkg. of 4		0%			
	<b>71043-8</b>		Pkg. of 8		0%			
	<b>71043-16</b>		Pkg. of 16		Less- 10%			
	<b>71043-50</b>		Pkg. of 50		Less- 15%			
<b>71043-100</b>		Pkg. of 100		Less- 20%				

## Valve Guides • C630 Bronze • For 851 SBK 1987-1992 / 888 SBK 1991-1993 / 916 SBK 1994-1998

	A	B	C	D	E	F	G	Intake	Exhaust
	0.245"	0.300"	0.900"	1.400"	---	0.2745	0.4745" / Std.		<b>92-9620</b>
							+0.001"		<b>92-9621</b>
							+0.002"		<b>92-9622</b>
							+0.004"		<b>92-9624</b>
						+0.010"		<b>92-9630</b>	

## Valve Guide Seals • Viton® • For 851 SBK 1987-1992 / 888 SBK 1991-1993 / 916 SBK 1994-1998

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
7.0mm	0.360"	0.520"	5	A	B	C	D	Intake
				0.383"-0.389"	---	---	0.255"	Exhaust
	Part Number		Quantity		Quantity Discount			
	<b>71044-4</b>		Pkg. of 4		0%			
	<b>71044-8</b>		Pkg. of 8		0%			
	<b>71044-16</b>		Pkg. of 16		Less- 10%			
	<b>71044-50</b>		Pkg. of 50		Less- 15%			
<b>71044-100</b>		Pkg. of 100		Less- 20%				

# DUCATI® 800 / 900 2000-2007



DUCATI

## Valves • Black Diamond™ • Black Nitroeng Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>92-92012</b>	Intake	43.00mm	1.693"	0.3140"	22°	3.825"	Standard
	<b>92-92013</b>	Intake	44.00mm	1.732"	0.3140"	22°	3.825"	Oversize
	<b>92-92016</b>	Exhaust	38.00mm	1.496"	0.3135"	22°	3.730"	Standard
	<b>92-92017</b>	Exhaust	39.00mm	1.535"	0.3135"	22°	3.730"	Oversize

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust
		0.165"	0.205"	0.855	1.290"	0.560"	0.3145"	0.5147" / Std.		<b>92-92020</b>
								+0.001"	<b>92-92021</b>	
								+0.002"	<b>92-92022</b>	
								+0.010"	<b>92-92029</b>	
		0.125"	0.165"	0.855	1.250"	0.560"	0.3140"	0.5147" / Std.		<b>92-92030</b>
								+0.001"		<b>92-92031</b>
								+0.002"		<b>92-92032</b>
								+0.010"		<b>92-92039</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
8.0mm	0.285"	0.555"	1	0.466"-0.475"	0.411"-0.430"	0.040"	0.135"	Exhaust
		<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>		
		<b>71043-4</b>		Pkg. of 4		0%		
		<b>71043-8</b>		Pkg. of 8		0%		
		<b>71043-16</b>		Pkg. of 16		Less- 10%		
		<b>71043-50</b>		Pkg. of 50		Less- 15%		
		<b>71043-100</b>		Pkg. of 100		Less- 20%		

For all the applications available for Kibblewhite's Ducati® line of products, please refer online to the Ducati® section of the [www.kpmi.us](http://www.kpmi.us) website, under **Sport Bike**.




# DUCATI® 696 / 796 / 1000 / 1100 2003-'10

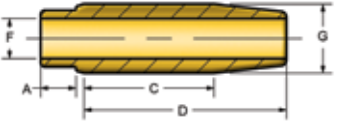

• Monster™ 1100 2010

• 1100S & Sport Classic GT™ 1000 Only


## Valves • Black Diamond™ • Black Nitroreg Stems for 1000cc-1100cc Models Only

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>92-92062</b>	Intake	45.00mm	1.772"	0.2746"	22°	3.830"	Standard
	<b>92-92063</b>	Intake	46.00mm	1.811"	0.2746"	22°	3.830"	Oversize
	<b>92-92066</b>	Exhaust	40.00mm	1.575"	0.2740"	22°	3.770"	Standard
	<b>92-92067</b>	Exhaust	41.00mm	1.614"	0.2740"	22°	3.770"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.235"	---	1.010"	1.270"	---	0.2745"	0.4744" / Std.		<b>92-92070</b>
							+0.001"	<b>92-92071</b>	
							+0.002"	<b>92-92072</b>	
							+0.010"	<b>92-92079</b>	
	0.235"	---	---	1.280"	---	0.2740"	0.4744" / Std.		<b>92-92080</b>
							+0.001"		<b>92-92081</b>
							+0.002"		<b>92-92082</b>
							+0.010"		<b>92-92089</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
7.0mm	0.360"	0.520"	5	A	B	C	D	Intake
				0.383"-0.389"	---	---	0.255"	Exhaust
		Part Number		Quantity		Quantity Discount		
		<b>71044-4</b>		Pkg. of 4		0%		
		<b>71044-8</b>		Pkg. of 8		0%		
		<b>71044-16</b>		Pkg. of 16		Less- 10%		
		<b>71044-50</b>		Pkg. of 50		Less- 15%		
<b>71044-100</b>		Pkg. of 100		Less- 20%				

For all the applications available for Kibblewhite's Ducati® line of products, please refer online to the Ducati® section of the [www.kpmi.us](http://www.kpmi.us) website, under **Sport Bike**.



# HD® FLATHEAD™ 1930-1973



## Valve Spring Kit • O. E. M. Replacement for 74" - 80" Flathead 1930-1948

	KPMI P/N	Type	Kit Includes					
			H. T. Steel Retainers		H. T. Steel Keepers Pr.			
	20-20480	Intake	4	20-20481	4	20-20489		
		Exhaust	4	20-20483	4	20-20485		
				CrSi Valve Springs	H. T. Steel Basewashers	H. T. Steel Shims		
			4	20-20483	4	20-20485	4	20-20487
	Max Valve Lift	Installed Height	Seat Pressure		Open Pressure	@ Lift		
	.375"	2.125"	65#		130#	.375"		

Some models may require shim# 20-20487 to achieve recommended installed height. All components are the quality you can expect from Kibblewhite®, manufactured to exact O.E.M. dimensions. These O.E.M. replacement parts may be purchased separately using the above part numbers.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	20-20740	Intake	1.625"	41.28mm	0.3395"	R0.540	R 0.540	5.585"	45" Standard 1941-1973
		Exhaust	1.930"	49.02mm	0.3715"	R0.325	7°	6.280"	UL 74"-80"
	20-20742	Intake	1.930"	49.02mm	0.3715"	R0.325	7°	6.280"	UL 74"-80"
		Exhaust	2.050"	52.07mm	0.3715"	R0.325	7°	6.280"	UL 74"-80"
	20-20743	Intake	1.930"	49.02mm	0.3715"	R0.325	7°	5.940"	VL 74"-80"
		Exhaust	2.050"	52.07mm	0.3715"	R0.325	7°	5.940"	VL 74"-80"
	20-20744	Intake	1.930"	49.02mm	0.3715"	R0.325	7°	5.940"	VL 74"-80"
		Exhaust	2.050"	52.07mm	0.3715"	R0.325	7°	5.940"	VL 74"-80"
	20-20745	Intake	2.050"	52.07mm	0.3715"	R0.325	7°	5.940"	VL 74"-80"
		Exhaust	2.050"	52.07mm	0.3715"	R0.325	7°	5.940"	VL 74"-80"

## Valve Guides • Cast Iron For 45" Flathead 1941-1973

	A	B	C	D	E	F	G	Intake	Exhaust
	1.200"	1.330"	1.310"	1.470"	0.855"	0.3395"	0.5647" / Std.		20-20750
							+0.001"		20-20751
							+0.002"		20-20752
							+0.010"		20-20759

## Valve Guides • Cast Iron For 74"- 80" Flathead 1930-1948

	A	B	C	D	E	F	G	Intake	Exhaust
	1.120"	1.275"	1.630"	1.860"	0.935"	0.3715"	0.5952" / Std.		20-20760
							+0.001"		20-20761
							+0.002"		20-20762
							+0.010"		20-20769

For sizing KPMI® Cast Iron Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.69-71).

# HD® KNUCKLEHEAD™ 1936-1947

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-20170	Intake	.480"	1.310"	158#	340#	.480"
		Exhaust					
	Kit Includes			4	H. T. Steel Retainers	4	H. T. Steel Keepers Pr.
			4	CrSi Valve Springs	4	H. T. Steel Shims	

Spring kit must be used with Kibblewhite® guides, or the tops of your guides must be machined to use this kit. Retainers manufactured from heat treated, aircraft quality, steel billet. FEA stress analysis used to incorporate unique concave radius, and design equidistant holes to lighten retainer without sacrificing strength. Black Oxide treatment applied to resist corrosion. Machining Instructions included with kit, or check our website [www.kpmi.us](http://www.kpmi.us) for current info.

VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)



# HD® KNUCKLEHEAD™ 1936-1947

## Valve Spring Kit • O. E. M. Replacement

	KPMI P/N	Type	Kit Includes			
			H. T. Steel Retainers	H. T. Steel Keepers Pr.	CrSi Valve Springs	H. T. Steel Basewashers
	20-20425	Intake Exhaust	4 20-20426	4 20-20429	4 20-20427	4 20-20428
	Max Valve Lift	Installed Height	Seat Pressure		Open Pressure	@ Lift
.415"	1.375"	127#		270#	.415"	

All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance. All components are the quality you can expect from KPMI®, manufactured to exact O.E.M. dimensions. These O.E.M. replacements parts may be purchased separately using the above part numbers.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
			Radius	Angle					
	20-4101	Intake	1.750"	44.45mm	0.3765"	R0.234	23°	3.590"	Standard
	20-20414	Intake	1.940"	49.28mm	0.3765"	R0.234	23°	3.590"	Oversize
20-4102	Exhaust	1.750"	44.45mm	0.3760"	R0.236	27°	3.670"	Standard	

## Valve Guides • Cast Iron

	A	B	C	D	E	F	G	Intake	Exhaust
	0.600"	0.700"	0.700"	1.200"	1.050"	0.3755"	0.6440" / Std.		20-4095C
							+0.002"		20-4096C
							+0.004"		20-4097C
							+0.006"		20-4098C
							+0.008"		20-4099C
						+0.025"		20-4100C	

For sizing KPMI® Cast Iron Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.69-71).

## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-20570	660 Bearing Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 2
	20-20572	660 Bearing Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 2
	20-20580	660 Bearing Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1
20-20582	660 Bearing Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 1	

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Wrist Pin Bushings • High Performance • C630 Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-0645	C630 Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

## Clutch Springs

	KPMI P/N	Description	A	B	C	Quantity
	20-0788	Replace 38075-41	0.468"	0.685"	1.488"	Pkg. of 10

Manufactured from high quality chrome silicon wire, they are designed to supply 20% more plate load than stock springs.

**ORDER 650-557-2046**

# HD® PANHEAD™ 1948-1965



HARLEY-DAVIDSON

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-20445	Intake	.600"	1.500"	154#	389#	.600"
		Exhaust					
	Kit Includes	4	H. T. Steel Retainers		4	H. T. Steel Keepers Pr.	
4		CrSi Valve Springs		4	H. T. Steel Basewashers		

This lightweight Panhead® spring kit is designed to work with factory covers without interference. Further, the basewasher in this kit has been counter bored to allow the seal to fit inside the basewasher which increases the retainer to seal clearance for higher lift cams. The retainers in this kit are designed using the latest CAD software available. The retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

## Valve Spring Kit • O. E. M. Replacement

	KPMI P/N	Type	Kit Includes							
			H. T. Steel Retainers	H. T. Steel Keepers Pr.		CrSi Valve Springs		H. T. Steel Basewashers		
	20-20430	Intake	4	20-20431	4	20-20434	4	20-20432	4	20-20433
		Exhaust								
Max Valve Lift	Installed Height	Seat Pressure		Open Pressure		@ Lift				
.415"	1.375"	129#		272#		.415"				

All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance. All components are the quality you can expect from KPMI®, manufactured to exact O.E.M. dimensions. These O.E.M. replacements parts may be purchased separately using the above part numbers.

## Valves • Black Diamond™ • Black Nitroeng Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
	20-4257	Intake	1.750"	44.45mm	0.3765"	R0.234	23°	3.800"
20-4195	Exhaust	1.750"	44.45mm	0.3760"	R0.234	29°	3.820"	OEM18082-57

## Valve Guides • C630 Bronze • Cast Iron

	A	B	C	D	E	F	G	Intake	
	0.450"	0.540"	0.810"	1.340"	0.745"	0.3760"	0.5650" / Std.	C630 Bronze	Cast Iron
							+0.001"	20-2020	20-2020C
							+0.002"	20-2021	20-2021C
							+0.003"	20-2022	20-2022C
							+0.004"	20-2023	20-2023C
							+0.006"	20-2024	20-2024C
							+0.008"	20-2026	20-2026C
							+0.010"	20-2028	20-2028C
							+0.025"	20-2029	20-2029C
	A	B	C	D	E	F	G	Exhaust	
	0.450"	0.540"	0.810"	1.340"	0.745"	0.3760"	0.5650" / Std.	20-2030	20-2030C
							+0.001"	20-2031	20-2031C
							+0.002"	20-2032	20-2032C
							+0.003"	20-2033	20-2033C
							+0.004"	20-2034	20-2034C
							+0.006"	20-2036	20-2036C
							+0.008"	20-2038	20-2038C
							+0.010"	20-2039	20-2039C
							+0.025"	20-30HS	20-30HSC

For sizing KPMI® Cast Iron Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.69-71).

## Wrist Pin Bushings • High Performance • C630 Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-0645	C630 Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)



# HD® PANHEAD™ 1948-1965

HARLEY-DAVIDSON

## Valve Guides • Manganese Bronze

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>Intake</b>	<b>Exhaust</b>	
	0.375"	0.465"	0.885"	1.435"	0.745"	0.3760"	0.5650" / Std.	20-2020M	20-2030M	
								+0.001"	20-2021M	20-2031M
								+0.002"	20-2022M	20-2032M
								+0.003"	20-2023M	20-2033M
								+0.004"	20-2024M	20-2034M
								+0.006"	20-2026M	20-2036M
								+0.008"	20-2028M	20-2038M
								+0.010"	20-2029M	20-2039M
								+0.025"	20-20HSM	20-30HSM

For sizing KPMI® Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.70-73).

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
3/8"	0.516"	0.661"	5	A	B	C	D	Intake
				0.562"±0.002"	---	---	0.375"	Exhaust
			<b>Part Number</b>				<b>Quantity</b>	<b>Quantity Discount</b>
			71011-4				Pkg. of 4	0%
			71011-8				Pkg. of 8	0%
			71011-16				Pkg. of 16	Less- 10%
			71011-50				Pkg. of 50	Less- 15%
			71011-100				Pkg. of 100	Less- 20%

## Valve Guide Seals • PC Style

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
3/8"	0.518"	0.650"	6	A	B	C	D	Intake
				0.562"±0.002"	---	---	0.375"	Exhaust
			<b>Part Number</b>				<b>Quantity</b>	<b>Quantity Discount</b>
			71002-4				Pkg. of 4	0%
			71002-8				Pkg. of 8	0%
			71002-16				Pkg. of 16	Less- 10%
			71002-50				Pkg. of 50	Less- 15%
			71002-100				Pkg. of 100	Less- 20%

## Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
3/8"	0.375"	0.660"	7	A	B	C	D	Intake
				0.562"±0.002"	---	---	0.315"	Exhaust
			<b>Part Number</b>				<b>Quantity</b>	<b>Quantity Discount</b>
			71035-4				Pkg. of 4	0%
			71035-8				Pkg. of 8	0%
			71035-16				Pkg. of 16	Less- 10%
			71035-50				Pkg. of 50	Less- 15%
			71035-100				Pkg. of 100	Less- 20%

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.70-73).

## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-20570	660 Bearing Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 2
	20-20572	660 Bearing Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 2
	20-20580	660 Bearing Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1
	20-20582	660 Bearing Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 1

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

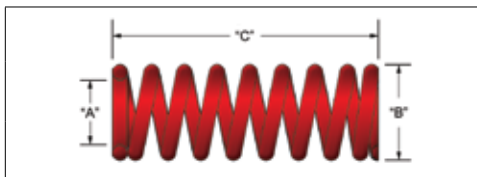
**ORDER 650-557-2046**

# HD® PANHEAD™ 1948-1965



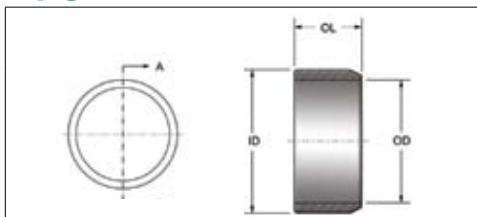
HARLEY-DAVIDSON

## Clutch Springs



KPMI P/N	Description	A	B	C	Quantity
<b>20-0788</b>	Replace 38075-41	0.468"	0.685"	1.488"	Pkg. of 10
Manufactured from high quality chrome silicon wire, they are designed to supply 20% more plate load than stock springs.					

## Spigot • Exhaust • 6061-T6 Aluminum



KPMI P/N	Type	Material	O. D.	I. D.	O. L.	Quantity
<b>20-2104</b>	Exhaust	6061-T6 aluminum	2.060"	1.765"	0.970"	Pkg. of 1
Kibblewhite®'s replacement exhaust spigot has been designed and machined from 6061-T6 aluminum extruded tubing. This spigot allows you to rebuild the exhaust attachment point on your classic Panhead engine.						

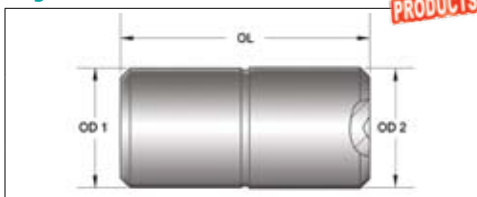
## Recommended Valve Seats • Powdered Metal



KPMI P/N	Type	O. D.		I. D.		Height		Quantity
<b>10-SC510</b>	Intake	2.007"	50.98mm	1.562"	39.67mm	0.450"	11.43mm	Pkg. of 1
KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.								

## Cylinder Dowels • Steel

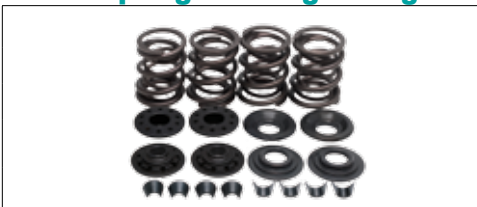
**NEW PRODUCTS**



KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
<b>83240-4</b>	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.73)							

# HD® SPORTSTER™ 1957-1969

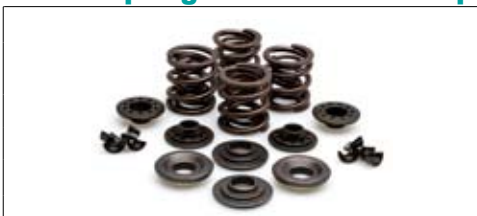
## Valve Spring Kit • Lightweight Racing



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
<b>20-2210</b>	Intake	.480"	1.310"	158#	340#	.480"
	Exhaust					
<b>Kit Includes</b>		4	H. T. Steel Retainers	4	H. T. Steel Keepers Pr.	
		4	CrSi Valve Springs	4	H. T. Steel Basewashers	

Longer KPMI 'R' model valves, 20-4167 (int.) and 20-4168(ex.) may be required to achieve correct installed height for this spring kit. Rockers should clear covers when kit is installed correctly.

## Valve Spring Kit • O. E. M. Replacement



KPMI P/N	Type	Kit Includes							
		H. T. Steel Retainers		H. T. Steel Keepers Pr.		CrSi Valve Springs		H. T. Steel Basewashers	
<b>20-20440</b>	Intake	4	<b>20-20441</b>	4	<b>20-4275</b>	4	<b>20-2215</b>	4	<b>20-20085</b>
	Exhaust								
<b>Max Valve Lift</b>		<b>Installed Height</b>		<b>Seat Pressure</b>		<b>Open Pressure</b>		<b>@ Lift</b>	
.400"		1.245"		95#		330#		.400"	

All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance. All components are the quality you can expect from KPMI®, manufactured to exact O.E.M. dimensions. These O.E.M. replacements parts may be purchased separately using the above part numbers.

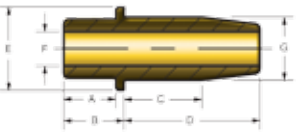

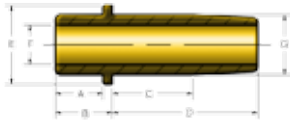

**VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)**



# HD® SPORTSTER™ 1957-1969


HARLEY-DAVIDSON

## Valve Guides • C630 Bronze • Cast Iron


		A	B	C	D	E	F	G	Intake	
		0.470"	0.545"	0.700"	1.225"	0.745"	0.3085"	0.5650" / Std.	C630 Bronze	Cast Iron
								+0.001"	20-2320	20-2320C
								+0.002"	20-2321	20-2321C
								+0.010"	20-2322	20-2322C
									20-2329	20-2329C
		A	B	C	D	E	F	G	Exhaust	
		0.470"	0.545"	0.600"	1.225"	0.745"	0.3375"	0.5650" / Std.	C630 Bronze	Cast Iron
								+0.001"	20-2330	20-2330C
								+0.002"	20-2331	20-2331C
								+0.010"	20-2332	20-2332C
									20-2339	20-2339C

For sizing KPMI® Cast Iron Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.69-71).

## Valves • Black Diamond™ • Black Nitroreg Stems

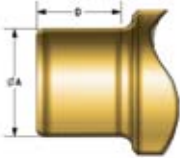

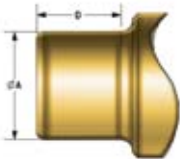

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
			1.825"	46.36mm		Radius	Angle		
	20-4258	Intake	1.825"	46.36mm	0.3090"	R0.375	23°	3.562"	OEM18071-58
	20-4197	Exhaust	1.570"	39.88mm	0.3384"	R0.236	29°	3.512"	OEM18080-58R
	20-4197-1	Exhaust	1.630"	41.40mm	0.3384"	R0.236	29°	3.512"	Oversize

## Valve Seats • Powdered Metal

	KPMI P/N	Type	O. D.		I. D.		Height		Quantity
	10-SC541	Intake	2.132"	54.15mm	1.690"	42.93mm	0.450"	11.43mm	Pkg. of 1
	10-SC446	Exhaust	1.757"	44.62mm	1.375"	35.00mm	0.450"	11.43mm	Pkg. of 1

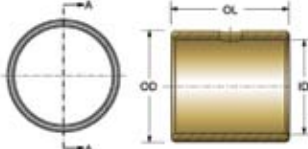
KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.

## Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.375"	0.630"	7	A	B	C	D	Intake
				0.530"±0.002"	---	---	0.295"	Exhaust
		Part Number		Quantity		Quantity Discount		
		71033-4		Pkg. of 4		0%		
		71033-8		Pkg. of 8		0%		
		71033-16		Pkg. of 16		Less- 10%		
		71033-50		Pkg. of 50		Less- 15%		
71033-100		Pkg. of 100		Less- 20%				
Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
11/32"	0.375"	0.630"	7	A	B	C	D	Intake
				0.530"±0.002"	---	---	0.295"	Exhaust
		Part Number		Quantity		Quantity Discount		
		71034-4		Pkg. of 4		0%		
		71034-8		Pkg. of 8		0%		
		71034-16		Pkg. of 16		Less- 10%		
		71034-50		Pkg. of 50		Less- 15%		
71034-100		Pkg. of 100		Less- 20%				

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.70-73).

## Rocker Arm Bushings • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-2106	660 Bearing Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

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**ORDER 650-557-2046**

# HD<sup>®</sup> SPORTSTER™ 1957-1969



## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	<a href="#">20-20810</a>	660 Bearing Bronze	0.897"	0.788"	0.945"	Standard	Pkg. of 1
	<a href="#">20-20812</a>	660 Bearing Bronze	0.899"	0.788"	0.945"	+0.002"	Pkg. of 1

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Wrist Pin Bushings • High Performance • C630 Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	<a href="#">20-0644</a>	C630 Bronze	0.897"	0.788"	0.945"	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

# HD<sup>®</sup> SPORTSTER™ 1970-1983

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<a href="#">20-2210</a>	Intake	.480"	1.310"	158#	340#	.480"
		Exhaust					
	<b>Kit Includes</b>			4	H. T. Steel Retainers	4	H. T. Steel Keepers Pr.
			4	CrSi Valve Springs	4	H. T. Steel Basewashers	

Longer KPMI 'R' model valves, 20-4167 (int.) and 20-4168(ex.) may be required to achieve correct installed height for this spring kit. Rockers should clear covers when kit is installed correctly. Retainers manufactured from heat treated, aircraft quality, steel billet. FEA stress analysis used to incorporate unique concave radius, and design equidistant holes to lighten retainer without sacrificing strength. Black Oxide treatment applied to resist corrosion.

## Valve Spring Kit • O. E. M. Replacement

	KPMI P/N	Type	Kit Includes							
			H. T. Steel Retainers		H. T. Steel Keepers Pr.		CrSi Valve Springs		H. T. Steel Basewashers	
	<a href="#">20-20440</a>	Intake	4	<a href="#">20-20441</a>	4	<a href="#">20-4275</a>	4	<a href="#">20-2215</a>	4	<a href="#">20-20085</a>
		Exhaust								
	<b>Max Valve Lift</b>		<b>Installed Height</b>		<b>Seat Pressure</b>		<b>Open Pressure</b>		<b>@ Lift</b>	
.400"		1.245"		95#		330#		.400"		

All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance. All components are the quality you can expect from KPMI®, manufactured to exact O.E.M. dimensions. These O.E.M. replacements parts may be purchased separately using the above part numbers.

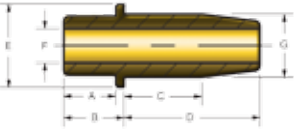

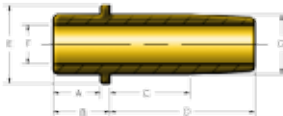

## Valves • Black Diamond™ • Black Nitroleg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	<a href="#">20-4196</a>	Intake	1.935"	49.15mm	0.3090"	R0.256	23°	3.620"	OEM18070-70
	<a href="#">20-4167</a>	Intake	1.950"	49.53mm	0.3090"	R0.256	23°	3.690"	OEM18069-65R
	<a href="#">20-4196-1</a>	Intake	2.000"	50.80mm	0.3090"	R0.256	23°	3.620"	Oversize
	<a href="#">20-4197</a>	Exhaust	1.570"	39.88mm	0.3384"	R0.236	29°	3.512"	OEM18080-58R
<a href="#">20-4197-1</a>	Exhaust	1.630"	41.40mm	0.3384"	R0.236	29°	3.512"	Oversize	
<a href="#">20-4168</a>	Exhaust	1.750"	44.45mm	0.3384"	R0.236	29°	3.620"	OEM18080-70R	




# HD<sup>®</sup> SPORTSTER™ 1970-1983

## Valve Guides • C630 Bronze • Cast Iron

		A	B	C	D	E	F	G	Intake	
		0.470"	0.545"	0.700"	1.225"	0.745"	0.3085"	0.5650" / Std.	C630 Bronze	Cast Iron
								+0.001"	20-2320	20-2320C
								+0.002"	20-2321	20-2321C
								+0.010"	20-2322	20-2322C
								+0.010"	20-2329	20-2329C
		A	B	C	D	E	F	G	Exhaust	
		0.470"	0.545"	0.600"	1.225"	0.745"	0.3375"	0.5650" / Std.	C630 Bronze	Cast Iron
								+0.001"	20-2330	20-2330C
								+0.002"	20-2331	20-2331C
								+0.010"	20-2332	20-2332C
								+0.010"	20-2339	20-2339C

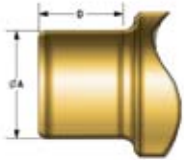

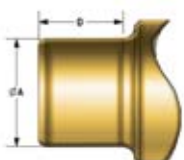

For sizing KPMI<sup>®</sup> Cast Iron Valve Guides please use Reamers and Ball Hones listed in HD<sup>®</sup> Tool section (Pg.69-71).

## Valve Seats • Powdered Metal

	KPMI P/N	Type	O. D.		I. D.		Height		Quantity
	10-SC541	Intake	2.132"	54.15mm	1.690"	42.93mm	0.450"	11.43mm	Pkg. of 1
	10-SC446	Exhaust	1.757"	44.62mm	1.375"	35.00mm	0.450"	11.43mm	Pkg. of 1

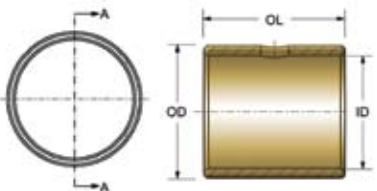
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## Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.375"	0.630"	7	0.530"±0.002"	---	---	0.295"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71033-4	Pkg. of 4	0%		
				71033-8	Pkg. of 8	0%		
				71033-16	Pkg. of 16	Less- 10%		
				71033-50	Pkg. of 50	Less- 15%		
				71033-100	Pkg. of 100	Less- 20%		
Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
11/32"	0.375"	0.630"	7	0.530"±0.002"	---	---	0.295"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71034-4	Pkg. of 4	0%		
				71034-8	Pkg. of 8	0%		
				71034-16	Pkg. of 16	Less- 10%		
				71034-50	Pkg. of 50	Less- 15%		
				71034-100	Pkg. of 100	Less- 20%		

Please use KPMI<sup>®</sup> installation tools and protectors listed in HD<sup>®</sup> Tool section (Pg.70-73).

## Rocker Arm Bushings • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
		20-2106	660 Bearing Bronze	0.6795"	0.548"	1.065"



# HD® SPORTSTER™ 1970-1983



## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze For Sportster 1957-1983

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-20810	660 Bearing Bronze	0.897"	0.788"	0.945"	Standard	Pkg. of 1
	20-20812	660 Bearing Bronze	0.899"	0.788"	0.945"	+0.002"	Pkg. of 1

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Wrist Pin Bushings • High Performance • C630 Bronze For Ironhead Sportster 1957-1983

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-0644	C630 Bronze	0.897"	0.788"	0.945"	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

## Clutch Springs

	KPMI P/N	Description	O. D.	I. D.	Free Length	Quantity
	20-0787	Replaces 38075-68 Dual Spring	2.520"	3.090"	2.630"	Pkg. of 1

Manufactured from high quality chrome silicon wire, spring is designed to supply 20% more plate load than stock.

# HD® SHOVELHEAD™ 74" 1966-1977

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-2110	Intake	.600"	1.510"	152#	387#	.600"
		Exhaust					
	Kit Includes		4	H.A. 7075-T6 Retainers	4	H. T. Steel Keepers Pr.	
			4	CrSi Valve Springs	4	H. T. Steel Basewashers	

Retainer offset 0.070" for taller installed height. Basewashers counter-bored to accept a 0.665" OD seal

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-20450	Intake	.600"	1.510"	152#	387#	.600"
		Exhaust					
	Kit Includes		4	H. T. Steel Retainers	4	H. T. Steel Keepers Pr.	
			4	CrSi Valve Springs	4	H. T. Steel Basewashers	

All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.



# HD® SHOVELHEAD™ 74" 1966-1977

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## Valve Spring Kit • O. E. M. Replacement

	KPMI P/N	Type	Kit Includes							
			H. T. Steel Retainers		H. T. Steel Keepers Pr.		CrSi Valve Springs		H. T. Steel Basewashers	
	20-20435	Intake	4	20-20436	4	20-20439	4	20-20437	4	20-20438
		Exhaust								
Max Valve Lift	Installed Height	Seat Pressure		Open Pressure		@ Lift				
.415"	1.375"	129#		272#		.415"				

All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance. All components are the quality you can expect from KPMI®, manufactured to exact O.E.M. dimensions. These O.E.M. replacement parts may be purchased separately using the above part numbers.

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	Same as Sifton P/N
	20-2000	Intake	.600"	1.510"	152#	387#	.600"	3030
		Exhaust						
	Outer Spring ID			Inner Spring ID			Solid Height	
	1.249"			0.975"			0.850"	
Kit Includes		4	CrSi Valve Springs					

Achieving the recommended installation height may require KPMI® retainer 20-4248, which is offset 0.070" compared to OEM.

## Retainer Set • O.E.M. Replacement • H. A. Aluminium

	KPMI P/N	Type	Material	I/ Spring Retainer Ø	O/ Spring Retainer Ø	Taper Angle	Quantity
	20-4248	Intake	H. A. Aluminium	0.975"	1.255"	15°	Pkg. of 4
		Exhaust					

This retainer is offset 0.070" when compared to OEM.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	20-4194	Intake	1.950"	49.53mm	0.3765"	R0.234	23°	3.885"	OEM18078-80
	20-4256	Intake	2.000"	50.80mm	0.3765"	R0.234	23°	3.885"	Oversize
	20-4195	Exhaust	1.750"	44.45mm	0.3760"	R0.234	29°	3.810"	OEM18082-57
	20-4195S	Exhaust	1.780"	45.21mm	0.3760"	R0.234	29°	3.820"	Oversize
20-4195-1	Exhaust	1.8120"	46.02mm	0.3760"	R0.234	29°	3.820"	Oversize	


For all the applications available for Kibblewhite's Harley® line of products, please refer online to the Harley-Davidson® section of the [www.kpmi.us](http://www.kpmi.us) website, under **V-Twin / Cruiser**.

# HD® SHOVELHEAD™ 74" 1966-1977

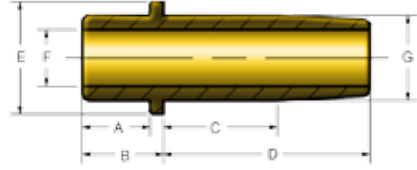



HARLEY-DAVIDSON

## Black Diamond™ Valves • Fat Stem • Black Nitroreg Stems

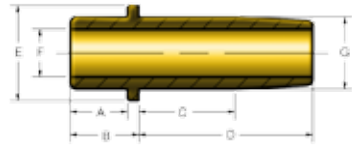
	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	<b>20-4294</b>	Intake	1.950"	49.53mm	0.3780"	R0.234	23°	3.885"	OEM18075-8
	<b>20-4295</b>	Exhaust	1.750"	44.45mm	0.3775"	R0.234	29°	3.810"	Standard

## Valve Guides • C630 Bronze • Cast Iron

	A	B	C	D	E	F	G	Intake	
								C630 Bronze	Cast Iron
	0.450"	0.540"	0.810"	1.340"	0.745"	0.3760"	0.5650" / Std.	<b>20-2020</b>	<b>20-2020C</b>
							+0.001"	<b>20-2021</b>	<b>20-2021C</b>
							+0.002"	<b>20-2022</b>	<b>20-2022C</b>
							+0.003"	<b>20-2023</b>	<b>20-2023C</b>
							+0.004"	<b>20-2024</b>	<b>20-2024C</b>
							+0.006"	<b>20-2026</b>	<b>20-2026C</b>
							+0.008"	<b>20-2028</b>	<b>20-2028C</b>
							+0.010"	<b>20-2029</b>	<b>20-2029C</b>
							+0.025"	<b>20-20HS</b>	<b>20-20HSC</b>
	A	B	C	D	E	F	G	Exhaust	
								C630 Bronze	Cast Iron
	0.450"	0.540"	0.810"	1.340"	0.745"	0.3760"	0.5650" / Std.	<b>20-2030</b>	<b>20-2030C</b>
							+0.001"	<b>20-2031</b>	<b>20-2031C</b>
							+0.002"	<b>20-2032</b>	<b>20-2032C</b>
							+0.003"	<b>20-2033</b>	<b>20-2033C</b>
							+0.004"	<b>20-2034</b>	<b>20-2034C</b>
							+0.006"	<b>20-2036</b>	<b>20-2036C</b>
							+0.008"	<b>20-2038</b>	<b>20-2038C</b>
							+0.010"	<b>20-2039</b>	<b>20-2039C</b>
							+0.025"	<b>20-30HS</b>	<b>20-30HSC</b>

For sizing KPMI® Cast Iron Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.69-71).

## Valve Guides • Manganese Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
		0.375"	0.465"	0.885"	1.435"	0.745"	0.3760"	0.5650" / Std.	<b>20-2020M</b>
							+0.001"	<b>20-2021M</b>	<b>20-2031M</b>
							+0.002"	<b>20-2022M</b>	<b>20-2032M</b>
							+0.003"	<b>20-2023M</b>	<b>20-2033M</b>
							+0.004"	<b>20-2024M</b>	<b>20-2034M</b>
							+0.006"	<b>20-2026M</b>	<b>20-2036M</b>
							+0.008"	<b>20-2028M</b>	<b>20-2038M</b>
							+0.010"	<b>20-2029M</b>	<b>20-2039M</b>
							+0.025"	<b>20-20HSM</b>	<b>20-30HSM</b>


For sizing KPMI® Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.70-73).



# HD® SHOVELHEAD™ 74" 1966-1977


HARLEY-DAVIDSON

## Valve Guide Seals • O.E.M. Replacement


Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
3/8"	0.375"	0.660"	7	A	B	C	D	Intake
				0.562"±0.002"	---	---	0.315"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71035-4		Pkg. of 4	0%	
				71035-8		Pkg. of 8	0%	
				71035-16		Pkg. of 16	Less- 10%	
				71035-50		Pkg. of 50	Less- 15%	
				71035-100		Pkg. of 100	Less- 20%	

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.70-73).

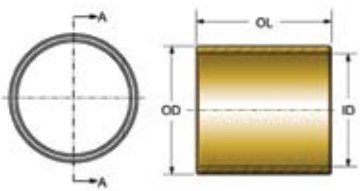
## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
3/8"	0.516"	0.661"	5	A	B	C	D	Intake
				0.562"±0.002"	---	---	0.375"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71011-4		Pkg. of 4	0%	
				71011-8		Pkg. of 8	0%	
				71011-16		Pkg. of 16	Less- 10%	
				71011-50		Pkg. of 50	Less- 15%	
				71011-100		Pkg. of 100	Less- 20%	

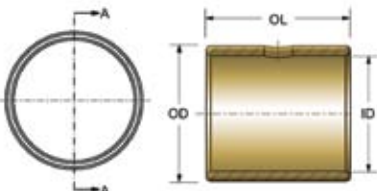
## Valve Guide Seals • PC Style

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
3/8"	0.518"	0.650"	6	A	B	C	D	Intake
				0.562"±0.002"	---	---	0.375"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71002-4		Pkg. of 4	0%	
				71002-8		Pkg. of 8	0%	
				71002-16		Pkg. of 16	Less- 10%	
				71002-50		Pkg. of 50	Less- 15%	
				71002-100		Pkg. of 100	Less- 20%	

## Kicker Shaft Bushings & Seal

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-2107	Bronze	0.9355"	0.741"	1.105"	Standard	2 Bushings & 1 O-Ring
	20-2108	Bronze	0.9405"	0.741"	1.105"	+0.005"	2 Bushings & 1 O-Ring

## Rocker Arm Bushings • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-2106	660 Bearing Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

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# HD® SHOVELHEAD™ 74" 1966-1977



## Wrist Pin Bushings • High Performance • Nickel Bronze Alloy

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	<b>20-0645</b>	C630 Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	<b>20-20570</b>	660 Bearing Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 2
	<b>20-20572</b>	660 Bearing Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 2
	<b>20-20580</b>	660 Bearing Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1
	<b>20-20582</b>	660 Bearing Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 1

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Valve Seats • Powdered Metal

	KPMI P/N	Type	O. D.		I. D.		Height		Quantity
	<b>10-SC550</b>	Intake	54.97mm	2.164"	44.45mm	1.750"	11.43mm	0.450"	Pkg. of 1
	<b>10-SC523</b>	Exhaust	52.32mm	2.060"	39.67mm	1.562"	11.43mm	0.450"	Pkg. of 1

KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.

## Clutch Springs

	KPMI P/N	Description	A	B	C	Quantity
	<b>20-0789</b>	Replace 38075-68	0.439"	0.629"	1.718"	Pkg. of 10

Manufactured from high quality chrome silicon wire, they are designed to supply 20% more plate load than stock springs.

## Cylinder Dowels • Steel

	KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
	<b>83240-4</b>	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.73)



# HD® SHOVELHEAD™ 80" 1978-1983

HARLEY-DAVIDSON

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-21100	Intake	.600"	1.510"	152#	387#	.600"	
		Exhaust						
	Kit Includes			4	H.A. 7075-T6 Retainers	4	H. T. Steel Keepers Pr.	
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
*20-21150	Intake	.600"	1.510"	152#	387#	.600"		
	Exhaust							
Kit Includes			4	H. T. Steel Retainers	4	H. T. Steel Keepers Pr.		
Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Basewashers		

\*All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance. Retainer offset 0.070" for taller installed height. Basewashers counter-bored to accept a 0.720" OD seal. Basewasher fits over 0.625" guide top.

## Valve Spring Kit • O. E. M. Replacement

	KPMI P/N	Type	Kit Includes							
			H. T. Steel Retainers	H. T. Steel Keepers Pr.	CrSi Valve Springs	H. T. Steel Basewashers				
	20-20850	Intake	4	20-20851	4	20-20857	4	20-20853	4	20-20855
		Exhaust								
	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift					
.415"	1.375"	129#	272#	.415"						

All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance. All components are the quality you can expect from KPMI®, manufactured to exact O.E.M. dimensions. These O.E.M. replacements parts may be purchased separately using the above part numbers.

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	Same as Sifton P/N
	20-2000	Intake	.600"	1.510"	152#	387#	.600"	3030
		Exhaust						
	Outer Spring ID			Inner Spring ID			Solid Height	
	1.249"			0.975"			0.850"	
Kit Includes		4	CrSi Valve Springs					

Achieving the recommended installation height may require KPMI® retainer 20-4248, which is offset 0.070" compared to OEM.

## Retainer Set • O.E.M. Replacement • H. A. Aluminium

	KPMI P/N	Type	Material	I/ Spring Retainer Ø	O/ Spring Retainer Ø	Taper Angle	Quantity
	20-4248	Intake	H. A. Aluminium	0.975"	1.255"	15°	Pkg. of 4
		Exhaust					

This retainer is offset 0.070" when compared to OEM.


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# HD® SHOVELHEAD™ 80" 1978-1983




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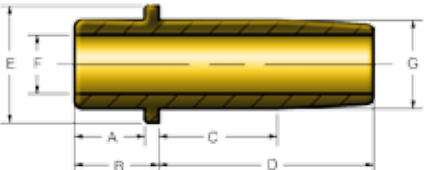

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	<a href="#">20-4194</a>	Intake	1.950"	49.53mm	0.3765"	R0.234	23°	3.885"	OEM18078-80
	<a href="#">20-4256</a>	Intake	2.000"	50.80mm	0.3765"	R0.234	23°	3.885"	Oversize
	<a href="#">20-4195</a>	Exhaust	1.750"	44.45mm	0.3760"	R0.234	29°	3.810"	OEM18082-57
	<a href="#">20-4195S</a>	Exhaust	1.780"	45.21mm	0.3760"	R0.234	29°	3.820"	Oversize
	<a href="#">20-4195-1</a>	Exhaust	1.8120"	46.02mm	0.3760"	R0.234	29°	3.820"	Oversize

## Valves • Black Diamond™ Valves • Fat Stem • Black Nitroreg Stems

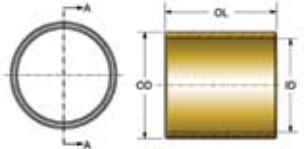
	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	<a href="#">20-4294</a>	Intake	1.950"	49.53mm	0.3780"	R0.234	23°	3.885"	OEM18075-81
	<a href="#">20-4295</a>	Exhaust	1.750"	44.45mm	0.3775"	R0.234	29°	3.810"	Standard

## Valve Guides • C630 Bronze • Cast Iron • Manganese Bronze

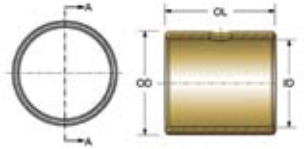
	A	B	C	D	E	F	G	Intake		
	0.450"	0.540"	0.755"	1.370"	0.745"	0.3745"	0.625" / Std.	C630 Bronze	Cast Iron	Manganese
							+0.001"	<a href="#">20-2050</a>	<a href="#">20-2050C</a>	<a href="#">20-2050M</a>
							+0.002"	<a href="#">20-2051</a>	<a href="#">20-2051C</a>	<a href="#">20-2051M</a>
							+0.003"	<a href="#">20-2052</a>	<a href="#">20-2052C</a>	<a href="#">20-2052M</a>
							+0.004"	<a href="#">20-2054</a>	<a href="#">20-2054C</a>	<a href="#">20-2054M</a>
							+0.005"	---	<a href="#">20-2055C</a>	---
							+0.006"	<a href="#">20-2056</a>	<a href="#">20-2056C</a>	<a href="#">20-2056M</a>
							+0.008"	---	<a href="#">20-2058C</a>	---
							+0.010"	---	<a href="#">20-2059C</a>	---
							+0.025"	<a href="#">20-50HS</a>	<a href="#">20-50HSC</a>	<a href="#">20-50HSM</a>
	A	B	C	D	E	F	G	Exhaust		
	0.450"	0.540"	0.755"	1.370"	0.745"	0.3745"	0.625" / Std.	<a href="#">20-2060</a>	<a href="#">20-2060C</a>	<a href="#">20-2060M</a>
							+0.001"	<a href="#">20-2061</a>	<a href="#">20-2061C</a>	<a href="#">20-2061M</a>
							+0.002"	<a href="#">20-2062</a>	<a href="#">20-2062C</a>	<a href="#">20-2062M</a>
							+0.003"	---	<a href="#">20-2063C</a>	---
							+0.004"	<a href="#">20-2064</a>	<a href="#">20-2064C</a>	<a href="#">20-2064M</a>
							+0.005"	---	<a href="#">20-2065C</a>	---
							+0.006"	<a href="#">20-2066</a>	<a href="#">20-2066C</a>	<a href="#">20-2066M</a>
							+0.008"	---	<a href="#">20-2068C</a>	---
							+0.010"	---	<a href="#">20-2069C</a>	---
							+0.025"	<a href="#">20-60HS</a>	<a href="#">20-60HSC</a>	<a href="#">20-60HSM</a>

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.70-73).

## Kicker Shaft Bushings & Seal

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	<a href="#">20-2107</a>	Bronze	0.9355"	0.741"	1.105"	Standard	2 Bushings & 1 O-Ring
	<a href="#">20-2108</a>	Bronze	0.9405"	0.741"	1.105"	+0.005"	2 Bushings & 1 O-Ring

## Rocker Arm Bushings • 660 Bearing Bronze


	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	<a href="#">20-2106</a>	660 Bearing Bronze	0.6795"	0.548"	1.065"	Pkg. of 8



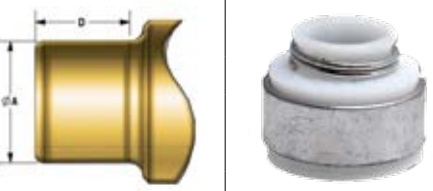
# HD® SHOVELHEAD™ 80" 1978-1983

HARLEY-DAVIDSON

## Valve Guide Seals • Viton®


Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
3/8"	0.516"	0.661"	5	A	B	C	D	Intake
				0.562"±0.002"	---	---	0.375"	Exhaust
		Part Number		Quantity		Quantity Discount		
		*71011-4		Pkg. of 4		0%		
		*71011-8		Pkg. of 8		0%		
		*71011-16		Pkg. of 16		Less- 10%		
		*71011-50		Pkg. of 50		Less- 15%		
		*71011-100		Pkg. of 100		Less- 20%		

## Valve Guide Seals • PC Style

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
3/8"	0.518"	0.650"	6	A	B	C	D	Intake
				0.562"±0.002"	---	---	0.375"	Exhaust
		Part Number		Quantity		Quantity Discount		
		*71002-4		Pkg. of 4		0%		
		*71002-8		Pkg. of 8		0%		
		*71002-16		Pkg. of 16		Less- 10%		
		*71002-50		Pkg. of 50		Less- 15%		
		*71002-100		Pkg. of 100		Less- 20%		

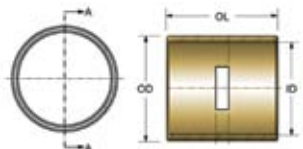
\*To use the above seals in this application, it is required to modify the guides with a 0.562" Ø x 3/8" Pilot seal cutter. Please refer to Goodson part number VSC-562375. [www.goodson.com](http://www.goodson.com)

## Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
3/8"	0.400"	0.720"	7	A	B	C	D	Intake
				0.625"±0.002"	---	---	0.310"	Exhaust
		Part Number		Quantity		Quantity Discount		
		71036-4		Pkg. of 4		0%		
		71036-8		Pkg. of 8		0%		
		71036-16		Pkg. of 16		Less- 10%		
		71036-50		Pkg. of 50		Less- 15%		
		71036-100		Pkg. of 100		Less- 20%		

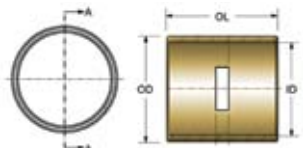
Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.70-73).

## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-20570	660 Bearing Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 2
	20-20572	660 Bearing Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 2
	20-20580	660 Bearing Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1
	20-20582	660 Bearing Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 1

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Wrist Pin Bushings • High Performance • C630 Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-0645	C630 Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.



# HD® SHOVELHEAD™ 80" 1978-1983



## Clutch Springs

	KPMI P/N	Description	A	B	C	Quantity
	<b>20-0789</b>	Replace 38075-68	0.439"	0.629"	1.718"	Pkg. of 10
Manufactured from high quality chrome silicon wire, they are designed to supply 20% more plate load than stock springs.						

## Valve Seats • Powdered Metal

	KPMI P/N	Type	O. D.		I. D.		Height		Quantity
	<b>10-SC550</b>	Intake	2.164"	54.97mm	1.750"	44.45mm	0.450"	11.43mm	Pkg. of 1
	<b>10-SC523</b>	Exhaust	2.060"	52.32mm	1.562"	39.67mm	0.450"	11.43mm	Pkg. of 1
KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.									

## Cylinder Dowels • Steel

**NEW PRODUCTS**

	KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
	<b>83240-4</b>	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.73)								

# HD® EVOLUTION™ 1984-1999

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>20-20122</b>	Intake	.600"	1.810"	175#	380#	.600"
		Exhaust					
	<b>Kit Includes</b>			4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.
			4	Titanium Retainers	4	H. T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>*20-20132</b>	Intake	.600"	1.810"	175#	380#	.600"
		Exhaust					
	<b>Kit Includes</b>			4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.
			4	H. T. Steel Retainers	4	H. T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>20-20060</b>	Intake	.655"	1.865"	190#	465#	.655"
		Exhaust					
	<b>Kit Includes</b>			4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.
			4	Titanium Retainers	4	H. T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>*20-20081</b>	Intake	.655"	1.860"	185#	450#	.655"
		Exhaust					
	<b>Kit Includes</b>			4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.
			4	H. T. Steel Retainers	4	H. T. Steel Basewashers	

\* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.




# HD® EVOLUTION™ 1984-1999

HARLEY-DAVIDSON


## Valve Spring Kit • "High Performance" Ovate Wire Beehive

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-21300	Intake	.610"	1.860"	175#	400#	.610"
		Exhaust					
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers
			4	H. T. Steel Keeper (OEM Style)	4	H. T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-21500	Intake	.660"	1.860"	178#	371#	.660"
		Exhaust					
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers
			4	H. T. Steel Keepers (9° Degree Taper)	4	H. T. Steel Basewashers	


## Dual Spring Kit • Lightweight Racing

**NEW PRODUCTS**


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21650	Intake	.650"	1.860"	185#	440#	.650"	VSK650S
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers	
			4	H. T. Steel Keepers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21600	Intake	.675"	1.860"	185#	450#	.675"	Steel Retainer Version of VSK675T
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers	
			4	H. T. Steel Keepers	4	H. T. Steel Basewashers		

## Valves • Black Diamond™ • Black Nitroreg Stems

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip		O. L.	Remarks	
					Radius	Angle			
	20-4171	Intake	1.840"	46.74mm	0.3100"	R0.236	23°	4.445"	OEM18074-83B
	20-20900	Intake	2.150"	54.61mm	0.3108"	R0.550	24°	4.480"	AV&V# AV2150
	20-20905	Intake	1.990"	50.55mm	0.3108"	R0.675	25°	4.440"	AV&V# AV1990
	20-20910	Intake	1.940"	49.28mm	0.3108"	R0.675	25°	4.440"	AV&V# AV1940
	20-20915	Intake	1.900"	48.26mm	0.3108"	R0.675	25°	4.440"	AV&V# AV1900
	20-20955	Intake	2.100"	53.34mm	0.3108"	R0.560	24°	4.475"	AV&V# AV2100
	20-20990	Intake	2.020"	51.31mm	0.3108"	R0.670	25°	4.440"	AV&V# AV2020A
	20-20965	Intake	2.020"	51.31mm	0.3108"	R0.645	25°	4.510"	AV&V# AV2020S
	20-4170	Exhaust	1.615"	41.02mm	0.3096"	R0.236	29°	4.525"	OEM18082-83
	20-20920	Exhaust	1.650"	41.91mm	0.3106"	R0.750	25°	4.515"	AV&V# AV1650
	20-20925	Exhaust	1.610"	40.89mm	0.3106"	R0.750	25°	4.510"	AV&V# AV1610D
	20-20930	Exhaust	1.585"	40.26mm	0.3106"	R0.750	25°	4.505"	AV&V# AV1585
	20-20960	Exhaust	1.700"	43.18mm	0.3106"	R0.600	25°	4.535"	AV&V# AV1700A
	20-20970	Exhaust	1.610"	40.89mm	0.3106"	R0.750	25°	4.565"	AV&V# AV1610S

## Valves • Black Diamond™ • Specially Designed for HD Racing Applications

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip		O. L.	Remarks		
					Radius	Angle				
	20-4169	In	Black Diamond™	1.940"	49.28mm	0.3100"	R0.234	23°	4.400"	Branch Heads
	20-20108	In	Black Diamond™	2.000"	50.80mm	0.3100"	R0.234	23°	4.445"	STD Heads
	20-4171R	In	Black Diamond™	1.900"	48.26mm	0.3100"	R0.344	28°	4.420"	Racing Profile
	20-B101	Ex	Black Diamond™	1.615"	41.02mm	0.3096"	R0.325	RO1.625	4.460"	Branch Heads
	20-4170R	Ex	Black Diamond™	1.630"	41.40mm	0.3096"	R0.500	40°	4.525"	Racing Profile
20-4170S	Ex	Black Diamond™	1.750"	44.45mm	0.3095"	R0.236	24°	4.480"	STD Heads	

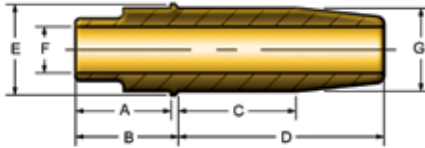
\* Custom sizes available, see **custom KPMI® Valve Order Form** at back of catalog. **Inconel®** is a high nickel content stainless steel classified as a "super alloy". It retains its mechanical properties at higher temps than other stainless materials. It also resists valve face pitting and recession in performance applications with unleaded and exotic fuels to a greater degree than other stainless materials. It is an excellent choice for turbocharged and nitrous applications.

**ORDER 650-557-2046**


# HD® EVOLUTION™ 1984-1999



## Valve Guides • C630 Bronze • Cast Iron • Manganese • Shouldered • .420" Seal Ø • Shortened for .600" Lift

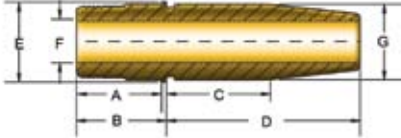
	A	B	C	D	E	F	G	Intake		
	0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5620" / Std.	C630 Bronze	Cast Iron	Manganese
							+0.001"	20-2120	20-2120C	20-2120M
							+0.002"	20-2121	20-2121C	20-2121M
							+0.003"	20-2122	20-2122C	20-2122M
							+0.004"	20-2123	20-2123C	20-2123M
							+0.010"	20-2124	20-2124C	20-2124M
								20-2129	20-2129C	20-2129M


	A	B	C	D	E	F	G	Exhaust		
	0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5620" / Std.	C630 Bronze	Cast Iron	Manganese
							+0.001"	20-2130	20-2130C	20-2130M
							+0.002"	20-2131	20-2131C	20-2131M
							+0.003"	20-2132	20-2132C	20-2132M
							+0.004"	20-2133	20-2133C	20-2133M
							+0.010"	20-2134	20-2134C	20-2134M
								20-2139	20-2139C	20-2139M

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.70-73).

## Valve Guides • Manganese Bronze • .530" Seal Ø • Shortened for .655" Lift NEW PRODUCTS

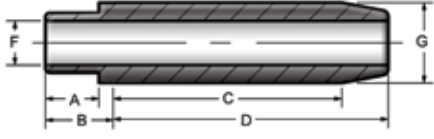
	A	B	C	D	E	F	G	Intake	Exhaust	AV&V#
		0.620"	0.665"	0.737"	1.435"	0.615"	0.3100"	0.5625" / Std.	20-20860M	
							+0.001"	20-20861M		VG5601
							+0.002"	20-20862M		VG5602
							+0.010"	20-20869M		VG5610


	A	B	C	D	E	F	G	Intake	Exhaust	AV&V#
	0.620"	0.665"	1.135"	1.435"	0.615"	0.3096"	0.5625" / Std.		20-20870M	VG5700
							+0.001"		20-20871M	VG5701
							+0.002"		20-20872M	VG5702
							+0.010"	20-20879M	20-20879M	VG5710

For sizing KPMI® Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.70-73).

## Valve Guides • O.E.M. Replacement • .420" Seal Ø

	A	B	C	D	E	F	G	Intake / Exhaust	
	0.375"	0.375"	1.700"	2.025"	---	0.3098"	0.5620" / Std.	C630 Bronze	Cast Iron
							+0.001"	20-4320	20-4320C
							+0.002"	20-4321	20-4321C
							+0.003"	20-4322	20-4322C
							+0.004"	20-4323	20-4323C
							+0.010"	20-4324	20-4324C
								20-4329	20-4329C

## Valve Seats • Powdered Metal

	KPMI P/N	Type	O. D.		I. D.		Height		Quantity
	10-SC500	Intake	1.969"	50.00mm	1.535"	39.00mm	0.453"	11.50mm	Pkg. of 1
	10-SC510	Intake	2.007"	50.98mm	1.562"	39.67mm	0.450"	11.43mm	Pkg. of 1
	10-SC541	Intake	2.132"	54.15mm	1.690"	42.93mm	0.450"	11.43mm	Pkg. of 1
	10-SC446	Exhaust	1.757"	44.62mm	1.375"	35.00mm	0.450"	11.43mm	Pkg. of 1

KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.



VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)




# HD® EVOLUTION™ 1984-1999

HARLEY-DAVIDSON

## Valve Guide Seals • Viton®


Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.412"	0.566"	5	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.275"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71010-4		Pkg. of 4	0%	
				71010-8		Pkg. of 8	0%	
				71010-16		Pkg. of 16	Less- 10%	
				71010-50		Pkg. of 50	Less- 15%	
				71010-100		Pkg. of 100	Less- 20%	
Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.514"	0.671"	5	A	B	C	D	Intake
				0.530"±0.002"	---	---	0.330"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71045-4		Pkg. of 4	0%	
				71045-8		Pkg. of 8	0%	
				71045-16		Pkg. of 16	Less- 10%	
				71045-50		Pkg. of 50	Less- 15%	
				71045-100		Pkg. of 100	Less- 20%	

## Valve Guide Seals • O.E.M. Replacement

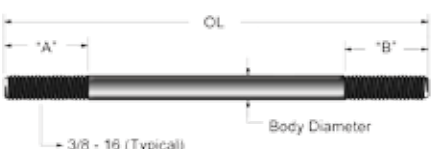
Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.385"	0.565"	7	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.315"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71032-4		Pkg. of 4	0%	
				71032-8		Pkg. of 8	0%	
				71032-16		Pkg. of 16	Less- 10%	
				71032-50		Pkg. of 50	Less- 15%	
				71032-100		Pkg. of 100	Less- 20%	

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.70-73).

## Valve Guide Seals • PC Style

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.517"	0.510"	6	A	B	C	D	Intake
				0.415"±0.005"	---	---	0.350"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71008-4		Pkg. of 4	0%	
				71008-8		Pkg. of 8	0%	
				71008-16		Pkg. of 16	Less- 10%	
				71008-50		Pkg. of 50	Less- 15%	
				71008-100		Pkg. of 100	Less- 20%	

## Cylinder Studs • H. T. Steel

	KPMI P/N	Material	O.L.	Body Dia.	A	B	Quantity	Repl. HD® OEM P/N
		20-2098	H. T. Steel	6.725"	0.370"	1.050"	1.100"	Pkg. of 8

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. Further, the case end thread is designed to have a slight interference fit to minimize distortion and maintain good thread contact during torque procedure. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

**ORDER 650-557-2046**

# HD® EVOLUTION™ 1984-1999



HARLEY-DAVIDSON

## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-20570	660 Bearing Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 2
	20-20572	660 Bearing Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 2
	20-20580	660 Bearing Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1
	20-20582	660 Bearing Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 1

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Wrist Pin Bushings • High Performance • C630 Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-0645	C630 Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

## Rocker Arm Bushings • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-2106	660 Bearing Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

## Keeper Set • O.E.M. Replacement

	KPMI P/N	Style	A	B	C	D	E	Quantity
	51014-4	Single Square Bead	0.310	7.0°	0.190"	0.380"	0.380"	4Pr.

The bead height is referenced from the minor diameter of the keeper to the center of the bead.

## Cylinder Dowels • Steel

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
	83070-4	Steel	0.5575"	0.375"	0.505"	Pkg. of 4	16573-83A

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.73)

## Cylinder Dowels • Steel

**NEW PRODUCTS**

	KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
	83240-4	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.73)

For all the applications available for Kibblewhite's Harley® line of products, please refer online to the Harley-Davidson® section of the [www.kpmi.us](http://www.kpmi.us) website, under **V-Twin / Cruiser**.



# HD® EVO SPORTSTER™ 883cc 1986-'03

HARLEY-DAVIDSON

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-20122	Intake	.600"	1.810"	175#	380#	.600"
		Exhaust					
	Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.	
		4	Titanium Retainers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	*20-20132	Intake	.600"	1.810"	175#	380#	.600"
		Exhaust					
	Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.	
		4	H. T. Steel Retainers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-20060	Intake	.655"	1.860"	190#	450#	.655"
		Exhaust					
	Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.	
		4	Titanium Retainers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	*20-20081	Intake	.655"	1.860"	185#	450#	.655"
		Exhaust					
	Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.	
		4	H. T. Steel Retainers	4	H. T. Steel Basewashers		

\* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

## Valve Spring Kit • "High Performance" Ovate Wire Beehive

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-21300	Intake	.610"	1.860"	175#	400#	.610"
		Exhaust					
	Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Retainers	
		4	H. T. Steel Keeper (OEM Style)	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-21500	Intake	.660"	1.860"	178#	371#	.660"
		Exhaust					
	Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Retainers	
		4	H. T. Steel Keepers (9° Degree Taper)	4	H. T. Steel Basewashers		

## Dual Spring Kit • Lightweight Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21650	Intake	.650"	1.860"	185#	440#	.650"	VSK650S
		Exhaust						
	Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Retainers		
		4	H. T. Steel Keepers	4	H. T. Steel Basewashers			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21600	Intake	.675"	1.860"	185#	450#	.675"	Steel Retainer Version of VSK675T
		Exhaust						
	Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Retainers		
		4	H. T. Steel Keepers	4	H. T. Steel Basewashers			


## Valves • Black Diamond™ • Black Nitroreg Stems For 883cc 1986-2003 Model

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip		O. L.	Remarks
	20-20090	Intake	1.585"	40.26mm	0.3100"	Radius		
						R0.250	23°	4.550"
20-20092	Exhaust	1.350"	34.29mm	0.3095"	R0.250	17°	4.640"	OEM18030-86

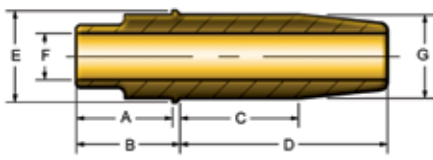
# HD® EVO SPORTSTER™ 883cc 1986-'03




## Valves • Black Diamond™ • Black Nitroreg Stems • Special Conversion Valves For 883cc / 1200cc 1986-'03 Model

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
						20-2010	Intake		
20-2012	Exhaust	1.480"	37.59mm	0.3096"	R0.500	40°	4.625"	Conversion Valve	

## Valve Guides • C630 Bronze • Cast Iron • Manganese • Shouldered • .420" Seal Ø • Shortened for .600" Lift

	A	B	C	D	E	F	G	Intake		
	0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5620" / Std.	C630 Bronze	Cast Iron	Manganese
								+0.001"	20-2120	20-2120C
							+0.002"	20-2121	20-2121C	20-2121M
							+0.003"	20-2122	20-2122C	20-2122M
							+0.004"	20-2123	20-2123C	20-2123M
							+0.010"	20-2124	20-2124C	20-2124M
								20-2129	20-2129C	20-2129M

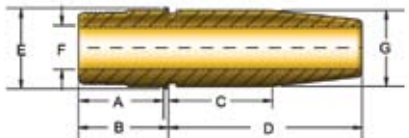
  

	A	B	C	D	E	F	G	Exhaust		
	0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5620" / Std.	20-2130	20-2130C	20-2130M
								+0.001"	20-2131	20-2131C
							+0.002"	20-2132	20-2132C	20-2132M
							+0.003"	20-2133	20-2133C	20-2133M
							+0.004"	20-2134	20-2134C	20-2134M
							+0.010"	20-2139	20-2139C	20-2139M


For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.70-73).

## Valve Guides • Manganese Bronze • .530" Seal Ø • Shortened for .655" Lift

**NEW PRODUCTS**

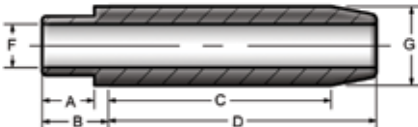
	A	B	C	D	E	F	G	Intake	Exhaust	AV&V#
	0.620"	0.665"	0.737"	1.435"	0.615"	0.3100"	0.5625" / Std.	20-20860M		VG5600
							+0.001"	20-20861M		VG5601
						+0.002"	20-20862M		VG5602	
						+0.010"	20-20869M		VG5610	

	A	B	C	D	E	F	G	Intake	Exhaust	AV&V#
	0.620"	0.665"	1.135"	1.435"	0.615"	0.3096"	0.5625" / Std.		20-20870M	VG5700
							+0.001"		20-20871M	VG5701
						+0.002"		20-20872M	VG5702	
						+0.010"		20-20879M	VG5710	

For sizing KPMI® Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.70-73).

## Valve Guides • C630 Bronze • Cast Iron • O.E.M. Replacement • .420" Seal Ø

	A	B	C	D	E	F	G	Intake / Exhaust	
	0.375"	0.375"	1.700"	2.025"	---	0.3098"	0.5620" / Std.	C630 Bronze	Cast Iron
								+0.001"	20-4320
							+0.002"	20-4321	20-4321C
							+0.003"	20-4322	20-4322C
							+0.004"	20-4323	20-4323C
							+0.010"	20-4324	20-4324C
								20-4329	20-4329C



# HD® EVO SPORTSTER™ 883cc 1986-'03

## Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.385"	0.565"	7	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.315"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71032-4		Pkg. of 4	0%	
				71032-8		Pkg. of 8	0%	
				71032-16		Pkg. of 16	Less- 10%	
				71032-50		Pkg. of 50	Less- 15%	
				71032-100		Pkg. of 100	Less- 20%	

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.70-73).

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.412"	0.566"	5	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.275"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71010-4		Pkg. of 4	0%	
				71010-8		Pkg. of 8	0%	
				71010-16		Pkg. of 16	Less- 10%	
				71010-50		Pkg. of 50	Less- 15%	
				71010-100		Pkg. of 100	Less- 20%	
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.514"	0.671"	5	A	B	C	D	Intake
				0.530"±0.002"	---	---	0.330"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71045-4		Pkg. of 4	0%	
				71045-8		Pkg. of 8	0%	
				71045-16		Pkg. of 16	Less- 10%	
				71045-50		Pkg. of 50	Less- 15%	
				71045-100		Pkg. of 100	Less- 20%	

## Valve Guide Seals • PC Style

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.517"	0.510"	6	A	B	C	D	Intake
				0.415"±0.005"	---	---	0.350"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71008-4		Pkg. of 4	0%	
				71008-8		Pkg. of 8	0%	
				71008-16		Pkg. of 16	Less- 10%	
				71008-50		Pkg. of 50	Less- 15%	
				71008-100		Pkg. of 100	Less- 20%	

## Rocker Arm Bushings • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
		20-2106	660 Bearing Bronze	0.6795"	0.548"	1.065"

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# HD® EVO SPORTSTER™ 883cc 1986-'03



## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-20810	660 Bearing Bronze	0.897"	0.788"	0.945"	Standard	Pkg. of 1
	20-20812	660 Bearing Bronze	0.899"	0.788"	0.945"	+0.002"	Pkg. of 1

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Wrist Pin Bushings • High Performance • C630 Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-0644	C630 Bronze	0.897"	0.788"	0.945"	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

## Keeper Set • O.E.M. Replacement

		KPMI P/N	Style	A	B	C	D	E	Quantity
		51014-4	Single Square Bead	0.310	7.0°	0.190"	0.380"	0.380"	4Pr.

The bead height is referenced from the minor diameter of the keeper to the center of the bead.

## Cylinder Dowels • Steel

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
	83070-4	Steel	0.5575"	0.375"	0.505"	Pkg. of 4	16573-83A

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.73)

## Cylinder Dowels • Steel

**NEW PRODUCTS**

	KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
	83240-4	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.73)

# HD® EVO SPORTSTER™ 883cc 2004-'17

## Valve Spring Kit • "High Performance" Ovate Wire Beehive

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-21400	Intake Exhaust	.610"	1.860"	175#	400#	.610"
	Kit Includes		4	H. T. Steel Retainers	4	CrSi Valve Springs	4
		4	H. T. Steel Keeper (OEM Style)		4	H. T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-21550	Intake Exhaust	.660"	1.860"	178#	371#	.660"
	Kit Includes		4	H. T. Steel Retainers	4	CrSi Valve Springs	4
		4	H. T. Steel Keepers (9° Degree Taper)		4	H. T. Steel Basewashers	

VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)



# HD® EVO SPORTSTER™ 883cc 2004-'17

## Valve Spring Kit • Lightweight Racing



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20360	Intake	.600"	1.860"	160#	365#	.600"
	Exhaust					
Kit Includes	4	Titanium Retainers	4	CrSi Valve Springs	4	Viton® Seals
	2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*20-20364	Intake	.600"	1.860"	160#	365#	.600"
	Exhaust					
Kit Includes	4	H.T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals
	2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		

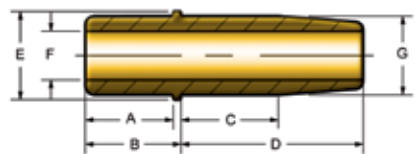
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20350	Intake	.655"	1.860"	185#	450#	.655"
	Exhaust					
Kit Includes	4	Titanium Retainers	4	CrSi Valve Springs	4	Viton® Seals
	2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*20-20355	Intake	.655"	1.860"	185#	450#	.655"
	Exhaust					
Kit Includes	4	H.T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals
	2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		

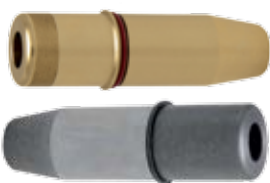
Note: These kits are supplied with 2 supplemental exhaust basewashers for use with the OEM exhaust guides.

\* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

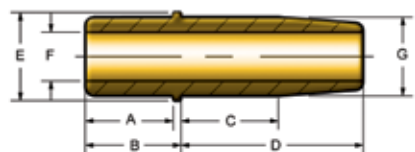
## Valve Guides • Shouldered • Use O.E.M. Style or Kibblewhite® Seals • Shortened for 0.655" Lift



A	B	C	D	E	F	G	Intake	
							C630 Bronze	Cast Iron
0.690"	0.770"	0.800"	1.280"	0.615"	0.2750"	0.5620" / Std.	20-20690	20-20690C
						+0.001"	20-20691	20-20691C
						+0.002"	20-20692	20-20692C
						+0.010"	20-20699	20-20699C



A	B	C	D	E	F	G	Exhaust	
0.650"	0.770"	1.030"	1.280"	0.615"	0.2750"	0.5620" / Std.	20-20700	20-20700C
						+0.001"	20-20701	20-20701C
						+0.002"	20-20702	20-20702C
						+0.010"	20-20709	20-20709C



A	B	C	D	E	F	G	Intake	
							Manganese	Ref. AV&V
0.685"	0.735"	0.702"	1.305"	0.615"	0.2750"	0.5625" / Std.	20-20690M	VG6600
						+0.001"	20-20691M	VG6601
						+0.002"	20-20692M	VG6602
						+0.010"	20-20699M	VG6610



A	B	C	D	E	F	G	Exhaust	
0.685"	0.735"	0.920"	1.305"	0.615"	0.2750"	0.5625" / Std.	20-20700M	VG6700
						+0.001"	20-20701M	VG6701
						+0.002"	20-20702M	VG6702
						+0.010"	20-20709M	VG6710

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.70-73).


**ORDER 650-557-2046**

# HD® EVO SPORTSTER™ 883cc 2004-'17

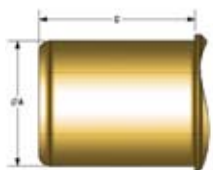



HARLEY-DAVIDSON

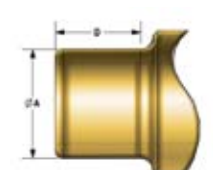

## Valves • Black Diamond™ • Black Nitroleg Stems • Special Conversion Valves for 883cc to 1200cc 2004-'17

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	<b>20-20550</b>	Intake	1.715"	43.56mm	0.2760"	R0.236	23°	4.580"	Conversion Valve
	<b>20-20555</b>	Exhaust	1.480"	37.59mm	0.2755"	R0.500	40°	4.660"	Conversion Valve

## Valve Guide Seals • Tophat

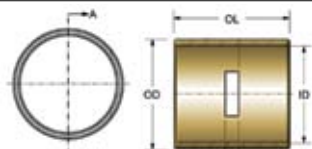
Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
7.0mm	0.974"	1.457"	3	A	B	C	D	Intake
				0.560"±0.005"	---	---	0.970"	Exhaust
				Part Number		Quantity		Quantity Discount
				<b>71030-4</b>		Pkg. of 4		0%
				<b>71030-8</b>		Pkg. of 8		0%
				<b>71030-16</b>		Pkg. of 16		Less- 10%
				<b>71030-50</b>		Pkg. of 50		Less- 15%
				<b>71030-100</b>		Pkg. of 100		Less- 20%

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
7.0mm	0.510"	0.665"	5	A	B	C	D	Intake
				0.560"±0.002"	---	---	0.375"	Exhaust
				Part Number		Quantity		Quantity Discount
				<b>71028-4</b>		Pkg. of 4		0%
				<b>71028-8</b>		Pkg. of 8		0%
				<b>71028-16</b>		Pkg. of 16		Less- 10%
				<b>71028-50</b>		Pkg. of 50		Less- 15%
				<b>71028-100</b>		Pkg. of 100		Less- 20%

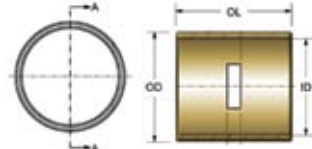
Use with Kibblewhite® Spring Kits on O.E.M. or Kibblewhite® Valve Guides

## Wrist Pin Bushings • High Performance • Nickel Bronze Alloy

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	<b>20-0644</b>	Nickel Bronze Alloy	0.897"	0.788"	0.945"	Pkg. of 1

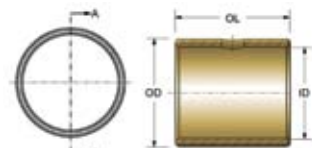
KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	<b>20-20810</b>	660 Bearing Bronze	0.897"	0.788"	0.945"	Standard	Pkg. of 1
	<b>20-20812</b>	660 Bearing Bronze	0.899"	0.788"	0.945"	+0.002"	Pkg. of 1

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Rocker Arm Bushings • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	<b>20-2106</b>	660 Bearing Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)



# HD® EVO SPORTSTER™ 883cc 2004-'17

## Keeper Set • O.E.M. Replacement

	KPMI P/N	Style	A	B	C	D	E	Quantity
	<b>51016-4</b>	Triple Radius Bead	0.275	7.0°	---	0.345"	0.290"	4Pr.
The bead height is referenced from the minor diameter of the keeper to the center of the bead.								

## Cylinder Studs • H. T. Steel

	KPMI P/N	Material	O.L.	Body Dia.	A	B	Quantity	Repl. HD® OEM P/N
	<b>20-2097</b>	H. T. Steel	5.760"	0.370"	1.050"	1.100"	Pkg. of 8	16837-83

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. Further, the case end thread is designed to have a slight interference fit to minimize distortion and maintain good thread contact during torque procedure. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

## Cylinder Dowels • Steel

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
	<b>83070-4</b>	Steel	0.5575"	0.375"	0.505"	Pkg. of 4	16573-83A
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.73)							

## Cylinder Dowels • Steel

	KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
	<b>83240-4</b>	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.73)								

# HD® XL™ 1100cc 1986-1987

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>20-20122</b>	Intake	.600"	1.810"	175#	380#	.600"
		Exhaust					
	Kit Includes	4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.		
	4	Titanium Retainers	4	H. T. Steel Basewashers			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>*20-20132</b>	Intake	.600"	1.810"	175#	380#	.600"
		Exhaust					
	Kit Includes	4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.		
	4	H. T. Steel Retainers	4	H. T. Steel Basewashers			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>20-20060</b>	Intake	.655"	1.860"	190#	450#	.655"
		Exhaust					
	Kit Includes	4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.		
	4	Titanium Retainers	4	H. T. Steel Basewashers			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>*20-20081</b>	Intake	.655"	1.860"	185#	450#	.655"
		Exhaust					
	Kit Includes	4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.		
	4	H. T. Steel Retainers	4	H. T. Steel Basewashers			

\* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

**ORDER 650-557-2046**

# HD® XL™ 1100cc 1986-1987



HARLEY-DAVIDSON

## Valve Spring Kit • "High Performance" Ovate Wire Beehive

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-21300	Intake	.610"	1.860"	175#	400#	.610"	
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers	
				4	H. T. Steel Keeper (OEM Style)	4	H. T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
20-21500	Intake	.660"	1.860"	178#	371#	.660"		
	Exhaust							
Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers		
			4	H. T. Steel Keepers (9° Degree Taper)	4	H. T. Steel Basewashers		

## Dual Spring Kit • Lightweight Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N	
	20-21650	Intake	.650"	1.860"	185#	440#	.650"	VSK650S	
		Exhaust							
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers		
				4	H. T. Steel Keepers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N	
20-21600	Intake	.675"	1.860"	185#	450#	.675"	Steel Retainer Version of VSK675T		
	Exhaust								
Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers			
			4	H. T. Steel Keepers	4	H. T. Steel Basewashers			

## Valves • Black Diamond™ • Black Nitroreg Stems for 1100cc 1986 Model

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
	20-4249	Intake	1.850"	47.00mm	0.3105"	Radius	Angle	4.490"	OEM18023-86
						R0.236	23°		
	20-4250	Intake	1.940"	49.28mm	0.3105"	R0.375	23°	4.440"	Oversize
20-4251	Exhaust	1.615"	41.02mm	0.3096"	R0.500	40°	4.575	OEM18024-86	

## Valves • Black Diamond™ • Black Nitroreg Stems for 1100cc 1987 Model

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
	20-2013	Intake	1.715"	43.56mm	0.3100"	Radius	Angle	4.480"	OEM180823-87
						R0.236	23°		
20-2014	Exhaust	1.480"	37.59mm	0.3096"	R0.500	40°	4.560"	OEM18024-87	

## Valve Guides • Manganese Bronze • .530" Seal Ø • Shortened for .655" Lift

**NEW PRODUCTS**

	A	B	C	D	E	F	G	Intake	Exhaust	AV&V#
	0.620"	0.665"	0.737"	1.435"	0.615"	0.3100"	0.5625" / Std.	20-20860M		VG5600
							+0.001"	20-20861M		VG5601
							+0.002"	20-20862M		VG5602
							+0.010"	20-20869M		VG5610
	0.620"	0.665"	1.135"	1.435"	0.615"	0.3096"	0.5625" / Std.		20-20870M	VG5700
							+0.001"		20-20871M	VG5701
							+0.002"		20-20872M	VG5702
							+0.010"		20-20879M	VG5710

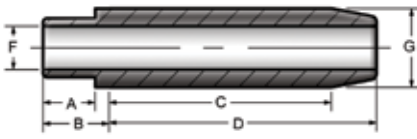

For sizing KPMI® Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.70-73).

**VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)**

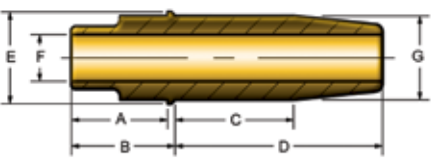



# HD® XL™ 1100cc 1986-1987

## Valve Guides • C630 Bronze • Cast Iron • O.E.M. Replacement • .420" Seal Ø

	A	B	C	D	E	F	G	Intake / Exhaust	
	0.375"	0.375"	1.700"	2.025"	---	0.3098"	0.5620" / Std.	C630 Bronze	Cast Iron
							+0.001"	20-4320	20-4320C
							+0.002"	20-4321	20-4321C
							+0.003"	20-4322	20-4322C
							+0.004"	20-4323	20-4323C
							+0.010"	20-4324	20-4324C

## Valve Guides • C630 Bronze • Cast Iron • Manganese • Shouldered • .420" Seal Ø • Shortened for .600" Lift

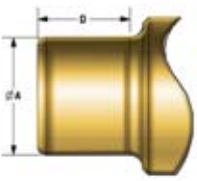

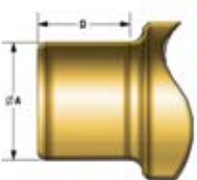

	A	B	C	D	E	F	G	Intake		
	0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5620" / Std.	C630 Bronze	Cast Iron	Manganese
							+0.001"	20-2120	20-2120C	20-2120M
							+0.002"	20-2121	20-2121C	20-2121M
							+0.003"	20-2122	20-2122C	20-2122M
							+0.004"	20-2123	20-2123C	20-2123M
							+0.010"	20-2124	20-2124C	20-2124M

A	B	C	D	E	F	G	Exhaust		
0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5620" / Std.	20-2130	20-2130C	20-2130M
						+0.001"	20-2131	20-2131C	20-2131M
						+0.002"	20-2132	20-2132C	20-2132M
						+0.003"	20-2133	20-2133C	20-2133M
						+0.004"	20-2134	20-2134C	20-2134M
						+0.010"	20-2139	20-2139C	20-2139M

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.70-73).

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.412"	0.566"	5	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.275"	Exhaust
 	Part Number		Quantity		Quantity Discount			
	71010-4		Pkg. of 4		0%			
	71010-8		Pkg. of 8		0%			
	71010-16		Pkg. of 16		Less- 10%			
	71010-50		Pkg. of 50		Less- 15%			
71010-100		Pkg. of 100		Less- 20%				
Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.514"	0.671"	5	A	B	C	D	Intake
				0.530"±0.002"	---	---	0.330"	Exhaust
 	Part Number		Quantity		Quantity Discount			
	71045-4		Pkg. of 4		0%			
	71045-8		Pkg. of 8		0%			
	71045-16		Pkg. of 16		Less- 10%			
	71045-50		Pkg. of 50		Less- 15%			
71045-100		Pkg. of 100		Less- 20%				

**NEW PRODUCTS**

# HD® XL™ 1100cc 1986-1987



HARLEY-DAVIDSON

## Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.385"	0.565"	7	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.315"	Exhaust
				Part Number		Quantity		Quantity Discount
				71032-4		Pkg. of 4		0%
				71032-8		Pkg. of 8		0%
				71032-16		Pkg. of 16		Less- 10%
				71032-50		Pkg. of 50		Less- 15%
				71032-100		Pkg. of 100		Less- 20%

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.70-73).

## Valve Guide Seals • PC Style

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.517"	0.510"	6	A	B	C	D	Intake
				0.415"±0.005"	---	---	0.350"	Exhaust
				Part Number		Quantity		Quantity Discount
				71008-4		Pkg. of 4		0%
				71008-8		Pkg. of 8		0%
				71008-16		Pkg. of 16		Less- 10%
				71008-50		Pkg. of 50		Less- 15%
				71008-100		Pkg. of 100		Less- 20%

## Valve Seats • Powdered Metal

	KPMI P/N	Type	O. D.		I. D.		Height		Quantity
	10-SC500	Intake	1.969"	50.00mm	1.535"	39.00mm	0.453"	11.50mm	Pkg. of 1
	10-SC510	Intake	2.007"	50.98mm	1.562"	39.67mm	0.450"	11.43mm	Pkg. of 1
	10-SC541	Intake	2.132"	54.15mm	1.690"	42.93mm	0.450"	11.43mm	Pkg. of 1
	10-SC446	Exhaust	1.757"	44.62mm	1.375"	35.00mm	0.450"	11.43mm	Pkg. of 1

KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.

## Wrist Pin Bushings • High Performance • C630 Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-0644	C630 Bronze	0.897"	0.788"	0.945"	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-20810	660 Bearing Bronze	0.897"	0.788"	0.945"	Standard	Pkg. of 1
	20-20812	660 Bearing Bronze	0.899"	0.788"	0.945"	+0.002"	Pkg. of 1

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Rocker Arm Bushings • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-2106	660 Bearing Bronze	0.6795"	0.548"	1.065"	Pkg. of 8



# HD® XL™ 1100cc 1986-1987

## Cylinder Dowels • Steel

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
	<b>83070-4</b>	Steel	0.5575"	0.375"	0.505"	Pkg. of 4	16573-83A
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.73)							

## Keeper Set • O.E.M. Replacement

	KPMI P/N	Style	A	B	C	D	E	Quantity
	<b>51014-4</b>	Single Square Bead	0.310	7.0°	0.190"	0.380"	0.380"	4Pr.
The bead height is referenced from the minor diameter of the keeper to the center of the bead.								

## Cylinder Studs • H. T. Steel

	KPMI P/N	Material	O.L.	Body Dia.	A	B	Quantity	Repl. HD® OEM P/N
	<b>20-2097</b>	H. T. Steel	5.760"	0.370"	1.050"	1.100"	Pkg. of 8	16837-83

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. Further, the case end thread is designed to have a slight interference fit to minimize distortion and maintain good thread contact during torque procedure. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

# HD® EVO SPORTSTER™ 1200cc 1988-'03

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>20-20122</b>	Intake	.600"	1.810"	175#	380#	.600"
		Exhaust					
	<b>Kit Includes</b>			4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.
			4	Titanium Retainers	4	H. T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>*20-20132</b>	Intake	.600"	1.810"	175#	380#	.600"
		Exhaust					
	<b>Kit Includes</b>			4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.
			4	H. T. Steel Retainers	4	H. T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>20-20060</b>	Intake	.655"	1.860"	185#	450#	.655"
		Exhaust					
	<b>Kit Includes</b>			4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.
			4	Titanium Retainers	4	H. T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>*20-20081</b>	Intake	.655"	1.860"	185#	450#	.655"
		Exhaust					
	<b>Kit Includes</b>			4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.
			4	H. T. Steel Retainers	4	H. T. Steel Basewashers	

\* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.



# HD® EVO SPORTSTER™ 1200cc 1988-'03



HARLEY-DAVIDSON

## Valve Spring Kit • "High Performance" Ovate Wire Beehive

NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-21300	Intake	.610"	1.860"	175#	400#	.610"	
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers	
				4	H. T. Steel Keeper (OEM Style)	4	H. T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
20-21500	Intake	.660"	1.860"	178#	371#	.660"		
	Exhaust							
Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers		
			4	H. T. Steel Keepers (9° Degree Taper)	4	H. T. Steel Basewashers		

## Dual Spring Kit • Lightweight Racing

NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21650	Intake	.650"	1.860"	185#	440#	.650"	VSK650S
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers	
				4	H. T. Steel Keepers	4	H. T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21600	Intake	.675"	1.860"	185#	450#	.675"	Steel Retainer Version of VSK675T	
	Exhaust							
Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers		
			4	H. T. Steel Keepers	4	H. T. Steel Basewashers		

## Valves • Black Diamond™ • Black Nitro Neg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
	20-2013	Intake	1.715"	43.56mm	0.3100"	Radius	Angle	4.480"	OEM180823-87
						R0.236	23°		
	20-2014	Exhaust	1.480"	37.59mm	0.3096"	R0.500	40°	4.560"	OEM18024-87

## Valve Guides • C630 Bronze • Cast Iron • Manganese • Shouldered • .420" Seal Ø • Shortened for .600" Lift

	A	B	C	D	E	F	G	Intake		
	0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5620" / Std.	C630 Bronze	Cast Iron	*Manganese
							+0.001"	20-2120	20-2120C	20-2120M
							+0.002"	20-2121	20-2121C	20-2121M
							+0.003"	20-2122	20-2122C	20-2122M
							+0.004"	20-2123	20-2123C	20-2123M
							+0.010"	20-2124	20-2124C	20-2124M
								20-2129	20-2129C	20-2129M
	A	B	C	D	E	F	G	Exhaust		
	0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5620" / Std.	20-2130	20-2130C	20-2130M
							+0.001"	20-2131	20-2131C	20-2131M
							+0.002"	20-2132	20-2132C	20-2132M
							+0.003"	20-2133	20-2133C	20-2133M
							+0.004"	20-2134	20-2134C	20-2134M
							+0.010"	20-2139	20-2139C	20-2139M

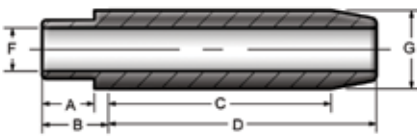

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.70-73).



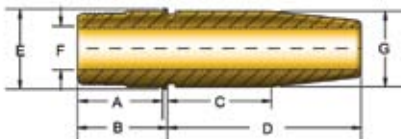


# HD® EVO SPORTSTER™ 1200cc 1988-'03

HARLEY-DAVIDSON

## Valve Guides • C630 Bronze • Cast Iron • O.E.M. Replacement • .420" Seal Ø

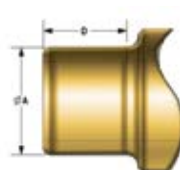

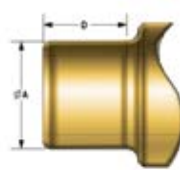

	A	B	C	D	E	F	G	Intake / Exhaust		
								C630 Bronze	Cast Iron	
	0.375"	0.375"	1.700"	2.025"	---	0.3098"	0.5620" / Std.	20-4320	20-4320C	
								+0.001"	20-4321	20-4321C
								+0.002"	20-4322	20-4322C
								+0.003"	20-4323	20-4323C
								+0.004"	20-4324	20-4324C
							+0.010"	20-4329	20-4329C	

## Valve Guides • Manganese Bronze • .530" Seal Ø • Shortened for .655" Lift NEW PRODUCTS


	A	B	C	D	E	F	G	Intake	Exhaust	AV&V#	
		0.620"	0.665"	0.737"	1.435"	0.615"	0.3100"	0.5625" / Std.	20-20860M		VG5600
							+0.001"	20-20861M		VG5601	
							+0.002"	20-20862M		VG5602	
							+0.010"	20-20869M		VG5610	
	0.620"	0.665"	1.135"	1.435"	0.615"	0.3096"	0.5625" / Std.		20-20870M	VG5700	
								+0.001"		20-20871M	VG5701
								+0.002"		20-20872M	VG5702
								+0.010"		20-20879M	VG5710

For sizing KPMI® Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.70-73).

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.412"	0.566"	5	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.275"	Exhaust
 	Part Number		Quantity		Quantity Discount			
	71010-4		Pkg. of 4		0%			
	71010-8		Pkg. of 8		0%			
	71010-16		Pkg. of 16		Less- 10%			
	71010-50		Pkg. of 50		Less- 15%			
	71010-100		Pkg. of 100		Less- 20%			
Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.514"	0.671"	5	A	B	C	D	Intake
				0.530"±0.002"	---	---	0.330"	Exhaust
 	Part Number		Quantity		Quantity Discount			
	71045-4		Pkg. of 4		0%			
	71045-8		Pkg. of 8		0%			
	71045-16		Pkg. of 16		Less- 10%			
	71045-50		Pkg. of 50		Less- 15%			
	71045-100		Pkg. of 100		Less- 20%			

## Cylinder Studs • H. T. Steel

	KPMI P/N	Material	O.L.	Body Dia.	A	B	Quantity	Repl. HD® OEM P/N
		20-2097	H. T. Steel	5.760"	0.370"	1.050"	1.100"	Pkg. of 8

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. Further, the case end thread is designed to have a slight interference fit to minimize distortion and maintain good thread contact during torque procedure. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

**ORDER 650-557-2046**

# HD® EVO SPORTSTER™ 1200cc 1988-'03



HARLEY-DAVIDSON

## Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.385"	0.565"	7	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.315"	Exhaust
				Part Number		Quantity		Quantity Discount
				71032-4		Pkg. of 4		0%
				71032-8		Pkg. of 8		0%
				71032-16		Pkg. of 16		Less- 10%
				71032-50		Pkg. of 50		Less- 15%
		71032-100		Pkg. of 100		Less- 20%		

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.70-73).

## Valve Guide Seals • PC Style

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.517"	0.510"	6	A	B	C	D	Intake
				0.415"±0.005"	---	---	0.350"	Exhaust
				Part Number		Quantity		Quantity Discount
				71008-4		Pkg. of 4		0%
				71008-8		Pkg. of 8		0%
				71008-16		Pkg. of 16		Less- 10%
				71008-50		Pkg. of 50		Less- 15%
		71008-100		Pkg. of 100		Less- 20%		

## Rocker Arm Bushings • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
		20-2106	660 Bearing Bronze	0.6795"	0.548"	1.065"

## Wrist Pin Bushings • High Performance • Nickel Bronze Alloy

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
		20-0644	Nickel Bronze Alloy	0.897"	0.788"	0.945"

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-20810	660 Bearing Bronze	0.897"	0.788"	0.945"	Standard	Pkg. of 1
	20-20812	660 Bearing Bronze	0.899"	0.788"	0.945"	+0.002"	Pkg. of 1

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Keeper Set • O.E.M. Replacement

	KPMI P/N	Style	A	B	C	D	E	Quantity
		51014-4	Single Square Bead	0.310	7.0°	0.190"	0.380"	0.380"

The bead height is referenced from the minor diameter of the keeper to the center of the bead.

VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)



# HD® EVO SPORTSTER™ 1200cc 1988-'03

## Cylinder Dowels • Steel

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
	<b>83070-4</b>	Steel	0.5575"	0.375"	0.505"	Pkg. of 4	16573-83A
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.73)							

## Cylinder Dowels • Steel

**NEW PRODUCTS**

	KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
	<b>83240-4</b>	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.73)								

# HD® EVO SPORTSTER™ 1200cc 2004-'17

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>20-20360</b>	Intake	.600"	1.860"	160#	365#	.600"
		Exhaust	.600"	1.860"	160#	365#	.600"
	<b>Kit Includes</b>		4	Titanium Retainers	4	CrSi Valve Springs	4
		2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>*20-20364</b>	Intake	.600"	1.860"	160#	365#	.600"
		Exhaust	.600"	1.860"	160#	365#	.600"
	<b>Kit Includes</b>		4	H.T. Steel Retainers	4	CrSi Valve Springs	4
		2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>20-20350</b>	Intake	.655"	1.860"	185#	450#	.655"
		Exhaust	.655"	1.860"	185#	450#	.655"
	<b>Kit Includes</b>		4	Titanium Retainers	4	CrSi Valve Springs	4
		2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>*20-20355</b>	Intake	.655"	1.860"	185#	450#	.655"
		Exhaust	.655"	1.860"	185#	450#	.655"
	<b>Kit Includes</b>		4	H.T. Steel Retainers	4	CrSi Valve Springs	4
		2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		

Note: These kits are supplied with 2 supplemental exhaust basewashers for use with the OEM exhaust guides.

\* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

## Valves • Black Diamond™ • Black Nitroneg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
	<b>20-20260</b>	Intake	1.805"	45.85mm	0.2760"	R0.344	28°	4.525"	OEM18690-02
			1.900"	48.26mm	0.2760"	R0.344	28°	4.500"	Oversize
	<b>20-20265</b>	Exhaust	1.575"	40.00mm	0.2755"	R0.500	34°	4.610"	OEM18691-02
	<b>20-20266</b>	Exhaust	1.615"	41.02mm	0.2755"	R0.500	34°	4.590"	Oversize

**ORDER 650-557-2046**

# HD® EVO SPORTSTER™ 1200cc 2004-'17



## Valve Spring Kit • "High Performance" Ovate Wire Beehive

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-21400	Intake	.610"	1.860"	175#	400#	.610"	
		Exhaust						
	Kit Includes			4	H. T. Steel Retainers	4	CrSi Valve Springs	4
			4	H. T. Steel Keeper (OEM Style)	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-21550	Intake	.660"	1.860"	178#	371#	.660"	
		Exhaust						
	Kit Includes			4	H. T. Steel Retainers	4	CrSi Valve Springs	4
			4	H. T. Steel Keepers (9° Degree Taper)	4	H. T. Steel Basewashers		

## Valve Guides • Shouldered • Use O.E.M. Style or Kibblewhite® Seals • Shortened for 0.655" Lift

	A	B	C	D	E	F	G	Intake	
	0.690"	0.770"	0.800"	1.280"	0.615"	0.2750"	0.5620" / Std.	C630 Bronze	Cast Iron
								20-20690	20-20690C
								+0.001"	20-20691
+0.002"								20-20692	20-20692C
+0.010"	20-20699	20-20699C							
	A	B	C	D	E	F	G	Exhaust	
	0.650"	0.770"	1.030"	1.280"	0.615"	0.2750"	0.5620" / Std.	20-20700	20-20700C
								20-20701	20-20701C
								+0.002"	20-20702
+0.010"								20-20709	20-20709C
	A	B	C	D	E	F	G	Intake	
	0.685"	0.735"	0.702"	1.305"	0.615"	0.2750"	0.5625" / Std.	Manganese	Ref. AV&V
								20-20690M	VG6600
								+0.001"	20-20691M
+0.002"								20-20692M	VG6602
+0.010"	20-20699M	VG6610							
	A	B	C	D	E	F	G	Exhaust	
	0.685"	0.735"	0.920"	1.305"	0.615"	0.2750"	0.5625" / Std.	20-20700M	VG6700
								20-20701M	VG6701
								+0.002"	20-20702M
+0.010"								20-20709M	VG6710

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.70-73).

## Valve Guide Seals • Tophat

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
7.0mm	0.974"	1.457"	3	A	B	C	D	Intake
				0.560"±0.005"	---	---	0.970"	Exhaust
		Part Number		Quantity		Quantity Discount		
		71030-4		Pkg. of 4		0%		
		71030-8		Pkg. of 8		0%		
		71030-16		Pkg. of 16		Less- 10%		
		71030-50		Pkg. of 50		Less- 15%		
71030-100		Pkg. of 100		Less- 20%				



# HD® EVO SPORTSTER™ 1200cc 2004-'17

HARLEY-DAVIDSON

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
7.0mm	0.510"	0.665"	5	0.560"±0.002"	---	---	0.375"	Exhaust
			Part Number		Quantity		Quantity Discount	
			71028-4		Pkg. of 4		0%	
			71028-8		Pkg. of 8		0%	
			71028-16		Pkg. of 16		Less- 10%	
			71028-50		Pkg. of 50		Less- 15%	
			71028-100		Pkg. of 100		Less- 20%	

Use with Kibblewhite® Spring Kits on O.E.M. or Kibblewhite® Valve Guides

## Cylinder Studs • H. T. Steel

	KPMI P/N	Material	O.L.	Body Dia.	A	B	Quantity	Repl. HD® OEM P/N
	- 3/8 - 16 (Typical)	20-2097	H. T. Steel	5.760"	0.370"	1.050"	1.100"	Pkg. of 8

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. Further, the case end thread is designed to have a slight interference fit to minimize distortion and maintain good thread contact during torque procedure. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

## Keeper Set • O.E.M. Replacement

	KPMI P/N	Style	A	B	C	D	E	Quantity
		51016-4	Triple Radius Bead	0.275	7.0°	---	0.345"	0.290"

The bead height is referenced from the minor diameter of the keeper to the center of the bead.

## Wrist Pin Bushings • High Performance • C630 Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
		20-0644	C630 Bronze	0.897"	0.788"	0.945"

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-20810	660 Bearing Bronze	0.897"	0.788"	0.945"	Standard	Pkg. of 1
	20-20812	660 Bearing Bronze	0.899"	0.788"	0.945"	+0.002"	Pkg. of 1

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Rocker Arm Bushings • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
		20-2106	660 Bearing Bronze	0.6795"	0.548"	1.065"

60

**ORDER 650-557-2046**

# HD® EVO SPORTSTER™ 1200cc 2004-'17



HARLEY-DAVIDSON

## Cylinder Dowels • Steel

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
	<b>83070-4</b>	Steel	0.5575"	0.375"	0.505"	Pkg. of 4	16573-83A
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.73)							

## Cylinder Dowels • Steel

**NEW PRODUCTS**

	KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
	<b>83240-4</b>	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.73)								

# HD® TWIN CAM™ 88" 1999-2004

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>20-20122</b>	Intake	.600"	1.810"	175#	380#	.600"
		Exhaust					
	<b>Kit Includes</b>		4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.	
		4	Titanium Retainers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>*20-20132</b>	Intake	.600"	1.810"	175#	380#	.600"
		Exhaust					
	<b>Kit Includes</b>		4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.	
		4	H. T. Steel Retainers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>20-20060</b>	Intake	.655"	1.865"	190#	465#	.655"
		Exhaust					
	<b>Kit Includes</b>		4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.	
		4	Titanium Retainers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>*20-20081</b>	Intake	.655"	1.860"	185#	450#	.655"
		Exhaust					
	<b>Kit Includes</b>		4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.	
		4	H. T. Steel Retainers	4	H. T. Steel Basewashers		

\* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

For all the applications available for Kibblewhite's Harley-Davidson® Evo Sportster 1200cc line of products, please refer online to the Harley-Davidson® section of the [www.kpmi.us](http://www.kpmi.us) website, under **V-Twin / Cruiser**.




# HD® TWIN CAM™ 88" 1999-2004

HARLEY-DAVIDSON


## Valve Spring Kit • "High Performance" Ovate Wire Beehive

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-21300	Intake	.610"	1.860"	175#	400#	.610"
		Exhaust					
	Kit Includes		4	CrSi Valve Springs		4	H. T. Steel Retainers
		4	H. T. Steel Keeper (OEM Style)		4	H. T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-21500	Intake	.660"	1.860"	178#	371#	.660"
		Exhaust					
	Kit Includes		4	CrSi Valve Springs		4	H. T. Steel Retainers
		4	H. T. Steel Keepers (9° Degree Taper)		4	H. T. Steel Basewashers	


## Dual Spring Kit • Lightweight Racing

**NEW PRODUCTS**


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21650	Intake	.650"	1.860"	185#	440#	.650"	VSK650S
		Exhaust						
	Kit Includes		4	CrSi Valve Springs		4	H. T. Steel Retainers	
		4	H. T. Steel Keepers		4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21600	Intake	.675"	1.860"	185#	450#	.675"	Steel Retainer Version of VSK675T
		Exhaust						
	Kit Includes		4	CrSi Valve Springs		4	H. T. Steel Retainers	
		4	H. T. Steel Keepers		4	H. T. Steel Basewashers		

## Valves • Black Diamond™ • Black Nitroreg Stems For All 5/16 Stem Valves

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	20-20055	Intake	1.840"	46.74mm	0.3100"	R0.234	23°	4.445"	OEM18074-83A
	20-20056	Intake	1.900"	48.26mm	0.3100"	R0.344	28°	4.420"	Oversize
	20-20108	Intake	2.000"	50.80mm	0.3100"	R0.234	23°	4.445"	Oversize
	20-20900	Intake	2.150"	54.61mm	0.3108"	R0.550	24°	4.480"	AV&V# AV2150
	20-20905	Intake	1.990"	50.55mm	0.3108"	R0.675	25°	4.440"	AV&V# AV1990
	20-20910	Intake	1.940"	49.28mm	0.3108"	R0.675	25°	4.440"	AV&V# AV1940
	20-20915	Intake	1.900"	48.26mm	0.3108"	R0.675	25°	4.440"	AV&V# AV1900
	20-20955	Intake	2.100"	53.34mm	0.3108"	R0.560	24°	4.475"	AV&V# AV2100
	20-20990	Intake	2.020"	51.31mm	0.3108"	R0.670	25°	4.440"	AV&V# AV2020A
	20-20965	Intake	2.020"	51.31mm	0.3108"	R0.645	25°	4.510"	AV&V# AV2020S
	20-20057	Exhaust	1.565"	39.75mm	0.3095"	R0.250	17°	4.505	OEM18085-991
	20-20920	Exhaust	1.650"	41.91mm	0.3106"	R0.750	25°	4.515"	AV&V# AV1650
	20-20925	Exhaust	1.610"	40.89mm	0.3106"	R0.750	25°	4.510"	AV&V# AV1610D
	20-20930	Exhaust	1.585"	40.26mm	0.3106"	R0.750	25°	4.505"	AV&V# AV1585
20-20960	Exhaust	1.700"	43.18mm	0.3106"	R0.600	25°	4.535"	AV&V# AV1700A	
20-20970	Exhaust	1.610"	40.89mm	0.3106"	R0.750	25°	4.565"	AV&V# AV1610S	

## Valves • Black Diamond™ • Specially Designed For HD Racing Applications

	KPMI P/N	Type		Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
							Radius	Angle		
	20-4169	In	Black Diamond™	1.940"	49.28mm	0.3100"	R0.234	23°	4.400"	Branch Heads
	20-B101	Ex	Black Diamond™	1.615"	41.02mm	0.3096"	R0.325	R0.1625	4.460"	Branch Heads
	20-4170R	Ex	Black Diamond™	1.630"	41.40mm	0.3096"	R0.500	40°	4.525"	Oversize
20-4170S	Ex	Black Diamond™	1.750"	44.45mm	0.3095"	R0.236	24°	4.480"	Std. Heads	

ORDER 650-557-2046

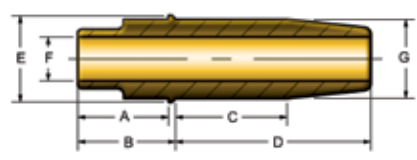



# HD® TWIN CAM™ 88" 1999-2004



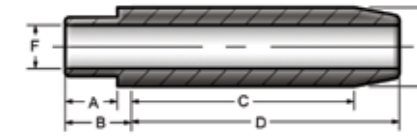
HARLEY-DAVIDSON

## Valve Guides • C630 Bronze • Cast Iron • Manganese • Shouldered • .420" Seal Ø • Shortened for .600" Lift

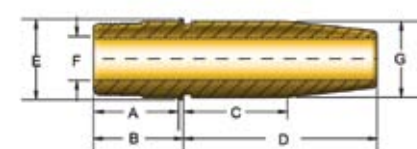

	A	B	C	D	E	F	G	Intake		
	0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5620" / Std.	C630 Bronze	Cast Iron	Manganese
							+0.001"	20-2120	20-2120C	20-2120M
							+0.002"	20-2121	20-2121C	20-2121M
							+0.003"	20-2122	20-2122C	20-2122M
							+0.004"	20-2123	20-2123C	20-2123M
							+0.010"	20-2124	20-2124C	20-2124M
								20-2129	20-2129C	20-2129M
	A	B	C	D	E	F	G	Exhaust		
	0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5620" / Std.	C630 Bronze	Cast Iron	Manganese
							+0.001"	20-2130	20-2130C	20-2130M
							+0.002"	20-2131	20-2131C	20-2131M
							+0.003"	20-2132	20-2132C	20-2132M
							+0.004"	20-2133	20-2133C	20-2133M
							+0.010"	20-2134	20-2134C	20-2134M
								20-2139	20-2139C	20-2139M

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.70-73).

## Valve Guides • C630 Bronze • Cast Iron • O.E.M. Replacement • .420" Seal Ø

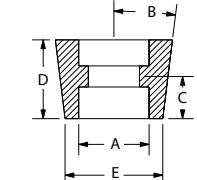
	A	B	C	D	E	F	G	Intake / Exhaust	
	0.375"	0.375"	1.700"	2.025"	---	0.3098"	0.5620" / Std.	C630 Bronze	Cast Iron
							+0.001"	20-4320	20-4320C
							+0.002"	20-4321	20-4321C
							+0.003"	20-4322	20-4322C
							+0.004"	20-4323	20-4323C
							+0.010"	20-4324	20-4324C
								20-4329	20-4329C

## Valve Guides • Manganese Bronze • .530" Seal Ø • Shortened for .655" Lift NEW PRODUCTS

	A	B	C	D	E	F	G	Intake	Exhaust	AV&V#
		0.620"	0.665"	0.737"	1.435"	0.615"	0.3100"	0.5625" / Std.	20-20860M	
							+0.001"	20-20861M		VG5601
							+0.002"	20-20862M		VG5602
							+0.010"	20-20869M		VG5610
	0.620"	0.665"	1.135"	1.435"	0.615"	0.3096"	0.5625" / Std.		20-20870M	VG5700
							+0.001"		20-20871M	VG5701
							+0.002"		20-20872M	VG5702
							+0.010"		20-20879M	VG5710

For sizing KPMI® Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.70-73).

## Keeper Set • O.E.M. Replacement

		KPMI P/N	Style	A	B	C	D	E	Quantity
		51014-4	Single Square Bead	0.310	7.0°	0.190"	0.380"	0.380"	4Pr.


The bead height is referenced from the minor diameter of the keeper to the center of the bead.



# HD® TWIN CAM™ 88" 1999-2004



HARLEY-DAVIDSON

## Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.385"	0.565"	7	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.315"	Exhaust
		Part Number				Quantity	Quantity Discount	
		71032-4				Pkg. of 4	0%	
		71032-8				Pkg. of 8	0%	
		71032-16				Pkg. of 16	Less- 10%	
		71032-50				Pkg. of 50	Less- 15%	
		71032-100				Pkg. of 100	Less- 20%	


Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.70-73).

## Valve Guide Seals • Viton®

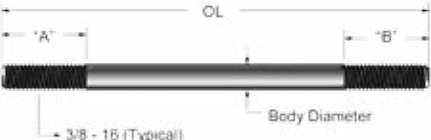
Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.412"	0.566"	5	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.275"	Exhaust
		Part Number				Quantity	Quantity Discount	
		71010-4				Pkg. of 4	0%	
		71010-8				Pkg. of 8	0%	
		71010-16				Pkg. of 16	Less- 10%	
		71010-50				Pkg. of 50	Less- 15%	
		71010-100				Pkg. of 100	Less- 20%	
5/16"	0.514"	0.671"	5	A	B	C	D	Intake
				0.530"±0.002"	---	---	0.330"	Exhaust
		Part Number				Quantity	Quantity Discount	
		71045-4				Pkg. of 4	0%	
		71045-8				Pkg. of 8	0%	
		71045-16				Pkg. of 16	Less- 10%	
		71045-50				Pkg. of 50	Less- 15%	
		71045-100				Pkg. of 100	Less- 20%	

**NEW PRODUCTS**

## Valve Guide Seals • PC Style

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.517"	0.510"	6	A	B	C	D	Intake
				0.415"±0.005"	---	---	0.350"	Exhaust
		Part Number				Quantity	Quantity Discount	
		71008-4				Pkg. of 4	0%	
		71008-8				Pkg. of 8	0%	
		71008-16				Pkg. of 16	Less- 10%	
		71008-50				Pkg. of 50	Less- 15%	
		71008-100				Pkg. of 100	Less- 20%	

## Cylinder Studs • H. T. Steel

	KPMI P/N	Material	O.L.	Body Dia.	A	B	Quantity	Repl. HD® OEM P/N
		20-20412	H. T. Steel	6.310"	0.370"	1.250"	1.250"	Pkg. of 8

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. Further, the case end thread is designed to have a slight interference fit to minimize distortion and maintain good thread contact during torque procedure. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

**ORDER 650-557-2046**

# HD® TWIN CAM™ 88" 1999-2004



HARLEY-DAVIDSON

## Rocker Arm Bushings • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-2106	660 Bearing Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

## Cylinder Dowels • Steel

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
	83080-4	Steel	0.4365"	0.323"	0.610"	Pkg. of 4	16595-99A
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.73)							

## Valve Seats • Powdered Metal

	KPMI P/N	Type	O. D.		I. D.		Height		Quantity
	10-SC500	Intake	1.969"	50.00mm	1.535"	39.00mm	0.453"	11.50mm	Pkg. of 1
	10-SC510	Intake	2.007"	50.98mm	1.562"	39.67mm	0.450"	11.43mm	Pkg. of 1
	10-SC541	Intake	2.132"	54.15mm	1.690"	42.93mm	0.450"	11.43mm	Pkg. of 1
	10-SC446	Exhaust	1.757"	44.62mm	1.375"	35.00mm	0.450"	11.43mm	Pkg. of 1
KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.									

# HD® TWIN CAM™ 88"-103" 2005-2017

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
	20-20360	Intake	.600"	1.860"	160#	365#	.600"		
		Exhaust							
	Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	Viton® Seals
				2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift			
*20-20364	Intake	.600"	1.860"	160#	365#	.600"			
	Exhaust								
Kit Includes			4	H. T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals	
			2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
	20-20350	Intake	.655"	1.860"	185#	450#	.655"		
		Exhaust							
	Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	Viton® Seals
				2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift			
*20-20355	Intake	.655"	1.860"	185#	450#	.655"			
	Exhaust								
Kit Includes			4	H. T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals	
			2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers			

Note: These kits are supplied with 2 supplemental exhaust basewashers for use with the OEM exhaust guides.

\* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)



# HD® TWIN CAM™ 88"-103" 2005-2017

HARLEY-DAVIDSON

## Valve Spring Kit • "High Performance" Ovate Wire Beehive

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
	20-21400	Intake	.610"	1.860"	175#	400#	.610"		
		Exhaust							
	Kit Includes			4	H. T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals
				4	H. T. Steel Keeper (OEM Style)	4	H. T. Steel Basewashers		
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift			
20-21550	Intake	.660"	1.860"	178#	371#	.660"			
	Exhaust								
Kit Includes			4	H. T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals	
			4	H. T. Steel Keepers (9° Degree Taper)	4	H. T. Steel Basewashers			

## Valve Guides • Shouldered • Use O.E.M. Style or Kibblewhite® Seals • Shortened for 0.655" Lift

	A	B	C	D	E	F	G	Intake		
	0.690"	0.770"	0.800"	1.280"	0.615"	0.2750"	0.5620" / Std.	C630 Bronze	Cast Iron	
								20-20690	20-20690C	
								+0.001"	20-20691	20-20691C
								+0.002"	20-20692	20-20692C
+0.010"	20-20699	20-20699C								
	A	B	C	D	E	F	G	Exhaust		
	0.650"	0.770"	1.030"	1.280"	0.615"	0.2750"	0.5620" / Std.	C630 Bronze	Cast Iron	
								20-20700	20-20700C	
								+0.001"	20-20701	20-20701C
								+0.002"	20-20702	20-20702C
+0.010"	20-20709	20-20709C								
	A	B	C	D	E	F	G	Intake		
	0.685"	0.735"	0.702"	1.305"	0.615"	0.2750"	0.5625" / Std.	Manganese	Ref. AV&V	
								20-20690M	VG6600	
								+0.001"	20-20691M	VG6601
								+0.002"	20-20692M	VG6602
+0.010"	20-20699M	VG6610								
	A	B	C	D	E	F	G	Exhaust		
	0.685"	0.735"	0.920"	1.305"	0.615"	0.2750"	0.5625" / Std.	C630 Bronze	Cast Iron	
								20-20700M	VG6700	
								+0.001"	20-20701M	VG6701
								+0.002"	20-20702M	VG6702
+0.010"	20-20709M	VG6710								

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.70-73).

## Valve Guide Seals • Tophat

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
7.0mm	0.974"	1.457"	3	A	B	C	D	Intake
				0.560"±0.005"	---	---	0.970"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71030-4			Pkg. of 4		0%		
	71030-8			Pkg. of 8		0%		
	71030-16			Pkg. of 16		Less- 10%		
	71030-50			Pkg. of 50		Less- 15%		
	71030-100			Pkg. of 100		Less- 20%		

# HD® TWIN CAM™ 88"-103" 2005-2017



## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
7.0mm	0.510"	0.665"	5	0.560"±0.002"	---	---	0.375"	Intake
								Exhaust
				Part Number		Quantity	Quantity Discount	
				71028-4		Pkg. of 4	0%	
				71028-8		Pkg. of 8	0%	
				71028-16		Pkg. of 16	Less- 10%	
				71028-50		Pkg. of 50	Less- 15%	
				71028-100		Pkg. of 100	Less- 20%	

Use with Kibblewhite® Spring Kits on O.E.M. or Kibblewhite® Valve Guides

## Valves • Black Diamond™ • Black Nitroreg Stems NEW PRODUCTS

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
						20-20322	Intake		
20-20323R	Intake	1.900"	48.26mm	0.2760"	R0.344	28°	4.420"	Oversize	
20-20935	Intake	1.980"	50.29mm	0.2757"	R0.290	23°	4.455"	AV1980-7TGB	
20-20940	Intake	1.900"	48.26mm	0.2757"	R0.475	24°	4.445"	AV1900-7TGB	
20-20325	Exhaust	1.575"	40.00mm	0.2755"	R0.354	22°	4.520"	OEM18085-991	
20-20326R	Exhaust	1.630"	41.40mm	0.2755"	R0.500	34°	4.520"	Oversize	
20-20945	Exhaust	1.610"	40.89mm	0.2755"	R0.595	25°	4.545"	AV1610-7TGB	
20-20950	Exhaust	1.575"	40.00mm	0.2755"	R0.595	25°	4.560"	AV1575-7TGB	

## Valves • Black Diamond™ • Fat Stem • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
						20-20772	Intake		
20-20776	Exhaust	1.575"	40.00mm	0.2805"	R0.374	23°	4.510"	Standard	

KPMI® Reamer GR-2820 should be used to size the OEM valve guides to accommodate these valves.

## Valve Seats • Powdered Metal

	KPMI P/N	Type	O. D.		I. D.		Height		Quantity
	10-SC500	Intake	1.969"	50.00mm	1.535"	39.00mm	0.453"	11.50mm	Pkg. of 1
	10-SC510	Intake	2.007"	50.98mm	1.562"	39.67mm	0.450"	11.43mm	Pkg. of 1
	10-SC541	Intake	2.132"	54.15mm	1.690"	42.93mm	0.450"	11.43mm	Pkg. of 1
	10-SC446	Exhaust	1.757"	44.62mm	1.375"	35.00mm	0.450"	11.43mm	Pkg. of 1

KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.

## Cylinder Dowels • Steel

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
	83080-4	Steel	0.4365"	0.323"	0.610"	Pkg. of 4	16595-99A


Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.73)



# HD® TWIN CAM™ 88" 1999-2004



HARLEY-DAVIDSON

## Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.385"	0.565"	7	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.315"	Exhaust
		Part Number				Quantity	Quantity Discount	
		71032-4				Pkg. of 4	0%	
		71032-8				Pkg. of 8	0%	
		71032-16				Pkg. of 16	Less- 10%	
		71032-50				Pkg. of 50	Less- 15%	
		71032-100				Pkg. of 100	Less- 20%	


Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.70-73).

## Valve Guide Seals • Viton®

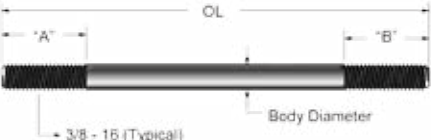
Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.412"	0.566"	5	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.275"	Exhaust
		Part Number				Quantity	Quantity Discount	
		71010-4				Pkg. of 4	0%	
		71010-8				Pkg. of 8	0%	
		71010-16				Pkg. of 16	Less- 10%	
		71010-50				Pkg. of 50	Less- 15%	
		71010-100				Pkg. of 100	Less- 20%	
5/16"	0.514"	0.671"	5	A	B	C	D	Intake
				0.530"±0.002"	---	---	0.330"	Exhaust
		Part Number				Quantity	Quantity Discount	
		71045-4				Pkg. of 4	0%	
		71045-8				Pkg. of 8	0%	
		71045-16				Pkg. of 16	Less- 10%	
		71045-50				Pkg. of 50	Less- 15%	
		71045-100				Pkg. of 100	Less- 20%	

**NEW PRODUCTS**

## Valve Guide Seals • PC Style

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.517"	0.510"	6	A	B	C	D	Intake
				0.415"±0.005"	---	---	0.350"	Exhaust
		Part Number				Quantity	Quantity Discount	
		71008-4				Pkg. of 4	0%	
		71008-8				Pkg. of 8	0%	
		71008-16				Pkg. of 16	Less- 10%	
		71008-50				Pkg. of 50	Less- 15%	
		71008-100				Pkg. of 100	Less- 20%	

## Cylinder Studs • H. T. Steel

	KPMI P/N	Material	O.L.	Body Dia.	A	B	Quantity	Repl. HD® OEM P/N
		20-20412	H. T. Steel	6.310"	0.370"	1.250"	1.250"	Pkg. of 8

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. Further, the case end thread is designed to have a slight interference fit to minimize distortion and maintain good thread contact during torque procedure. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

**ORDER 650-557-2046**

# HD® BUELL® XB9™ 2003-2007



HARLEY-DAVIDSON

## Valve Spring Kit • "High Performance" Ovate Wire Beehive

NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
	20-21400	Intake	.610"	1.860"	175#	400#	.610"		
		Exhaust							
	Kit Includes			4	H. T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals
				4	H. T. Steel Keeper (OEM Style)	4	H. T. Steel Basewashers		
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift			
20-21550	Intake	.660"	1.860"	178#	371#	.660"			
	Exhaust								
Kit Includes			4	H. T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals	
			4	H. T. Steel Keepers (9° Degree Taper)	4	H. T. Steel Basewashers			

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	20-20260	Intake	1.805"	45.85mm	0.2760"	R0.344	28°	4.525"	Standard
	20-20262	Intake	1.900"	48.26mm	0.2760"	R0.344	28°	4.500"	Oversize
20-20265	Exhaust	1.575"	40.00mm	0.2755"	R0.500	34°	4.610"	Standard	

## Valve Guides • Shouldered • Use O.E.M. Style or Kibblewhite® Seals • Shortened for 0.655" Lift

	A	B	C	D	E	F	G	Intake	
								C630 Bronze	Cast Iron
	0.690"	0.770"	0.800"	1.280"	0.615"	0.2750"	0.5620" / Std.	20-20690	20-20690C
							+0.001"	20-20691	20-20691C
						+0.002"	20-20692	20-20692C	
						+0.010"	20-20699	20-20699C	
	A	B	C	D	E	F	G	Exhaust	
	0.650"	0.770"	1.030"	1.280"	0.615"	0.2750"	0.5620" / Std.	20-20700	20-20700C
							+0.001"	20-20701	20-20701C
						+0.002"	20-20702	20-20702C	
						+0.010"	20-20709	20-20709C	
	A	B	C	D	E	F	G	Intake	
								Manganese	Ref. AV&V
	0.685"	0.735"	0.702"	1.305"	0.615"	0.2750"	0.5625" / Std.	20-20690M	VG6600
							+0.001"	20-20691M	VG6601
						+0.002"	20-20692M	VG6602	
						+0.010"	20-20699M	VG6610	
	A	B	C	D	E	F	G	Exhaust	
	0.685"	0.735"	0.920"	1.305"	0.615"	0.2750"	0.5625" / Std.	20-20700M	VG6700
							+0.001"	20-20701M	VG6701
						+0.002"	20-20702M	VG6702	
						+0.010"	20-20709M	VG6710	

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.70-73).



# HD® BUELL® XB9™ 2003-2007

HARLEY-DAVIDSON

## Valve Guide Seals • Tophat

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
7.0mm	0.974"	1.457"	3	A	B	C	D	Intake
				0.560"±0.005"	---	---	0.970"	Exhaust
				Part Number		Quantity		Quantity Discount
				71030-4		Pkg. of 4		0%
				71030-8		Pkg. of 8		0%
				71030-16		Pkg. of 16		Less- 10%
				71030-50		Pkg. of 50		Less- 15%
		71030-100		Pkg. of 100		Less- 20%		

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
7.0mm	0.510"	0.665"	5	A	B	C	D	Intake
				0.560"±0.002"	---	---	0.375"	Exhaust
				Part Number		Quantity		Quantity Discount
				71028-4		Pkg. of 4		0%
				71028-8		Pkg. of 8		0%
				71028-16		Pkg. of 16		Less- 10%
				71028-50		Pkg. of 50		Less- 15%
		71028-100		Pkg. of 100		Less- 20%		

Use with Kibblewhite® Spring Kits on O.E.M. or Kibblewhite® Valve Guides

# HD® V-ROD™ 2005

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-20140	Intake	.500"	1.360"	72#	230#	.500"
Exhaust							
Kit Includes			8	Titanium Retainers	8	CrSi Valve Springs	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-20147	Intake	1.575"	40.00mm	0.2350"	R0.310	10°	4.580"	Standard
20-20152	Exhaust	1.360"	34.54mm	0.2345"	R0.465	25°	4.620"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.720"	0.745"	1.050"	1.180"	0.440"	0.2340"	0.3957" / Std.		20-20330
							+0.001"	20-20331	
							+0.010"	20-20339	
0.720"	0.745"	1.170"	1.300"	0.440"	0.2340"	0.3957" / Std.		20-20340	
							+0.001"	20-20341	
Use O.E.M valve guide seals.							+0.010"	20-20349	

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# HD® V-ROD™ 2005



HARLEY-DAVIDSON

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
	20-20157	Intake	None	31.00mm	1.2195"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
Exhaust										

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting oversize tappets.

# HD® MILWAUKEE-EIGHT™ 2017-2018

## Valve Spring Kit • Ovate Wire Beehive

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-21000	Intake	.465"	1.410"	80#	212#	.465"	
Exhaust								
<b>Kit Includes</b>			8	Titanium Retainers	8	CrSi Valve Springs	8	H. T. Steel Basewashers

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-21050	Intake	.465"	1.410"	80#	212#	.465"	
Exhaust								
<b>Kit Includes</b>			8	H. T. Steel Retainers	8	CrSi Valve Springs	8	H. T. Steel Basewashers

## Valve Spring Kit • Ovate Wire Beehive • High Lift

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-21200	Intake	0.550"	1.550"	104#	230#	0.550"
Exhaust							
<b>Kit Includes</b>			8	Titanium Retainers	8	CrSi Valve Springs	

## Valves • Black Diamond™ • Black Nitroreg Stems

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	20-21012	Intake	1.571"	39.90mm	0.2347"	R0.235	10°	4.015"	Standard
	20-21015	Intake	1.591"	40.40mm	0.2347"	R0.235	10°	4.015"	Oversize
	20-21013	Intake	1.630"	41.40mm	0.2347"	R0.235	10°	4.055"	Oversize
	20-21016	Exhaust	1.264"	32.11mm	0.2342"	R0.460	24°	4.050"	Standard
20-21017	Exhaust	1.284"	32.61mm	0.2342"	R0.460	24°	4.050"	Oversize	

KPMI® Black Diamond™ Blank Valve PN 20-21019 is available for M8 Application and please see Blank Valve section in back of catalog.

## Valve • White Diamond® • Inconel® • Exhaust

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
20-21018K	Exhaust	1.284"	32.61mm	0.2342"	R0.460	24°	4.050"	Oversize	

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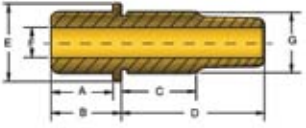

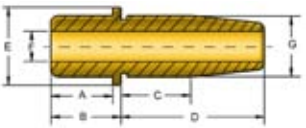



# HD® MILWAUKEE-EIGHT™ 2017-2018

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## Valve Guides • C630 Bronze • Cast Iron • Manganese Bronze

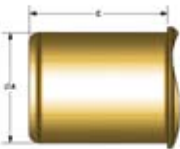

**NEW PRODUCTS**

 	A	B	C	D	E	F	G	Intake		
	0.480"	0.545"	0.540"	1.110"	0.600"	0.2347	0.4750" / Std.	C630 Bronze	Cast Iron	Manganese
							+0.001"	20-21020	20-21020C	20-21020M
							+0.002"	20-21021	20-21021C	20-21021M
							+0.010"	20-21022	20-21022C	20-21022M
								20-21029	20-21029C	20-21029M
 	A	B	C	D	E	F	G	Exhaust		
	0.480"	0.545"	0.600"	1.110"	0.600"	0.2342	0.4750" / Std.	C630 Bronze	Cast Iron	Manganese
							+0.001"	20-21030	20-21030C	20-21030M
							+0.002"	20-21031	20-21031C	20-21031M
							+0.010"	20-21032	20-21032C	20-21032M
								20-21039	20-21039C	20-21039M

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.70-73).

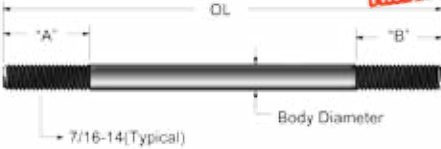
## Valve Guide Seals • Tophat

**NEW PRODUCTS**

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.712"	1.170"	3	A	B	C	Spring shoulder Ø	Intake
				0.475"±0.002"	---	0.545"	0.707	Exhaust
				Part Number		Quantity		Quantity Discount
				71046-4		Pkg. of 4		0%
				71046-8		Pkg. of 8		0%
				71046-16		Pkg. of 16		Less- 10%
				71046-50		Pkg. of 50		Less- 15%
				71046-100		Pkg. of 100		Less- 20%

## Cylinder Studs • H.T. Steel

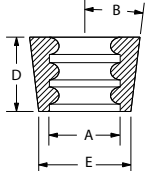

**NEW PRODUCTS**

	KPMI P/N	Material	Body Dia.	O. L.	A	B	Quantity	Repl. HD® OEM P/N
	20-21040	H. T. Steel	0.429"	6.240"	1.050"	1.200"	Pkg. of 8	16800063

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. Further, the case end thread is designed to have a slight interference fit to minimize distortion and maintain good thread contact during torque procedure. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

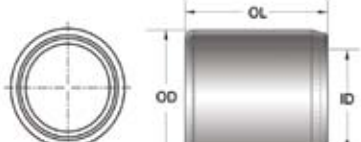
## Keeper Set • O.E.M. Replacement

**NEW PRODUCTS**

 	KPMI P/N	Style	A	B	C	D	E	Quantity
	51029-8	Triple Radius Bead	0.236"	7.0°	---	0.200"	0.282"	8Pr.

## Cylinder Dowels • Steel

**NEW PRODUCTS**

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Repl. HD® OEM P/N
	83250-8	Steel	0.375"	0.272"	0.400"	Pkg. of 8	16589-99A

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.73)

**ORDER 650-557-2046**

# HD® TOOLS & COMPONENTS



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## Installation Tools & Tool Kits

			Tool Kit P/N	Description						
			<b>20-20835</b>	Kit includes all 4 sizes of installations						
Tool P/N	Fits	Color	ØA	ØB	C	ØD	E	Quantity		
<b>20-20830</b>	71032-4	Red	Ø0.575"	0.860"	0.160"	0.404"	0.910	Pkg. of 1		
<b>20-20831</b>	71036-4	Blue	Ø0.758"	0.860"	0.160"	0.404"	0.910	Pkg. of 1		
<b>20-20832</b>	71033-4	White	Ø0.638"	0.860"	0.160"	0.404"	0.910	Pkg. of 1		
	71034-4									
<b>20-20833</b>	71035-4	Black	Ø0.673"	0.860"	0.160"	0.404"	0.910	Pkg. of 1		

These installation tools for OE style seals are manufactured from high strength 6061-T6 Aluminum for increased durability when compared to plastic installers. The tools are designed for precision fitment onto the seal OD to help the builder center the seal over the valve guide so that a few light strikes from a hammer will set the seal. Radiused top striking surface reduces the likelihood of a burr forming from deformation. Each installation tool is color coded and laser marked for each seal size by guide diameter.

## Installation Protector

	KPMI P/N (2-pack)	KPMI P/N (1-pack)	Application	Stem Diameter	Fits	Color	
	<b>20-20634</b>	<b>20-20637</b>	Evolution Ironhead Sportster Intake	5/16"	71032-4	71033-4	Green
	<b>20-20635</b>	<b>20-20638</b>	Ironhead Sportster Exhaust	11/32"	71034-4		Clear
	<b>20-20636</b>	<b>20-20639</b>	Panhead Shovelhead 74" & Shovelhead 80"	3/8"	71035-4	71036-4	Red

The flexible thin wall protectors are designed to fit over the top of the valve stem, protecting the sealing element from any sharp edges that might damage it during installation.

## Compression Release Valves

**NEW PRODUCTS**

	KPMI P/N	A	B	C	Quantity	Note
	<b>20-21250</b>	M10 x 1	1.400"	0.350"	Pkg. of 2	Fits Evos, Shortened thread for ease of installation, 6N closing force
<b>20-21265</b>	M10 x 1	1.400"	0.350"	Pkg. of 20		
	<b>20-21255</b>	M10 x 1	1.730"	0.350"	Pkg. of 2	Fits Twin Cams, Shortened thread for ease of installation, 6N closing force
	<b>20-21270</b>	M10 x 1	1.730"	0.350"	Pkg. of 20	
	<b>20-21260</b>	M10 x 1	1.750"	0.500"	Pkg. of 2	6N closing force
	<b>20-21275</b>	M10 x 1	1.750"	0.500"	Pkg. of 20	

- KPMI® Compression Release valves are state of the art and priced competitively
- Designed to reduce "hot start" issues and starter / battery loads
- 5-7 Newtons of closing force resistance, for high demand applications
- Custom molded knobs ensure a cool touch and easy operation
- Embossed with the KPMI® brand to ensure product quality

## Ball Hones

	KPMI P/N	Description	Overall Length A	Hone Head Length B	Hone Diameter C	Shank Diameter D
	<b>GH-2755</b>	7.0mm valve guide hone	7.975"	2.075"	0.325"	0.130"
	<b>GH-3125</b>	5/16 (.3125") valve guide hone	8.125"	2.225"	0.375"	0.145"
	<b>GH-3750</b>	3/8 (.3750") valve guide hone	8.050"	2.190"	0.415"	0.145"

BC Series Flex-Hone are manufactured by Brush Research (BRM). The BC Series Flex-Hone tool is designed for use on any type or size of valve guide from 4mm up to 3/8" in diameter. This guide hone is designed for surface finishing and cross hole deburring. Although Ball Hones have many uses, KPMI® offers them primarily to be used after a guide has been reamed. Using a Ball Hone after reaming creates a uniform surface free of irregularities, which improves surface contact and reduces the risk of galling or seizure. Please see our FAQ for recommended clearances.





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# HD® TOOLS & COMPONENTS



## Reamers • Solid Carbide

**NEW PRODUCTS**

	KPMI P/N	Description	Overall Length A	Cutting Diameter B	Pilot Diameter C	Shank Diameter D
		<b>CR-2170</b>	0.2170 carbide valve guide reamer	7.625"	0.2170"	0.212"
<b>CR-2357</b>		0.2357 carbide valve guide reamer	7.625"	0.2357"	0.230"	0.228"
<b>CR-2768</b>		0.2768 carbide valve guide reamer	7.625"	0.2768"	0.271"	0.269"
<b>CR-3110</b>		0.3110 carbide valve guide reamer	7.625"	0.3110"	0.306"	0.304"
<b>CR-3115</b>		0.3115 carbide valve guide reamer	7.625"	0.3115"	0.306"	0.304"
<b>CR-3120</b>		0.3120 carbide valve guide reamer	7.625"	0.3120"	0.307"	0.305"
<b>CR-3775</b>		0.3775 carbide valve guide reamer	7.625"	0.3775"	0.372"	0.370"

KPMI® Carbide valve guide reamers are manufactured from Solid Carbide. All KPMI® reamers are ground to: +/- .0002". KPMI® carbide reamers are straight-flute and have a 6-flute design. The pilot portion of KPMI® reamers are 1.0" to 1.5" long. Insert the pilot into a guide that you intend to size. Using a hand held drill, apply honing oil or ATF before and during reaming a guide. KPMI® reamers have been specifically designed for Manganese Bronze valve guides and Cast Iron. **Do not attempt to use these reamers to size C630 Nickel Aluminum Bronze guides. Also, once a reamer is used on Cast Iron, it's not advisable to then use it on a bronze guide.**

## Reamers • High Speed Steel

	KPMI P/N	Description	Overall Length A	Cutting Diameter B	Pilot Diameter C	Shank Diameter D
		<b>GR-2357</b>	0.2357 HSS valve guide reamer	7.125"	0.2357"	0.229"
<b>GR-2770</b>		0.2770 HSS valve guide reamer	7.125"	0.2770"	0.271"	0.270"
<b>GR-2820</b>		0.2820 HSS valve guide reamer	7.125"	0.2820"	0.271"	0.270"
<b>GR-3100</b>		0.3100 HSS valve guide reamer	7.125"	0.3100"	0.304"	0.303"
<b>GR-3110</b>		0.3110 HSS valve guide reamer	7.125"	0.3110"	0.305"	0.304"
<b>GR-3115</b>		0.3115 HSS valve guide reamer	7.125"	0.3115"	0.305"	0.304"
<b>GR-3120</b>		0.3120 HSS valve guide reamer	7.125"	0.3120"	0.306"	0.305"
<b>GR-3400</b>		0.3400 HSS valve guide reamer	7.125"	0.3400"	0.334"	0.333"
<b>GR-3410</b>		0.3410 HSS valve guide reamer	7.125"	0.3410"	0.335"	0.334"
<b>GR-3730</b>		0.3730 HSS valve guide reamer	7.125"	0.3730"	0.367"	0.336"
<b>GR-3775</b>		0.3775 HSS valve guide reamer	7.125"	0.3775"	0.371"	0.370"
<b>GR-3790</b>	0.3790 HSS valve guide reamer	7.125"	0.3790"	0.373"	0.372"	

KPMI® valve guide reamers are manufactured from premium hardened High Speed Steel. The advertised finished reamer diameters are ground to: +/- .0002". These spiral fluted reamers incorporate a 1.00" long pilot (reduced diameter) which gets inserted into an unfinished guide bore, to align the reamer to the valve guide centerline, during the sizing process. These reamers have been specifically designed for KPMI® Manganese Bronze and Cast Iron valve guides. **Do not attempt to use these reamers to size C630 Nickel Aluminum Bronze guides. Also, once a reamer is used on Cast Iron, it is not advisable to then use it on a bronze guide.**

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# HD® TOOLS & COMPONENTS



## Cylinder Dowels • Steel

**NEW PRODUCTS**

Material	OD	ID	OL	Rep. HD® OEM P/N		
Steel	0.5575"	0.375"	0.505"	16573-83A		
		<b>KPMI P/N</b>	<b>Quantity</b>	<b>Discount</b>	<b>Fits</b>	
		83070-4	Pkg. of 4	0%		Evolution 1984-'99 XL 1100cc 1986-'87 Evo Sportster 883cc 1986-'17 Evo Sportster 1200cc 1988-'17
		83070-8	Pkg. of 8	0%		
		83070-20	Pkg. of 20	Less-5%		
<ul style="list-style-type: none"> <li>Black Oxide Coated for Corrosion Resistance</li> <li>Designed for HD® Evolution OEM Replacement</li> <li>Can Also Be Used as Multipurpose Dowel</li> </ul>			<ul style="list-style-type: none"> <li>See Dimensions for Fitment</li> <li>Supersedes <b>part number 20-2099</b></li> </ul>			
Material	OD	ID	OL	Rep. HD® OEM P/N		
Steel	0.4365"	0.323"	0.610"	16595-99A		
		<b>KPMI P/N</b>	<b>Quantity</b>	<b>Discount</b>	<b>Fits</b>	
		83080-4	Pkg. of 4	0%		Twin Cam 88" 1999-'07 Twin Cam 88"-103" 2005-'17
		83080-8	Pkg. of 8	0%		
		83080-20	Pkg. of 20	Less-5%		
<ul style="list-style-type: none"> <li>Black Oxide Coated for Corrosion Resistance</li> <li>Designed for HD® Twin Cam OEM Replacement</li> <li>Can Also Be Used as Multipurpose Dowel</li> </ul>			<ul style="list-style-type: none"> <li>See Dimensions for Fitment</li> <li>Supersedes <b>part number 20-20413</b></li> </ul>			
Material	OD 1	OD 2 O/S	OL	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N	
H.T. Steel	0.250"	0.252"	0.520"	50-8022	366	
		<b>KPMI P/N</b>	<b>Quantity</b>	<b>Discount</b>	<b>Fits</b>	
		83240-4	Pkg. of 4	0%		Panhead 1948-'65 Shovelhead 1966-'83 Evolution 1984-'99 Evo Sportster 883cc 1986-'17 Evo Sportster 1200cc 1988-'17
		83240-8	Pkg. of 8	0%		
		83240-20	Pkg. of 20	Less-5%		
<ul style="list-style-type: none"> <li>S&amp;S "Oversized" Dowel for 4" to 4-3/8" Cylinders</li> <li>Black Oxide Coated for Corrosion Resistance</li> <li>Heat Treated Steel</li> </ul>			<ul style="list-style-type: none"> <li>Cone Dowel for 1948-'05 Various HD® Applications</li> <li>See Description Below for Special Design Features</li> </ul>			
<p>This KPMI® dowel has been designed to replace the S&amp;S .250" cylinder dowel, or to be used as desired. This dowel features a unique witness line in the center of the part which serves two purposes. First, this witness line serves as a marker for proper installation height and, second, to create two distinct halves of the part. One end of the dowel has a .252" diameter with a machined dimple on the end so you know to use that end in the case or cylinder. The other half incorporates a .250" diameter. This purpose-made change in diameter, and interference, ensures a snug fit on one end and a slip fit on the other as well as fret free use.</p>						
Material	OD	ID	OL	Rep. HD® OEM P/N		
Steel	0.375"	0.272"	0.400"	16589-99A		
		<b>KPMI P/N</b>	<b>Quantity</b>	<b>Discount</b>	<b>Fits</b>	
		83250-4	Pkg. of 4	0%		Milwaukee-Eight 2017-'18
		83250-8	Pkg. of 8	0%		
		83250-20	Pkg. of 20	Less-5%		
<ul style="list-style-type: none"> <li>Black Oxide Coated for Corrosion Resistance</li> <li>Rounded End Installed in Cylinder or Case</li> <li>Tapered End Installed in Head or Cam-Support Cover</li> </ul>			<ul style="list-style-type: none"> <li>Designed as HD® M8 OEM Replacement</li> <li>Can Also Be Used as Multipurpose Dowel</li> <li>See Dimensions for Fitment</li> </ul>			
<p>Designed for the Harley Davidson® Milwaukee-Eight engine, this dowel can also serve as a multi-purpose alignment pin. Our dowel incorporates OEM elements while increasing ease of installation through the overall shape of the part. A radiused end allows for easy insertion into the cylinder or case, and a tapered end provides hassle-free location of the mating holes in the head or cam-support cover. This commonly-sized dowel will serve its purpose wherever you see fit.</p>						

HARLEY-DAVIDSON



# HONDA® XR™ 50 2000-2003

HONDA

## Valve Guides • C630 Bronze

		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>Intake</b>	<b>Exhaust</b>	
		0.245"	0.335"	0.655"	0.775"	0.645"	0.1960"	0.3963" / Std.	<b>30-30510</b>		
									+0.002"	<b>30-30512</b>	
									+0.010"	<b>30-30519</b>	
		0.245"	0.335"	0.790"	0.865"	0.645"	0.1960"	0.3963" / Std.			<b>30-30520</b>
									+0.002"		<b>30-30522</b>
							+0.010"		<b>30-30529</b>		

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		<b>71015-2</b>				Pkg. of 2		0%
		<b>71015-4</b>				Pkg. of 4		0%
		<b>71015-8</b>				Pkg. of 8		0%
		<b>71015-16</b>				Pkg. of 16		Less- 10%
		<b>71015-50</b>				Pkg. of 50		Less- 15%
<b>71015-100</b>				Pkg. of 100		Less- 20%		

# HONDA® CRF™ / XR™ 75-100 1973-2013

## Valve Spring Kit • Lightweight Racing

	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>	
	<b>30-30235</b>	Intake	.360"	1.165"	47#	130#	.360"	
		Exhaust						
<b>Kit Includes</b>			2	CrSi Valve Springs	2	Titanium Retainers	2	Spring Shims

## Spring Only Kit • Replacement

	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>
	<b>30-4062</b>	Intake	.400"	1.210"	54#	145#	.400"
		Exhaust					
<b>Kit Includes</b>			2	CrSi Valve Springs			

## Valves • Black Diamond™ • Black Nitroleg Stems (Excludes XR75 1973-'76 Intake)

	<b>KPMI P/N</b>	<b>Type</b>	<b>Head Diameter</b>		<b>Stem Diameter</b>	<b>Tulip</b>	<b>O. L.</b>	<b>Remarks</b>
	<b>30-30238</b>	Intake	24.00mm	0.945"	0.2145"	20°	3.115"	Standard
	<b>30-30239</b>	Intake	26.00mm	1.024"	0.2145"	20°	3.115"	Oversize
	<b>30-30241</b>	Exhaust	20.50mm	0.807"	0.2140"	20°	3.100"	Standard
	<b>30-30242</b>	Exhaust	22.00mm	0.866"	0.2140"	20°	3.100"	Oversize

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	Intake
				0.358"±0.005"	0.320"	0.115"	0.225"	Exhaust
		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		<b>71016-2</b>				Pkg. of 2		0%
		<b>71016-4</b>				Pkg. of 4		0%
		<b>71016-8</b>				Pkg. of 8		0%
		<b>71016-16</b>				Pkg. of 16		Less- 10%
		<b>71016-50</b>				Pkg. of 50		Less- 15%
<b>71016-100</b>				Pkg. of 100		Less- 20%		

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# HONDA® CRF™ 150R 2007-2019



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## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-30880	Intake	.350"	1.320"	45#	143#	.350"	
		Exhaust						
Kit Includes			2	In, CrSi Valve Springs	2	In, Titanium Retainers	2	In, H. T. Steel Basewashers
			2	Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-30910	Intake	26.00mm	1.024"	0.1765"	19°	3.065"	Standard
	30-30913	Exhaust	22.50mm	0.886"	0.1760"	19°	3.145"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	---	0.550"	0.570"	0.710"	---	0.1765	0.3566" / Std.	30-30890	
							+0.010"	30-30899	
	---	0.790"	0.600"	0.710"	---	0.1760	0.3566" / Std.		30-30900
							+0.010"		30-30909

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Intake
				0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71014-4			Pkg. of 4		0%		
	71014-8			Pkg. of 8		0%		
	71014-16			Pkg. of 16		Less- 10%		
	71014-50			Pkg. of 50		Less- 15%		
	71014-100			Pkg. of 100		Less- 20%		

# HONDA® CB™ 160 1965-1969

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-30800	Intake	.354"	1.175"	48#	134 #	.354"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	* H. T. Steel Keepers Pr.	
			4	Titanium Retainers	4	H. T. Steel Basewashers	

\*Designed for use with Kibblewhite® valves only. KPMI® keepers which are supplied with this kit are designed to work with Kibblewhite® valves utilizing a radius groove keeper design.

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# HONDA® CB™ 160 1965-1969

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## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	30-30830	Intake	25.00mm	0.984"	0.2157"	21°	2.980"	Standard
	30-30831	Intake	26.00mm	1.024"	0.2157"	21°	2.980"	Oversize
	30-30833	Exhaust	22.00mm	0.866"	0.2152"	15°	2.975"	Standard
	30-30834	Exhaust	23.00mm	0.906"	0.2152"	15°	2.975"	Oversize

Not recommended for O.E.M. replacement. These valves have been designed to work with Kibblewhite® Radius Groove Keepers, which are supplied with Kibblewhite® Spring Kit #30-30800.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.415"	0.450"	0.650"	0.880"	0.440"	0.2155"	0.3975" / Std.	30-30810	
							+0.001"	30-30811	
							+0.002"	30-30812	
							+0.010"	30-30819	
	0.415"	0.450"	0.790"	1.040"	0.440"	0.2152"	0.3975" / Std.		30-30820
							+0.001"		30-30821
							+0.002"		30-30822
							+0.010"		30-30829

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
			Part Number	Quantity		Quantity Discount		
			71016-4	Pkg. of 4		0%		
			71016-8	Pkg. of 8		0%		
			71016-16	Pkg. of 16		Less- 10%		
			71016-50	Pkg. of 50		Less- 15%		
		71016-100	Pkg. of 100		Less- 20%			

# HONDA® CB™ 175 1970-1975

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-30840	Intake	.354"	1.175"	47#	133#	.354"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	* H. T. Steel Keepers Pr.	
			4	Titanium Retainers	4	H. T. Steel Basewashers	

\*Designed for use with Kibblewhite® valves only. KPMI® keepers which are supplied with this kit are designed to work with Kibblewhite® valves utilizing a radius groove keeper design.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	30-30870	Intake	28.00mm	1.102"	0.2157"	21°	2.920"	Standard
	30-30871	Intake	29.00mm	1.142"	0.2157"	21°	2.920"	Oversize
	30-30873	Exhaust	24.00mm	0.945"	0.2152"	15°	2.895"	Standard
	30-30874	Exhaust	25.00mm	0.984"	0.2152"	15°	2.895"	Oversize

Not recommended for O.E.M. replacement. These valves have been designed to work with Kibblewhite® Radius Groove Keepers, which are supplied with Kibblewhite® Spring Kit #30-30840.

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# HONDA® CB™ 175 1970-1975



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## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.415"	0.450"	0.650"	0.880"	0.440"	0.2155"	0.3975" / Std.	<b>30-30850</b>		
								+0.001"	<b>30-30851</b>	
								+0.002"	<b>30-30852</b>	
								+0.010"	<b>30-30859</b>	
	0.415"	0.450"	0.790"	1.040"	0.440"	0.2152"	0.3975" / Std.		<b>30-30860</b>	
								+0.001"	<b>30-30861</b>	
								+0.002"	<b>30-30862</b>	
							+0.010"	<b>30-30869</b>		

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		<b>71016-4</b>				Pkg. of 4		0%
		<b>71016-8</b>				Pkg. of 8		0%
		<b>71016-16</b>				Pkg. of 16		Less- 10%
		<b>71016-50</b>				Pkg. of 50		Less- 15%
		<b>71016-100</b>				Pkg. of 100		Less- 20%

# HONDA® VARIOUS 185-200 1980-2002

• ATC™ 185 / 200 1980-1986

• XL 200R / XR 200 / XR 200R (non-RFVC) 1980-2002

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>30-4021</b>	Intake	.450"	1.345"	66#	202#	.450"	
		Exhaust						
<b>Kit Includes</b>			2	CrSi Valve Springs	2	Titanium Retainers	2	H. T. Steel Basewashers

## Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-4016</b>	Intake	.500"	1.390"	57#	145#	.290"
		Exhaust					
<b>Kit Includes</b>			2	CrSi Valve Springs	2	H. T. Steel Shims	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>30-30120</b>	Intake	30.00mm	1.181"	0.2145"	23°	3.605"	Standard
	<b>30-30122</b>	Exhaust	25.00mm	0.984"	0.2140"	29°	3.595"	Standard

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# HONDA® VARIOUS 185-200 1980-2002

• ATC™ 185 / 200 1980-1986

• XL 200R / XR 200 / XR 200R (non-RFVC) 1980-2002

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.550"	0.650"	0.890"	1.050"	0.685"	0.2155"	0.4372" / Std.	<b>30-4069</b>		
								+0.004"	<b>30-4159</b>	
								+0.015"	<b>30-4160</b>	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
				Part Number			Quantity	Quantity Discount
				<b>71016-2</b>			Pkg. of 2	0%
				<b>71016-4</b>			Pkg. of 4	0%
				<b>71016-8</b>			Pkg. of 8	0%
				<b>71016-16</b>			Pkg. of 16	Less- 10%
				<b>71016-50</b>			Pkg. of 50	Less- 15%
			<b>71016-100</b>			Pkg. of 100	Less- 20%	

# HONDA® XR™ 200R RFVC 1984-1985

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>30-30077</b>	Intake	.355"	1.205"	55#	150#	.355"	
		Exhaust						
<b>Kit Includes</b>			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.400"	0.495"	1.185"	1.300"	0.650"	0.2155"	0.4355" / Std.	<b>30-3100</b>		
								+0.002"	<b>30-3102</b>	
								+0.010"	<b>30-3110</b>	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
				Part Number			Quantity	Quantity Discount
				<b>71016-4</b>			Pkg. of 4	0%
				<b>71016-8</b>			Pkg. of 8	0%
				<b>71016-16</b>			Pkg. of 16	Less- 10%
				<b>71016-50</b>			Pkg. of 50	Less- 15%
				<b>71016-100</b>			Pkg. of 100	Less- 20%

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# HONDA® CRF™ 250R 2004-'07 / 250X 2004-'17



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## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-30590	Intake	.350"	1.320"	50#	145#	.350"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	
			4	H. T. Steel Basewashers	4	Red Viton® Seals	

## Valve Spring Kit • High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-31300	Intake	.385"	1.185"	50#	160#	.385"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	
			4	H. T. Steel Basewashers	4	Red Viton® Seals	

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-31200	Intake	.350"	1.320"	50#	145#	.350"	
	Kit Includes			2	CrSi Valve Springs	2	Titanium Retainers	2
			2	Black Diamond™ Valves	2	Red Viton® Seals		

## Cylinder Head Service Kit NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
	30-33300	Intake	.350"	1.320"	50#	145#	.350"		
		Exhaust							
	Kit Includes			4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
				2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
			2	In Std. C630 Valves Guides	2	Ex Std. C630 Valves Guides			
			4	In / Ex Red Viton® Seals	1	Top End Gasket Kit			

## Components • Replacement • Cylinder Head Service Kit NEW PRODUCTS

KPMI P/N	Description	Specification
30-30590	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Red Viton® Seals
30-30630	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-30633	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-30610	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
30-30620	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
30-33301	Gasket Kit	<b>Includes:</b> Head Gasket 78mm (1), Base Gasket (1), Cam Chain Tensioner Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Bolt Seal (1), Head Oil Drain Cap O-ring (1), Water Outlet O-ring (1), Air Recirculation Valve Seal (1)

## Valves • Black Diamond™ • Black Nitroreg Stems


	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-30630	Intake	31.00mm	1.220"	0.1961"	20°	3.280"	Standard
	30-30631	Intake	32.00mm	1.260"	0.1961"	20°	3.280"	Oversize
	30-30633	Exhaust	26.00mm	1.024"	0.1956"	20°	3.235"	Standard
	30-30634	Exhaust	27.00mm	1.063"	0.1956"	20°	3.235"	Oversize

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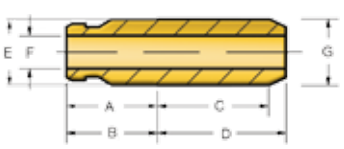

# HONDA® CRF™ 250R 2004-'07 / 250X 2004-'17

## Valves • O.E.M. Replacement • Titanium • Stainless

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	<b>30-30630T</b>	Intake	31.00mm	1.220"	0.1960"	20°	3.275"	Titanium	14711-KRN-670
	<b>30-30633</b>	Exhaust	26.00mm	1.024"	0.1956"	20°	3.235"	Stainless	14721-KRN-670

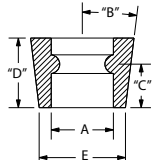

**Note:** These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.540"	0.540"	0.710"	0.770"	0.394"	0.1961"	0.3965" / Std.	+0.001"	<b>30-30610</b>
							+0.002"	<b>30-30611</b>	
							+0.010"	<b>30-30612</b>	
								<b>30-30619</b>	
	0.740"	0.740"	0.675"	0.775"	0.394"	0.1956"	0.3965" / Std.		<b>30-30620</b>
							+0.001"		<b>30-30621</b>
							+0.002"		<b>30-30622</b>
							+0.004"		<b>30-30624</b>
							+0.010"		<b>30-30629</b>

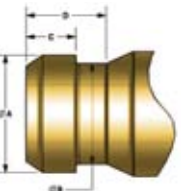

## Keeper Set • O.E.M. Replacement

**NEW PRODUCTS**

		KPMI P/N	Style	Type	A	B	C	D	E	Quantity
		<b>51025-4</b>	Single Radius Bead	Intake	0.196"	7.0°	0.170"	0.205"	0.236"	4Pr.
		Exhaust								


**Note:** The bead height is referenced from the minor diameter of the keeper to the center of the bead.

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Intake
				0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust
		Part Number		Quantity		Quantity Discount		
		<b>71014-4</b>		Pkg. of 4	0%			
		<b>71014-8</b>		Pkg. of 8	0%			
		<b>71014-16</b>		Pkg. of 16	Less- 10%			
		<b>71014-50</b>		Pkg. of 50	Less- 15%			
		<b>71014-100</b>		Pkg. of 100	Less- 20%			

# HONDA® CRF™ 250R 2008-2009

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-31150</b>	Intake	.350"	1.320"	50#	145#	.350"
		Exhaust					
<b>Kit Includes</b>	4	CrSi Valve Springs		4	Titanium Retainers		
	4	H. T. Steel Basewashers		4	Red Viton® Seals		

# HONDA® CRF™ 250R 2008-2009



## Valve Spring Kit • High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-31310	Intake	.385"	1.185"	50#	160#	.385"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	
			4	H. T. Steel Basewashers	4	Red Viton® Seals	

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-31200	Intake	.350"	1.320"	50#	145#	.350"	
	Kit Includes			2	CrSi Valve Springs	2	Titanium Retainers	2
			2	Black Diamond™ Valves	2	Red Viton® Seals		

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-31162	Intake	31.00mm	1.220"	0.1961"	20°	3.280"	Standard
	30-31163	Intake	32.00mm	1.260"	0.1961"	20°	3.280"	Oversize
	30-31166	Exhaust	26.00mm	1.024"	0.1760"	20°	3.235"	Standard

## Valves • O.E.M. Replacement • Titanium • Stainless

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N	
	30-31162T	Intake	31.00mm	1.220"	0.1960"	20°	3.275"	Titanium	14711-KRN-670
	30-31166	Exhaust	26.00mm	1.024"	0.1768"	20°	3.235"	Stainless	14721-KRN-A10

**Note:** These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.540"	0.540"	0.710"	0.770"	0.394"	0.1960"	0.3965" / Std.	30-31170	
							+0.001"	30-31171	
							+0.002"	30-31172	
							+0.010"	30-31179	
	0.740"	0.740"	0.750"	0.850"	0.394"	0.1760"	0.3965" / Std.		30-31180
							+0.001"		30-31181
							+0.002"		30-31182
							+0.010"		30-31189

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Intake
				0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust
		Part Number		Quantity		Quantity Discount		
		71014-4		Pkg. of 4		0%		
		71014-8		Pkg. of 8		0%		
		71014-16		Pkg. of 16		Less- 10%		
		71014-50		Pkg. of 50		Less- 15%		
		71014-100		Pkg. of 100		Less- 20%		

VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)

HONDA



# HONDA® CRF™ 250R 2010-2015

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-31450	Intake	.385"	1.185"	50#	160#	.385"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	
			4	H. T. Steel Basewashers	4	Red Viton® Seals	

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-31500	Intake	.385"	1.185"	50#	160#	.385"	
	Kit Includes			2	CrSi Valve Springs	2	Titanium Retainers	2
			2	Black Diamond™ Valves	2	Red Viton® Seals		

## Cylinder Head Service Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
	30-33310	Intake	.385"	1.185"	50#	160#	.385"		
		Exhaust							
	Kit Includes			4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
				2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
			2	In Std. C630 Valves Guides	2	Ex Std. C630 Valves Guides			
			4	Red Viton® Seals		1	Top End Gasket Kit		

## Components • Replacement • Cylinder Head Service Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
30-31450	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Red Viton® Seals
30-31462	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-31466	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-31470	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
30-31480	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
30-33311	Gasket Kit	<b>Includes:</b> Head Gasket 78mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Water Outlet O-ring (1)

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-31462	Intake	30.50mm	1.201"	0.1961"	20°	3.500"	Standard
	30-31463	Intake	31.50mm	1.240"	0.1961"	20°	3.500"	Oversize
	30-31466	Exhaust	25.00mm	0.984"	0.1760"	20°	3.310"	Standard
	30-31467	Exhaust	26.00mm	1.024"	0.1760"	20°	3.310"	Oversize

## Valves • O.E.M. Replacement • Titanium • Stainless

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N	
	30-31462T	Intake	30.50mm	1.221"	0.1960"	20°	3.500"	Titanium	14711-KRN-A40
	30-31466	Exhaust	25.00mm	0.984"	0.1760"	20°	3.310"	Stainless	14721-KRN-A40

**Note:** These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

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# HONDA® CRF™ 250R 2010-2015



## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.610"	0.610"	0.745"	0.965"	0.394"	0.1961"	0.3965" / Std.	<b>30-31470</b>		
									+0.001"	<b>30-31471</b>	
									+0.002"	<b>30-31472</b>	
									+0.010"	<b>30-31479</b>	
		0.820"	0.820"	0.650"	0.770"	0.394"	0.1760"	0.3965" / Std.		<b>30-31480</b>	
									+0.001"		<b>30-31481</b>
									+0.002"		<b>30-31482</b>
									+0.010"		<b>30-31489</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Intake
				0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust
		Part Number		Quantity		Quantity Discount		
		<b>71014-4</b>		Pkg. of 4		0%		
		<b>71014-8</b>		Pkg. of 8		0%		
		<b>71014-16</b>		Pkg. of 16		Less- 10%		
		<b>71014-50</b>		Pkg. of 50		Less- 15%		
		<b>71014-100</b>		Pkg. of 100		Less- 20%		

# HONDA® CRF™ 250R 2016-2017

## Valve Spring Kit • Lightweight Racing NEW PRODUCTS

		KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>30-32400</b>		Intake	.380"	1.180"	51#	160#	.380"	
			Exhaust						
		Kit Includes		4	CrSi Valve Springs	4	Titanium Retainers	4	*Red Viton® Seals
				2	In H. T. Steel Basewashers	2	Ex H. T. Steel Basewashers		

\*KPMI® supplied Viton® seals must be used with this kit. O.E.M. seals are NOT compatible.

## Intake Only • Steel Valve Conversion Kit NEW PRODUCTS

		KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>30-32440</b>		Intake	.380"	1.180"	51#	160#	.380"	
		Kit Includes		2	CrSi Valve Springs	2	Titanium Retainers	2	H. T. Steel Basewashers
				2	Black Diamond™ Valves	2	*Red Viton® Seals		

\*KPMI® supplied Viton® seals must be used with this kit. O.E.M. seals are NOT compatible.



# HONDA® CRF™ 250R 2016-2017

## Cylinder Head Service Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-33320	Intake	.380"	1.180"	51#	160#	.380"
		Exhaust					
	Kit Includes	2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
		2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
		2	In Red Viton® Seals		2	Ex Red Viton® Seals	
		2	In Std. Black Diamond™ Valves		2	Ex Std. Black Diamond™ Valves	
2		In Std. C630 Valves Guides		2	Ex Std. C630 Valves Guides		
1	Top End Gasket Kit						

## Components • Replacement • Cylinder Head Service Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
30-32400	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Red Viton® Seals
30-32412	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-32416	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-32420	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
30-32430	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
30-33321	Gasket Kit	<b>Includes:</b> Head Gasket 78mm, Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Water Outlet O-ring (1)

**NEW PRODUCTS**

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	30-32412	Intake	30.50mm	1.201"	0.1961"	20°	3.500"	Standard
	30-32413	Intake	31.50mm	1.240"	0.1961"	20°	3.500"	Oversize
	30-32416	Exhaust	25.00mm	0.984"	0.1956"	20°	3.310"	Standard

You must use KPMI® Spring Kit 30-32400 When installing Black Diamond™ Valves

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	30-32412T	Intake	30.50mm	1.201"	0.1960"	20°	3.500"	Titanium	14711-KRN-A40
	30-32416T	Exhaust	25.00mm	0.984"	0.1956"	20°	3.300"	Titanium	14721-KRN-B10

**Note:** These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. KPMI® Tensilite® titanium valves are one piece forgings made from 6-2-4-2 titanium alloy. These are the latest developments in titanium valve alloys and have superior hardness, strength, and thermal characteristics when compared to other titanium valve alloys. Tensilite® valves are covered with a chromium nitride (CRN) PVD coating. This coating adheres exceptionally well to titanium, has a low coefficient of friction, and is impact, abrasion, and corrosion resistant.

**NEW PRODUCTS**

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.675"	0.675"	0.710"	0.815"	0.394"	0.1961"	0.3963" / Std.	30-32420	
							+0.001"	30-32421	
							+0.002"	30-32422	
							+0.010"	30-32429	
	0.835"	0.835"	0.630"	0.735"	0.394"	0.1956"	0.3963" / Std.	30-32430	
							+0.001"	30-32431	
						+0.002"	30-32432		
						+0.010"	30-32439		



# HONDA® CRF™ 250R 2016-2017



## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Intake
								Exhaust
		<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>		
		71014-4		Pkg. of 4		0%		
		71014-8		Pkg. of 8		0%		
		71014-16		Pkg. of 16		Less- 10%		
		71014-50		Pkg. of 50		Less- 15%		
		71014-100		Pkg. of 100		Less- 20%		

# HONDA® TRX™ 250X 1987-1992

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-3041	Intake	.400"	1.215"	76#	192#	.400"
		Exhaust					
<b>Kit Includes</b>	4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Shims	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	30-30088	Intake	25.50mm	1.004"	0.2155"	23°	3.680"	Standard
	30-30090	Exhaust	22.50mm	0.886"	0.2150"	29°	3.650"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.400"	0.495"	1.185"	1.300"	0.800"	0.2150"	0.4355" / Std.		30-3030
							+0.002"		30-3032
							+0.010"		30-3040

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Intake
								Exhaust
		<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>		
		71016-4		Pkg. of 4		0%		
		71016-8		Pkg. of 8		0%		
		71016-16		Pkg. of 16		Less- 10%		
		71016-50		Pkg. of 50		Less- 15%		
		71016-100		Pkg. of 100		Less- 20%		



# HONDA® XR™ / XL™ 250R RFVC 1984-'95

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-30077	Intake	.355"	1.205"	55#	150#	.355"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-30081	Intake	28.50mm	1.122"	0.2160"	23°	3.805"	Standard
	30-30082	Intake	29.50mm	1.161"	0.2160"	23°	3.805"	Oversize
	*30-30083	Exhaust	23.50mm	0.925"	0.2155"	29°	3.775"	Standard

\* Note # 30-30083 - Recommended for XR250R 1986-1995 Model only

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.400"	0.495"	1.185"	1.300"	0.650"	0.2155"	0.4355" / Std.	30-3100		
								+0.002"	30-3102	
								+0.010"	30-3110	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71016-4			Pkg. of 4		0%		
	71016-8			Pkg. of 8		0%		
	71016-16			Pkg. of 16		Less- 10%		
	71016-50			Pkg. of 50		Less- 15%		
71016-100			Pkg. of 100		Less- 20%			

# HONDA® XR™ 250R RFVC 1996-2004

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-30070	Intake	.465"	1.455"	52#	143#	.300"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	

# HONDA® XR™ 250R RFVC 1996-2004



## Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-4154	Intake	.465"	1.205"	55#	140#	.300"
		Exhaust					
Kit Includes		4	CrSi Valve Springs		4	H. T. Steel Basewashers	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	30-30073	Intake	28.50mm	1.122"	0.1960"	23°	3.805"	Standard
	30-30075	Exhaust	23.50mm	0.925"	0.1955"	29°	3.765"	Standard

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
				Part Number				Quantity
		71016-4		Pkg. of 4		0%		
		71016-8		Pkg. of 8		0%		
		71016-16		Pkg. of 16		Less- 10%		
		71016-50		Pkg. of 50		Less- 15%		
		71016-100		Pkg. of 100		Less- 20%		

# HONDA® XR™ 250L 1991-1996

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.400"	0.495"	1.185"	1.300"	0.650"	0.2155"	0.4355" / Std.	30-3100		
								+0.002"	30-3102	
								+0.010"	30-3110	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
				Part Number				Quantity
		71016-4		Pkg. of 4		0%		
		71016-8		Pkg. of 8		0%		
		71016-16		Pkg. of 16		Less- 10%		
		71016-50		Pkg. of 50		Less- 15%		
		71016-100		Pkg. of 100		Less- 20%		



# HONDA® TRX™ 300EX / X 1993-2009

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-3041	Intake	.400"	1.215"	76#	192#	.400"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Shims

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-30088	Intake	25.50mm	1.004"	0.2155"	23°	3.680"	Standard
	30-30090	Exhaust	22.50mm	0.886"	0.2150"	29°	3.650"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.400"	0.495"	1.185"	1.300"	0.800"	0.2150"	0.4355" / Std.	30-3030		
								+0.002"	30-3032	
								+0.010"	30-3040	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71016-4			Pkg. of 4		0%		
	71016-8			Pkg. of 8		0%		
	71016-16			Pkg. of 16		Less- 10%		
	71016-50			Pkg. of 50		Less- 15%		
71016-100			Pkg. of 100		Less- 20%			

# HONDA® 350 RFVC 1983-1985

## Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-4083	Intake	.460"	1.390"	65#	204#	.460"
		Exhaust					
Kit Includes			4	CrSi Valve Springs			

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# HONDA® 350 RFVC 1983-1985



## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.400"	0.495"	1.185"	1.300"	0.650"	0.2155"	0.4355" / Std.		<b>30-3100</b>	
										+0.002"	<b>30-3102</b>
										+0.010"	<b>30-3110</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
		Part Number		Quantity		Quantity Discount		
		<b>71016-4</b>		Pkg. of 4		0%		
		<b>71016-8</b>		Pkg. of 8		0%		
		<b>71016-16</b>		Pkg. of 16		Less- 10%		
		<b>71016-50</b>		Pkg. of 50		Less- 15%		
<b>71016-100</b>		Pkg. of 100		Less- 20%				

# HONDA® CB™ / CL™ 350 TWIN 1968-'73

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-30104</b>	Intake	.465"	1.315"	101#	266#	.465"
		Exhaust					
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.
4				Titanium Retainers	4	H. T. Steel Basewashers	

## Valves • Black Diamond™ • Black Nitroneg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	<b>30-30361</b>	Intake	34.00mm	1.339"	0.2745"	15°	3.910"	Standard
	<b>30-30362</b>	Intake	35.00mm	1.378"	0.2745"	15°	3.900"	Oversize
	<b>30-30364</b>	Exhaust	28.00mm	1.102"	0.2740"	23°	3.850"	Standard
	<b>30-30365</b>	Exhaust	29.00mm	1.142"	0.2740"	23°	3.840"	Oversize

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.830"	0.880"	0.810"	1.020"	0.525"	0.2745"	0.4950" / Std.		<b>30-0359</b>	
										+0.002"	<b>30-0360</b>
										+0.010"	<b>30-0400</b>
		0.830"	0.880"	1.070"	1.170"	0.525"	0.2740"	0.4950" / Std.		<b>30-0363</b>	
										+0.002"	<b>30-0364</b>
										+0.010"	<b>30-0401</b>

No seal required.

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# HONDA® CB™ / CL™ 350 TWIN 1968-'73

## • Lightweight 5.00mm Conversion System

### Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-30320	Intake	.460"	1.370"	68#	207#	.460"
		Exhaust					
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.
			4	Titanium Retainers	4	H. T. Steel Basewashers	

### Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Head Length	Stem Diameter	Tulip	O. L.	Remarks
	30-30326	Intake	34.00mm	1.339"	0.1965"	20°	3.835"	Standard
	30-30327	Intake	35.00mm	1.378"	0.1965"	20°	3.825"	Oversize
	30-30328	Exhaust	28.00mm	1.102"	0.1960"	23°	3.775"	Standard
	30-30329	Exhaust	29.00mm	1.142"	0.1960"	23°	3.765"	Oversize

Must use Kibblewhite® Lash Caps #94007-4 (Pkg. of 4). Valves have been shortened to fit lash caps.

### Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.440"	0.600"	0.825"	1.165"	0.525"	0.1960"	0.4953" / Std.	30-30330		
									+0.001"	30-30331	
									+0.002"	30-30332	
								+0.010"	30-30339		
		0.440"	0.600"	1.000"	1.180"	0.525"	0.1960"	0.4953" / Std.		30-30340	
									+0.001"	30-30341	
									+0.002"	30-30342	
One seal supplied with each guide.								+0.010"	30-30349		

### Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
		Part Number				Quantity		Quantity Discount
		71015-4				Pkg. of 4		0%
		71015-8				Pkg. of 8		0%
		71015-16				Pkg. of 16		Less- 10%
		71015-50				Pkg. of 50		Less- 15%
71015-100				Pkg. of 100		Less- 20%		

### Lash Caps • H.T. Steel

	KPMI P/N	Material	"A"	"B"	"C"	"D"	"C" - "D"	Quantity
	94007-4	H.T. Steel	5.00mm 0.1969"	0.277"	0.175"	0.100"	0.075"	Pkg. of 4

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# HONDA® ATC™ 350X 1985-1986



## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-3045	Intake	.415"	1.160"	90#	210#	.415"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	

# HONDA® XL™ 350 1974-1978

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-30230	Intake	.440"	1.195"	59#	172#	.440"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.550"	0.650"	0.890"	1.050"	0.685"	0.2155"	0.4372" / Std.	30-0494	
							+0.004"	30-0496	
	0.550"	0.650"	0.890"	1.050"	0.685"	0.2155"	0.4372" / Std.		30-0498
							+0.004"		30-0500

## Swing Arm Bushing • Bearing Bronze For XL™350 1976-1978 NEW PRODUCTS

	KPMI P/N	Material	A	B	C	D	E	Quantity
	30-0477	Bearing Bronze	1.550"	1.465"	Ø 1.250"	Ø 0.8435"	Ø 1.045"	1 Pr.
<ul style="list-style-type: none"> <li>• Replaces worn or damaged plastic OEM bushing</li> <li>• High quality bearing bronze offers increased durability and better fitment than OEM component</li> <li>• OEM P/N: 52108-457-300 &amp; 52108-422-300</li> </ul>								

# HONDA® CB™ 350F / 400F 1972-1977

## Spring Only Kit • High Performance


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-1032	Intake	.400"	1.270"	40#	131#	.400"
		Exhaust					
Kit Includes			8	CrSi Valve Springs			




# HONDA® XR™ 400R RFVC 1996-2004

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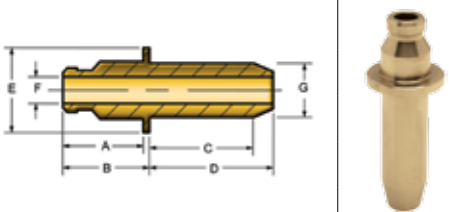
## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-30085	Intake	.430"	1.380"	71#	210#	.430"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	

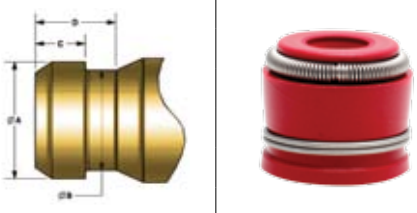
## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	30-3115	Intake	33.00mm	1.300"	0.2156"	20°	4.040"	Standard
	30-3116	Intake	34.00mm	1.340"	0.2156"	20°	4.020"	Oversize
	30-3117	Exhaust	29.00mm	1.142"	0.2150"	29°	3.980"	Standard
	30-3118	Exhaust	30.00mm	1.181"	0.2150"	29°	3.960"	Oversize

## Valve Guides • C630 Bronze


	A	B	C	D	E	F	G	Intake	Exhaust	
	0.550"	0.645"	1.020"	1.300"	0.715"	0.2150"	0.4355" / Std.	30-3120		
								+0.001"	30-3121	
								+0.002"	30-3122	
								+0.010"	30-3130	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	Part Number			Quantity	Quantity Discount			
	71016-4			Pkg. of 4	0%			
	71016-8			Pkg. of 8	0%			
	71016-16			Pkg. of 16	Less- 10%			
	71016-50			Pkg. of 50	Less- 15%			
71016-100			Pkg. of 100	Less- 20%				

# HONDA® TRX™ 400X/ 400EX 1999-'14

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-3111	Intake	.465"	1.375"	70#	157#	.300"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	

Running cams with over .350" lift requires the use of shortened KPMI® guide, PN 30-3120

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# HONDA® TRX™ 400X/ 400EX 1999-'14



## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	30-3115	Intake	33.00mm	1.300"	0.2156"	20°	4.040"	Standard
	30-3116	Intake	34.00mm	1.340"	0.2156"	20°	4.020"	Oversize
	30-3117	Exhaust	29.00mm	1.142"	0.2150"	29°	3.980"	Standard
	30-3118	Exhaust	30.00mm	1.181"	0.2150"	29°	3.960"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.550"	0.645"	1.020"	1.300"	0.715"	0.2150"	0.4355" / Std.		30-3120
							+0.001"		30-3121
							+0.002"		30-3122
							+0.010"		30-3130

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.115"	0.225"	Exhaust
	Part Number		Quantity		Quantity Discount			
	71016-4		Pkg. of 4		0%			
	71016-8		Pkg. of 8		0%			
	71016-16		Pkg. of 16		Less- 10%			
	71016-50		Pkg. of 50		Less- 15%			
71016-100		Pkg. of 100		Less- 20%				

# HONDA® CB™ 450 1965-'72 / CB™ 500 TWIN 1965-'76

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.130"	0.210"	1.293"	1.468"	0.702"	0.2750"	0.4955" / Std.		30-0367
							+0.002"		30-0368
							+0.004"		30-0369
							+0.006"		30-0370
Use O.E.M. valve guide seals.									

# HONDA® CB™ 450 1965-'72 / CB™ 500 TWIN 1965-'76

- Lightweight 5.00mm Conversion System

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-30300	Intake	.460"	1.180"	72#	188#	.460"
		Exhaust					
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.
			4	Titanium Retainers	4	H. T. Steel Basewashers	

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# HONDA® CB™ 450 1965-'72 / CB™ 500 TWIN 1965-'76

• 2018

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>30-30306</b>	Intake	38.00mm	1.496"	0.1960"	20°	3.855"	Standard
	<b>30-30307</b>	Intake	39.00mm	1.535"	0.1960"	20°	3.845"	Oversize
	<b>30-30308</b>	Exhaust	33.00mm	1.299"	0.1955"	18°	3.715"	Standard
	<b>30-30309</b>	Exhaust	34.00mm	1.339"	0.1955"	18°	3.695"	Oversize

Valves shortened for lash caps. Use Kibblewhite® Lash Caps #94007-4 (Pkg. of 4). Using these valves as O.E.M. replacements requires Kibblewhite® 5.0mm Conversion Guides and Keepers.

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.259"	0.354"	1.311"	1.621"	0.524"	0.1960"	0.4951" / Std.	<b>30-30690</b>		
									+0.001"	<b>30-30691</b>	
									+0.002"	<b>30-30692</b>	
		0.259"	0.354"	1.241"	1.436"	0.524"	0.1955"	0.4951" / Std.		<b>30-30700</b>	
									+0.001"	<b>30-30701</b>	
									+0.002"	<b>30-30702</b>	
									+0.010"	<b>30-30699</b>	
One seal supplied with each guide.										<b>30-30709</b>	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
		Part Number		Quantity	Quantity Discount			
		<b>71015-4</b>	Pkg. of 4	0%				
		<b>71015-8</b>	Pkg. of 8	0%				
		<b>71015-16</b>	Pkg. of 16	Less- 10%				
		<b>71015-50</b>	Pkg. of 50	Less- 15%				
	<b>71015-100</b>	Pkg. of 100	Less- 20%					

## Keeper Set • O.E.M. Style • 5.0mm Conversion

		KPMI P/N	Style	A	B	C	D	E	Quantity
		<b>51015-4</b>	Single Radius Bead	0.196"	10.0°	0.160"	0.200"	0.308"	4Pr.

These Kibblewhite® Keepers seamlessly merge the Kibblewhite® 5.0mm Conversion Valves and Guides with the O.E.M. Retainer and Torsion System.

## Lash Caps • H.T. Steel

	KPMI P/N	Material	"A"	"B"	"C"	"D"	"C" - "D"	Quantity
	<b>94007-4</b>	H.T. Steel	5.00mm	0.277"	0.175"	0.100"	0.075"	Pkg. of 4
			0.1969"					

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# HONDA® CRF™ 450R 2002-2008



## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-30640	Intake	.440"	1.215"	40#	147#	.440"	
		Exhaust	.440"	1.365"	70#	203#	.440"	
Kit Includes			2	In CrSi Valve Springs	2	In Titanium Retainers	2	In H.T. Steel Basewashers
			2	*Ex CrSi Valve Springs	2	Ex Titanium Retainers	2	Ex H.T. Steel Basewashers

## Top End Service Kit for CRF 450R 2002-2006

**NEW PRODUCTS**

	KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-32700	96.00mm	Intake	.440"	1.215"	40#	147#	.440"	
			Exhaust	.440"	1.365"	70#	203#	.440"	
	Kit Includes			2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
				2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
			2	In Black Diamond™ Valves	2	Ex Black Diamond™ Valves			
			1	High Compression Racing Piston Kit	1	Top End Gasket Kit			

**IMPORTANT NOTE:** The piston, rings, valves and pin clips in this kit are designed to work together as a system. They are **NOT COMPATIBLE** with O.E.M. components and should **ONLY** be used with the components in this KPMI® Top End Service Kit.

## Components • Replacement • Top End Service Kit for CRF 450R 2002-2006

**NEW PRODUCTS**

KPMI P/N	Description	Specification
30-30640	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-30220	Intake, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
30-30223	Exhaust, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
30-32701	Gasket Kit	<b>Includes:</b> Head Gasket 96mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner O-ring (1), Exhaust Valve Seals (2), Intake Valve Seals (2), Water Pipe O-ring (1), Cam Chain Tensioner O-Ring (1)
30-32702	**Piston Rings	1 complete set
30-32703	**Piston Pin	1 piece
30-32704	**Piston Pin Clips	1 pair
30-32705	**Piston	Includes: Pin, Rings, Clips, Piston

\*\*These components are intended for use with the KPMI® Top End Kit and are not intended for OEM compatibility.

## Cylinder Head Service Kit for CRF™ 450R 2002-2006

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
	30-33340	Intake	.440"	1.215"	40#	147#	.440"		
		Exhaust	.440"	1.365"	70#	203#	.440"		
	Kit Includes			2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
				2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
			2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves			
			2	In Std. C630 Valves Guides	2	Ex Std. C630 Valves Guides			
			1	Top End Gasket Kit					

## Components • Replacement • Cylinder Head Service Kit for CRF 450R 2002-2006

**NEW PRODUCTS**

KPMI P/N	Description	Specification
30-30640	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-30220	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-30223	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-30200	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
30-30210	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
30-33341	Gasket Kit	<b>Includes:</b> Head Gasket 96mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner O-ring (1), Exhaust Valve Seals (2), Intake Valve Seals (2), Water Pipe O-ring (1), Cam Chain Tensioner O-Ring (1)

\*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.

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# HONDA® CRF™ 450R 2002-2008

## Top End Service Kit for CRF 450R 2007-2008 NEW PRODUCTS

	KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-33100	96.00mm	Intake	.440"	1.215"	40#	147#	.440"	
			Exhaust	.440"	1.365"	70#	203#	.440"	
	Kit Includes	2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers		
		2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers		
2		In Black Diamond™ Valves	2	Ex Black Diamond™ Valves					
1		High Compression Racing Piston Kit	1	Top End Gasket Kit					
<b>IMPORTANT NOTE:</b> The piston, rings, valves and pin clips in this kit are designed to work together as a system. They are <b>NOT COMPATIBLE with O.E.M. components</b> and should <b>ONLY</b> be used with the components in this KPMI® Top End Service Kit.									

## Components • Replacement • Top End Service Kit for CRF 450R 2007-2008 NEW PRODUCTS

KPMI P/N	Description	Specification
30-30640	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-30220	Intake, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
30-30225	Exhaust, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
30-33101	Gasket Kit	<b>Includes:</b> Head Gasket 96mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner O-ring (1), Exhaust Valve Seals (2), Intake Valve Seals (2), Water Pipe O-ring (1), Cam Chain Tensioner O-Ring (1)
30-33102	**Piston Rings	1 complete set
30-33103	**Piston Pin	1 piece
30-33104	**Piston Pin Clips	1 pair
30-33105	**Piston	Includes: Pin, Rings, Clips, Piston

\*\*These components are intended for use with the KPMI® Top End Kit and are not intended for OEM compatibility.

## Cylinder Head Service Kit for CRF 450R 2007-2008 NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-33350	Intake	.440"	1.215"	40#	147#	.440"	
		Exhaust	.440"	1.365"	70#	203#	.440"	
	Kit Includes	2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers	
		2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
2		In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves				
2		In Std. C630 Valves Guides	2	Ex Std. C630 Valves Guides				
1	Top End Gasket Kit							

## Components • Replacement • Cylinder Head Service Kit for CRF 450R 2007-2008 NEW PRODUCTS

KPMI P/N	Description	Specification
30-30640	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-30220	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-30225	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-30200	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
30-30210	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
30-33351	Gasket Kit	<b>Includes:</b> Head Gasket 96mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner O-ring (1), Exhaust Valve Seals (2), Intake Valve Seals (2), Water Pipe O-ring (1), Cam Chain Tensioner O-Ring (1)

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-31210	Intake	.440"	1.215"	40#	147#	.440"
	Kit Includes	2	CrSi Valve Springs	2	Titanium Retainers		
2		Black Diamond™ Valves	2	H. T. Steel Basewashers			

\*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.


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# HONDA® CRF™ 450R 2002-2008




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## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>30-30220</b>	Intake	36.00mm	1.417"	0.2158"	20°	3.315"	Standard
	<b>30-30221</b>	Intake	37.00mm	1.457"	0.2158"	20°	3.325"	Oversize
	<b>30-30222</b>	Intake	38.00mm	1.496"	0.2158"	20°	3.325"	Oversize
	<b>30-30223</b>	Exhaust	31.00mm	1.220"	0.1957"	20°	3.310"	2002-'06 Std.
	<b>30-30224</b>	Exhaust	32.00mm	1.260"	0.1957"	20°	3.320"	2002-'06 O/S
<b>30-30225</b>	Exhaust	30.00mm	1.181"	0.1957"	20°	3.310"	2007-'08 Std.	

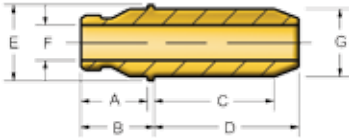

Must use **Kibblewhite® Lightweight Valve Spring Kits** when installing **Black Diamond™ Valves**.

## Valves • O.E.M. Replacement • Titanium • Stainless

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	<b>30-30220T</b>	Intake	36.00mm	1.417"	0.2158"	20°	3.325"	Titanium	14711-MEB-670
	<b>30-30223</b>	Exhaust	31.00mm	1.220"	0.1957"	20°	3.310"	2002-'06 Stainless	14721-MEB-670
	<b>30-30225</b>	Exhaust	30.00mm	1.181"	0.1957"	20°	3.310"	2007-'08 Stainless	14721-MEN-A00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

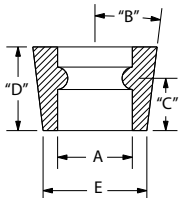

	A	B	C	D	E	F	G	Intake	Exhaust
	0.495"	0.520"	0.650"	0.760"	0.480"	0.2155"	0.4360" / Std.	+0.001"	<b>30-30200</b>
							+0.002"	<b>30-30201</b>	
							+0.004"	<b>30-30202</b>	
							+0.010"	<b>30-30204</b>	
							+0.010"	<b>30-30209</b>	
	0.580"	0.605"	0.740"	0.890"	0.480"	0.1955"	0.4360" Std.		<b>30-30210</b>
							+0.001"		<b>30-30211</b>
							+0.002"		<b>30-30212</b>
							+0.004"		<b>30-30214</b>
							+0.010"		<b>30-30219</b>

## Valve Guide Seal Kits • High Performance

	Intake Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				
					A	B	C	D	
	5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.115"	0.225"	
Exhaust Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs					
				A	B	C	D		
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"		
<b>Part Number</b>		<b>30-30550</b>		<b>Kit Includes</b>		2	Intake Viton® Seals	2	Exhaust Viton® Seals

## Keeper Set • O.E.M. Replacement

**NEW PRODUCTS**

		KPMI P/N	Style	Type	A	B	C	D	E	Quantity
		<b>30-30650</b>	Single Radius Bead	Intake	0.215"	7.0°	0.179"	0.214"	0.262"	2 Pr.
				Exhaust	0.196"	7.0°	0.170"	0.205"	0.236"	2 Pr.

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

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# HONDA® CRF™ 450R 2002-2008

## Tappets • O.E.M Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
	<b>30-30648</b>	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"	Pkg. of 2
Refer to <b>KPMI® Tappet Section</b> , in back of catalog, when selecting oversize tappets.										

# HONDA® CRF™ 450R 2009-2012

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-31250</b>	Intake	.440"	1.215"	40#	147#	.440"
		Exhaust	.440"	1.365"	71#	203#	.440"
<b>Kit Includes</b>		2	In CrSi Valve Springs	2	In Titanium Retainers	2	In H.T. Steel Basewashers
		2	*Ex CrSi Valve Springs	2	In Titanium Retainers	2	Ex H.T. Steel Basewashers
*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H.T. Steel Basewashers.							

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-31240</b>	Intake	.440"	1.215"	40#	147#	.440"
	<b>Kit Includes</b>		2	CrSi Valve Springs	2	Titanium Retainers	
		2	Black Diamond™ Valves	2	H. T. Steel Basewashers		

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	<b>30-31262</b>	Intake	36.00mm	1.417"	0.1960"	20°	3.095"	Standard
	<b>30-31263</b>	Intake	37.00mm	1.457"	0.1960"	20°	3.095"	Oversize
	<b>30-31266</b>	Exhaust	30.00mm	1.181"	0.1955"	20°	3.175"	Standard
	<b>30-31267</b>	Exhaust	31.00mm	1.220"	0.1955"	20°	3.185"	Oversize

Must use **Kibblewhite® Lightweight Valve Spring Kits** when installing **Black Diamond™ Valves**.

## Valves • O.E.M. Replacement • Titanium • Stainless

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N	
	<b>30-31262T</b>	Intake	36.00mm	1.417"	0.1960"	20°	3.095"	Titanium	14711-MEN-A30
	<b>30-31266</b>	Exhaust	30.00mm	1.181"	0.1955"	20°	3.175"	Stainless	14721-MEN-A30

**Note:** These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Tappets • H.T. Steel • High Performance

	KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
	<b>30-31292</b>	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"	Pkg. of 2
Refer to <b>KPMI® Tappet Section</b> , in back of catalog, when selecting oversize tappets.										

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# HONDA® CRF™ 450R 2009-2012



## Valve Guides • C630 Bronze

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>Intake</b>	<b>Exhaust</b>
	0.535"	0.535"	0.590"	0.670"	0.433"	0.1960"	0.4360" / Std.	<b>30-31270</b>	
							+0.001"	<b>30-31271</b>	
							+0.002"	<b>30-31272</b>	
							+0.010"	<b>30-31279</b>	
	0.630"	0.630"	0.730"	0.870"	0.433"	0.1955"	0.4360" / Std.		<b>30-31280</b>
							+0.002"		<b>30-31282</b>
							+0.010"		<b>30-31289</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
		<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>	
		<b>71015-4</b>			Pkg. of 4		0%	
		<b>71015-8</b>			Pkg. of 8		0%	
		<b>71015-16</b>			Pkg. of 16		Less- 10%	
		<b>71015-50</b>			Pkg. of 50		Less- 15%	
		<b>71015-100</b>			Pkg. of 100		Less- 20%	

# HONDA® CRF™ 450R 2013-2016

## Valve Spring Kit • Lightweight High-Lift Racing

	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>
	<b>30-31600</b>	Intake	.440"	1.215"	40#	147#	.440"
		Exhaust	.440"	1.365"	70#	203#	.440"
	<b>Kit Includes</b>		2	In, CrSi Valve Springs	2	In, Titanium Retainers	2
		2	*Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

\*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.

## Intake Only • Steel Valve Conversion Kit

	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>
	<b>30-31580</b>	Intake	.440"	1.215"	40#	147#	.440"
	<b>Kit Includes</b>		2	CrSi Valve Springs	2	Titanium Retainers	
		2	Black Diamond™ Valves	2	H. T. Steel Basewashers		

## Valves • Black Diamond™ • Black Nitroreg Stems

	<b>KPMI P/N</b>	<b>Type</b>	<b>Head Diameter</b>	<b>Stem Diameter</b>	<b>Tulip</b>	<b>O. L.</b>	<b>Remarks</b>
	<b>30-31612</b>	Intake	36.00mm	1.417"	0.1960"	20°	3.095" Standard
	<b>30-31613</b>	Intake	37.00mm	1.457"	0.1960"	20°	3.095" Oversize
	<b>30-31616</b>	Exhaust	31.00mm	1.220"	0.1955"	20°	3.175" Standard
	<b>30-31617</b>	Exhaust	32.00mm	1.260"	0.1955"	20°	3.175" Oversize


Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.



# HONDA® CRF™ 450R 2013-2016

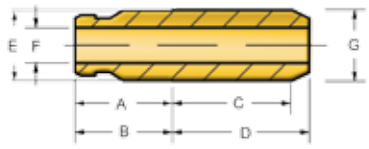

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## Valves • O.E.M. Replacement • Titanium • Stainless

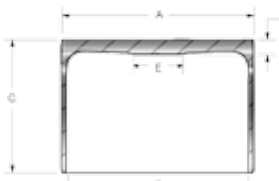
	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	<b>30-31612T</b>	Intake	36.00mm	1.417"	0.1960"	20°	3.095"	Titanium	14711-MEN-A30
	<b>30-31616</b>	Exhaust	31.00mm	1.220"	0.1955"	20°	3.175"	Stainless	14721-MEN-A70

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze


	A	B	C	D	E	F	G	Intake	Exhaust
	0.535"	0.535"	0.590"	0.670"	0.433"	0.1960"	0.4360" / Std.	<b>30-31620</b>	
							+0.001"	<b>30-31621</b>	
							+0.002"	<b>30-31622</b>	
							+0.010"	<b>30-31629</b>	
	0.630"	0.630"	0.730"	0.870"	0.433"	0.1955"	0.4360" / Std.		<b>30-31630</b>
							+0.001"		<b>30-31631</b>
							+0.002"		<b>30-31632</b>
						+0.010"		<b>30-31639</b>	

## Tappets • O.E.M Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
	<b>30-31642</b>	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"	Pkg. of 2

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting oversize tappets.


## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
	<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>		
	<b>71015-4</b>			Pkg. of 4		0%		
	<b>71015-8</b>			Pkg. of 8		0%		
	<b>71015-16</b>			Pkg. of 16		Less- 10%		
	<b>71015-50</b>			Pkg. of 50		Less- 15%		
	<b>71015-100</b>			Pkg. of 100		Less- 20%		

# HONDA® CRF™ 450R/RX/WE 2017-2019

## Valve Spring Kit • Lightweight Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>30-32800</b>	Intake	.440"	1.340"	50#	162#	.440"	
		Exhaust	.405"	1.360"	90#	220#	.405"	
<b>Kit Includes</b>			2	In CrSi Valve Springs	2	In Titanium Retainers	2	In H. T. Steel Basewashers
			2	*Ex CrSi Valve Springs	2	Ex Titanium Retainers	2	Ex H. T. Steel Basewashers

\*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H.T. Steel Basewashers.

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# HONDA® CRF™ 450R/RX/WE 2017-2019



## Cylinder Head Service Kit **NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-33330	Intake	.440"	1.340"	50#	162#	.440"
		Exhaust	.405"	1.360"	90#	220#	.405"
	Kit Includes	2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
		2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
		2	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves (Inconel®)		
2		In Std. C630 Valves Guides	2	Ex Std. C630 Valves Guides			
1		Top End Gasket Kit					

## Components • Replacement • Cylinder Head Service Kit **NEW PRODUCTS**

KPMI P/N	Description	Specification
30-32800	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-32812H	Intake, Standard Valve	Valve • White Diamond® • Stainless
30-32816K	Exhaust, Standard Valve	Valve • White Diamond® • Inconel®
30-32820	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
30-32830	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
30-33331	Gasket Kit	<b>Includes:</b> Head Gasket 96mm (1), Base Gasket (1), Case Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Bolt Seal (1), Valve Stem Seal (4)

## Intake Only • Steel Valve Conversion Kit **NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-32780	Intake	.440"	1.340"	50#	162#	.440"
	Kit Includes	2	*CrSi Valve Springs	2	Titanium Retainers		
2		H. T. Steel Basewashers	2	White Diamond® Valves			

\* The Intake springs in this kit include a progressively wound springs, which should be installed with the tightly wound end seated on the H.T. Steel Basewashers.

## Valves • White Diamond® • Stainless • Inconel® **NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	
	30-32812H	Intake	38.00mm	1.496"	0.1960"	20°	3.080"	Stainless
		Standard						
	**30-32816K	Exhaust	31.00mm	1.220"	0.1955"	23°	3.165"	Inconel®
Standard								

## Valves • O.E.M. Replacement • Titanium • Inconel® **NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	Replaces OEM P/N	
	30-32812T	Intake	38.00mm	1.496"	0.1960"	20°	3.085"	Titanium	14711-MKE-A01
		Standard							
	**30-32816K	Exhaust	31.00mm	1.220"	0.1955"	23°	3.165"	Inconel®	14721-MEN-A70
Standard									

**Note:** These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits.

KPMI® Tensilite® titanium valves are one piece forgings made from 6-2-4-2 titanium alloy. These are the latest developments in titanium valve alloys and have superior hardness, strength, and thermal characteristics when compared to other titanium valve alloys. Tensilite® valves are covered with a chromium nitride (CRN) PVD coating. This coating adheres exceptionally well to titanium, has a low coefficient of friction, and is impact, abrasion, and corrosion resistant.

\*\* Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

**VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)**



# HONDA® CRF™ 450R/RX/WE 2017-2019

## Valve Guides • C630 Bronze

**NEW PRODUCTS**

	A	B	C	D	E	F	G	Intake	Exhaust
	0.535"	0.535"	0.590"	0.670"	0.433"	0.1960"	0.4360" / Std.	<b>30-32820</b>	
							+0.001"	<b>30-32821</b>	
							+0.002"	<b>30-32822</b>	
							+0.010"	<b>30-32829</b>	
	0.630"	0.630"	0.730"	0.870"	0.433"	0.1955"	0.4360" / Std.		<b>30-32830</b>
							+0.001"		<b>30-32831</b>
							+0.002"		<b>30-32832</b>
							+0.010"		<b>30-32839</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		<b>71015-4</b>				Pkg. of 4		0%
		<b>71015-8</b>				Pkg. of 8		0%
		<b>71015-16</b>				Pkg. of 16		Less- 10%
		<b>71015-50</b>				Pkg. of 50		Less- 15%
		<b>71015-100</b>				Pkg. of 100		Less- 20%

# HONDA® CRF™ 450X 2005-2017

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-31050</b>	Intake	.440"	1.215"	40#	147#	.440"
		Exhaust	.440"	1.365"	70#	203#	.440"
<b>Kit Includes</b>			2 In, CrSi Valve Springs	2 In, Titanium Retainers	2 In, H. T. Steel Basewashers		
			2 *Ex, CrSi Valve Springs	2 Ex, Titanium Retainers	2 Ex, H. T. Steel Basewashers		

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-31230</b>	Intake	.440"	1.215"	40#	147#	.440"
	<b>Kit Includes</b>			2 CrSi Valve Springs	2 Titanium Retainers		
			2 Black Diamond™ Valves	2 H. T. Steel Basewashers			

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	<b>30-31062</b>	Intake	35.00mm	1.378"	0.2158"	20°	3.315"	Standard
	<b>30-31063</b>	Intake	36.00mm	1.417"	0.2158"	20°	3.315"	Oversize
	<b>30-31066</b>	Exhaust	30.00mm	1.181"	0.1957"	20°	3.310"	Standard
	<b>30-31067</b>	Exhaust	31.00mm	1.220"	0.1957"	20°	3.310"	Oversize

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

**ORDER 650-557-2046**

# HONDA® CRF™ 450X 2005-2017



## Top End Service Kit

**NEW PRODUCTS**

	KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-32900	96.00mm	Intake	.440"	1.215"	40#	147#	.440"	
			Exhaust	.440"	1.365"	70#	203#	.440"	
	Kit Includes	2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers		
		2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers		
2		In Black Diamond™ Valves	2	Ex Black Diamond™ Valves					
1		High Compression Racing Piston Kit	1	Top End Gasket Kit					

**IMPORTANT NOTE:** The piston, rings, valves and pin clips in this kit are designed to work together as a system. They are **NOT COMPATIBLE with O.E.M. components** and should **ONLY** be used with the components in this KPMI® Top End Service Kit.

\*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.

## Components • Replacement • Top End Service Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
30-31050	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-31062	Intake, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
30-31066	Exhaust, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
30-32901	Gasket Kit	Includes: Base gasket, Engine case gasket, Exhaust gasket, Head gasket, Washers, Valve stem seals
30-32902	**Piston Rings	1 complete set
30-32903	**Piston Pin	1 piece
30-32904	**Piston Pin Clips	1 pair
30-32905	**Piston	Includes: Pin, Rings, Clips, Piston

\*\*These components are intended for use with the KPMI® Top End Kit and are not intended for OEM compatibility.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.495"	0.520"	0.650"	0.760"	0.480"	0.2155"	0.4360" / Std.	30-31070	
							+0.001"	30-31071	
							+0.002"	30-31072	
							+0.004"	30-31074	
							+0.010"	30-31079	
	0.580"	0.605"	0.740"	0.890"	0.480"	0.1955"	0.4360" / Std.		30-31080
							+0.001"		30-31081
							+0.002"		30-31082
							+0.004"		30-31084
							+0.010"		30-31089

## Keeper Set • O.E.M. Replacement

		KPMI P/N	Style	Type	A	B	C	D	E	Quantity
		30-31095	Single Radius Bead	Intake	0.215"	7.0°	0.179"	0.214"	0.262"	2 Pr.
				Exhaust	0.196"	7.0°	0.170"	0.205"	0.236"	2 Pr.

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

## Tappets • O.E.M Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	30-31092	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"

Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

**VISIT US AT WWW.KPMI.US**




# HONDA® CRF™ 450X 2005-2017

## Valve Guide Seal Kits • High Performance


		Intake Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			
		5.5mm	0.320"	0.440"	4	A	B	C	D
		Exhaust Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			
		5.0mm	0.350"	0.405"	4	A	B	C	D
Part Number		30-31570		Kit Includes		2	Intake Viton® Seals	2	Exhaust Viton® Seals

# HONDA® TRX™ 450R 2004-2005


## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-30720	Intake	.440"	1.215"	40#	147#	.440"	
Exhaust		.440"	1.365"	70#	203#	.440"		
Kit Includes			2	In, CrSi Valve Springs	2	In, Titanium Retainers	2	In, H. T. Steel Basewashers
			2	*Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

## Intake Only • Steel Valve Conversion Kit **NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-33200	Intake	.440"	1.215"	40#	147#	.440"
Kit Includes			2	CrSi Valve Springs	2	Titanium Retainers	
			2	Black Diamond™ Valves	2	H. T. Steel Basewashers	

## Top End Service Kit **NEW PRODUCTS**

	KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-32500	94.00mm	Intake	.440"	1.215"	40#	147#	.440"
Exhaust			.440"	1.365"	70#	203#	.440"	
Kit Includes			2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
			2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
			2	In Black Diamond™ Valves	2	Ex Black Diamond™ Valves		
			1	High Compression Racing Piston Kit	1	Top End Gasket Kit		
<b>IMPORTANT NOTE:</b> The piston, rings, valves and pin clips in this kit are designed to work together as a system. They are <b>NOT COMPATIBLE</b> with O.E.M. components and should <b>ONLY</b> be used with the components in this KPMI® Top End Service Kit.								

\*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.

## Components • Replacement • Top End Service Kit **NEW PRODUCTS**

KPMI P/N	Description	Specification
30-30720	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-30750	Intake, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
30-30753	Exhaust, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
30-32501	Gasket Kit	Includes: Base gasket, Engine case gasket, Exhaust gasket, Head gasket, Washers, Valve stem seals
30-32502	**Piston Rings	1 complete set
30-32503	**Piston Pin	1 piece
30-32504	**Piston Pin Clips	1 pair
30-32505	**Piston	Includes: Pin, Rings, Clips, Piston

\*\*These components are intended for use with the KPMI® Top End Kit and are not intended for OEM compatibility.

**ORDER 650-557-2046**

# HONDA® TRX™ 450R 2004-2005



## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>30-30750</b>	Intake	36.00mm	1.417"	0.2158"	20°	3.315"	Standard
	<b>30-30751</b>	Intake	37.00mm	1.457"	0.2158"	20°	3.325"	Oversize
	<b>30-30752</b>	Intake	38.00mm	1.496"	0.2158"	20°	3.325"	Oversize
	<b>30-30753</b>	Exhaust	30.00mm	1.181"	0.2151"	20°	3.315"	Standard
	<b>30-30754</b>	Exhaust	31.00mm	1.220"	0.2151"	20°	3.325"	Oversize
<b>30-30755</b>	Exhaust	32.00mm	1.260"	0.2151"	20°	3.325"	Oversize	

Must use **Kibblewhite® Lightweight Valve Spring Kits** when installing **Black Diamond™ Valves**.

## Racing Valve Kit • Titanium • Stainless

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	<b>30-30750T</b>	Intake	36.00mm	1.417"	0.2158"	20°	3.325"	Titanium	14711-HP1-670
	<b>30-30753</b>	Exhaust	30.00mm	1.181"	0.2151"	20°	3.315"	Stainless	14721-HP1-670

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.495"	0.520"	0.650"	0.760"	0.480"	0.2155"	0.4360" / Std.	<b>30-30730</b>	
							+0.001"	<b>30-30731</b>	
							+0.002"	<b>30-30732</b>	
							+0.004"	<b>30-30734</b>	
							+0.010"	<b>30-30739</b>	
	0.580"	0.605"	0.705"	0.830"	0.480"	0.2150"	0.4360" / Std.		<b>30-30740</b>
							+0.001"		<b>30-30741</b>
							+0.002"		<b>30-30742</b>
							+0.004"		<b>30-30744</b>
						+0.010"		<b>30-30749</b>	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
			Part Number	Quantity		Quantity Discount		
			<b>71016-4</b>	Pkg. of 4		0%		
			<b>71016-8</b>	Pkg. of 8		0%		
			<b>71016-16</b>	Pkg. of 16		Less- 10%		
			<b>71016-50</b>	Pkg. of 50		Less- 15%		
		<b>71016-100</b>	Pkg. of 100		Less- 20%			

## Tappets • O.E.M Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	<b>30-30728</b>	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting oversize tappets.



# HONDA® TRX 450R / ER 2006-2014

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-30920	Intake	.440"	1.215"	40#	147#	.440"
		Exhaust	.440"	1.365"	70#	203#	.440"
<b>Kit Includes</b>			2 In, CrSi Valve Springs	2 In, Titanium Retainers	2 In, H. T. Steel Basewashers		
			2 *Ex, CrSi Valve Springs	2 Ex, Titanium Retainers	2 Ex, H. T. Steel Basewashers		

## Top End Service Kit

**NEW PRODUCTS**

	KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-32600	96.00mm	Intake	.440"	1.215"	40#	147#	.440"
			Exhaust	.440"	1.365"	70#	203#	.440"
	<b>Kit Includes</b>			2 In Titanium Retainers	2 In CrSi Valve Springs	2 In H. T. Steel Basewashers		
				2 Ex Titanium Retainers	2 *Ex CrSi Valve Springs	2 Ex H. T. Steel Basewashers		
			2 In Black Diamond™ Valves	2 Ex Black Diamond™ Valves				
			1 High Compression Racing Piston Kit	1 Top End Gasket Kit				
<p><b>IMPORTANT NOTE:</b> The piston, rings, valves and pin clips in this kit are designed to work together as a system. They are <b>NOT COMPATIBLE with O.E.M. components</b> and should <b>ONLY</b> be used with the components in this KPMI® Top End Service Kit.</p>								

## Components • Replacement • Top End Service Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
30-30920	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-30950	Intake, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
30-30953	Exhaust, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
30-32601	Gasket Kit	Includes: Head Gasket 96mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner Gasket Early (1), Exhaust Valve Seals (2), Intake Valve Seals (2), Cam Chain Tensioner Bolt Seal (1), Thermostat Housing Gasket (1)
30-32602	**Piston Rings	1 complete set
30-32603	**Piston Pin	1 piece
30-32604	**Piston Pin Clips	1 pair
30-32605	**Piston	Includes: Pin, Rings, Clips, Piston

\*\*These components are intended for use with the KPMI® Top End Kit and are not intended for OEM compatibility.

## Cylinder Head Service Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-33360	Intake	.440"	1.215"	40#	147#	.440"	
		Exhaust	.440"	1.365"	70#	203#	.440"	
	<b>Kit Includes</b>			2 In Titanium Retainers	2 In CrSi Valve Springs	2 In H. T. Steel Basewashers		
				2 Ex Titanium Retainers	2 *Ex CrSi Valve Springs	2 Ex H. T. Steel Basewashers		
			2 In Std. Black Diamond™ Valves	2 Ex Std. Black Diamond™ Valves				
			2 In Std. C630 Valves Guides	2 Ex Std. C630 Valves Guides				
			1 Top End Gasket Kit					

\*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.

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# HONDA® TRX 450R / ER 2006-2014




## Components • Replacement • Cylinder Head Service Kit

**NEW PRODUCTS**


KPMI P/N	Description	Specification
<b>30-30920</b>	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
<b>30-30950</b>	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
<b>30-30953</b>	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
<b>30-30930</b>	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
<b>30-30940</b>	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
<b>30-33361</b>	Gasket Kit	<b>Includes:</b> Head Gasket 96mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner Gasket Early (1), Exhaust Valve Seals (2), Intake Valve Seals (2), Cam Chain Tensioner Bolt Seal (1), Thermostat Housing Gasket (1)

## Intake Only • Steel Valve Conversion Kit

**NEW PRODUCTS**


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-33250</b>	Intake	.440"	1.215"	40#	147#	.440"
<b>Kit Includes</b>	2	CrSi Valve Springs	2	Titanium Retainers			
	2	Black Diamond™ Valves	2	H. T. Steel Basewashers			

## Valves • Black Diamond™ • Black Nitroneg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>30-30950</b>	Intake	36.00mm	1.417"	0.2158"	20°	3.315"	Standard
	<b>30-30951</b>	Intake	37.00mm	1.457"	0.2158"	20°	3.325"	Oversize
	<b>30-30952</b>	Intake	38.00mm	1.496"	0.2158"	20°	3.325"	Oversize
	<b>30-30953</b>	Exhaust	30.00mm	1.181"	0.1957"	20°	3.310"	Standard
	<b>30-30954</b>	Exhaust	31.00mm	1.220"	0.1957"	20°	3.310"	Oversize
<b>30-30955</b>	Exhaust	32.00mm	1.260"	0.1957"	20°	3.320"	Oversize	

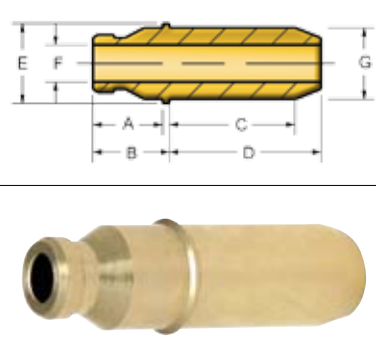
Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Racing Valve Kit • Titanium • Stainless

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	<b>30-30950T</b>	Intake	36.00mm	1.417"	0.2158"	20°	3.325"	Titanium	14711-MEB-670
	<b>30-30953</b>	Exhaust	30.00mm	1.181"	0.1957"	20°	3.310"	Stainless	14721-MEY-670

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.495"	0.520"	0.650"	0.760"	0.480"	0.2155"	0.4360" / Std.		<b>30-30930</b>
							+0.001"	<b>30-30931</b>	
							+0.002"	<b>30-30932</b>	
							+0.004"	<b>30-30934</b>	
							+0.010"	<b>30-30939</b>	
	0.580"	0.605"	0.740"	0.890"	0.480"	0.1955"	0.4360" / Std.		<b>30-30940</b>
							+0.001"	<b>30-30941</b>	
							+0.002"	<b>30-30942</b>	
							+0.004"	<b>30-30944</b>	
							+0.010"	<b>30-30949</b>	

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# HONDA® TRX™ 450R / ER 2006-2014

## Valve Guide Seal Kits • High Performance

	Intake Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs			
	5.5mm	0.320"	0.440"	4	A	B	C	D
	0.358"±0.005"	0.320"	0.115"	0.225"	Designed for these guide specs			
	0.340"±0.005"	0.303"	0.125"	0.230"	A	B	C	D
Exhaust Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				
5.0mm	0.350"	0.405"	4	A	B	C	D	
0.340"±0.005"	0.303"	0.125"	0.230"	Designed for these guide specs				
Part Number	30-30980		Kit Includes	2	Intake Viton® Seals	2	Exhaust Viton® Seals	

## Keeper Set • O.E.M. Replacement

**NEW PRODUCTS**

	KPMI P/N	Style	Type	A	B	C	D	E	Quantity
	30-30655	Single Radius Bead	Intake	0.215"	7.0°	0.179"	0.214"	0.262"	2 Pr.
			Exhaust	0.196"	7.0°	0.170"	0.205"	0.236"	2 Pr.

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

## Tappets • O.E.M Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	30-30648	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"
Refer to <b>KPMI® Tappet Section</b> , in back of catalog, when selecting oversize tappets.									

# HONDA® CB™ 500 / 4 - CB™ 550 / 4 1971-'78

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-31550	Intake	.440"	1.385"	70#	203#	.440"
		Exhaust					
	Kit Includes	8	CrSi Valve Springs	8	Titanium Retainers		
Use O.E.M. Basewashers							

## Spring Only Kit • OEM Replacement

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-4045	Intake	.440"	1.390"	60#	195#	.440"
		Exhaust					
	Kit Includes	8	CrSi Valve Springs				

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-31330	Intake	27.50mm	1.083"	0.2150"	20°	3.680"	Standard
	30-31331	Intake	28.50mm	1.122"	0.2150"	20°	3.680"	Oversize
	30-31334	Exhaust	23.00mm	0.905"	0.2145"	30°	3.650"	Standard
30-31335	Exhaust	24.00mm	0.945"	0.2145"	30°	3.650"	Oversize	

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# HONDA® CB™ 500 / 4 - CB™ 550 / 4 1971-'78



## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.475"	0.595"	0.980"	1.230"	0.720"	0.2150"	0.4372" / Std.		<b>30-3150</b>	
									+0.001"		<b>30-3151</b>
									+0.002"		<b>30-3152</b>
									+0.004"		<b>30-3154</b>
							+0.010"		<b>30-3160</b>		

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
		Part Number			Quantity		Quantity Discount	
		<b>71016-4</b>			Pkg. of 4		0%	
		<b>71016-8</b>			Pkg. of 8		0%	
		<b>71016-16</b>			Pkg. of 16		Less- 10%	
		<b>71016-50</b>			Pkg. of 50		Less- 15%	
		<b>71016-100</b>			Pkg. of 100		Less- 20%	

## Swing Arm Bushing • Bearing Bronze For CB™500 1975-1976 and CB™550 1975-1978

**NEW PRODUCTS**

	KPMI P/N	Material	A	B	C	D	E	Quantity
	<b>30-0477</b>	Bearing Bronze	1.550"	1.465"	Ø 1.250"	Ø 0.8435"	Ø 1.045"	1 Pr.

- Replaces worn or damaged plastic OEM bushing
- High quality bearing bronze offers increased durability and better fitment than OEM component
- OEM P/N: 52108-457-300 & 52108-422-300

## Cylinder Head Studs For CB™500 1976 and CB™550 1976-1978

**NEW PRODUCTS**

	KPMI P/N	O. L. "C"	O. L. "D"	Body Dia.	A	B	Remarks
	<b>30-32450</b>	5.787"	5.118"	0.309"	0.551"	0.827"	Standard
	<b>Kit Includes</b>	6	5.787" O.L. Studs		6	5.118" O.L. Studs	

These High Performance Cylinder studs are made from 180,000 psi yield strength, fine grain, heat treated, premium grade 8740 steel. Threads are rolled after heat treating to ensure maximum strength and the longest fatigue life possible. The case-end threads are designed to have a slight interference fit to maintain good thread contact at high temperature. Studs are centerless ground to ensure concentricity, and finished with a black oxide treatment for a premium appearance.

# HONDA® CBR™ 600 F2 / F3 1991-1996


## Spring Only Kit • OEM Replacement

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-3020</b>	Intake	.420"	1.220"	50#	140#	.400"
		Exhaust					
<b>Kit Includes</b>	16	CrSi Valve Springs					




# HONDA® CBR™ 600 F2 / F3 1991-1996

## Retainer Set • Titanium

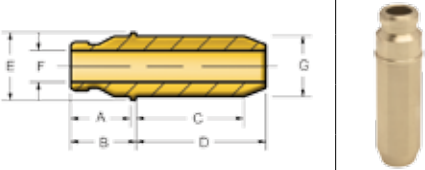
	KPMI P/N	Type	Material	Quantity
	30-3021	Intake	Titanium	Pkg. of 16
Exhaust				

## Valves • Black Diamond™ • Black Nitroreg Stems

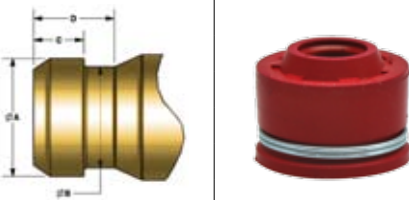
	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	30-3024	Intake	25.50mm	1.004"	0.1566"	19°	3.115"	Standard
	30-3025	Intake	26.50mm	1.043"	0.1566"	19°	3.115"	Oversize
	30-3022	Exhaust	22.00mm	0.866"	0.1561"	20°	3.120"	Standard
	30-3023	Exhaust	23.00mm	0.905"	0.1561"	20°	3.120"	Oversize

Intake valves made from special alloy to resist face recession common in these models

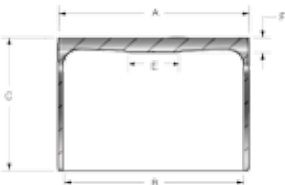
## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.385"	0.410"	0.800"	0.900"	0.365"	0.1561"	0.3370" / Std.		30-3010
							+0.002"		30-3012
							+0.010"		30-3019

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.0mm	0.310"	0.380"	2	A	B	C	D	Intake
				0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust
			Part Number	Quantity		Quantity Discount		
			71013-4	Pkg. of 4		0%		
			71013-8	Pkg. of 8		0%		
			71013-16	Pkg. of 16		Less- 10%		
			71013-50	Pkg. of 50		Less- 15%		
		71013-100	Pkg. of 100		Less- 20%			


## Tappets • O.E.M Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	30-30019	Intake Exhaust	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting oversize tappets.

# HONDA® CBR™ 600F4i 2001-2006

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-30290	Intake	.360"	1.230"	51#	139#	.360"
		Exhaust					
Kit Includes			16	CrSi Valve Springs	16	Titanium Retainers	
			8	In, H. T. Steel Basewashers	8	Ex, H. T. Steel Basewashers	

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# HONDA® CBR™ 600F4i 2001-2006



## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Intake
								Exhaust
				Part Number		Quantity		Quantity Discount
				71013-4		Pkg. of 4		0%
				71013-8		Pkg. of 8		0%
				71013-16		Pkg. of 16		Less- 10%
				71013-50		Pkg. of 50		Less- 15%
				71013-100		Pkg. of 100		Less- 20%

## Tappets • O.E.M Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	30-30019	Intake Exhaust	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting oversize tappets.

# HONDA® XR™ 650R 2000-2007

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-30161	Intake	.440"	1.225"	70#	195#	.440"	
		Exhaust						
<b>Kit Includes</b>			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-30166	Intake	37.00mm	1.457"	0.2590"	19°	4.025"	Standard
	30-30167	Intake	38.00mm	1.496"	0.2590"	19°	4.040"	Oversize
	30-30168	Exhaust	32.00mm	1.260"	0.2585"	19°	4.065"	Standard


## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.600"	0.600"	0.805"	1.075"	0.475"	0.2590"	0.4753" / Std.	+0.001"	30-30170
							+0.002"	30-30171	
							+0.010"	30-30172	
							+0.010"	30-30179	
0.600"	0.600"	1.000"	1.230"	0.475"	0.2590"	0.4753" / Std.			30-30180
							+0.001"		30-30181
							+0.002"		30-30182
							+0.010"		30-30189



# HONDA® XR™ 650R 2000-2007


## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
6.5mm	0.353"	0.560"	4	A	B	C	D	Intake
				0.475"±0.005"	0.415"	0.115"	0.260"	Exhaust
		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		71018-4				Pkg. of 4		0%
		71018-8				Pkg. of 8		0%
		71018-16				Pkg. of 16		Less- 10%
		71018-50				Pkg. of 50		Less- 15%
		71018-100				Pkg. of 100		Less- 20%


# HONDA® VARIOUS 500cc-650cc 1983-'18

- GB™ 500 1989-1990
- XR™ 500R 1983-1984
- XL™ 600R 1983-1987
- XR™ 600R 1985-2000
- XR™ 650L 1993-2018


## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-30015	Intake	.465"	1.210"	70#	185#	.400"	
		Exhaust						
<b>Kit Includes</b>			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Shims

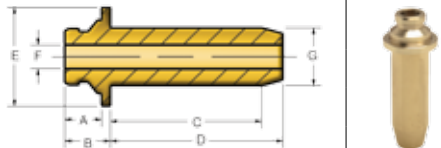
## Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-4081	Intake	.465"	1.210"	70#	210#	.465"
		Exhaust					
<b>Kit Includes</b>			4	CrSi Valve Springs	4	H. T. Steel Shims	


## Valves • Black Diamond™ • Black Nitroreg Stems • Excluding XL™ 600R 1985-1987

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	30-3003	Intake	36.00mm	1.417"	0.2590"	23°	4.165"	Standard
	30-3004	Exhaust	31.00mm	1.220"	0.2585"	29°	4.095"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.300"	0.375"	1.240"	1.410"	0.808"	0.2585"	0.4755"/ Std.		<b>30-3050</b>
							+0.002"		<b>30-3052</b>
							+0.010"		<b>30-3060</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
6.5mm	0.353"	0.560"	4	A	B	C	D	Intake
				0.475"±0.005"	0.415"	0.115"	0.260"	Exhaust
		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		71018-4				Pkg. of 4		0%
		71018-8				Pkg. of 8		0%
		71018-16				Pkg. of 16		Less- 10%
		71018-50				Pkg. of 50		Less- 15%
		71018-100				Pkg. of 100		Less- 20%

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# HONDA® HAWK NT™ 650 1988-1991



## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-3070	Intake	.500"	1.460"	45#	196#	.500"	
		Exhaust	.500"	1.420"	74#	252#	.500"	
Kit Includes			4	In, CrSi Valve Springs	4	In, Titanium Retainers	4	In, H. T. Steel Basewashers
			2	Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	4	In, Spring Shims
			2	Ex, Spring Shims		2	Ex, Spring Shims	

# HONDA® TRX™ 700XX 2008-2009

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-31350	Intake	.375"	1.220"	71#	180#	.375"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	30-31362	Intake	36.00mm	1.417"	0.2590"	19°	4.025"	Standard
	30-31363	Intake	37.00mm	1.457"	0.2590"	19°	4.025"	Oversize
	30-31366	Exhaust	32.00mm	1.260"	0.2585"	19°	4.065"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.600"	0.600"	0.805"	1.075"	0.475"	0.2590"	0.4753"/ Std.	30-31370	
							+0.001"	30-31371	
							+0.002"	30-31372	
							+0.010"	30-31379	
	0.600"	0.600"	1.000"	1.230"	0.475"	0.2590"	0.4753"/ Std.		30-31380
							+0.001"		30-31381
							+0.002"		30-31382
						+0.010"		30-31389	

## Valve Guide Seals • Viton®


Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.5mm	0.353"	0.560"	4	A	B	C	D	Intake
				0.475"±0.005"	0.415"	0.115"	0.260"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71018-4		Pkg. of 4	0%	
				71018-8		Pkg. of 8	0%	
				71018-16		Pkg. of 16	Less- 10%	
				71018-50		Pkg. of 50	Less- 15%	
			71018-100		Pkg. of 100	Less- 20%		




# HONDA® CB™ 750 SOHC 1969-1977

• Excluding F2™ Models


## Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-0307	Intake	.485"	1.330"	95#	268#	.485"
		Exhaust					
Kit Includes			8	CrSi Valve Springs			

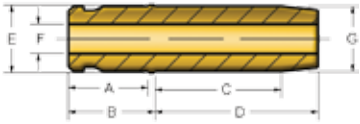

## Retainer Set • Titanium

	KPMI P/N	Type	Material	Quantity
	30-0308	Intake	Titanium	Pkg. of 8
		Exhaust		

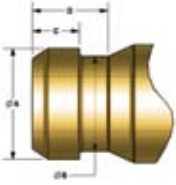

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-4186	Intake	32.00mm	1.260"	0.2590"	23°	4.020"	Standard
	30-4187	Intake	33.50mm	1.319"	0.2590"	23°	4.040"	Oversize
	30-4188	Exhaust	28.00mm	1.102"	0.2585"	29°	4.020"	Standard
	30-4189	Exhaust	28.50mm	1.122"	0.2585"	29°	4.040"	Oversize

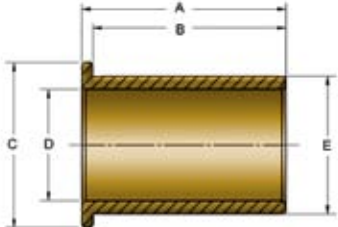
## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.585"	0.635"	0.865"	1.135"	0.495"	0.2590"	0.4762" / Std.	30-0379	
							+0.002"	30-0380	
	0.585"	0.635"	0.925"	1.195"	0.495"	0.2585"	0.4762" / Std.		30-0383
							+0.002"		30-0384
							+0.015"		30-4035

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.5mm	0.353"	0.560"	4	A	B	C	D	Intake
				0.475"±0.005"	0.415"	0.115"	0.260"	Exhaust
		Part Number		Quantity	Quantity Discount			
		71018-4		Pkg. of 4	0%			
		71018-8		Pkg. of 8	0%			
		71018-16		Pkg. of 16	Less- 10%			
		71018-50		Pkg. of 50	Less- 15%			
71018-100		Pkg. of 100	Less- 20%					

## Swing Arm Bushing • Bearing Bronze For CB™750 1976-1979 NEW PRODUCTS

	KPMI P/N	Material	A	B	C	D	E	Quantity
	30-0477	Bearing Bronze	1.550"	1.465"	Ø 1.250"	Ø 0.8435"	Ø 1.045"	1 Pr.
<ul style="list-style-type: none"> <li>• Replaces worn or damaged plastic OEM bushing</li> <li>• High quality bearing bronze offers increased durability and better fitment than OEM component</li> <li>• OEM P/N: 52108-457-300 &amp; 52108-422-300</li> </ul>								

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# HONDA® CB™ 750 SOHC 1969-1977



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- Excluding F2/3™ Models

## Cylinder Head Studs For CB™750 1969-1978

	KPMI P/N	O. L. "C"	O. L. "D"	Body Dia.	A	B	Remarks
	<b>30-0800</b>	6.299"	7.717"	0.309"	0.630"	0.787"	Standard
	<b>Includes</b>	4	6.299" O.L. Studs		12	7.717" O.L. Studs	

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. Further, the case end thread is designed to have a slight interference fit to minimize distortion and maintain good thread contact during torque procedure. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

## Cylinder Head Nuts For CB™750 1969-1978

**NEW PRODUCTS**

	KPMI P/N	Material	O. L.	F. D.	Thread	Quantity
	<b>30-32300</b>	H. T. Steel	0.385"	0.670"	M8 x 1.25	Pkg. of 16
	<b>41003-4</b>	H. T. Steel	0.385"	0.670"	M8 x 1.25	Pkg. of 4
Designed for Honda CB750, but can be used for general purpose ( see diagram for detail)						

These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.

# HONDA® CB™ 750 SOHC 1969-1977

- Excluding F2™ Models (5.0mm Conversion System)

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-30150</b>	Intake	.435"	1.375"	71#	203#	.435"
		Exhaust					
<b>Kit Includes</b>	8	CrSi Valve Springs	8	H. T. Steel Keepers Pr.	8	Titanium Retainers	
	8	H. T. Steel Basewashers			8	H. T. Steel Shims	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	<b>30-30157</b>	Intake	32.00mm	1.260"	0.1960"	20°	3.935"	Standard
	<b>30-30158</b>	Intake	34.00mm	1.339"	0.1960"	20°	3.935"	Oversize
	<b>30-30159</b>	Exhaust	27.00mm	1.063"	0.1955"	23°	3.940"	Spl. Undersize
	<b>30-30160</b>	Exhaust	28.00mm	1.102"	0.1955"	23°	3.925"	Standard

Must use Kibblewhite® Lash Caps #94007-8. Valves shortened for lash caps. Must use 5.00mm conversion guides and spring kit with these valves.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.400"	0.440"	0.980"	1.380"	0.510"	0.1960"	0.4762" / Std.	<b>30-0379-5</b>	
							+0.002"	<b>30-0380-5</b>	
	0.400"	0.440"	1.030"	1.430"	0.510"	0.1960"	0.4762" / Std.		<b>30-0383-5</b>
							+0.002"		<b>30-0384-5</b>
							+0.015"		<b>30-0385-5</b>


VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)



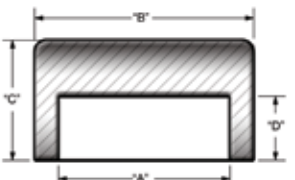
# HONDA® CB™ 750 SOHC 1969-1977

• Excluding F2™ Models (5.0mm Conversion System)

## Valve Guide Seals • Viton®


Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Intake
								Exhaust
		Part Number			Quantity		Quantity Discount	
		71015-4			Pkg. of 4		0%	
		71015-8			Pkg. of 8		0%	
		71015-16			Pkg. of 16		Less- 10%	
		71015-50			Pkg. of 50		Less- 15%	
71015-100			Pkg. of 100		Less- 20%			

## Lash Caps • H.T. Steel


	KPMI P/N	Material	"A"	"B"	"C"	"D"	"C" - "D"	Quantity
	94007-8	H.T. Steel	5.00mm 0.1969"	0.277"	0.175"	0.100"	0.075"	Pkg. of 8

# HONDA® CB™ 750 DOHC 1979-1983


## Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-1017	Intake	.500"	1.390"	60#	185#	.400"
		Exhaust					
Kit Includes		16	CrSi Valve Springs				

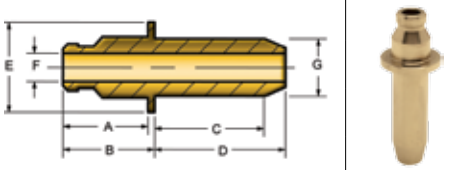
## Retainer Set • Titanium

	KPMI P/N	Type	Material	Quantity
	30-1019	Intake	Titanium	Pkg. of 16
		Exhaust		
These retainers accept a 9.5mm OD shim and requires use of 30-1020 "Shim Under" style tappet. See adjustment shim section for available sizes.				

## Valves • Black Diamond™ • Black Nitroene Stems NEW PRODUCTS

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-4221	Intake	0.985"	25.02mm	0.2157"	23°	3.535"	Standard
	30-4222	Exhaust	0.870"	22.10mm	0.2152"	29°	3.475"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.550"	0.650"	0.890"	1.050"	0.685"	0.2155"	0.4372" / Std.		30-4071
								+0.004"	30-4161
								+0.015"	30-4162

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# HONDA® CB™ 750 DOHC 1979-1983



## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
		<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>	
		71016-4			Pkg. of 4		0%	
		71016-8			Pkg. of 8		0%	
		71016-16			Pkg. of 16		Less- 10%	
		71016-50			Pkg. of 50		Less- 15%	
		71016-100			Pkg. of 100		Less- 20%	

## Tappets • Shim On Bottom Conv. • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	30-1020	Intake Exhaust	H. T. Steel	28.00mm	1.1016"	1.040"	0.860"	0.310"	0.135"

Requires use of Kibblewhite® "Shim Under" Style Retainer # 30-1019 (Pkg. of 16).

# HONDA® CBR™ 900RR 1993-1999

## Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-6068	Intake	.480"	1.270"	45#	135#	.400"
		Exhaust					
Kit Includes			16	CrSi Valve Springs			

## Retainer Set • Titanium

	KPMI P/N	Type	Material	Quantity
	30-6067	Intake	Titanium	Pkg. of 16
		Exhaust		

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.545"	0.570"	0.660"	0.780"	0.385"	0.1765"	0.3570" / Std.		30-30050
								+0.001"	30-30051
								+0.002"	30-30052
								+0.010"	30-30059

## Tappets • O.E.M Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	30-30227	Intake Exhaust	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting oversize tappets.



# HONDA® CBR™ 900RR 1993-1999

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Intake
								Exhaust
				Part Number		Quantity	Quantity Discount	
				71014-4		Pkg. of 4	0%	
				71014-8		Pkg. of 8	0%	
				71014-16		Pkg. of 16	Less- 10%	
				71014-50		Pkg. of 50	Less- 15%	
		71014-100		Pkg. of 100	Less- 20%			

# HONDA® VTR™ 1000 1998-2005

## Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-4023	Intake	.520"	1.490"	55#	176#	.340"
		Exhaust					
Kit Includes			8	CrSi Valve Springs			

# HONDA® CBR™ 1000 2004-2005

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-30760	Intake	.385"	1.320"	46#	140#	.385"	
		Exhaust						
Kit Includes			16	CrSi Valve Springs	16	Titanium Retainers	16	H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-30790	Intake	29.00mm	1.142"	0.1570"	10°	3.740"	Standard
	30-30791	Intake	30.00mm	1.181"	0.1570"	10°	3.740"	Oversize
	30-30793	Exhaust	24.00mm	0.945"	0.1565"	20°	3.755"	Standard
	30-30794	Exhaust	25.00mm	0.984"	0.1565"	20°	3.755"	Oversize

## Tappets • O.E.M Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	30-30766	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"	Pkg. of 16
		Exhaust								
Refer to <b>KPMI® Tappet Section</b> , in back of catalog, when selecting oversize tappets.										

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# HONDA® VARIOUS 900cc-1100cc 1980-'83




HONDA

• **CB™ 900/ 1000 / 1100F DOHC1980-1983**

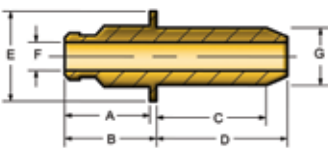

**Spring Only Kit • High Performance**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-1017</b>	Intake	.500"	1.390"	60#	185#	.400"
		Exhaust					
<b>Kit Includes</b>			16	CrSi Valve Springs			

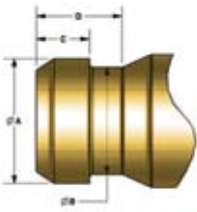

**Retainer Set • Titanium**

	KPMI P/N	Type	Material	Quantity
	<b>30-1019</b>	Intake	Titanium	Pkg. of 16
		Exhaust		
These retainers accept a 9.5mm OD shim and requires use of 30-1020 "Shim Under" style tappet. See adjustment shim section for available sizes.				

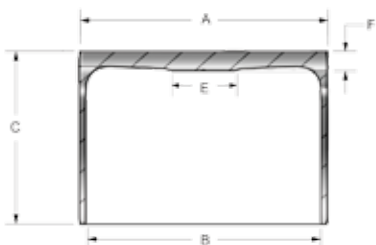
**Valve Guides • C630 Bronze**

		A	B	C	D	E	F	G	Intake	Exhaust		
		0.550"	0.650"	0.890"	1.050"	0.685"	0.2155"	0.4372" / Std.	<b>30-4071</b>			
										+0.004"	<b>30-4161</b>	
										+0.015"	<b>30-4162</b>	

**Valve Guide Seals • Viton®**

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type	
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake	
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust	
		Part Number				Quantity	Quantity Discount		
		<b>71016-4</b>				Pkg. of 4	0%		
		<b>71016-8</b>				Pkg. of 8	0%		
		<b>71016-16</b>				Pkg. of 16	Less- 10%		
		<b>71016-50</b>				Pkg. of 50	Less- 15%		
<b>71016-100</b>				Pkg. of 100	Less- 20%				

**Tappets • Shim On Bottom Conv. • H.T. Steel**

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	<b>30-1020</b>	Intake	H. T. Steel	28.00mm	1.1016"	1.040"	0.860"	0.310"	0.135"	Pkg. of 16
		Exhaust								
Requires use of Kibblewhite® "Shim Under" Style Retainer # 30-1019 (Pkg. of 16).										



# HONDA® CBR™ 1100XX-BLACKBIRD™ 1997-'03

HONDA

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-30100	Intake	.405"	1.290"	66#	168#	.405"	
		Exhaust						
Kit Includes			16	CrSi Valve Springs	16	Titanium Retainers	16	H. T. Steel Basewashers

**NEW PRODUCTS**

## Keeper Set • O.E.M. Replacement

		KPMI P/N	Style	Type	A	B	C	D	E	Quantity
		51025-16	Single Radius Bead	Intake	0.196"	7.0°	0.170"	0.205"	0.236"	16Pr.
				Exhaust						

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

# HONDA® CBX 6 CYLINDER 1979-1982

## Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-1018	Intake	.500"	1.390"	60#	175	.400"
		Exhaust					
Kit Includes			24	CrSi Valve Springs			

## Retainer Set • Titanium

	KPMI P/N	Type	Material	Quantity
	30-1021	Intake	Titanium	Pkg. of 24
		Exhaust		
These retainers accept a 9.5mm OD shim and requires use of 30-1022 "Shim Under" style tappet. See adjustment shim section for available sizes.				

## Valves • Black Diamond™ • Black Nitroreg Stems

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	30-4221	Intake	0.985"	25.02mm	0.2157"	23°	3.535"	Standard
			0.870"	22.10mm				
30-4222	Exhaust	0.870"	22.10mm	0.2152"	29°	3.475"	Standard	

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# HONDA® CBX 6 CYLINDER 1979-1982



HONDA

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.550"	0.650"	0.890"	1.050"	0.685"	0.2155"	0.4372" / Std.		<b>30-4071</b>	
								+0.004"		<b>30-4161</b>
								+0.015"		<b>30-4162</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
		<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>	
		<b>71016-4</b>			Pkg. of 4		0%	
		<b>71016-8</b>			Pkg. of 8		0%	
		<b>71016-16</b>			Pkg. of 16		Less- 10%	
		<b>71016-24</b>			Pkg. of 24		Less- 10%	
		<b>71016-50</b>			Pkg. of 50		Less- 15%	
		<b>71016-100</b>			Pkg. of 100		Less- 20%	

## Tappets • Shim On Bottom Conv. • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	<b>30-1022</b>	Intake	H. T. Steel	28.00mm	1.1016"	1.040"	0.860"	0.310"	0.135"	Pkg. of 24
		Exhaust								
Refer to <b>KPMI® Tappet Section</b> , in back of catalog, when selecting oversize tappets.										

## Swing Arm Bushing • Bearing Bronze For CBX™ 1979

**NEW PRODUCTS**

	KPMI P/N	Material	A	B	C	D	E	Quantity
	<b>30-0477</b>	Bearing Bronze	1.550"	1.465"	Ø 1.250"	Ø 0.8435"	Ø 1.045"	1 Pr.
<ul style="list-style-type: none"> <li>• Replaces worn or damaged plastic OEM bushing</li> <li>• High quality bearing bronze offers increased durability and better fitment than OEM component</li> <li>• OEM P/N: 52108-457 &amp; 52108-422-300</li> </ul>								

For all the applications available for Kibblewhite's Honda® CBX 6 Cylinder line of products, please refer online to the Honda® section of the [www.kpmi.us](http://www.kpmi.us) website, under **Sport**.



# HUSQVARNA® 350 / 410 1991-2000

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	93-93020	Intake	.400"	1.210"	74#	189#	.400"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	93-93010	Intake	32.50mm	1.280"	0.2352"	23°	4.020"	Standard
	93-93011	Exhaust	27.00mm	1.063"	0.2347"	29°	4.020"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.430"	0.465"	0.970"	1.110"	0.510"	0.2350"	0.4750" / Std.	93-93000	
								+0.010"	93-93009
Use O.E.M. valve guide seal.									

# HUSQVARNA® VARIOUS 510-610cc 1983-2001

- TX™ 510 1983-'88
- TE™ 510 1983-'90
- TC™ 510 1987-'90
- WXE™ 610 1991-'96
- WMX™ 610 1991
- TE™ 610 1992-'98
- TC™ 610 1992-'98
- WXC™ 610 1992-'96
- SM™ 610 R 2000-2001

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	93-93012	Intake	35.00mm	1.378"	0.2352"	23°	3.970"	Standard
	93-93013	Intake	36.00mm	1.417"	0.2352"	23°	3.970"	Oversize
	93-93014	Exhaust	30.00mm	1.181"	0.2347"	29°	3.970"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.430"	0.465"	0.970"	1.110"	0.510"	0.2350"	0.4750" / Std.	93-93000	
								+0.010"	93-93009
Use O.E.M. valve guide seal.									

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# HUSQVARNA® VARIOUS 450'S 2014-2018



• FS 450 2017-2018

• FX 450 2017

• FC 450 2014-2018

## Valve Spring Kit • Beehive Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96500	Intake	.435"	1.360"	80#	205#	.435"
		Exhaust					
Kit Includes			2 In CrSi Valve Springs	2 In Titanium Retainers	2 In H.T. Steel Basewashers	2 In H.T. Steel Shims	
			2 Ex CrSi Valve Springs	2 Ex Titanium Retainers	2 Ex H.T. Steel Basewashers	-- Ex H.T. Steel Shims	

\*KPMI® supplied Viton® seals must be used with this kit. O.E.M. seals are NOT compatible.

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96540	Intake	.435"	1.360"	80#	205#	.435"
	Kit Includes			2 CrSi Valve Springs	2 Titanium Retainers	2 H.T. Steel Basewashers	
			2 Black Diamond™ Valves	2 H.T. Steel Shims			

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks
	96-96512	Intake	39.93mm	1.572"	0.2358"	15°	3.675" Standard
	96-96516	Exhaust	33.15mm	1.305"	0.2353"	30°	3.645" Standard

You must use KPMI® Spring Kit 96-96500 when installing Black Diamond™ Valves

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	96-96512T	Intake	39.93mm	1.572"	0.2358"	15°	3.675"	Titanium 78936030100
	96-96516T	Exhaust	33.15mm	1.305"	0.2353"	30°	3.645"	Titanium 78936031000

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	*A	*C	*D	E	F	G	Intake	Exhaust
	0.555"	0.945"	1.140"	0.433"	0.2353"	0.4352" / Std.	96-96520	
						+0.001"	96-96521	
						+0.002"	96-96522	
						+0.010"	96-96529	
	0.635"	0.865"	1.060"	0.433"	0.2353"	0.4352" / Std.		96-96520
						+0.001"		96-96521
						+0.002"		96-96522
						+0.010"		96-96529

\*Note: One guide design installs at two different heights depending on Intake or Exhaust usage. You must install to lower line for exhaust and upper line for intake.

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.315"	0.520"	5	A	B	C	D	Intake
				0.435"±0.002"	0.395"	0.120"	0.210"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71029-4			Pkg. of 4		0%		
	71029-8			Pkg. of 8		0%		
	71029-16			Pkg. of 16		Less- 10%		
	71029-50			Pkg. of 50		Less- 15%		
71029-100			Pkg. of 100		Less- 20%			

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HUSQVARNA



# HUSQVARNA® VARIOUS 450-510cc 2006-'08

• TE/ TC/ TXC 450-510

• SM 450R-510R

• SM 450RR 2006

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	93-93050	Intake	.440"	1.350"	50#	160#	.440"	
		Exhaust	.440"	1.390"	40#	150#	.440"	
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	93-93062	Intake	37.00mm	1.457"	0.2160"	20°	3.955"	Standard
	93-93063	Intake	38.00mm	1.496"	0.2160"	20°	3.955"	Oversize
	93-93066	Exhaust	31.00mm	1.220"	0.1958"	20°	3.565"	Standard
	93-93067	Exhaust	32.00mm	1.260"	0.1958"	20°	3.565"	Oversize

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust		
		0.515"	0.515"	0.660"	1.290"	0.432"	0.2160"	0.4355" / Std.	93-93070			
								+0.001"	93-93071			
								+0.002"	93-93072			
								+0.010"	93-93079			
		0.650"	0.650"	0.700"	0.990"	0.412"	0.1958"	0.4156" / Std.		93-93080		
									+0.001"	93-93081		
										+0.002"	93-93082	
										+0.010"	93-93089	

Use O.E.M. valve guide seal.

# INDIAN® 74" V-TWIN MODELS

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	20-2018	Intake	50.80mm	2.000"	0.3697"	19°	5.126"	Standard
	20-2019	Exhaust	50.80mm	2.000"	0.3697"	10°	5.130"	Standard

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# KAWASAKI® MOJAVE™ 1987-2004




KAWASAKI

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-4190	Intake	29.00mm	1.142"	0.2155"	20°	3.510"	Standard
	40-4191	Intake	30.50mm	1.201"	0.2155"	20°	3.530"	Oversize
	40-4192	Exhaust	24.50mm	0.965"	0.2150"	25°	3.430"	Standard
	40-4193	Exhaust	25.00mm	0.984"	0.2150"	25°	3.440"	Oversize


# KAWASAKI® KX250F™ 2004-2016

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-40100	Intake	.445"	1.320"	46#	155#	.445"	
		Exhaust						
<b>Kit Includes</b>			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

## Cylinder Head Service Kit for KX250F™ 2004-2006

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-41500	Intake	.445"	1.320"	46#	155#	.445"	
		Exhaust						
<b>Kit Includes</b>			4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
			2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
			4	In/ Ex Std. C630 Valves Guides	1	Top End Gasket Kit		


## Components • Replacement • Cylinder Head Service Kit for KX250F™ 2004-2006

**NEW PRODUCTS**

KPMI P/N	Description	Specification
40-40100	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
40-40140	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
40-40143	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
40-40120	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
40-41501	Gasket Kit	<b>Includes:</b> Head Gasket 77mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner O-Ring (1), Valve Stem Seal (4)

## Cylinder Head Service Kit for KX250F™ 2007-2008

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-41510	Intake	.445"	1.320"	46#	155#	.445"	
		Exhaust						
<b>Kit Includes</b>			4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
			2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
			4	In/ Ex Std. C630 Valves Guides	1	Top End Gasket Kit		

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# KAWASAKI® KX250F™ 2004-2016


## Components • Replacement • Cylinder Head Service Kit for KX250F™ 2007-2008

**NEW PRODUCTS**

KPMI P/N	Description	Specification
40-40100	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
40-40140	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
40-40143	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
40-40520	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
40-40120	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
40-41511	Gasket Kit	<b>Includes:</b> Head Gasket 77mm, Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner O-Ring (1), Valve Stem Seal (4)

## Cylinder Head Service Kit for KX250F™ 2009-2016

**NEW PRODUCTS**


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-41520	Intake		.445"	1.320"	46#	155#
Exhaust							
<b>Kit Includes</b>	4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers	
	2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves			
	4	In/ Ex Std. C630 Valves Guides	1	Top End Gasket Kit			

## Components • Replacement • Cylinder Head Service Kit for KX250F™ 2009-2016


**NEW PRODUCTS**

KPMI P/N	Description	Specification
40-40100	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
40-40140	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
40-40143	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
40-40520	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
40-40120	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
40-41521	Gasket Kit	<b>Includes:</b> Head Gasket 77mm, Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner O-Ring (1), Valve Stem Seal (4)

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40350	Intake		.445"	1.320"	46#	155#
<b>Kit Includes</b>	2	CrSi Valve Springs	2	Titanium Retainers			
	2	Black Diamond™ Valves	2	H. T. Steel Basewashers			

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-40140	Intake	31.00mm	1.220"	0.1765"	20°	3.120"	Standard
	40-40141	Intake	32.00mm	1.260"	0.1765"	20°	3.130"	Oversize
	40-40143	Exhaust	25.00mm	0.985"	0.1756"	25°	3.125"	Standard
	40-40144	Exhaust	26.00mm	1.024"	0.1756"	25°	3.135"	Oversize

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

# KAWASAKI® KX250F™ 2004-2016



## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	<b>40-40140T</b>	Intake	31.00mm	1.220"	0.1765"	20°	3.120"	Titanium	12004-0033
	<b>40-40143T</b>	Exhaust	25.00mm	0.985"	0.1756"	25°	3.125"	Titanium	12005-0002

**Note:** These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.465"	0.465"	0.565"	0.870"	0.374"	0.1765"	0.3765" / Std.	<b>40-40520</b>	
							+0.001"	<b>40-40521</b>	
							+0.002"	<b>40-40522</b>	
							+0.010"	<b>40-40529</b>	
Note: #40-40520 - Recommended for 2007-2016 model only									
	0.440"	0.465"	0.590"	0.850"	0.410"	0.1765"	0.3765" / Std.	<b>40-40120</b>	
							+0.001"	<b>40-40121</b>	
							+0.002"	<b>40-40122</b>	
							+0.010"	<b>40-40129</b>	
Note: #40-40120 - Recommended for Intake 2004-2006 model only and Exhaust 2004-2016 all model.									

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.0mm	0.310"	0.380"	2	A	B	C	D	Intake
				0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust
	<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>			
	<b>71013-4</b>		Pkg. of 4		0%			
	<b>71013-8</b>		Pkg. of 8		0%			
	<b>71013-16</b>		Pkg. of 16		Less- 10%			
	<b>71013-50</b>		Pkg. of 50		Less- 15%			
<b>71013-100</b>		Pkg. of 100		Less- 20%				

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	<b>40-40106</b>	Intake	H. T. Steel	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"
Refer to <b>KPMI® Tappet Section</b> , in back of catalog, when selecting oversize tappets.									

# KAWASAKI® KX250F™ 2017-2019

## Valve Spring Kit • Lightweight High-Lift Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>40-41400</b>	Intake	.415"	1.315"	65#	181#	.415"
		Exhaust	.415"	1.310"	49#	155#	.415"
<b>Kit Includes</b>			2 In CrSi Valve Springs	2 In Titanium Retainers	2 In H. T. Steel Basewashers		
			2 Ex CrSi Valve Springs	2 Ex Titanium Retainers	2 Ex H. T. Steel Basewashers		

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# KAWASAKI® KX250F™ 2017-2019

## Intake Only • Steel Valve Conversion Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-41450	Intake	.415"	1.315"	65#	181#	.415"	
	Kit Includes		2	CrSi Valve Springs		2	Titanium Retainers	
			2	White Diamond® Valves		2	H. T. Steel Basewashers	

## Valves • White Diamond® • Hard Chrome Stems

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-41412H	Intake	31.00mm	1.220"	0.1764"	20°	3.460"	Standard
	40-41416H	Exhaust	25.00mm	0.984"	0.1759"	25°	3.170"	Standard

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	40-41412T	Intake	31.00mm	1.220"	0.1764"	20°	3.465"	Titanium	12004-0741
	40-41416T	Exhaust	25.00mm	0.984"	0.1759"	25°	3.165"	Titanium	12005-0761

**Note:** These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.0mm	0.310"	0.380"	2	A	B	C	D	Intake
				0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust
				Part Number		Quantity		Quantity Discount
				71013-4		Pkg. of 4		0%
				71013-8		Pkg. of 8		0%
				71013-16		Pkg. of 16		Less- 10%
				71013-50		Pkg. of 50		Less- 15%
				71013-100		Pkg. of 100		Less- 20%

For all the applications available for Kibblewhite®'s Kawasaki® line of products, please refer online to the Kawasaki® section of the [www.kpmi.us](http://www.kpmi.us) website, under **Dirt Bike**.

**ORDER 650-557-2046**

# KAWASAKI® KLX™ 300R/ 250R/ S/ SF 1994-'14



## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40008	Intake	.440"	1.245"	49#	156#	.440"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	
			4	H. T. Steel Basewashers	4	H. T. Steel Shims	

## Valve Spring Kit • High Performance for O.E.M. Retainers

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-4431	Intake	.430"	1.245"	51#	155#	.430"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Basewashers	4	H. T. Steel Shims

## Valves • White Diamond® • Hard Chrome Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-4372H	Intake	29.00mm	1.142"	0.1765"	20°	3.360"	Standard
	40-4374H	Intake	30.00mm	1.181"	0.1765"	20°	3.360"	Oversize
	40-4373H	Exhaust	25.00mm	0.895"	0.1760"	20°	3.375"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.560"	0.595"	0.620"	0.855"	0.460"	0.1760"	0.4165" / Std.	40-4420	
								+0.010"	40-4430

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.0mm	0.310"	0.380"	2	A	B	C	D	Intake
				0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71013-4			Pkg. of 4		0%		
	71013-8			Pkg. of 8		0%		
	71013-16			Pkg. of 16		Less- 10%		
	71013-50			Pkg. of 50		Less- 15%		
71013-100			Pkg. of 100		Less- 20%			

# KAWASAKI® KLX™ / KFX™ 400 2001-'06

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-40148	Intake	.440"	1.205"	57#	171#	.440"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers


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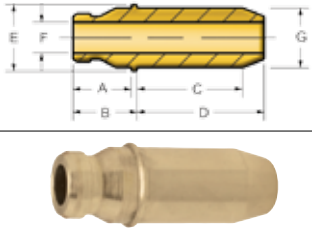


# KAWASAKI® KLX™ / KFX™ 400 2001-'06

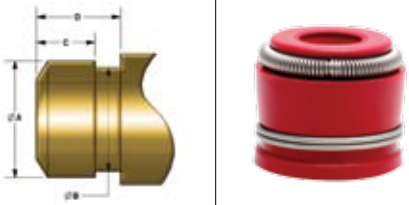
## Valves • White Diamond® • Stainless NEW PRODUCTS

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>40-40188H</b>	Intake	36.00mm	1.417"	0.1960"	20°	3.245"	Standard
	<b>40-40189H</b>	Intake	37.00mm	1.457"	0.1960"	20°	3.245"	Oversize
	<b>40-40191H</b>	Exhaust	29.00mm	1.142"	0.1953"	17°	3.210"	Standard
	<b>40-40192H</b>	Exhaust	30.00mm	1.181"	0.1953"	17°	3.210"	Oversize

## Valve Guides • C630 Bronze


	A	B	C	D	E	F	G	Intake	Exhaust	
	0.390"	0.430"	0.570"	0.770"	0.466"	0.1960"	0.4167" / Std.		<b>40-40170</b>	
							+0.001"		<b>40-40171</b>	
							+0.002"		<b>40-40172</b>	
							+0.004"		<b>40-40174</b>	
						+0.010"		<b>40-40179</b>		

## Valve Guide Seals • Viton®


Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
	<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>			
	<b>71015-4</b>		Pkg. of 4		0%			
	<b>71015-8</b>		Pkg. of 8		0%			
	<b>71015-16</b>		Pkg. of 16		Less- 10%			
	<b>71015-50</b>		Pkg. of 50		Less- 15%			
	<b>71015-100</b>		Pkg. of 100		Less- 20%			

# KAWASAKI® KLX 450R™ 2008-2015

## Valve Spring Kit • Lightweight Racing

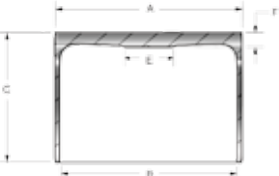
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>40-40700</b>	Intake	.415"	1.325"	50#	155#	.415"
		Exhaust	.415"	1.215"	50#	144#	.415"
	<b>Kit Includes</b>			2 In, CrSi Valve Springs	2 In, Titanium Retainers	2 In, H. T. Steel Basewashers	
			2 Ex, CrSi Valve Springs	2 Ex, Titanium Retainers	2 Ex, H. T. Steel Basewashers		

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>40-40712</b>	Intake	35.00mm	1.378"	0.2158"	20°	3.280"	Standard
	<b>40-40713</b>	Intake	36.00mm	1.417"	0.2158"	20°	3.280"	Oversize
	<b>40-40716</b>	Exhaust	30.00mm	1.181"	0.2150"	20°	3.230"	Standard
	<b>40-40717</b>	Exhaust	31.00mm	1.221"	0.2150"	20°	3.230"	Oversize

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	<b>40-40742</b>	Intake	None	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"	Pkg. of 4
		Exhaust								
Refer to <b>KPMI® Tappet Section</b> , in back of catalog, when selecting oversize tappets.										

**ORDER 650-557-2046**

# KAWASAKI® KLX 450R™ 2008-2015



## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	---	0.390"	0.550"	0.895"	0.434"	0.2150"	0.4365" / Std.	<b>40-40720</b>		
								+0.001"	<b>40-40721</b>	
								+0.002"	<b>40-40722</b>	
							+0.010"	<b>40-40729</b>		

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	Part Number			Quantity		Quantity Discount		
	<b>71016-4</b>			Pkg. of 4		0%		
	<b>71016-8</b>			Pkg. of 8		0%		
	<b>71016-16</b>			Pkg. of 16		Less- 10%		
	<b>71016-50</b>			Pkg. of 50		Less- 15%		
<b>71016-100</b>			Pkg. of 100		Less- 20%			

# KAWASAKI® KX 450F™ 2006-2008

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>40-40300</b>	Intake	.415"	1.325"	51#	155#	.415"	
		Exhaust	.415"	1.215"	52#	146#	.415"	
Kit Includes			2	In, CrSi Valve Springs	2	In, Titanium Retainers	2	In, H. T. Steel Basewashers
			2	Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>40-40360</b>	Intake	.415"	1.325"	51#	155#	.415"
	Kit Includes			2	CrSi Valve Springs	2	Titanium Retainers
			2	Black Diamond™ Valves	2	H. T. Steel Basewashers	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	<b>40-40312</b>	Intake	36.00mm	1.417"	0.2158"	20°	3.280"	Standard
	<b>40-40313</b>	Intake	37.00mm	1.457"	0.2158"	20°	3.280"	Oversize
<b>40-40316</b>	Exhaust	31.00mm	1.220"	0.2150"	20°	3.230"	Standard	

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

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# KAWASAKI® KX 450F™ 2006-2008

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.390"	0.390"	0.550"	0.895"	0.434"	0.2150"	0.4365" / Std.	<b>40-40320</b>		
								+0.001"	<b>40-40321</b>	
								+0.002"	<b>40-40322</b>	
							+0.010"	<b>40-40329</b>		

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
		<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>	
		<b>71016-4</b>			Pkg. of 4		0%	
		<b>71016-8</b>			Pkg. of 8		0%	
		<b>71016-16</b>			Pkg. of 16		Less- 10%	
		<b>71016-50</b>			Pkg. of 50		Less- 15%	
<b>71016-100</b>			Pkg. of 100		Less- 20%			

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	<b>40-40342</b>	Intake Exhaust	None	28.00mm 1.1017"	1.038"	0.763"	0.320"	0.098"	Pkg. of 4

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting oversize tappets.

# KAWASAKI® KX 450F™ 2009-2016

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>40-40660</b>	Intake	.415"	1.290"	64#	169#	.415"
		Exhaust	.415"	1.240"	65#	170#	.415"
<b>Kit Includes</b>			2 In, CrSi Valve Springs	2 In, Titanium Retainers	2 In, H. T. Steel Basewashers		
			2 Ex, CrSi Valve Springs	2 Ex, Titanium Retainers	2 Ex, H. T. Steel Basewashers		

## Cylinder Head Service Kit for KX 450F™ 2009-2015

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>40-41470</b>	Intake	.415"	1.290"	64#	169#	.415"	
		Exhaust	.415"	1.240"	65#	170#	.415"	
	<b>Kit Includes</b>			2 In Titanium Retainers	2 In CrSi Valve Springs	2 In H. T. Steel Basewashers		
				2 Ex Titanium Retainers	2 Ex CrSi Valve Springs	2 Ex H. T. Steel Basewashers		
2 In Std. Black Diamond™ Valves				2 Ex Std. Black Diamond™ Valves				
4 In / Ex Std. C630 Valves Guides				1 Top End Gasket Kit				

**ORDER 650-557-2046**



# KAWASAKI® KX 450F™ 2009-2016




## Components • Replacement • Cylinder Head Service Kit for KX 450F™ 2009-2015

**NEW PRODUCTS**

KPMI P/N	Description	Specification
40-40660	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
40-40652	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
40-40656	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
40-40670	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
40-41471	Gasket Kit	<b>Includes:</b> Head Gasket 96.5mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Tensioner Gasket (1), Spark Plug O-Ring (1), Cam Chain Tensioner O-Ring (1), Valve Stem Seals (4)

## Cylinder Head Service Kit for KX 450F™ 2016

**NEW PRODUCTS**


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-41480	Intake		.415"	1.290"	64#	169#
	Exhaust		.415"	1.240"	65#	170#	.415"
<b>Kit Includes</b>	2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers	
	2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
	2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves			
	4	In / Ex Std. C630 Valves Guides	1	Top End Gasket Kit			

## Components • Replacement • Cylinder Head Service Kit for KX 450F™ 2016


**NEW PRODUCTS**

KPMI P/N	Description	Specification
40-40660	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
40-40652	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
40-40656	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
40-40670	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
40-41481	Gasket Kit	<b>Includes:</b> Head Gasket 96.5mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Tensioner Gasket (1), Spark Plug O-Ring (1), Cam Chain Tensioner O-Ring (1), Valve Stem Seals (4)

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40380	Intake		.415"	1.290"	64#	169#
<b>Kit Includes</b>	2	CrSi Valve Springs	2	Titanium Retainers			
	2	Black Diamond™ Valves	2	H. T. Steel Basewashers			

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	40-40652	Intake	35.99mm	1.417"	0.2155"	20°	3.080"	Standard
	40-40653	Intake	37.01mm	1.457"	0.2155"	20°	3.080"	Oversize
	40-40656	Exhaust	31.01mm	1.221"	0.2150"	20°	3.030"	Standard
	40-40657	Exhaust	32.00mm	1.260"	0.2150"	20°	3.030"	Oversize

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

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# KAWASAKI® KX 450F™ 2009-2016

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	---	0.380"	0.525"	0.760"	0.434"	0.2150'	0.4365" / Std.	<b>40-40670</b>		
								+0.001"	<b>40-40671</b>	
								+0.002"	<b>40-40672</b>	
							+0.010"	<b>40-40679</b>		

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	Part Number			Quantity		Quantity Discount		
	<b>71016-4</b>			Pkg. of 4		0%		
	<b>71016-8</b>			Pkg. of 8		0%		
	<b>71016-16</b>			Pkg. of 16		Less- 10%		
	<b>71016-50</b>			Pkg. of 50		Less- 15%		
<b>71016-100</b>			Pkg. of 100		Less- 20%			

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	<b>40-40690</b>	Intake Exhaust	H. T. Steel	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"
Refer to <b>KPMI® Tappet Section</b> , in back of catalog, when selecting oversize tappets.									

# KAWASAKI® KFX 450R™ 2008-2014

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>40-40550</b>	Intake	.415"	1.325"	51#	155#	.415"
		Exhaust	.415"	1.215"	52#	146#	.415"
<b>Kit Includes</b>			2 In, CrSi Valve Springs	2 In, Titanium Retainers	2 In, H. T. Steel Basewashers		
			2 Ex, CrSi Valve Springs	2 Ex, Titanium Retainers	2 Ex, H. T. Steel Basewashers		

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>40-40950</b>	Intake	.415"	1.325"	51#	155#	.415"
	<b>Kit Includes</b>			2 CrSi Valve Springs	2 Titanium Retainers		
			2 Black Diamond™ Valves	2 H. T. Steel Basewashers			

**ORDER 650-557-2046**

# KAWASAKI® KFX 450R™ 2008-2014



## Valves • Black Diamond™ • Black Nitroneg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>40-40562</b>	Intake	36.00mm	1.417"	0.2158"	20°	3.280"	Standard
	<b>40-40563</b>	Intake	37.00mm	1.457"	0.2158"	20°	3.280"	Oversize
	<b>40-40566</b>	Exhaust	31.00mm	1.221"	0.2150"	20°	3.230"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.390"	0.390"	0.550"	0.895"	0.434"	0.2150"	0.4365" / Std.	<b>40-40570</b>		
								+0.001"	<b>40-40571</b>	
								+0.002"	<b>40-40572</b>	
							+0.010"	<b>40-40579</b>		

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
				Part Number		Quantity		Quantity Discount
				<b>71016-4</b>		Pkg. of 4		0%
				<b>71016-8</b>		Pkg. of 8		0%
				<b>71016-16</b>		Pkg. of 16		Less- 10%
				<b>71016-50</b>		Pkg. of 50		Less- 15%
				<b>71016-100</b>		Pkg. of 100		Less- 20%

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	<b>40-40592</b>	Intake	None	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"	Pkg. of 4
		Exhaust								
Refer to <b>KPMI® Tappet Section</b> , in back of catalog, when selecting oversize tappets.										

# KAWASAKI® KLR™ 600 / 650 1984-2010

## Valve Spring Kit • High Performance for O.E.M. Retainers

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>40-4350</b>	Intake	.460"	1.205"	75#	175#	.460"
		Exhaust					
<b>Kit Includes</b>			4	CrSi Valve Springs	4	H. T. Steel Basewashers	



# KAWASAKI® NINJA 500R™ 1987-2009

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## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-4190	Intake	29.00mm	1.142"	0.2155"	20°	3.510"	Standard
	40-4191	Intake	30.50mm	1.201"	0.2155"	20°	3.530"	Oversize
	40-4192	Exhaust	24.50mm	0.965"	0.2150"	25°	3.430"	Standard
	40-4193	Exhaust	25.00mm	0.984"	0.2150"	25°	3.440"	Oversize

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>		
	71016-4			Pkg. of 4		0%		
	71016-8			Pkg. of 8		0%		
	71016-16			Pkg. of 16		Less- 10%		
	71016-50			Pkg. of 50		Less- 15%		
71016-100			Pkg. of 100		Less- 20%			

# KAWASAKI® KZ™ 650 / 750 1976-1985

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-0893	Intake	.500"	1.330"	90#	268#	.500"
		Exhaust					
<b>Kit Includes</b>			8	CrSi Valve Springs			

## Retainer Set • O.E.M. Replacement • Titanium

	KPMI P/N	Type	Material	Quantity
	40-1008	Intake	Titanium	Pkg. of 8
		Exhaust		

## Tappets • Shim On Bottom Conv. • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	40-1013	Intake	None	33.00mm	1.298"	1.235"	1.025"	0.340"	0.115"	Pkg. of 8
		Exhaust								
Refer to <b>KPMI® Tappet Section</b> , in back of catalog, when selecting oversize tappets.										

# KAWASAKI® NINJA™ 650R / VERSYS 2006-'13

## Valve Spring Kit • Lightweight Racing


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-40800	Intake	.400"	1.215"	39#	136#	.400"	
		Exhaust						
<b>Kit Includes</b>			8	CrSi Valve Springs	8	Titanium Retainers	8	H. T. Steel Basewashers

**ORDER 650-557-2046**

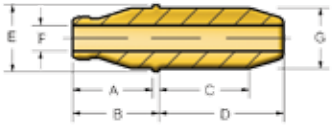

# KAWASAKI® NINJA™ 650R / VERSYS 2006-'13



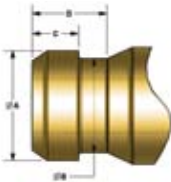

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-40812	Intake	33.35mm	1.313"	0.1765"	10°	3.810"	Standard
	40-40813	Intake	34.35mm	1.352"	0.1765"	10°	3.810"	Oversize
	40-40816	Exhaust	28.27mm	1.113"	0.1760"	22°	3.820"	Standard
	40-40817	Exhaust	29.27mm	1.152"	0.1760"	22°	3.820"	Oversize

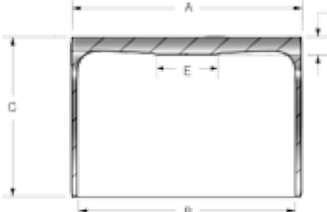
## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust
		0.560"	0.595"	0.620"	0.855"	0.460"	0.1760"	0.4165" / Std.	40-40820	
										+0.010"

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type	
4.0mm	0.310"	0.380"	2	A	B	C	D	Intake	
				0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust	
		Part Number			Quantity	Quantity Discount			
		71013-4			Pkg. of 4	0%			
		71013-8			Pkg. of 8	0%			
		71013-16			Pkg. of 16	Less- 10%			
		71013-50			Pkg. of 50	Less- 15%			
71013-100			Pkg. of 100	Less- 20%					

## Tappets • O.E.M. Replacement • H.T. Steel


	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	40-40807	Intake Exhaust	None	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"

NOTE: Shims of less than 1.90mm may cause clearance issues between tappet and retainer. Always check clearances before installing smaller than O.E.M. shims. Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

# KAWASAKI® VARIOUS 2005-2013

- KFX™ 700 2005-'09
- Brute Force™ 650 2005-'13
- Brute Force™ 650I 2006-'12
- Prairie™ 700 • 2005-'06
- Brute Force™ 750I • 2005-'12
- Teryx™ 750 • 2008-'12 (Excluding Teryx 4)

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40400	Intake	.500"	1.400"	59#	210#	.500"
		Exhaust					
Kit Includes			8	CrSi Valve Springs	8	Titanium Retainers	
			8	H. T. Steel Basewashers	8	H. T. Steel Shims	

KPMI® Guides must be installed when using cams greater than .430" valve lift.


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# KAWASAKI® VARIOUS 2005-2013

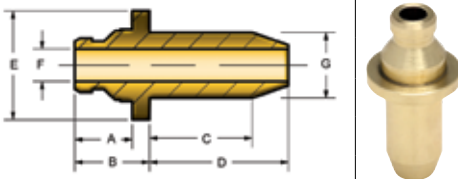
- KFX™ 700 2005-'09
- Brute Force™ 650 2005-'13
- Brute Force™ 650I 2006-'12
- Prairie™ 700 • 2005-'06
- Brute Force™ 750I • 2005-'12
- Teryx™ 750 • 2008-'12 (Excluding Teryx 4)

## Valves • Black Diamond™ • Black Nitroreg Stems


	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>40-40412</b>	Intake	30.00mm	1.181"	0.1960"	10°	3.610"	Standard
	<b>40-40413</b>	Intake	31.00mm	1.220"	0.1960"	10°	3.610"	Oversize
	<b>40-40416</b>	Exhaust	26.00mm	1.024"	0.1955"	10°	3.655"	Standard
	<b>40-40417</b>	Exhaust	27.00mm	1.063"	0.1955"	10°	3.655"	Oversize

Custom oversize's available +3 and +4 mm, call for availability.

## Valve Guides • C630 Bronze


	A	B	C	D	E	F	G	Intake	Exhaust
	0.450"	0.550"	0.590"	0.790"	0.675"	0.1955"	0.4161" / Std.		<b>40-40420</b>
							+ 0.001"		<b>40-40421</b>
							+ 0.002"		<b>40-40422</b>
							+0.010"		<b>40-40429</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Intake
								Exhaust
	Part Number		Quantity		Quantity Discount			
	<b>71015-4</b>		Pkg. of 4		0%			
	<b>71015-8</b>		Pkg. of 8		0%			
	<b>71015-16</b>		Pkg. of 16		Less- 10%			
	<b>71015-50</b>		Pkg. of 50		Less- 15%			
<b>71015-100</b>		Pkg. of 100		Less- 20%				


# KAWASAKI® KLX™ 650 / 650R 1993-'96

## Valve Spring Kit with Shim Under Conversions • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>40-40051</b>	Intake		.450"	1.195"	77#	207#	.450"
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Keepers	4	Titanium Retainers
			4	H. T. Steel Basewashers	4	H. T. Steel Tappets	4	Adj. Shims

To prevent high lift cams from spitting shims, Kibblewhite® recommends using shim under tappets for cams with over 0.400" lift. See Kibblewhite® Tappet Section in back of catalog.

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>40-4349</b>	Intake		.400"	1.200"	75#	191#	.400"
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers


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# KAWASAKI® KLX™ 650 / 650R 1993-'96



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## Valve Spring Only Kit • High Performance for O.E.M. Retainers

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-4089	Intake	.450"	1.380"	75#	175#	.450"
		Exhaust					
Kit Includes			4	CrSi Valve Springs			

# KAWASAKI® VARIOUS 650 / 750 2012-2019


- Brute Force 650 4x4 / 4x4i • 2013
- Brute Force 750 4x4i • 2013-2018
- Teryx™ • 2013-2019
- Teryx 4™ • 2012-2019

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40900	Intake	.500"	1.400"	59#	210#	.500"
		Exhaust					
Kit Includes			8	CrSi Valve Springs	8	Titanium Retainers	
			8	H. T. Steel Basewashers	8	H. T. Steel Shims	

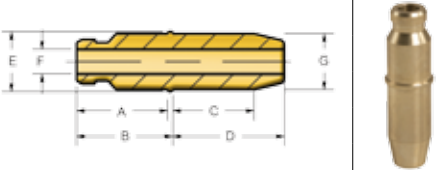
Note: KPMI® Guides must be installed when using cams greater than 0.430" valve lift.

## Valves • Black Diamond™ • Black Nitroleg Stems


	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-40920	Intake	30.00mm	1.181"	0.1960"	10°	3.610"	Standard
	40-40921	Intake	31.00mm	1.220"	0.1960"	10°	3.610"	Oversize
	40-40924	Exhaust	26.00mm	1.024"	0.1955"	10°	3.655"	Standard
	40-40925	Exhaust	27.00mm	1.063"	0.1955"	10°	3.655"	Oversize

If the above sizes are not what you need, we can make any size custom valve. Please call for more information.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.500"	0.550"	0.590"	0.790"	0.510"	0.1955"	0.4161" / Std.	40-40910		
								+ 0.001"	40-40911	
								+ 0.002"	40-40912	
								+0.010"	40-40919	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Intake
				0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71014-4			Pkg. of 4		0%		
	71014-8			Pkg. of 8		0%		
	71014-16			Pkg. of 16		Less- 10%		
	71014-50			Pkg. of 50		Less- 15%		
71014-100			Pkg. of 100		Less- 20%			

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# KAWASAKI® KZ™ / Z1™ 900 1973-1977

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## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-0449	Intake	.425"	1.330"	90#	245#	.425"
		Exhaust					
Kit Includes			8	CrSi Valve Springs			

## Retainer Set • O.E.M. Replacement • Titanium for Valve Spring Only Kit 40-0449

	KPMI P/N	Type	Material	Quantity	Remarks
	40-1008M	Intake	Titanium	Pkg. of 8	O.E.M. Style
		Exhaust			

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-1016	Intake	.475"	1.330"	90#	265#	.475"	
		Exhaust						
	Kit Includes			8	CrSi Valve Springs			
	40-1007	Intake	.490"	1.320"	95#	269#	.490"	
		Exhaust						
	Kit Includes			8	CrSi Valve Springs			
	40-1014	Intake	.565"	1.405"	105#	305#	.565"	
		Exhaust						
	Kit Includes			8	CrSi Valve Springs			

## Retainer Set • Shim On Bottom • Titanium for Valve Spring Only Kits 40-1016, 40-1007, and 40-1014

	KPMI P/N	Type	Material	Quantity
	40-1008	Intake	Titanium	Pkg. of 8
		Exhaust		

Use with Kibblewhite® "Shim On Bottom" Style Tappets # 40-1013 with this retainer.

## Valves • White Diamond® • Stainless

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	40-4180H	Intake	36.00mm	1.417"	0.2745"	23°	3.615"	Standard
	40-4181H	Intake	37.50mm	1.476"	0.2745"	23°	3.615"	Oversize (max w/ stock seat)
	40-4183H	Exhaust	30.00mm	1.181"	0.2745"	29°	3.555"	Standard
40-4184H	Exhaust	31.00mm	1.220"	0.2745"	29°	3.555"	Oversize (max w/ stock seat)	

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.440"	0.490"	0.785"	1.165"	0.495"	0.2745"	0.4752" / Std.	40-0478	
							+0.002"	40-0479	
							+0.004"	40-0480	
							+0.006"	40-0481	
							+0.015"	40-4036	
							+0.027"	40-0499	
	0.440"	0.490"	---	1.240"	0.495"	0.2745"	0.4752" / Std.	40-0482	
							+0.002"	40-0483	
							+0.004"	40-0484	
						+0.006"	40-0485		
						+0.015"	40-4037		

**ORDER 650-557-2046**



# KAWASAKI® KZ™ / Z1™ 900 1973-1977



## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
7.0mm	0.374"	0.560"	4	A	B	C	D	Intake
				0.475"±0.005"	0.430"	0.115"	0.240"	Exhaust
		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		71019-4				Pkg. of 4		0%
		71019-8				Pkg. of 8		0%
		71019-16				Pkg. of 16		Less- 10%
		71019-50				Pkg. of 50		Less- 15%
		71019-100				Pkg. of 100		Less- 20%

## Tappets • Shim On Bottom Conv. • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	40-1013	Intake	None	33.00mm	1.2980"	1.235"	1.025"	0.340"	0.115"	Pkg. of 8
		Exhaust								
	40-4202	Intake	None	33.50mm	1.3184"	1.250"	1.025"	0.313"	0.115"	Pkg. of 1 (Oversize)
Exhaust										
40-4203	Intake	None	34.00mm	1.3380"	1.258"	1.025"	0.313"	0.115"	Pkg. of 1 (Oversize)	
	Exhaust									

Use Kibblewhite® Shim On Bottom Retainers # 40-1008 (Pkg. of 8). Large tappets available, see Kibblewhite® Tappet Section in back of catalog.

## Retainer Set • Replacement • High Performance

	KPMI P/N	Type	Material	Description			
	40-4006	Intake	Titanium	"Shim Under" Style supplied with 15° Jumbo Keepers for radius groove valves.			
		Exhaust					
<b>Set Includes</b>			8	Titanium Retainers	8	H.T. Steel Keepers Pr.	

15° Jumbo keepers are designed for high spring loads in racing application.

## Keeper Set • O.E.M. Replacement

		KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. OEM P/N
		51001-8	Single Radius Bead	0.275"	7.0°	0.160"	0.340"	0.349"	8Pr.	12011-004
		51008-8	Single Radius Bead	0.275"	7.0°	0.188"	0.323"	0.342"	8Pr.	12011-004 (Shortened to increase tip length)

# KAWASAKI® NINJA™ 900 1984-1986

## Valves • Black Diamond™ • Black Nitroneg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-4190	Intake	29.00mm	1.142"	0.2155"	20°	3.510"	Standard
	40-4191	Intake	30.50mm	1.201"	0.2155"	20°	3.530"	Oversize
	40-4192	Exhaust	24.50mm	0.965"	0.2150"	25°	3.430"	Standard
	40-4193	Exhaust	25.00mm	0.984"	0.2150"	25°	3.440"	Oversize


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# KAWASAKI® KZ™ / Z1™ POLICE 1000 1977-'05

KAWASAKI


## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-0449	Intake	.425"	1.330"	90#	245#	.425"
		Exhaust					
Kit Includes			8	CrSi Valve Springs			


## Retainer Set • O.E.M. Replacement • Titanium for Valve Spring Only Kit 40-0449

	KPMI P/N	Type	Material	Quantity	Remarks
	40-1008M	Intake	Titanium	Pkg. of 8	O.E.M. Style
		Exhaust			


## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-1016	Intake	.475"	1.330"	90#	265#	.475"	
		Exhaust						
	Kit Includes			8	CrSi Valve Springs			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-1007	Intake	.490"	1.320"	95#	269#	.490"	
		Exhaust						
	Kit Includes			8	CrSi Valve Springs			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
40-1014	Intake	.565"	1.405"	105#	305#	.565"		
	Exhaust							
Kit Includes			8	CrSi Valve Springs				


## Retainer Set • Shim On Bottom • Titanium for Valve Spring Only Kits 40-1016, 40-1007, and 40-1014

	KPMI P/N	Type	Material	Quantity
	40-1008	Intake	Titanium	Pkg. of 8
		Exhaust		
Use with Kibblewhite® "Shim On Bottom" Style Tappets # 40-1013 with this retainer.				

## Valves • White Diamond® • Stainless

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-4180H	Intake	36.00mm	1.417"	0.2745"	23°	3.615"	Standard
	40-4181H	Intake	37.50mm	1.476"	0.2745"	23°	3.615"	Oversize (max w/ stock seat)
	40-4183H	Exhaust	30.00mm	1.181"	0.2745"	29°	3.555"	Standard
40-4184H	Exhaust	31.00mm	1.220"	0.2745"	29°	3.555"	Oversize (max w/ stock seat)	

## Valves • White Diamond® • J Model Valves • Stainless

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-4281H	Intake	38.50mm	1.516"	0.2745"	23°	3.565"	Standard
40-4285H	Exhaust	32.00mm	1.260"	0.2745"	29°	3.500"	Standard	

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# KAWASAKI® KZ™ / Z1™ POLICE 1000 1977-'05



## Valve Guides • C630 Bronze

Diagram	Image	A	B	C	D	E	F	G	Intake	Exhaust
		0.440"	0.490"	0.785"	1.165"	0.495"	0.2745"	0.4752" / Std.	+0.002"	40-0478
								+0.002"	40-0479	
								+0.004"	40-0480	
								+0.006"	40-0481	
								+0.015"	40-4036	
								+0.027"	40-0499	
		0.440"	0.490"	---	1.240"	0.495"	0.2745"	0.4752" / Std.		40-0482
								+0.002"		40-0483
								+0.004"		40-0484
								+0.006"		40-0485
								+0.015"		40-4037

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
7.0mm	0.374"	0.560"	4	A	B	C	D	Intake
				0.475"±0.005"	0.430"	0.115"	0.240"	Exhaust
		Part Number			Quantity		Quantity Discount	
		71019-4			Pkg. of 4		0%	
		71019-8			Pkg. of 8		0%	
		71019-16			Pkg. of 16		Less- 10%	
		71019-50			Pkg. of 50		Less- 15%	
		71019-100			Pkg. of 100		Less- 20%	

## Tappets • Shim On Bottom Conv. • H.T. Steel

Diagram	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
		40-1013	Intake	None	33.00mm	1.2980"	1.235"	1.025"	0.340"	0.115"
Exhaust										
40-4202		Intake	None	33.50mm	1.3184"	1.250"	1.025"	0.313"	0.115"	Pkg. of 1 (Oversize)
		Exhaust								
40-4203		Intake	None	34.00mm	1.3380"	1.258"	1.025"	0.313"	0.115"	Pkg. of 1 (Oversize)
		Exhaust								

Use Kibblewhite® Shim On Bottom Retainers # 40-1008 (Pkg. of 8). Large tappets available, see Kibblewhite® Tappet Section in back of catalog.

## Retainer Set • Titanium

Image	KPMI P/N	Type	Material	Description			
		40-4006	Intake	Titanium	"Shim Under" Style supplied with 15° Jumbo Keepers for radius groove valves.		
Exhaust							
Set Includes			8	Titanium Retainers	8	H.T. Steel Keepers Pr.	

15° Jumbo keepers are designed for high spring loads in racing application.

## Keeper Set • O.E.M. Replacement

Diagram	Image	KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. OEM P/N
		51001-8	Single Radius Bead	0.275"	7.0°	0.160"	0.340"	0.349"	8Pr.	12011-004
51008-8	Single Radius Bead	0.275"	7.0°	0.188"	0.323"	0.342"	8Pr.	12011-004 (Shortened to increase tip length)		

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# KAWASAKI® NINJA™ 1000R 1986-1987

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-4190	Intake	29.00mm	1.142"	0.2155"	20°	3.510"	Standard
	40-4191	Intake	30.50mm	1.201"	0.2155"	20°	3.530"	Oversize
	40-4192	Exhaust	24.50mm	0.965"	0.2150"	25°	3.430"	Standard
	40-4193	Exhaust	25.00mm	0.984"	0.2150"	25°	3.440"	Oversize

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust

	Part Number		Quantity	Quantity Discount
	71016-4		Pkg. of 4	0%
	71016-8		Pkg. of 8	0%
	71016-16		Pkg. of 16	Less- 10%
	71016-50		Pkg. of 50	Less- 15%
	71016-100		Pkg. of 100	Less- 20%

# KAWASAKI® GPZ™ 1100 1981-1982

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-0449	Intake	.425"	1.330"	90#	245#	.425"
		Exhaust					
Kit Includes			8	CrSi Valve Springs			

## Retainer Set • O.E.M. Replacement • Titanium for Valve Spring Only Kit 40-0449

	KPMI P/N	Type	Material	Quantity	Remarks
	40-1008M	Intake	Titanium	Pkg. of 8	O.E.M. Style
		Exhaust			

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-1016	Intake	.475"	1.330"	90#	265#	.475"	
		Exhaust						
	Kit Includes			8	CrSi Valve Springs			
	40-1007	Intake	.490"	1.320"	95#	269#	.490"	
		Exhaust						
Kit Includes			8	CrSi Valve Springs				
40-1014	Intake	.565"	1.405"	105#	305#	.565"		
	Exhaust							
Kit Includes			8	CrSi Valve Springs				

## Retainer Set • Shim On Bottom • Titanium for Valve Spring Only Kits 40-1016, 40-1007, and 40-1014

	KPMI P/N	Type	Material	Quantity
	40-1008	Intake	Titanium	Pkg. of 8
		Exhaust		
Use with Kibblewhite® "Shim On Bottom" Style Tappets # 40-1013 with this retainer.				

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# KAWASAKI® GPZ™ 1100 1981-1982



## Valves • White Diamond® • J Model Valves • Stainless

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>40-4281H</b>	Intake	38.50mm	1.516"	0.2745"	23°	3.565"	Standard
	<b>40-4285H</b>	Exhaust	32.00mm	1.260"	0.2745"	29°	3.500"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.440"	0.490"	0.785"	1.165"	0.495"	0.2745"	0.4752" / Std.	<b>40-0478</b>	
							+0.002"	<b>40-0479</b>	
							+0.004"	<b>40-0480</b>	
							+0.006"	<b>40-0481</b>	
							+0.015"	<b>40-4036</b>	
	0.440"	0.490"	---	1.240"	0.495"	0.2745"	0.4752" / Std.		<b>40-0482</b>
							+0.002"		<b>40-0483</b>
							+0.004"		<b>40-0484</b>
							+0.006"		<b>40-0485</b>
							+0.015"		<b>40-4037</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
7.0mm	0.374"	0.560"	4	A	B	C	D	Intake
				0.475"±0.005"	0.430"	0.115"	0.240"	Exhaust
				Part Number		Quantity		Quantity Discount
				<b>71019-4</b>		Pkg. of 4		0%
				<b>71019-8</b>		Pkg. of 8		0%
				<b>71019-16</b>		Pkg. of 16		Less- 10%
				<b>71019-50</b>		Pkg. of 50		Less- 15%
				<b>71019-100</b>		Pkg. of 100		Less- 20%

## Tappets • Shim On Bottom Conv. • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	<b>40-1013</b>	Intake	None	33.00mm	1.2980"	1.235"	1.025"	0.340"	0.115"	Pkg. of 8
		Exhaust								
	<b>40-4202</b>	Intake	None	33.50mm	1.3184"	1.250"	1.025"	0.313"	0.115"	Pkg. of 1 (Oversize)
		Exhaust								
	<b>40-4203</b>	Intake	None	34.00mm	1.3380"	1.258"	1.025"	0.313"	0.115"	Pkg. of 1 (Oversize)
Exhaust										

Use Kibblewhite® Shim On Bottom Retainers # 40-1008 (Pkg. of 8). Large tappets available, see Kibblewhite® Tappet Section in back of catalog.

## Retainer Set • Replacement • High Performance

	KPMI P/N	Type	Material	Description			
	<b>40-4006</b>	Intake	Titanium	"Shim Under" Style supplied with 15° Jumbo Keepers for radius groove valves.			
		Exhaust					
	<b>Set Includes</b>			8	Titanium Retainers	8	H.T. Steel Keepers Pr.
15° Jumbo keepers are designed for high spring loads in racing application.							

## Keeper Set • O.E.M. Replacement

	KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. OEM P/N
	<b>51001-8</b>	Single Radius Bead	0.275"	7.0°	0.160"	0.340"	0.349"	8Pr.	12011-004
	<b>51008-8</b>	Single Radius Bead	0.275"	7.0°	0.188"	0.323"	0.342"	8Pr.	12011-004 (Shortened to increase tip length)

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# KAWASAKI® ZX-7R™ 1991-1995

KAWASAKI

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-4385	Intake	.425"	1.220"	55#	159#	.425"	
		Exhaust						
Kit Includes			16	CrSi Valve Springs	16	Titanium Retainers	16	H. T. Steel Basewashers

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust
		0.560"	0.595"	0.620"	0.855"	0.460"	0.1760"	0.4165" / Std.	40-4400	
										+0.010"

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type	
				A	B	C	D	Intake	Exhaust
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Intake	Exhaust
		Part Number		Quantity	Quantity Discount				
		71013-4		Pkg. of 4	0%				
		71013-8		Pkg. of 8	0%				
		71013-16		Pkg. of 16	Less- 10%				
		71013-50		Pkg. of 50	Less- 15%				
71013-100		Pkg. of 100	Less- 20%						

# KAWASAKI® VULCAN™ 1500 1986-'08

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-40004	Intake	.450"	1.450"	67#	227#	.450"	
		Exhaust						
Kit Includes			8	CrSi Valve Springs	8	Titanium Retainers	8	H. T. Steel Shims

# KAWASAKI® VULCAN™ 1500 (Mean Streak) 2002-'03

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40060	Intake	.450"	1.450"	67#	227#	.450"
		Exhaust					
Kit Includes			8	CrSi Valve Springs	8	Titanium Retainers	


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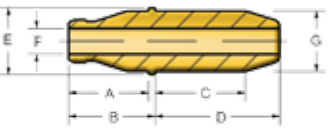

# KAWASAKI® ZX-7R™ 1996-2003



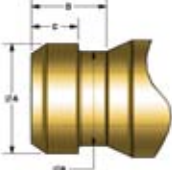

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-4395	Intake	.460"	1.260"	45#	157#	.460"	
		Exhaust						
Kit Includes			16	CrSi Valve Springs	16	Titanium Retainers	16	H. T. Steel Basewashers

## Valve Guides • C630 Bronze


		A	B	C	D	E	F	G	Intake	Exhaust
		0.560"	0.595"	0.620"	0.855"	0.460"	0.1760"	0.4165" / Std.	40-4400	
										+0.010"

## Valve Guide Seals • Viton®


Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust
		Part Number		Quantity	Quantity Discount			
		71013-4		Pkg. of 4	0%			
		71013-8		Pkg. of 8	0%			
		71013-16		Pkg. of 16	Less- 10%			
		71013-50		Pkg. of 50	Less- 15%			
		71013-100		Pkg. of 100	Less- 20%			

# KAWASAKI® ZX-9R™ 1994-2003

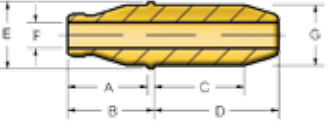

## Valve Spring Kit • Lightweight Racing For 1994-1997 Models

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-4385	Intake	.425"	1.220"	55#	159#	.425"	
		Exhaust						
Kit Includes			16	CrSi Valve Springs	16	Titanium Retainers	16	H. T. Steel Basewashers

## Valve Spring Kit • Lightweight Racing For 1998-2003 Models

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-4500	Intake	.470"	1.280"	40#	155#	.470"	
		Exhaust						
Kit Includes			16	CrSi Valve Springs	16	Titanium Retainers	16	H. T. Steel Basewashers

## Valve Guides • C630 Bronze


		A	B	C	D	E	F	G	Intake	Exhaust
		0.560"	0.595"	0.620"	0.855"	0.460"	0.1760"	0.4165" / Std.	40-4400	
										+0.010"

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# KAWASAKI® ZX-9R™ 1994-2003

## Valve Guide Seals • Viton®


Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Intake
								Exhaust
				Part Number		Quantity	Quantity Discount	
				71013-4		Pkg. of 4	0%	
				71013-8		Pkg. of 8	0%	
				71013-16		Pkg. of 16	Less- 10%	
				71013-50		Pkg. of 50	Less- 15%	
				71013-100		Pkg. of 100	Less- 20%	

# KAWASAKI® ZX-10R™ 1988-1990


## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-4611	Intake	.500"	1.400"	39#	160#	.400"
		Exhaust					
Kit Includes			16	CrSi Valve Springs			

## Retainer Set • Titanium


	KPMI P/N	Type	Material	Quantity
	40-4612	Intake	Titanium	Pkg. of 16
		Exhaust		

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Intake
								Exhaust
				Part Number		Quantity	Quantity Discount	
				71015-4		Pkg. of 4	0%	
				71015-8		Pkg. of 8	0%	
				71015-16		Pkg. of 16	Less- 10%	
				71015-50		Pkg. of 50	Less- 15%	
				71015-100		Pkg. of 100	Less- 20%	


# KAWASAKI® ZX-10R™ 2004-2007

## Single Spring Kit • High Performance NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40500	Intake	.425"	1.320"	65#	182#	.425"
		Exhaust					
Kit Includes			16	CrSi Valve Springs	16	H. T. Steel Retainers	

\* Springs are compatible with OEM Retainers & Basewashers and can be ordered individually, however KPMI® supplies this kit with the 40-40501 Retainers for increased durability over the OEM Aluminum Retainers.

## Retainer Set • H. T. Steel NEW PRODUCTS

	KPMI P/N	Type	Material	Quantity
	40-40501	Intake	H. T. Steel	Pkg. of 16
		Exhaust		

**ORDER 650-557-2046**



# KAWASAKI® ZX-10R™ 2004-2007



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## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40450	Intake	.445"	1.350"	50#	162#	.445"
		Exhaust	.445"	1.240"	44#	153#	.445"
Kit Includes			8 In, CrSi Valve Springs	8 In, Titanium Retainers	8 In, H. T. Steel Basewashers		
			8 Ex, CrSi Valve Springs	8 Ex, Titanium Retainers	8 Ex, H. T. Steel Basewashers		

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	40-40462	Intake	30.00mm	1.181"	0.1765"	10°	3.565"	Standard
	40-40463	Intake	31.00mm	1.220"	0.1765"	11°	3.580"	Oversize

## Valves • Tensilite® • Exhaust • Chromium Nitride PVD Coated Titanium NEW PRODUCTS

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks
	40-40466T	Exhaust	25.50mm	1.004"	0.1762"	25°	3.595"
<p>All titanium valves are 1 piece forged for superior strength over a 2 piece valve. The Tensilite PVD CrN coating is a state of the art process, which exceeds OEM specifications.</p>							

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	40-40485	Intake	H. T. Steel	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"	Pkg. of 16
		Exhaust								
<p>Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.</p>										

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.0mm	0.310"	0.380"	2	A	B	C	D	Intake
				0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust
	Part Number			Quantity	Quantity Discount			
	71013-4			Pkg. of 4	0%			
	71013-8			Pkg. of 8	0%			
	71013-16			Pkg. of 16	Less- 10%			
	71013-50			Pkg. of 50	Less- 15%			
	71013-100			Pkg. of 100	Less- 20%			

# KAWASAKI® ZX-10R™ 2008-2010

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-41100	Intake	.445"	1.350"	50#	162#	.445"
		Exhaust	.445"	1.240"	44#	153#	.445"
Kit Includes			8 In, CrSi Valve Springs	8 In, Titanium Retainers	8 In, H. T. Steel Basewashers		
			8 Ex, CrSi Valve Springs	8 Ex, Titanium Retainers	8 Ex, H. T. Steel Basewashers		

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# KAWASAKI® ZX-10R™ 2008-2010

## Single Spring Kit • High Performance

**NEW PRODUCTS**



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-41120	Intake	.425"	1.320"	65#	182#	.425"
	Exhaust					
<b>Kit Includes</b>		16	CrSi Valve Springs	16	H. T. Steel Retainers	

Springs are compatible with OEM Retainers & Basewashers and can be ordered individually, however KPMI® supplies this kit with the 40-41121 Retainers for increased durability over the OEM Aluminum Retainers.

## Retainer Set • H. T. Steel

**NEW PRODUCTS**



KPMI P/N	Type	Material	Quantity
40-41121	Intake	H. T. Steel	Pkg. of 16
	Exhaust		

## Valves • Black Diamond™ • Black Nitroreg Stems



KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks
40-41112	Intake	30.00mm	1.181"	0.1767"	10°	3.565" Standard
40-41113	Intake	31.00mm	1.220"	0.1767"	10°	3.580" Oversize
40-41116	Exhaust	24.50mm	0.965"	0.1762"	25°	3.590" Standard

## Valves • Tensilite® • Exhaust • Chromium Nitride PVD Coated Titanium

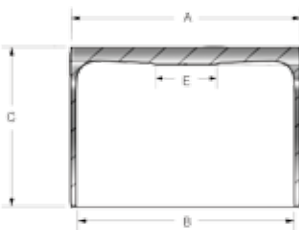


KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks
40-41117T	Exhaust	25.50mm	1.004"	0.1762"	25°	3.595" Oversize

All titanium valves are 1 piece forged for superior strength over a 2 piece valve. The Tensilite PVD CrN coating is a state of the art process, which exceeds OEM specifications.

## Tappets • O.E.M. Replacement • H.T. Steel

**NEW PRODUCTS**

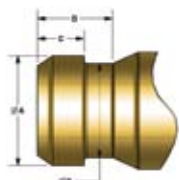


KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
40-41125	Intake	None	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"
	Exhaust							

Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.0mm	0.310"	0.380"	2	A	B	C	D	Intake
				0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust
				Part Number		Quantity		Quantity Discount
				71013-4		Pkg. of 4		0%
				71013-8		Pkg. of 8		0%
				71013-16		Pkg. of 16		Less- 10%
				71013-50		Pkg. of 50		Less- 15%
				71013-100		Pkg. of 100		Less- 20%



**ORDER 650-557-2046**

# KAWASAKI® ZX-10R™ 2011-2013



## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40850	Intake	.445" *	1.350"	50#	162#	.445"
		Exhaust	.445"	1.240"	44#	153#	.445"
	Kit Includes	8	In, CrSi Valve Springs		8	In, Titanium Retainers	
8		In, H. T. Steel Basewashers		8	In, H. T. Steel Shims		
8		Ex, CrSi Valve Springs	8	Ex, Titanium Retainers	8	Ex, H. T. Steel Basewashers	

\* When converting to a stainless steel intake valve, it is recommend to not exceed the OEM cam lift. Stainless steel exhaust valve OK to 0.445" lift. Titanium IN&EX valves OK to 0.445"

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Intake Exhaust
	Part Number			Quantity		Quantity Discount		
	71013-4			Pkg. of 4		0%		
	71013-8			Pkg. of 8		0%		
	71013-16			Pkg. of 16		Less- 10%		
	71013-50			Pkg. of 50		Less- 15%		
71013-100			Pkg. of 100		Less- 20%			

# KAWASAKI® ZX-11™ / ZRX™ 1100/ 1200 1999-'05

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-4611	Intake	.500"	1.400"	39#	160#	.400"
		Exhaust					
Kit Includes	16	CrSi Valve Springs					

## Retainer Set • Titanium

	KPMI P/N	Type	Material	Quantity
	40-4612	Intake Exhaust	Titanium	Pkg. of 16

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Intake Exhaust
	Part Number			Quantity		Quantity Discount		
	71015-4			Pkg. of 4		0%		
	71015-8			Pkg. of 8		0%		
	71015-16			Pkg. of 16		Less- 10%		
	71015-50			Pkg. of 50		Less- 15%		
71015-100			Pkg. of 100		Less- 20%			



# KAWASAKI® ZX-12R™ 2000-2005

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## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40025	Intake	.420"	1.410"	56#	183#	.420"
		Exhaust					
Kit Includes			16	CrSi Valve Springs	16	Titanium Retainers	
			16	H. T. Steel Basewashers	16	H. T. Steel Shims	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	40-40030	Intake	33.40mm	1.315"	0.1960"	10°	3.845"	Standard
	40-40031	Intake	34.40mm	1.354"	0.1960"	10°	3.845"	Oversize
	40-40032	Exhaust	28.24mm	1.112"	0.1955"	10°	3.865"	Standard
	40-40033	Exhaust	29.26mm	1.152"	0.1955"	10°	3.865"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.690"	0.730"	0.555"	0.855"	0.460"	0.1955"	0.4165" / Std.	40-40040		
								+0.001"	40-40041	
								+0.002"	40-40042	
								+0.010"	40-40050	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71015-4			Pkg. of 4		0%		
	71015-8			Pkg. of 8		0%		
	71015-16			Pkg. of 16		Less- 10%		
	71015-50			Pkg. of 50		Less- 15%		
71015-100			Pkg. of 100		Less- 20%			

# KAWASAKI® ZX-14™ 2006-2011

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-40267	Intake	.405"	1.285"	66#	168#	.405"	
		Exhaust						
Kit Includes			16	CrSi Valve Springs	16	Titanium Retainers	16	H. T. Steel Basewashers


**ORDER 650-557-2046**

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# KAWASAKI® ZX-14™ 2006-2011




## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40292	Intake	.425"	1.320"	65#	182#	.425"
		Exhaust					
Kit Includes			16	CrSi Valve Springs			


Springs are compatible with OEM Retainers & Basewashers and can be ordered individually, however KPMI® recommends the 40-40291 Retainer for increased durability over the OEM .

## Retainer Set • O. E. M. Replacement • H. T. Steel

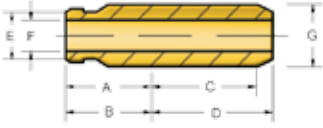

**NEW PRODUCTS**

	KPMI P/N	Type	Material	Quantity
	40-40291	Intake	H. T. Steel	Pkg. of 16
		Exhaust		



## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-40273	Intake	33.40mm	1.315"	0.1958"	10°	3.565"	Standard
	40-40274	Intake	34.40mm	1.354"	0.1958"	10°	3.565"	Oversize
	40-40276	Exhaust	28.25mm	1.112"	0.1953"	10°	3.575"	Standard
	40-40277	Exhaust	29.25mm	1.152"	0.1953"	10°	3.575"	Oversize

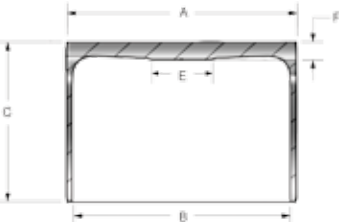
## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust		
		0.460"	0.460"	0.500"	0.780"	0.413"	0.1950"	0.4162" / Std.	40-40280			
										+0.001"	40-40281	
										+0.002"	40-40282	
										+0.010"	40-40289	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
		Part Number		Quantity		Quantity Discount		
		71015-4		Pkg. of 4		0%		
		71015-8		Pkg. of 8		0%		
		71015-16		Pkg. of 16		Less- 10%		
		71015-50		Pkg. of 50		Less- 15%		
		71015-100		Pkg. of 100		Less- 20%		

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	40-40271	Intake	None	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"	Pkg. of 16
		Exhaust								

Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

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# KAWASAKI® PWC™ 2007-2014

- STX • 2009-2010
- STX-15F™ • 2006-2014
- Ultra 250X™ • 2007-2008
- Ultra LX™ • 2008-2014
- Ultra 260X™ • 2009-2010
- Ultra 260LX™ • 2009-2010

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40750	Intake	.385"	1.410"	56#	171#	.383"
		Exhaust					
Kit Includes			16	CrSi Valve Springs	16	Titanium Retainers	
			16	H. T. Steel Basewashers	8	In, H. T. Steel Shims	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-40762	Intake	33.40mm	1.315"	0.1960"	10°	3.845"	Standard
	40-40763	Intake	34.40mm	1.354"	0.1960"	10°	3.845"	Oversize
	40-40766	Exhaust	28.24mm	1.112"	0.1955"	10°	3.865"	Standard
	40-40767	Exhaust	29.26mm	1.152"	0.1955"	10°	3.865"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.690"	0.730"	0.555"	0.855"	0.460"	0.1955"	0.4165" / Std.		40-40770	
								+0.001"		40-40771
								+0.002"		40-40772
								+0.010"		40-40779


## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71015-4			Pkg. of 4		0%		
	71015-8			Pkg. of 8		0%		
	71015-16			Pkg. of 16		Less- 10%		
	71015-50			Pkg. of 50		Less- 15%		
71015-100			Pkg. of 100		Less- 20%			


For all the applications available for Kibblewhite's Kawasaki® line of products, please refer online to the Kawasaki® section of the [www.kpmi.us](http://www.kpmi.us) website, under **PWC / Snowmobile**.

• For RC4 Engines


## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96090	Intake	.425"	1.175"	60#	169#	.425"
		Exhaust	.425"	1.175"	60#	169#	.425"
Kit Includes			2 In, CrSi Valve Springs	2 In, Titanium Retainers	2 In, H. T. Steel Basewashers		
			2 Ex, CrSi Valve Springs	2 Ex, Titanium Retainers	2 Ex, H. T. Steel Basewashers		

## Intake Only • Steel Valve Conversion Kit


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96130	Intake	.425"	1.175"	60#	169#	.425"
	Kit Includes			2 CrSi Valve Springs	2 Titanium Retainers		
			2 Black Diamond™ Valves	2 H. T. Steel Basewashers			

## Valves • Black Diamond™ • Black Nitroeng Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	96-96102	Intake	30.95mm	1.218"	0.1960"	15°	3.910"	Standard
	96-96106	Exhaust	26.60mm	1.047"	0.1955"	30°	3.665"	Standard

Must use **Kibblewhite® Lightweight Valve Spring Kits** when installing **Black Diamond™ Valves**.

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.0mm	0.320"	0.435"	5	0.305"±0.002"	0.265"	0.100"	0.195"	Intake
								Exhaust
		Part Number			Quantity		Quantity Discount	
		71041-4			Pkg. of 4		0%	
		71041-8			Pkg. of 8		0%	
		71041-16			Pkg. of 16		Less- 10%	
		71041-50			Pkg. of 50		Less- 15%	
		71041-100			Pkg. of 100		Less- 20%	

For all the applications available for Kibblewhite's KPMI® line of products, please refer online to the KTM® section of the [www.kpmi.us](http://www.kpmi.us) website, under **Dirt Bikes**.



# KTM® 250 2008-2011

• For RC4 Engines

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96250	Intake	.425"	1.175"	60#	169#	.425"
		Exhaust	.425"	1.175"	60#	169#	.425"
Kit Includes			2 In, CrSi Valve Springs	2 In, Titanium Retainers	2 In, H. T. Steel Basewashers		
			2 Ex, CrSi Valve Springs	2 Ex, Titanium Retainers	2 Ex, H. T. Steel Basewashers		

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96450	Intake	.425"	1.175"	60#	169#	.425"
	Kit Includes			2 CrSi Valve Springs	2 Titanium Retainers		
			2 Black Diamond™ Valves	2 H. T. Steel Basewashers			

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	96-96262	Intake	30.95mm	1.218"	0.1960"	15°	3.910"	Standard
	96-96266	Exhaust	26.60mm	1.047"	0.1955"	30°	3.665"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.200"	0.475"	1.020"	1.335"	0.470"	0.1960"	0.3958" / Std.	96-96270		
								+0.001"	96-96271	
								+0.002"	96-96272	
	0.200"	0.475"	0.765"	1.200"	0.470"	0.1955"	0.3958" / Std.		96-96280	
								+0.001"	96-96281	
								+0.002"	96-96282	
								+0.010"	96-96289	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.320"	0.435"	5	A	B	C	D	Intake
				0.305"±0.002"	0.265"	0.100"	0.195"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71041-4		Pkg. of 4	0%	
				71041-8		Pkg. of 8	0%	
				71041-16		Pkg. of 16	Less- 10%	
				71041-50		Pkg. of 50	Less- 15%	
				71041-100		Pkg. of 100	Less- 20%	

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KTM

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# KTM® 250 2012-2013



• For RC4 Engines

• XCF - W™ Only • 2013

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96250	Intake	.425"	1.175"	60#	169#	.425"
		Exhaust	.425"	1.175"	60#	169#	.425"
Kit Includes			2 In, CrSi Valve Springs	2 In, Titanium Retainers	2 In, H. T. Steel Basewashers		
			2 Ex, CrSi Valve Springs	2 Ex, Titanium Retainers	2 Ex, H. T. Steel Basewashers		

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96450	Intake	.425"	1.175"	60#	169#	.425"
	Kit Includes			2 CrSi Valve Springs	2 Titanium Retainers		
			2 Black Diamond™ Valves	2 H. T. Steel Basewashers			

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	96-96262	Intake	30.95mm	1.218"	0.1960"	15°	3.910"	Standard
	96-96266	Exhaust	26.60mm	1.047"	0.1955"	30°	3.665"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	---	0.475"	1.020"	1.335"	---	0.1960"	0.4352" / Std.	96-96290	
								+0.001"	96-96291
								+0.002"	96-96292
								+0.010"	96-96299
	---	0.475"	0.765"	1.200"	---	0.1955"	0.4352" / Std.		96-96300
								+0.001"	96-96301
							+0.002"	96-96302	
							+0.010"	96-96309	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.320"	0.435"	5	A	B	C	D	Intake
				0.305"±0.002"	0.265"	0.100"	0.195"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71041-4			Pkg. of 4		0%		
	71041-8			Pkg. of 8		0%		
	71041-16			Pkg. of 16		Less- 10%		
	71041-50			Pkg. of 50		Less- 15%		
71041-100			Pkg. of 100		Less- 20%			

VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)



# KTM® SX-F / XC-F 250 2013-2015

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96400	Intake	.450"	1.340"	50#	165#	.450"
		Exhaust					
Kit Includes			2 In, CrSi Valve Springs	2 In, H. T. Steel Retainers	2 In, H. T. Steel Basewashers	2 Ex, CrSi Valve Springs	2 Ex, H. T. Steel Basewashers

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96480	Intake	.450"	1.340"	50#	165#	.450"
	Kit Includes			2 CrSi Valve Springs	2 H. T. Steel Retainers	2 Black Diamond™ Valves	2 H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	96-96412	Intake	32.51mm	1.280"	0.1960"	15°	3.770"	Standard
	96-96416	Exhaust	26.55mm	1.045"	0.1955"	30°	3.875"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N	
	96-96412T	Intake	32.51mm	1.280"	0.1960"	15°	3.770"	Titanium	77736030000
	96-96416T	Exhaust	26.55mm	1.045"	0.1955"	30°	3.875"	Titanium	77736031000

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	---	0.490"	0.715"	1.165"	---	0.1960"	0.4352" / Std.	96-96420	
							+0.001"	96-96421	
							+0.002"	96-96422	
							+0.010"	96-96429	
							0.4352" / Std.		96-96430
							+0.001"		96-96431
							+0.002"		96-96432
						+0.010"		96-96439	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.320"	0.435"	5	A	B	C	D	Intake
				0.305"±0.002"	0.265"	0.100"	0.195"	Exhaust
			Part Number				Quantity	Quantity Discount
			71041-4				Pkg. of 4	0%
			71041-8				Pkg. of 8	0%
			71041-16				Pkg. of 16	Less- 10%
			71041-50				Pkg. of 50	Less- 15%
71041-100				Pkg. of 100	Less- 20%			

ORDER 650-557-2046

# KTM® 450 2007-2011



• For RF4 Engines

**Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	96-96162T	Intake	40.25mm	1.585"	0.2358"	15°	3.455"	Titanium	77336030200
									77336030300
	96-96166T	Exhaust	31.70mm	1.248"	0.2353"	30°	3.520"	Titanium	77336031200
				77336031300					

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

**Valve Guide Seals • Viton®**

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.315"	0.520"	5	A	B	C	D	Intake
				0.435"±0.002"	0.395"	0.120"	0.210"	Exhaust
				Part Number		Quantity		Quantity Discount
				71029-4		Pkg. of 4		0%
				71029-8		Pkg. of 8		0%
				71029-16		Pkg. of 16		Less- 10%
				71029-50		Pkg. of 50		Less- 15%
				71029-100		Pkg. of 100		Less- 20%

# KTM® 400cc-530cc 2008-2013

• For XC4 Engines

• EXC-R / XCR-W / EXC / XC-W

**Valves • O.E.M. Replacement • Titanium • Stainless**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	96-96212T	Intake	39.95mm	1.573"	0.2350"	15°	3.650"	Titanium	78036030000
									78936030000
	96-96216	Exhaust	33.10mm	1.303"	0.1955"	30°	3.620"	Stainless	78036031000
				78936031000					

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

**High Performance Valve Guide Seal Kits**

	Intake Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				
					A	B	C	D	
	6.0mm	0.315"	0.520"	5	0.435"±0.002"	0.395"	0.120"	0.215"	
					Designed for these guide specs				
	Exhaust Stem Diameter	O.L.	Seal O.D.	Seal Style	A	B	C	D	
					0.305"±0.002"	0.265"	0.100"	0.195"	
Part Number		96-96380		Kit Includes		2	Intake Viton® Seals	2	Exhaust Viton® Seals

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# KTM® ALL RFS ENGINES 400cc-560cc 2000-'09

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## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96000	Intake	.435"	1.175"	75#	214#	.435"
		Exhaust					
	Kit Includes	2	In, CrSi Valve Springs	2	In Titanium Retainers	2	In, H. T. Steel Basewashers
2		Ex, CrSi Valve Springs	2	ex Titanium Retainers	2	Ex, H. T. Steel Basewashers	
2		In, Spring Shims		2	Ex, Spring Shims		

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96070	Intake	.435"	1.175"	75#	214#	.435"
	Kit Includes	2	CrSi Valve Springs		2	In Titanium Retainers	
2		Black Diamond™ Valves		2	H. T. Steel Basewashers		

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	96-96004	Intake	35.00mm	1.378"	0.2350"	20°	3.815"	Standard
	96-96005	Intake	36.00mm	1.417"	0.2350"	20°	3.815"	Oversize
	96-96007	Exhaust	30.00mm	1.181"	0.2342"	24°	3.815"	Standard
	96-96008	Exhaust	31.00mm	1.220"	0.2342"	24°	3.815"	Oversize

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.410"	0.450"	0.555"	0.945"	0.525"	0.2360"	0.4745" / Std.	96-96010	
							+0.001"	96-96011	
							+0.002"	96-96012	
							+0.010"	96-96019	
	0.410"	0.450"	0.740"	1.100"	0.525"	0.2360"	0.4745" / Std.		96-96020
							+0.001"		96-96021
							+0.002"		96-96022
							+0.010"		96-96029

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.315"	0.520"	5	A	B	C	D	Intake
				0.435"±0.002"	0.395"	0.120"	0.210"	Exhaust
			Part Number	Quantity		Quantity Discount		
			71029-4	Pkg. of 4		0%		
			71029-8	Pkg. of 8		0%		
			71029-16	Pkg. of 16		Less- 10%		
			71029-50	Pkg. of 50		Less- 15%		
		71029-100	Pkg. of 100		Less- 20%			

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# KTM® VARIOUS 450'S 2013-2018



• 450 XC-F 2013-2017

• 450 SX-F 2013-2018

**NEW PRODUCTS**

## Valve Spring Kit • Beehive Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift			
	96-96500	Intake	.435"	1.360"	80#	205#	.435"			
		Exhaust								
	Kit Includes			2	In CrSi Valve Springs	2	In Titanium Retainers	2	In H. T. Steel Basewashers	2
Kit Includes			2	Ex CrSi Valve Springs	2	Ex Titanium Retainers	2	Ex H. T. Steel Basewashers	--	Ex H. T. Steel Shims

\*KPMI® supplied Viton® seals must be used with this kit. O.E.M. seals are NOT compatible.

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
	96-96540	Intake	.435"	1.360"	80#	205#	.435"		
	Kit Includes			2	CrSi Valve Springs	2	Titanium Retainers	2	H. T. Steel Basewashers
	Kit Includes			2	Black Diamond™ Valves	2	H.T. Steel Shims		

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	96-96512	Intake	39.93mm	1.572"	0.2358"	15°	3.675"	Standard
	96-96516	Exhaust	33.15mm	1.305"	0.2353"	30°	3.645"	Standard

You must use KPMI® Spring Kit 96-96500 when installing Black Diamond™ Valves

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N	
	96-96512T	Intake	39.93mm	1.572"	0.2358"	15°	3.675"	Titanium	78936030100
	96-96516T	Exhaust	33.15mm	1.305"	0.2353"	30°	3.645"	Titanium	78936031000

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

		*A	*C	*D	E	F	G	Intake	Exhaust
		0.555"	0.945"	1.140"	0.433"	0.2353"	0.4352" / Std.	96-96520	
							+0.001"	96-96521	
							+0.002"	96-96522	
							+0.010"	96-96529	
		0.635"	0.865"	1.060"	0.433"	0.2353"	0.4352" / Std.		96-96520
							+0.001"		96-96521
							+0.002"		96-96522
							+0.010"		96-96529
		*Note: One guide design installs at two different heights depending on Intake or Exhaust usage. You must install to lower line for exhaust and upper line for intake.							

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# KTM® VARIOUS 450'S 2013-2018

**NEW PRODUCTS**

• 450 XC-F 2013-2017

• 450 SX-F 2013-2018

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
6.0mm	0.315"	0.520"	5	0.435"±0.002"	0.395"	0.120"	0.210"	Intake
								Exhaust
				Part Number		Quantity	Quantity Discount	
				71029-4		Pkg. of 4	0%	
				71029-8		Pkg. of 8	0%	
				71029-16		Pkg. of 16	Less- 10%	
				71029-50		Pkg. of 50	Less- 15%	
				71029-100		Pkg. of 100	Less- 20%	

# MOTO GUZZI® ALL 2-VALVE "BIG-BLOCKS" 1971-'12

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	90-90000	Intake	.575"	1.420"	111#	204#	.375"
		Exhaust					
Kit Includes			4 CrSi Valve Springs	4 H.T. Steel Retainers	4 H. T. Steel Basewashers		

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	90-9100	Intake	41.00mm	1.614"	0.3145"	23°	4.200"	Standard (OEM #13036000)
	90-9102	Intake	44.00mm	1.732"	0.3145"	23°	4.185"	Standard (OEM #14036050)
	90-9101	Exhaust	36.00mm	1.417"	0.3140"	27°	4.130"	Standard (OEM #13033100)
	90-9103	Exhaust	37.10mm	1.461"	0.3140"	27°	4.100"	Standard (OEM #14036150)

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.645"	0.695"	1.205"	1.405"	0.620"	0.3145"	0.5538" / Std.	90-4067		
								+0.002"	90-4068	
	Seal not required.							+0.015"	90-4175	

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# NORTON® 750 1968-1973



## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	* Installed Height	Seat Pressure	Open Pressure	@ Lift
	50-0460	Intake	.500"	1.420"	105#	185#	.320"
		Exhaust					
	Kit Includes	4	7075-T6 H. A. Retainers		4	H. T. Steel Keepers Pr.	
4		CrSi Valve Springs		4	H. T. Steel Basewashers		

\*Important: In order to achieve the above installation height, it will be necessary to spot face the spring pad prior to guide installation.

## Valve Spring Kit • O. E. M. Replacement

	KPMI P/N	Type	Kit Includes					
	50-50000	Intake	H. T. Steel Retainers		CrSi Valve Springs		H. T. Steel Basewashers	
		Exhaust	4	50-50001	4	50-50004	4	50-50003
	Max Valve Lift	Installed Height	Seat Pressure		Open Pressure		@ Lift	
.410"	1.280"	93#		170#		.320"		

All components are the quality you can expect from Kibblewhite®, manufactured to exact O.E.M. dimensions. These O.E.M. replacements parts may be purchased separately using the above part numbers.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	50-4092	Intake	38.10mm	1.500"	0.3115"	1.5" R	4.065"	Standard
	50-4092-1	Intake	39.62mm	1.560"	0.3115"	1.5" R	4.055"	Oversize
	50-4091	Exhaust	33.02mm	1.300"	0.3110"	27°	4.015"	Standard
	50-4091-1	Exhaust	34.54mm	1.360"	0.3110"	27°	4.005"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.330"	0.430"	1.025"	1.525"	0.680"	0.3105"	0.5010" / Std.	50-0403	
							+0.002"	50-0404	
							+0.004"	50-0405	
	0.470"	0.655"	0.785"	1.345"	0.682"	0.3105"	0.5010" / Std.		50-0410
							+0.002"		50-0411
							+0.004"		50-0412
							+0.006"		50-0413

## Push Rod • Alloy Tube • H. T. Steel Endpieces

	KPMI P/N	Type	Material	"A"	"B"	Quantity
	50-50010	Intake	H. T. Seamless Aluminum	8.150"	8.010"	Pkg. of 2
		Exhaust		7.300"	7.160"	Pkg. of 2

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.465"	0.550"	1	A	B	C	D	Intake
				0500"±0.010"	0.445"	0.230"	0.280"	Exhaust
		Part Number			Quantity		Quantity Discount	
		71012-4			Pkg. of 4		0%	
		71012-8			Pkg. of 8		0%	
		71012-16			Pkg. of 16		Less- 10%	
		71012-50			Pkg. of 50		Less- 15%	
71012-100			Pkg. of 100		Less- 20%			

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# NORTON® 850 1973-1977

NORTON

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	* Installed Height	Seat Pressure	Open Pressure	@ Lift
	50-0460	Intake	.500"	1.420"	105#	185#	.320"
		Exhaust					
	Kit Includes	4	7075-T6 H. A. Retainers		4	H. T. Steel Keepers Pr.	
4		CrSi Valve Springs		4	H. T. Steel Basewashers		

\*Important: In order to achieve the above installation height, it will be necessary to spot face the spring pad prior to guide installation.

## Valve Spring Kit • O. E. M. Replacement

	KPMI P/N	Type	Kit Includes					
	50-50000	Intake	H. T. Steel Retainers		CrSi Valve Springs		H. T. Steel Basewashers	
		Exhaust	4	50-50001	4	50-50004	4	50-50003
	Max Valve Lift	Installed Height	Seat Pressure		Open Pressure		@ Lift	
.410"	1.280"	93#		170#		.320"		

All components are the quality you can expect from Kibblewhite®, manufactured to exact O.E.M. dimensions. These O.E.M. replacement parts may be purchased separately using the above part numbers.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	50-4092	Intake	38.10mm	1.500"	0.3115"	1.5" R	4.065"	Standard
	50-4092-1	Intake	39.62mm	1.560"	0.3115"	1.5" R	4.055"	Oversize
	50-4091	Exhaust	33.02mm	1.300"	0.3110"	27°	4.015"	Standard
	50-4091-1	Exhaust	34.54mm	1.360"	0.3110"	27°	4.005"	Oversize

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.330"	0.400"	1.030"	1.560"	0.680"	0.3105'	0.6260" / Std.	50-0648		
									+0.002"	50-0649	
									+0.004"	50-0650	
		0.525"	0.580"	0.955'	1.420"	0.680"	0.3105'	0.6260" / Std.		50-0652	
									+0.002"		50-0653
									+0.004"		50-0654
									+0.006"		50-0655

Note: Exhaust seals are not required.

## Push Rod • Alloy Tube • H. T. Steel Endpieces

	KPMI P/N	Type	Material	"A"	"B"	Quantity
	50-50010	Intake	H. T. Seamless Aluminum	8.150"	8.010"	Pkg. of 2
		Exhaust		7.300"	7.160"	Pkg. of 2

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.465"	0.550"	1	A	B	C	D	Intake
				0500"±0.010"	0.445"	0.230"	0.280"	Exhaust
		Part Number			Quantity		Quantity Discount	
		71012-4			Pkg. of 4		0%	
		71012-8			Pkg. of 8		0%	
		71012-16			Pkg. of 16		Less- 10%	
		71012-50			Pkg. of 50		Less- 15%	
71012-100			Pkg. of 100		Less- 20%			

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# POLARIS® 400-500 1996-'14, Series 10, 11



- Ranger™ 400 2010-2014
- Sportsman™ 500 1996-2013
- Xpedition™ 425 2000-2002
- Scrambler™ 500 1997-2012
- Magnum™ 500 1996-2003
- Ranger™ 500 1999-'13, Series 10,11

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	82-82000	Intake	.440"	1.285"	40#	140#	.440"	
		Exhaust						
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	82-82005	Intake	31.00mm	1.220"	0.2345"	14°	3.970"	Standard
	82-82008	Exhaust	26.55mm	1.063"	0.2340"	25°	3.985"	Standard

# POLARIS® PREDATOR™ / OUTLAW™ 500 2003-2007

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82012	Intake	.440"	1.375"	66#	199#	.440"
		Exhaust					
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	82-82052	Intake	37.00mm	1.457"	0.2345"	20°	4.030"	Standard
	82-82053	Intake	38.00mm	1.496"	0.2345"	20°	4.030"	Oversize
	82-82055	Exhaust	32.00mm	1.260"	0.2345"	22°	4.055"	Standard
	82-82056	Exhaust	33.00mm	1.300"	0.2345"	22°	4.055"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.375"	0.545"	0.880"	0.980"	0.704"	0.2345"	0.4160" / Std.		82-82030
							+0.001"		82-82031
							+0.010"		82-82039

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.371"	0.480"	5	A	B	C	D	Intake
				0.385"±0.002"	0.341"	0.120"	0.255"	Exhaust
		Part Number			Quantity		Quantity Discount	
		71017-4			Pkg. of 4		0%	
		71017-8			Pkg. of 8		0%	
		71017-16			Pkg. of 16		Less- 10%	
		71017-50			Pkg. of 50		Less- 15%	
71017-100			Pkg. of 100		Less- 20%			

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# POLARIS® SPORTSMAN™ 800 2006-'14

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	82-82060	Intake	.500"	1.495"	65#	235#	.500"	
		Exhaust						
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	2	In, Viton® Seals
			2	In, H.T. Steel Basewashers	2	Ex, H.T. Steel Basewashers		

These seals are designed to work with the KPMI® Spring Kit and OEM intake Valve Guides. Use the recommended #71017-4 seals when using KPMI® Valve Guides.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	82-82065	Intake	35.00mm	1.378"	0.2357"	25°	4.510"	Standard
	82-82066	Intake	36.00mm	1.417"	0.2357"	25°	4.510"	Oversize
	82-82068	Exhaust	30.00mm	1.181"	0.2352"	11°	4.555"	Standard
	82-82069	Exhaust	31.00mm	1.220"	0.2352"	11°	4.555"	Oversize

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.470"	0.560"	0.495"	1.335"	0.544"	0.2360"	0.4950" / Std.	82-82070		
									+0.001"	82-82071	
									+0.002"	82-82072	
								+0.010"	82-82079		
		0.525"	0.615"	0.520"	1.115"	0.544"	0.2355"	0.4531" / Std.		82-82080	
									+0.001"	82-82081	
									+0.002"	82-82082	
								+0.010"	82-82089		

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.371"	0.480"	5	A	B	C	D	Intake
				0.385"±0.002"	0.341"	0.120"	0.255"	Exhaust
			Part Number	Quantity		Quantity Discount		
			71017-4	Pkg. of 4		0%		
			71017-8	Pkg. of 8		0%		
			71017-16	Pkg. of 16		Less- 10%		
			71017-50	Pkg. of 50		Less- 15%		
		71017-100	Pkg. of 100		Less- 20%			

These seals are designed to work with the KPMI® Guides.

# POLARIS® RZR™ 800 2008-2010



## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>82-82200</b>	Intake	.500"	1.495"	65#	235#	.500"	
		Exhaust						
<b>Kit Includes</b>			4	Titanium Retainers	4	CrSi Valve Springs	2	In, Viton® Seals
			2	In, H. T. Steel Basewashers	2	Ex, H. T. Steel Basewashers		

These seals are designed to work with the KPMI® Spring Kit and OEM intake Valve Guides. **Use the recommended #71017-4 seals** when using KPMI® Valve Guides.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	<b>82-82212</b>	Intake	35.00mm	1.378"	0.2357"	25°	4.510"	Standard
	<b>82-82213</b>	Intake	36.00mm	1.417"	0.2357"	25°	4.510"	Oversize
	<b>82-82216</b>	Exhaust	30.00mm	1.181"	0.2352"	11°	4.555"	Standard
	<b>82-82217</b>	Exhaust	31.00mm	1.220"	0.2352"	11°	4.555"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.470"	0.560"	0.495"	1.335"	0.544	0.2360"	0.4950" / Std.	<b>82-82220</b>		
								+0.001"	<b>82-82221</b>	
								+0.002"	<b>82-82222</b>	
								+0.010"	<b>82-82229</b>	
	0.525"	0.615"	0.520"	1.115"	0.544"	0.2355"	0.4531" / Std.		<b>82-82230</b>	
								+0.001"	<b>82-82231</b>	
								+0.002"	<b>82-82232</b>	
							+0.010"	<b>82-82239</b>		

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.371"	0.480"	5	A	B	C	D	Intake
				0.385"±0.002"	0.341"	0.120"	0.255"	Exhaust
				Part Number		Quantity		Quantity Discount
				<b>71017-4</b>		Pkg. of 4		0%
				<b>71017-8</b>		Pkg. of 8		0%
				<b>71017-16</b>		Pkg. of 16		Less- 10%
				<b>71017-50</b>		Pkg. of 50		Less- 15%
			<b>71017-100</b>		Pkg. of 100		Less- 20%	

These seals are designed to work with the KPMI® Guides.

# POLARIS® RZR™ 800 (&S/4) / RANGER 800 2011-'17

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>82-82300</b>	Intake	.500"	1.495"	65#	235#	.500"	
		Exhaust						
<b>Kit Includes</b>			4	Titanium Retainers	4	CrSi Valve Springs	2	In, Viton® Seals
			2	In, H. T. Steel Basewashers	2	Ex, H. T. Steel Basewashers		

These seals are designed to work with the KPMI® Spring Kit and OEM intake Valve Guides. **Use the recommended #71017-4 seals** when using KPMI® Valve Guides.



# POLARIS® RZR™ 800 (&S/4) / RANGER 800 2011-'17

## Valves • Black Diamond™ • Black Nitroneg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>82-82312</b>	Intake	35.00mm	1.378"	0.2357"	25°	4.510"	Standard
	<b>82-82313</b>	Intake	36.00mm	1.417"	0.2357"	25°	4.510"	Oversize
	<b>82-82316</b>	Exhaust	30.00mm	1.181"	0.2352"	11°	4.555"	Standard
	<b>82-82317</b>	Exhaust	31.00mm	1.220"	0.2352"	11°	4.555"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.490"	0.580"	1.385"	1.515"	0.552"	0.2352"	0.4531" / Std.		<b>82-82320</b>
							+0.001"		<b>82-82321</b>
							+0.002"		<b>82-82322</b>
							+0.010"		<b>82-82329</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.371"	0.480"	5	A	B	C	D	Intake
				0.385"±0.002"	0.341"	0.120"	0.255"	Exhaust
			Part Number	Quantity		Quantity Discount		
			<b>71017-4</b>	Pkg. of 4		0%		
			<b>71017-8</b>	Pkg. of 8		0%		
			<b>71017-16</b>	Pkg. of 16		Less- 10%		
			<b>71017-50</b>	Pkg. of 50		Less- 15%		
		<b>71017-100</b>	Pkg. of 100		Less- 20%			

These seals are designed to work with the KPMI® Guides.

# POLARIS® RZR™ XP900 2011-2012

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
	<b>82-82160</b>	Intake	.450"	1.375"	57#	150#	.450"		
		Exhaust							
	<b>Kit Includes</b>			8	Titanium Retainers	8	CrSi Valve Springs	8	H. T. Steel Basewashers
	<b>*82-82650</b>	Intake	.450"	1.375"	57#	150#	.450"		
Exhaust									
<b>Kit Includes</b>			8	H. T. Steel Retainers	8	CrSi Valve Springs	8	H. T. Steel Basewashers	

\*KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With two different spring pressure option kits to choose from, these are the ultimate setup for any Polaris RZR/Ranger tuner.

## Valve Spring Kit • Beehive Racing


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
	<b>82-82580</b>	Intake	.435"	1.360"	80#	205#	.435"		
		Exhaust							
	<b>Kit Includes</b>			8	H.T. Steel Retainers	8	CrSi Valve Springs	8	H.T. Steel Basewashers

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# POLARIS® RZR™ XP900 2011-2012




## Valve Spring Kit • High Performance “Turbo” Racing



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
82-82190	Intake	.450"	1.375"	65#	200#	.450"	
	Exhaust						
<b>Kit Includes</b>		8	Titanium Retainers	8	CrSi Valve Springs	8	H.T. Steel Basewashers
When installing these kits with a shouldered guide, the use of a spring shim (KPMI P/N 92039-8 or equivalent) may be necessary for guide shoulder to basewasher clearance.							
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
*82-82700	Intake	.450"	1.375"	65#	200#	.450"	
	Exhaust						
<b>Kit Includes</b>		8	H.T. Steel Retainers	8	CrSi Valve Springs	8	H.T. Steel Basewashers

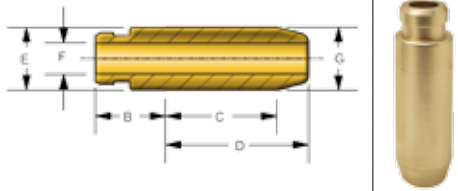
\*KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With two different spring pressure option kits to choose from, these are the ultimate setup for any Polaris RZR/Ranger tuner.

## Valves • Black Diamond™ • Black Nitroreg Stems




KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks
82-82155	Intake	37.72mm	1.485"	0.2160"	17°	3.775" Standard
82-82156	Intake	38.72mm	1.524"	0.2160"	17°	3.775" Oversize
82-82158	Exhaust	32.44mm	1.277"	0.2155"	25°	3.815" Standard
82-82159	Exhaust	33.44mm	1.317"	0.2155"	25°	3.815" Oversize

## Valve Guides • C630 Bronze

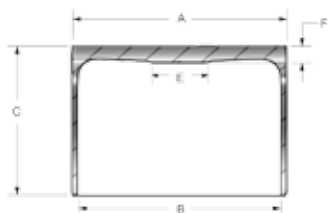


A	B	C	D	E	F	G	Intake	Exhaust	
---	0.460"	0.815"	0.960"	0.433"	0.2155"	0.4353" / Std.	82-82170		
							+0.001"	82-82171	
							+0.002"	82-82172	
							+0.004"	82-82174	
							+0.010"	82-82179	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
			Part Number			Quantity		Quantity Discount
			71015-4			Pkg. of 4		0%
			71015-8			Pkg. of 8		0%
			71015-16			Pkg. of 16		Less- 10%
			71015-50			Pkg. of 50		Less- 15%
			71015-100			Pkg. of 100		Less- 20%

## Tappets • O.E.M. Replacement • H.T. Steel



KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
82-82185	Intake	None	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
	Exhaust								
82-82187	Intake	DLC Coated	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
	Exhaust								

**Note:** These tappets must be used with KPMI® spring kit to convert to a 9.5mm shim adjustment system.\*Our coated tappets undergo a low temperature PVD process to deposit a DLC film, which is extremely hard and has a very low coefficient of friction. These properties help the tappet to maintain its durability in extreme duty situations. Although KPMI® recommends never running a camshaft off the edge of the tappet, this coating may help increase durability in these applications. For complete shim range visit [www.kpmi.us](http://www.kpmi.us) or Tappets section in back of catalog.

**VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)**



# POLARIS® RZR™ 900 2013-2014

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82500	Intake	.450"	1.375"	57#	150#	.450"
		Exhaust					
Kit Includes			8	Titanium Retainers	8	CrSi Valve Springs	
			8	H.T. Steel Basewashers	8	Viton® Seals	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82750	Intake	.450"	1.375"	57#	150#	.450"
		Exhaust					
Kit Includes			8	H.T. Steel Retainers	8	CrSi Valve Springs	
			8	H.T. Steel Basewashers	8	Viton® Seals	

## Valve Spring Kit • High Performance "Turbo" Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82450	Intake	.450"	1.375"	65#	200#	.450"
		Exhaust					
Kit Includes			8	Titanium Retainers	8	CrSi Valve Springs	
			8	H.T. Steel Basewashers	8	Viton® Seals	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82800	Intake	.450"	1.375"	65#	200#	.450"
		Exhaust					
Kit Includes			8	H.T. Steel Retainers	8	CrSi Valve Springs	
			8	H.T. Steel Basewashers	8	Viton® Seals	

Our Turbo spring kits have been designed for applications with up to 15psi of boost.

- These spring kits are compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets listed below.
- KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With two different spring pressure option kits to choose from, these are the ultimate setup for any Polaris RZR/Ranger tuner.
- The seals included in these kits are intended for use with OEM guides. Please use KPMI® P/N 71016-8 when installing KPMI® guides. Some early 2013 models came from the OEM with guides that included a seal detail. These guides require the use of KPMI® seal/P/N 71015-8.

## Valve Spring Kit • Beehive Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	82-82560	Intake	.435"	1.360"	80#	205#	.435"	
		Exhaust						
Kit Includes			8	H.T. Steel Retainers	8	CrSi Valve Springs	8	Viton® Seals

- 1) This kit is compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets listed below
- 2) This kit is designed for compatibility with the OEM integrated Seal/Base (OE# 3610212) or KPMI#71048-8 (included in this kit)
- 3) KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution

## Valves • Black Diamond™ • Black Nitroreg Stems

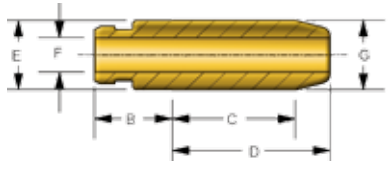

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	82-82462	Intake	37.72mm	1.485"	0.2160"	17°	3.775"	Standard
	82-82463	Intake	38.72mm	1.524"	0.2160"	17°	3.775"	Oversize
	82-82466	Exhaust	32.44mm	1.277"	0.2155"	25°	3.815"	Standard
	82-82467	Exhaust	33.44mm	1.317"	0.2155"	25°	3.815"	Oversize

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# POLARIS® RZR™ 900 2013-2014

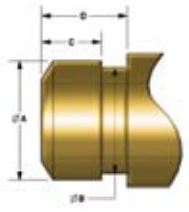



## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
		---	0.455"	0.755"	0.940"	0.433"	0.2160"	0.4353" / Std.	<b>82-82480</b>
							+0.001"	<b>82-82481</b>	
							+0.002"	<b>82-82482</b>	
							+0.010"	<b>82-82489</b>	
	---	0.455"	0.815"	0.940"	0.433"	0.2155"	0.4353" / Std.		<b>82-82470</b>
							+0.001"		<b>82-82471</b>
							+0.002"		<b>82-82472</b>
							+0.010"		<b>82-82479</b>

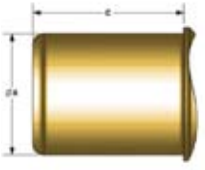

Note: These guides are compatible with both KPMI® seals #71016-X and the OEM Tophat Seal.

## Valve Guide Seals • Viton®

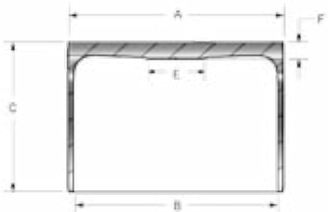
Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
 	Part Number		Quantity		Quantity Discount			
	<b>71016-4</b>		Pkg. of 4		0%			
	<b>71016-8</b>		Pkg. of 8		0%			
	<b>71016-16</b>		Pkg. of 16		Less- 10%			
	<b>71016-50</b>		Pkg. of 50		Less- 15%			
	<b>71016-100</b>		Pkg. of 100		Less- 20%			

These seals are not OEM replacement seals, they are designed to work with KPMI® valve guides in conjunction with KPMI® dual spring kits.

## Valve Guide Seals • OEM Replacement • Tophat NEW PRODUCTS

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs			Spring Shoulder Dia.	Type	Rep. OEM P/N
				A	B	C			
5.5mm	0.630"	1.043"	3	A	B	C	0.697"	Intake	3610212
				0.435"±0.005"	---	0.480"		Exhaust	
 	Part Number		Quantity		Quantity Discount				
	<b>71048-4</b>		Pkg. of 4		0%				
	<b>71048-8</b>		Pkg. of 8		0%				
	<b>71048-16</b>		Pkg. of 16		Less- 10%				
	<b>71048-50</b>		Pkg. of 50		Less- 15%				
	<b>71048-100</b>		Pkg. of 100		Less- 20%				

## Tappets • Shim On Bottom Conv. • H.T. Steel NEW PRODUCTS

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
		<b>82-82459</b>	Intake	None	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"
Exhaust										
<b>*82-82495</b>		Intake	DLC Coated	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
		Exhaust								

Note: These tappets must be used with KPMI® spring kit to convert to a 9.5mm shim adjustment system.\*Our coated tappets undergo a low temperature PVD process to deposit a DLC film, which is extremely hard and has a very low coefficient of friction. These properties help the tappet to maintain its durability in extreme duty situations. Although KPMI® recommends never running a camshaft off the edge of the tappet, this coating may help increase durability in these applications. For complete shim range visit [www.kpmi.us](http://www.kpmi.us) or Tappets section in back of catalog.



# POLARIS® VARIOUS 900'S 2013-2016

• Ranger™ 900 XP 2013-2015

• RZR™ 900 2015-2016

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	82-82260	Intake	.450"	1.375"	57#	150#	.450"	
		Exhaust						
Kit Includes	8	Titanium Retainers	8	H.T. Steel Basewashers				
		8	CrSi Valve Springs	8	Viton® Seals			
<p>The tappet must never contact the retainer for this application. To ensure this, the top surface of the shim must never fall below the top surface of the retainer.</p>								
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	82-82850	Intake	.450"	1.375"	57#	150#	.450"	
		Exhaust						
Kit Includes	8	H.T. Steel Retainers	8	H.T. Steel Basewashers				
		8	CrSi Valve Springs	8	Viton® Seals			

## Valve Spring Kit • High Performance "Turbo" Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	82-82290	Intake	.450"	1.375"	65#	200#	.450"	
		Exhaust						
Kit Includes	8	Titanium Retainers	8	CrSi Valve Springs				
		8	H.T. Steel Basewashers	8	Viton® Seals			
<p>When installing these kits with a shouldered guide, the use of a spring shim (KPMI P/N 92039-8 or equivalent) may be necessary for guide shoulder to basewasher clearance.</p>								
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	82-82900	Intake	.450"	1.375"	65#	200#	.450"	
		Exhaust						
Kit Includes	8	H.T. Steel Retainers	8	CrSi Valve Springs				
		8	H.T. Steel Basewashers	8	Viton® Seals			

- These spring kits are compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets listed below.
- KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With two different spring pressure option kits to choose from, these are the ultimate setup for any Polaris RZR/Ranger tuner.
- The seals included in these kits are intended for use with OEM guides. Please use KPMI® P/N 71016-8 when installing KPMI® guides.

## Valve Spring Kit • Beehive Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82570	Intake	.435"	1.360"	80#	205#	.435"
		Exhaust					
Kit Includes	8	H.T. Steel Retainers	8	CrSi Valve Springs	8	Viton® Seals	

- 1) This kit is compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets listed below
- 2) This kit is designed for compatibility with the OEM integrated Seal/Base (OE# 3610212) or KPMI#71048-8 (included in this kit)
- 3) KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks		
	82-82255	Intake	34.42mm	1.355"	0.2160"	17°	3.765'	Standard	
	82-82256	Intake	35.42mm	1.394"	0.2160"	17°	3.765'	Oversize	
	82-82258	Exhaust	29.21mm	1.150"	0.2155"	25°	3.805"	Standard	
		82-82259	Exhaust	30.21mm	1.189"	0.2155"	25°	3.805"	Oversize

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# POLARIS® VARIOUS 900'S 2013-2016

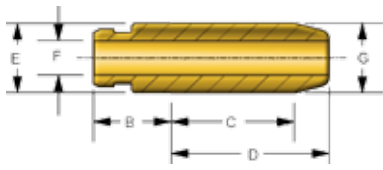



POLARIS

• Ranger™ 900 XP 2013-2015

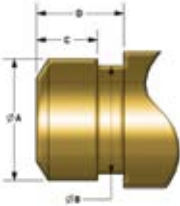

• RZR™ 900 2015-2016

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
		---	0.455"	0.815"	0.940"	0.433"	0.2155'	0.4353" / Std.	<b>82-82270</b>
							+0.001"	<b>82-82271</b>	
							+0.002"	<b>82-82272</b>	
							+0.010"	<b>82-82279</b>	
	---	0.455"	1.090"	1.190"	0.433"	0.2155'	0.4353" / Std.		<b>82-82420</b>
							+0.001"		<b>82-82421</b>
							+0.002"		<b>82-82422</b>
							+0.010"		<b>82-82429</b>

Note: These guides are compatible with both KPMI® seals #71016-X and the OEM Tophat Seal.

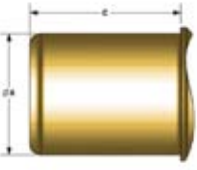

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
 	Part Number		Quantity		Quantity Discount			
	<b>71016-4</b>		Pkg. of 4		0%			
	<b>71016-8</b>		Pkg. of 8		0%			
	<b>71016-16</b>		Pkg. of 16		Less- 10%			
	<b>71016-50</b>		Pkg. of 50		Less- 15%			
	<b>71016-100</b>		Pkg. of 100		Less- 20%			

These seals are not OEM replacement seals, they are designed to work with KPMI® valve guides in conjunction with KPMI® dual spring kits.

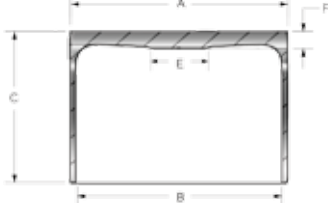
## Valve Guide Seals • OEM Replacement • Tophat

**NEW PRODUCTS**

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs			Spring Shoulder Dia.	Type	Rep. OEM P/N
5.5mm	0.630"	1.043"	3	A	B	C	0.697"	Intake	3610212
				0.435"±0.005"	---	0.480"		Exhaust	
 	Part Number		Quantity		Quantity Discount				
	<b>71048-4</b>		Pkg. of 4		0%				
	<b>71048-8</b>		Pkg. of 8		0%				
	<b>71048-16</b>		Pkg. of 16		Less- 10%				
	<b>71048-50</b>		Pkg. of 50		Less- 15%				
	<b>71048-100</b>		Pkg. of 100		Less- 20%				

## Tappets • Shim On Bottom Conv. • H.T. Steel

**NEW PRODUCTS**

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	<b>82-82285</b>	Intake	None	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"
Exhaust									
<b>*82-82287</b>	Intake	DLC Coated	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
	Exhaust								


**Note:** These tappets must be used with KPMI® spring kit to convert to a 9.5mm shim adjustment system.\*Our coated tappets undergo a low temperature PVD process to deposit a DLC film, which is extremely hard and has a very low coefficient of friction. These properties help the tappet to maintain its durability in extreme duty situations. Although KPMI® recommends never running a camshaft off the edge of the tappet, this coating may help increase durability in these applications. For complete shim range visit [www.kpmi.us](http://www.kpmi.us) or Tappets section in back of catalog.

VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)




# POLARIS® RZR™ XP1000 2014


## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82400	Intake	.450"	1.375"	57#	150#	.450"
		Exhaust					
Kit Includes			8	Titanium Retainers	8	CrSi Valve Springs	
			8	H.T. Steel Basewashers	8	Viton® Seals	


**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82950	Intake	.450"	1.375"	57#	150#	.450"
		Exhaust					
Kit Includes			8	H.T. Steel Retainers	8	CrSi Valve Springs	
			8	H.T. Steel Basewashers	8	Viton® Seals	

## Valve Spring Kit • High Performance "Turbo" Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82350	Intake	.450"	1.375"	65#	200#	.450"
		Exhaust					
Kit Includes			8	Titanium Retainers	8	CrSi Valve Springs	
			8	H.T. Steel Basewashers	8	Viton® Seals	


**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-83000	Intake	.450"	1.375"	65#	200#	.450"
		Exhaust					
Kit Includes			8	H.T. Steel Retainers	8	CrSi Valve Springs	
			8	H.T. Steel Basewashers	8	Viton® Seals	

Our Turbo spring kits Have been designed for applications with up to 15psi of boost.

- These spring kits are compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets listed below.
- KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With two different spring pressure option kits to choose from, these are the ultimate setup for any Polaris RZR/Ranger tuner.
- The seals included in these kits are intended for use with OEM guides. Please use KPMI® P/N 71016-8 when installing KPMI® guides.


## Valve Spring Kit • Beehive Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	82-82550	Intake	.435"	1.360"	80#	205#	.435"	
		Exhaust						
Kit Includes			8	H.T. Steel Retainers	8	CrSi Valve Springs	8	Viton® Seals

**NEW PRODUCTS**

- 1) This kit is compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets listed below
- 2) This kit is designed for compatibility with the OEM integrated Seal/Base (OE# 3610212) or KPMI#71048-8 (included in this kit)
- 3) KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution

## Valves • Black Diamond™ • Black Nitroneg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	82-82362	Intake	37.72mm	1.485"	0.2160"	17°	3.775"	Standard
	82-82363	Intake	38.72mm	1.524"	0.2160"	17°	3.775"	Oversize
	82-82366	Exhaust	29.21mm	1.150"	0.2155"	25°	3.805"	Standard
	82-82367	Exhaust	30.21mm	1.189"	0.2155"	25°	3.805"	Oversize

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# POLARIS® RZR™ XP1000 2014



## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	---	0.455"	0.750"	0.935"	0.433"	0.2160"	0.4353" / Std.	<b>82-82370</b>	
							+0.001"	<b>82-82371</b>	
							+0.002"	<b>82-82372</b>	
							+0.010"	<b>82-82379</b>	
	---	0.455"	1.090"	1.190"	0.433"	0.2155"	0.4353" / Std.		<b>82-82380</b>
							+0.001"		<b>82-82381</b>
							+0.002"		<b>82-82382</b>
							+0.010"		<b>82-82389</b>

Note: These guides are compatible with both KPMI® seals #71016-X and the OEM Tophat Seal.

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	Part Number		Quantity		Quantity Discount			
	<b>71016-4</b>		Pkg. of 4		0%			
	<b>71016-8</b>		Pkg. of 8		0%			
	<b>71016-16</b>		Pkg. of 16		Less- 10%			
	<b>71016-50</b>		Pkg. of 50		Less- 15%			
	<b>71016-100</b>		Pkg. of 100		Less- 20%			

These seals are not OEM replacement seals, they are designed to work with KPMI® valve guides in conjunction with KPMI® dual spring kits.

## Valve Guide Seals • OEM Replacement • Tophat

**NEW PRODUCTS**

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs			Spring Shoulder Dia.	Type	Rep. OEM P/N
				A	B	C			
5.5mm	0.630"	1.043"	3	A	B	C	0.697"	Intake	3610212
				0.435"±0.005"	---	0.480"		Exhaust	
	Part Number		Quantity		Quantity Discount				
	<b>71048-4</b>		Pkg. of 4		0%				
	<b>71048-8</b>		Pkg. of 8		0%				
	<b>71048-16</b>		Pkg. of 16		Less- 10%				
	<b>71048-50</b>		Pkg. of 50		Less- 15%				
	<b>71048-100</b>		Pkg. of 100		Less- 20%				

## Tappets • Shim On Bottom Conv. • H.T. Steel

**NEW PRODUCTS**

KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
<b>82-82359</b>	Intake	None	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
	Exhaust								
<b>*82-82395</b>	Intake	DLC Coated	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
	Exhaust								

Note: These tappets must be used with KPMI® spring kit to convert to a 9.5mm shim adjustment system. \*Our coated tappets undergo a low temperature PVD process to deposit a DLC film, which is extremely hard and has a very low coefficient of friction. These properties help the tappet to maintain its durability in extreme duty situations. Although KPMI® recommends never running a camshaft off the edge of the tappet, this coating may help increase durability in these applications. For complete shim range visit [www.kpmi.us](http://www.kpmi.us) or Tappets section in back of catalog.



# POLARIS® RZR™ XP1000 / XP TURBO 2015-'19

## Valve Spring Kit • Beehive Racing **NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	82-82600	Intake	.435"	1.360"	80#	205#	.435"	
		Exhaust						
<b>Kit Includes</b>			8	H.T. Steel Retainers	8	CrSi Valve Springs	8	Viton® Seals

1) This kit is compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets listed below  
 2) This kit is designed for compatibility with the OEM integrated Seal/Base (OE# 3610212) or KPMI#71048-8 (included in this kit)  
 3) KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution

## Cylinder Head Service Kit for RZR™ XP1000 2015-'19 **NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-83150	Intake	.435"	1.360"	80#	205#	.435"
		Exhaust					
	<b>Kit Includes</b>			8	In / Ex H.T. Steel Retainers	8	In / Ex CrSi Valve Springs
				4	In Std. Black Diamond™ Valves	4	Ex Std. Black Diamond™ Valves
			4	In Std. C630 Valves Guides	4	Ex Std. C630 Valves Guides	
			1	Top End Gasket Kit			

## Components • Replacement • Cylinder Head Service Kit for RZR™ XP1000 2015-'19 **NEW PRODUCTS**

KPMI P/N	Description	Specification
82-82600	Beehive Spring Kit	<b>Includes:</b> H.T. Steel Retainers, CrSi Valve Springs
82-82612	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-82616	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-82620	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
82-82630	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
82-83151	Gasket Kit	<b>Includes:</b> Head Gasket 94mm (1), Base Gasket (1), Header Gasket (1), Valve Spring Seat w/ Seal (8), Thermostat Seal (1), Water Outlet O-ring (1)

## Cylinder Head Service Kit for RZR™ Turbo 2016-'19 **NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-83160	Intake	.435"	1.360"	80#	205#	.435"
		Exhaust					
	<b>Kit Includes</b>			8	In / Ex H.T. Steel Retainers	8	In / Ex CrSi Valve Springs
				4	In Std. White Diamond® Valves	4	Ex Std. White Diamond® Valves
			4	In Std. C630 Valves Guides	4	Ex Std. C630 Valves Guides	
			1	Top End Gasket Kit			

## Components • Replacement • Cylinder Head Service Kit for RZR™ Turbo 2016-'19 **NEW PRODUCTS**

KPMI P/N	Description	Specification
82-82600	Beehive Spring Kit	<b>Includes:</b> H.T. Steel Retainers, CrSi Valve Springs
82-83112H	Intake, Standard Valve	Valve • White Diamond® • Stainless
82-83116K	Exhaust, Standard Valve	Valve • White Diamond® • Inconel®
82-82620	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
82-82630	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
82-83161	Gasket Kit	<b>Includes:</b> Head Gasket 94mm (1), Base Gasket (1), Header Gasket (1), Valve Spring Seat w/ Seal (8), Thermostat Seal (1), Water Outlet O-ring (1)

## Valves • Black Diamond™ • Black Nitroneg Stems **NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	82-82612	Intake	37.72mm	1.485"	0.2160"	17°	3.775"	Standard
	82-82613	Intake	38.72mm	1.524"	0.2160"	17°	3.775"	Oversize
	*82-82616	Exhaust	29.21mm	1.150"	0.2155"	25°	3.805"	Standard
	*82-82617	Exhaust	30.21mm	1.189"	0.2155"	25°	3.805"	Oversize

Note: \*Not recommended for Turbo applications (see KPMI® Turbo valve PN's 82-83100 & 82-83116)

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# POLARIS® RZR™ XP1000 / XP TURBO 2015-'19



## Valve Kit • Turbo **NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	82-83100	Intake	37.72mm	1.485"	0.2160"	17°	3.775"	Standard
		Exhaust	29.21mm	1.150"	0.2155"	25°	3.805"	Standard
Kit Includes			4	Intake White Diamond® Valves		4	Exhaust Inconel® Valves	

The Turbo Valve Kit is specifically designed for Turbo applications using our 1-Pc forged "Super Alloy" Inconel® 751 exhaust valve that retains mechanical properties and corrosion resistance at elevated temperatures. The exhaust valve is paired with a 1-Pc White Diamond® Stainless Intake for superior performance and longevity. Together this valve kit provides the performance for boosted applications at a competitive selling price.

## Valves • White Diamond® • Inconel® **NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	82-83112H	Intake	37.72mm	1.485"	0.2160"	17°	3.775"	Standard
	**82-83116K	Exhaust	29.21mm	1.150"	0.2155"	25°	3.805"	Standard -Inconel® Recommended for Turbos

\*\*Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

## Valve Guides • C630 Bronze **NEW PRODUCTS**

	A	B	C	D	E	F	G	Intake	Exhaust
	---	0.455"	0.755"	0.940"	0.433"	0.2160'	0.4353" / Std.	82-82620	
							+0.001"	82-82621	
							+0.002"	82-82622	
							+0.010"	82-82629	
	---	0.455"	1.090"	1.190"	0.433"	0.2155'	0.4353" / Std.		82-82630
							+0.001"		82-82631
							+0.002"		82-82632
							+0.010"		82-82639

Note: These guides are compatible with the OEM Tophat Seal.

## Valve Guide Seals • OEM Replacement • Tophat **NEW PRODUCTS**

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			Spring Shoulder Dia.	Type	Rep. OEM P/N
5.5mm	0.630"	1.043"	3	A	B	C		Intake	3610212
				0.435"±0.005"	---	0.480"	0.697"	Exhaust	
	Part Number		Quantity		Quantity Discount				
	71048-4		Pkg. of 4		0%				
	71048-8		Pkg. of 8		0%				
	71048-16		Pkg. of 16		Less- 10%				
	71048-50		Pkg. of 50		Less- 15%				
71048-100		Pkg. of 100		Less- 20%					

## Tappets • Shim On Bottom Conv. • H.T. Steel **NEW PRODUCTS**

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	82-82607	Intake	None	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
		Exhaust								
	*82-82609	Intake	DLC Coated	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
Exhaust										

Note: These tappets must be used with KPMI® spring kit to convert to a 9.5mm shim adjustment system.\*Our coated tappets undergo a low temperature PVD process to deposit a DLC film, which is extremely hard and has a very low coefficient of friction. These properties help the tappet to maintain its durability in extreme duty situations. Although KPMI® recommends never running a camshaft off the edge of the tappet, this coating may help increase durability in these applications. For complete shim range visit [www.kpmi.us](http://www.kpmi.us) or Tappets section in back of catalog.

VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)



# SUZUKI® DR™ 250/ 350S/ SE 1990-1999

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-6041	Intake	.350"	1.200"	61#	141#	.350"	
		Exhaust						
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.410"	0.450"	0.740"	0.890"	0.467"	0.1955"	0.4170" / Std.		60-6030
							+0.001"		60-6031
							+0.002"		60-6032
							+0.003"		60-6033
						+0.010"		60-6040	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71015-4			Pkg. of 4		0%		
	71015-8			Pkg. of 8		0%		
	71015-16			Pkg. of 16		Less- 10%		
	71015-50			Pkg. of 50		Less- 15%		
71015-100			Pkg. of 100		Less- 20%			

# SUZUKI® RM-Z250™ 2004-2006

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-60170	Intake	.445"	1.320"	46#	155#	.445"	
		Exhaust						
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

## Intake Only • Steel Valve Conversion Kit


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-60450	Intake	.445"	1.320"	46#	155#	.445"
		Kit Includes			2	CrSi Valve Springs	2
			2	Black Diamond™ Valves	2	H. T. Steel Basewashers	

ORDER 650-557-2046

# SUZUKI® RM-Z250™ 2004-2006

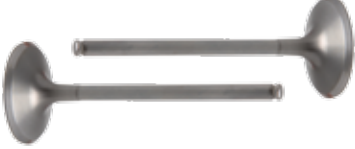


## Valves • Black Diamond™ • Black Nitroneg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>60-60210</b>	Intake	31.00mm	1.220"	0.1765"	20°	3.120"	Standard
	<b>60-60211</b>	Intake	32.00mm	1.260"	0.1765"	20°	3.120"	Oversize
	<b>60-60213</b>	Exhaust	25.00mm	0.984"	0.1756"	25°	3.125"	Standard
	<b>60-60214</b>	Exhaust	26.00mm	1.024"	0.1756"	25°	3.125"	Oversize

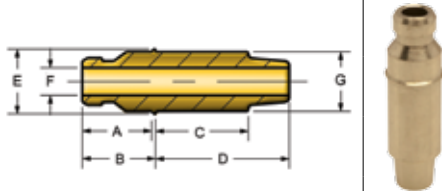
Must use **Kibblewhite® Lightweight Valve Spring Kits** when installing **Black Diamond™ Valves**.

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

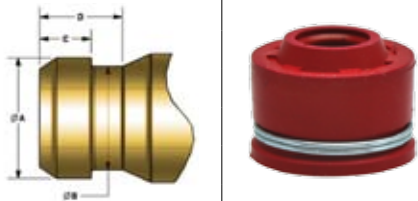
	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	<b>60-60210T</b>	Intake	31.00mm	1.220"	0.1765"	20°	3.110"	Titanium	K1200-40002
	<b>60-60213T</b>	Exhaust	25.00mm	0.984"	0.1756"	25°	3.115"	Titanium	K1200-50002

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

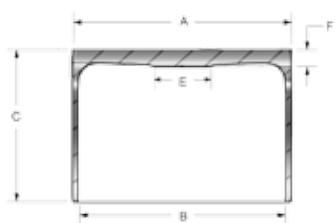
## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.440"	0.465"	0.590"	0.850"	0.410"	0.1765"	0.3765" / Std.		<b>60-60190</b>
							+0.001"		<b>60-60191</b>
							+0.002"		<b>60-60192</b>
							+0.010"		<b>60-60199</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.0mm	0.310"	0.380"	2	A	B	C	D	Intake
				0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust
	Part Number			Quantity		Quantity Discount		
	<b>71013-4</b>			Pkg. of 4		0%		
	<b>71013-8</b>			Pkg. of 8		0%		
	<b>71013-16</b>			Pkg. of 16		Less- 10%		
	<b>71013-50</b>			Pkg. of 50		Less- 15%		
	<b>71013-100</b>			Pkg. of 100		Less- 20%		

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	<b>60-60176</b>	Intake	None	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting oversize tappets.



# SUZUKI® RM-Z250™ 2007-2017

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-60500	Intake	.445"	1.300"	51#	160#	.445"	
		Exhaust						
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

## Cylinder Head Service Kit for RM-Z250™ 2010-2017

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-61600	Intake	.445"	1.300"	51#	160#	.445"	
		Exhaust						
	Kit Includes			4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4
			2	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves		
			4	In / Ex Std. C630 Valves Guides	1	Top End Gasket Kit		

## Components • Replacement • Cylinder Head Service Kit for RM-Z250™ 2010-2017

**NEW PRODUCTS**

KPMI P/N	Description	Specification
60-60500	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
60-60512H	Intake, Standard Valve	Valve • White Diamond® • Stainless
60-60516H	Exhaust, Standard Valve	Valve • White Diamond® • Stainless
60-60520	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
60-61601	Gasket Kit	<b>Includes:</b> Head Gasket 77mm (1), Valve Stem Seals (4), Base Gasket (1), Exhaust Gasket (1), Head Drain Seal (1), Water Temp Sensor O-ring (1), Cam Chain Tensioner O-ring (1), Cam Tower O-ring Seal (1)

## Intake Only • Steel Valve Conversion Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-60470	Intake	.445"	1.300"	51#	160#	.445"
	Kit Includes			2	CrSi Valve Springs	2	Titanium Retainers
			2	White Diamond® Valves	2	H. T. Steel Basewashers	

## Valves • White Diamond® • Stainless

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	60-60512H	Intake	31.00mm	1.220"	0.1765"	15°	3.175"	Standard
	60-60516H	Exhaust	25.00mm	0.985"	0.1760"	25°	3.185"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing White Diamond® Valves.

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N	
	60-60512T	Intake	31.00mm	1.220"	0.1765"	15°	3.165"	Titanium	12911-49H00
	60-60516T	Exhaust	25.00mm	0.985"	0.1760"	25°	3.175"	Titanium	1212-10H00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

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# SUZUKI® RM-Z250™ 2007-2017



## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.545"	0.545"	0.530"	0.700"	0.374"	0.1765	0.3778" / Std.		<b>60-60520</b>	
									+0.001"		<b>60-60521</b>
									+0.002"		<b>60-60522</b>
								+0.010"		<b>60-60529</b>	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.0mm	0.310"	0.380"	2	A	B	C	D	Intake
				0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust
		Part Number				Quantity		Quantity Discount
		<b>71013-4</b>				Pkg. of 4		0%
		<b>71013-8</b>				Pkg. of 8		0%
		<b>71013-16</b>				Pkg. of 16		Less- 10%
		<b>71013-50</b>				Pkg. of 50		Less- 15%
		<b>71013-100</b>				Pkg. of 100		Less- 20%

## Cam Tower Bolt • H.T. Steel for Suzuki® RM-Z250 2010-2017 NEW PRODUCTS

	KPMI P/N	Thread	Hex	T. L. -A-	O. L. -B-	Flange Ø -C-	Quantity	Kit Quantity	Rep. OEM P/N
	<b>60-61455</b>	M6 x 1.0	10mm	18mm	40mm	12.57mm	4ea.	Pkg. of 8	09103-06266
M6 x 1.0		10mm	18mm	45mm	0.495	4ea.	09103-06026		
<b>41005-4</b>	M6 x 1.0	10mm	18mm	40mm	12.57mm	4ea.	Pkg. of 4	09103-06266	
					0.495"			09103-06026	
<b>41006-4</b>	M6 x 1.0	10mm	18mm	45mm	12.57mm	4ea.	Pkg. of 4	09103-06165	
					0.495"			09103-06293	

Works with other applications (see dimensions for compatibility)

# SUZUKI® LT-Z / D-RZ 400 2000-2017

• LT-Z™ 400 2003-2014

• D-RZ™ 400E/ S/ SM™ 2000-2017

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>60-60045</b>	Intake	.440"	1.205"	57#	171#	.440"	
		Exhaust						
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

## Valves • White Diamond® • Stainless NEW PRODUCTS

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>60-60050H</b>	Intake	36.00mm	1.418"	0.1960"	20°	3.245"	Standard
	<b>60-60051H</b>	Intake	37.00mm	1.457"	0.1960"	20°	3.245"	Oversize
	<b>60-60053H</b>	Exhaust	29.00mm	1.142"	0.1953"	17°	3.210"	Standard
	<b>60-60054H</b>	Exhaust	30.00mm	1.182"	0.1953"	17°	3.210"	Oversize

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# SUZUKI® LT-Z / D-RZ 400 2000-2017

• LT-Z™ 400 2003-2014

• D-RZ™ 400E/ S/ SM™ 2000-2017

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.390"	0.430"	0.570"	0.770"	0.466"	0.1960"	0.4167" / Std.	<b>60-60060</b>		
								+0.001"	<b>60-60061</b>	
								+0.002"	<b>60-60062</b>	
								+0.004"	<b>60-60064</b>	
							+0.010"	<b>60-60069</b>		

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
	<b>Part Number</b>			<b>Quantity</b>			<b>Quantity Discount</b>	
	<b>71015-4</b>			Pkg. of 4			0%	
	<b>71015-8</b>			Pkg. of 8			0%	
	<b>71015-16</b>			Pkg. of 16			Less- 10%	
	<b>71015-50</b>			Pkg. of 50			Less- 15%	
<b>71015-100</b>			Pkg. of 100			Less- 20%		

# SUZUKI® LTR™ 450 / 450Z 2006-2009

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>60-60280</b>	Intake	.415"	1.190"	61#	168#	.415"	
		Exhaust	.415"	1.215"	56#	157#	.415"	
<b>Kit Includes</b>			4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>60-60850</b>	Intake	.415"	1.190"	61#	168#	.415"
	<b>Kit Includes</b>		2	CrSi Valve Springs		2	Titanium Retainers
<b>Kit Includes</b>		2	Black Diamond™ Valves		2	H. T. Steel Basewashers	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	<b>60-60310</b>	Intake	36.00mm	1.418"	0.2155"	20°	3.210"	Standard
	<b>60-60311</b>	Intake	37.00mm	1.457"	0.2155"	20°	3.210"	Oversize
	<b>60-60313</b>	Exhaust	29.00mm	1.142"	0.2150"	20°	3.190"	Standard
<b>60-60314</b>	Exhaust	30.00mm	1.182"	0.2150"	20°	3.190"	Oversize	

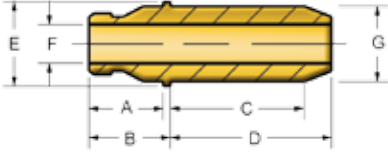

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

**ORDER 650-557-2046**

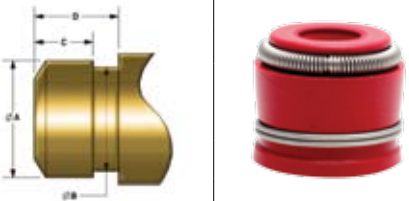
# SUZUKI® LTR™ 450 / 450Z 2006-2009



## Valve Guides • C630 Bronze


	A	B	C	D	E	F	G	Intake	Exhaust
	0.375"	0.410"	0.600"	0.820"	0.460"	0.2155"	0.4170" / Std.		<b>60-60290</b>
							+0.001"	<b>60-60291</b>	
							+0.002"	<b>60-60292</b>	
							+0.004"	<b>60-60294</b>	
							+0.010"	<b>60-60299</b>	
	0.375"	0.410"	0.600"	0.820"	0.460"	0.2155"	0.4170" / Std.		<b>60-60300</b>
							+0.001"		<b>60-60301</b>
							+0.002"		<b>60-60302</b>
							+0.004"		<b>60-60304</b>
							+0.010"		<b>60-60309</b>

## Valve Guide Seals • Viton®


Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>		
	<b>71016-4</b>			Pkg. of 4		0%		
	<b>71016-8</b>			Pkg. of 8		0%		
	<b>71016-16</b>			Pkg. of 16		Less- 10%		
	<b>71016-50</b>			Pkg. of 50		Less- 15%		
	<b>71016-100</b>			Pkg. of 100		Less- 20%		

# SUZUKI® RM-Z450™ 2005-2006


## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>60-60240</b>	Intake	.415"	1.190"	61#	168#	.415"	
		Exhaust	.415"	1.220"	55#	156#	.415"	
<b>Kit Includes</b>			4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>60-60460</b>	Intake	.415"	1.190"	61#	168#	.415"
	<b>Kit Includes</b>			2	CrSi Valve Springs	2	Titanium Retainers
			2	White Diamond® Valves	2	H. T. Steel Basewashers	

## Valves • White Diamond® • Stainless NEW PRODUCTS

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	<b>60-60270H</b>	Intake	36.00mm	1.418"	0.1960"	20°	3.245"	Standard
	<b>60-60271H</b>	Intake	37.00mm	1.456"	0.1960"	20°	3.245"	Oversize
	<b>60-60273H</b>	Exhaust	29.00mm	1.142"	0.1953"	17°	3.210"	Standard
	<b>60-60274H</b>	Exhaust	30.00mm	1.182"	0.1953"	17°	3.210"	Oversize

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# SUZUKI® RM-Z450™ 2005-2006

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.375"	0.410"	0.580"	0.800"	0.460"	0.1955"	0.4170" / Std.	<b>60-60320</b>		
									+0.001"	<b>60-60321</b>	
									+0.002"	<b>60-60322</b>	
							+0.010"	<b>60-60329</b>			

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
		Part Number		Quantity		Quantity Discount		
		<b>71015-4</b>		Pkg. of 4		0%		
		<b>71015-8</b>		Pkg. of 8		0%		
		<b>71015-16</b>		Pkg. of 16		Less- 10%		
		<b>71015-50</b>		Pkg. of 50		Less- 15%		
<b>71015-100</b>		Pkg. of 100		Less- 20%				

# SUZUKI® RM-Z450™ 2007

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>60-60650</b>	Intake	.415"	1.190"	61#	168#	.415"	
		Exhaust	.415"	1.220"	55#	156#	.415"	
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>60-61000</b>	Intake	.415"	1.190"	61#	168#	.415"
	Kit Includes		2	CrSi Valve Springs		2	Titanium Retainers
		2	Black Diamond™ Valves		2	H. T. Steel Basewashers	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>60-60662</b>	Intake	36.00mm	1.418"	0.2160"	20°	3.240"	Standard
	<b>60-60666</b>	Exhaust	29.00mm	1.142"	0.2150"	20°	3.190"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

**ORDER 650-557-2046**

# SUZUKI® RM-Z450™ 2007



## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.375"	0.410"	0.600"	0.820"	0.460"	0.2155"	0.4170" / Std.		<b>60-60670</b>	
									+0.001"		<b>60-60671</b>
									+0.002"		<b>60-60672</b>
								+0.010"		<b>60-60679</b>	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
		Part Number			Quantity		Quantity Discount	
		<b>71016-4</b>			Pkg. of 4		0%	
		<b>71016-8</b>			Pkg. of 8		0%	
		<b>71016-16</b>			Pkg. of 16		Less- 10%	
		<b>71016-50</b>			Pkg. of 50		Less- 15%	
<b>71016-100</b>			Pkg. of 100		Less- 20%			

# SUZUKI® RM-Z450™ 2008-2018

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>60-60700</b>	Intake	.415"	1.190"	61#	168#	.415"	
		Exhaust	.415"	1.220"	56#	157#	.415"	
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

## Cylinder Head Service Kit NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>60-61610</b>	Intake	.415"	1.190"	61#	168#	.415"	
		Exhaust	.415"	1.220"	56#	157#	.415"	
	Kit Includes			4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4
			2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
			4	In / Ex Std. C630 Valves Guides	1	Top End Gasket Kit		

## Components • Replacement • Cylinder Head Service Kit NEW PRODUCTS

KPMI P/N	Description	Specification
<b>60-60700</b>	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
<b>60-60712</b>	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
<b>60-60718</b>	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
<b>60-60730</b>	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
<b>60-61611</b>	Gasket Kit	<b>Includes:</b> Head Gasket 97mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Valve Seals (4)

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# SUZUKI® RM-Z450™ 2008-2018

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>60-60720</b>	Intake	.415"	1.190"	61#	168#	.415"	
	<b>Kit Includes</b>		2	CrSi Valve Springs		2	Titanium Retainers	
			2	Black Diamond™ Valves		2	H. T. Steel Basewashers	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	<b>60-60712</b>	Intake	36.00mm	1.418"	0.2155"	20°	3.210"	Standard
	<b>60-60713</b>	Intake	37.00mm	1.417"	0.2155"	20°	3.210"	Oversize
	<b>60-60718</b>	Exhaust	31.00mm	1.220"	0.2150"	20°	3.195"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N	
	<b>60-60712T</b>	Intake	36.00mm	1.418"	0.2155"	20°	3.215"	Titanium	12911-28H00
	<b>60-60718T</b>	Exhaust	31.00mm	1.220"	0.2150"	20°	3.180"	Titanium	12912-28H00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.375"	0.410"	0.600"	0.820"	0.460"	0.2155"	0.4170" / Std.	<b>60-60730</b>	
							+0.001"	<b>60-60731</b>	
							+0.002"	<b>60-60732</b>	
							+0.004"	<b>60-60734</b>	
							+0.010"	<b>60-60739</b>	

## Valve Guide Seals • Viton®

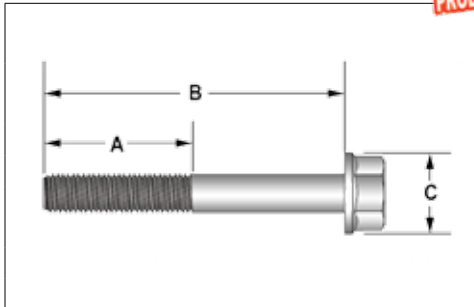
Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>		
	<b>71016-4</b>			Pkg. of 4		0%		
	<b>71016-8</b>			Pkg. of 8		0%		
	<b>71016-16</b>			Pkg. of 16		Less- 10%		
	<b>71016-50</b>			Pkg. of 50		Less- 15%		
<b>71016-100</b>			Pkg. of 100		Less- 20%			

# SUZUKI® RM-Z450™ 2008-2018



## Cam Tower Bolt • H.T. Steel

**NEW PRODUCTS**



KPMI P/N	Thread	Hex	T. L. -A-	O. L. -B-	Flange Ø -C-	Quantity	Kit Quantity	Rep. OEM P/N
60-61460	M6 x 1.0	10mm	18mm	40mm	12.57mm	4ea.	Pkg. of 8	09103-06266
	M6 x 1.0	10mm	18mm	45mm	0.495	4ea.		09103-06026
41005-4	M6 x 1.0	10mm	18mm	40mm	12.57mm 0.495"	4ea.	Pkg. of 4	09103-06165
41006-4	M6 x 1.0	10mm	18mm	45mm	12.57mm 0.495"	4ea.	Pkg. of 4	09103-06293

Works with other applications (see dimensions for compatibility)

# SUZUKI® GS 500E™ 1989-2009

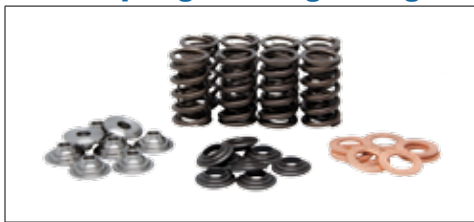
## Valve Spring Kit • Lightweight Racing



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
60-60120	Intake	.500"	1.345"	90#	268#	.500"	
	Exhaust						
<b>Kit Includes</b>		4	Titanium Retainers	4	H.T. Steel Keepers Pr.	4	CrSi Valve Springs
		4	H.T. Steel Basewashers	4	H.T. Steel Spring Shims		

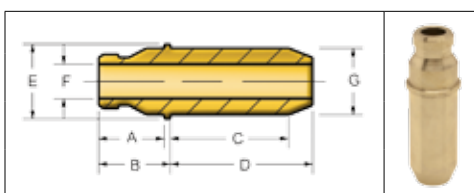
# SUZUKI® SV™ 650 1999-2009

## Valve Spring Kit • Lightweight Racing



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60030	Intake	.405"	1.285"	66#	168#	.405"
	Exhaust					
<b>Kit Includes</b>		8	Titanium Retainers	8	CrSi Valve Springs	
		8	H.T. Steel Basewashers	8	H.T. Steel Spring Shims	

## Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.435"	0.460"	0.875"	1.020"	0.460"	0.1750"	0.4170" / Std.		<b>60-60080</b>
							+0.001"	<b>60-60081</b>
							+0.010"	<b>60-60089</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Intake
				0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust
		<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>		
		71014-4		Pkg. of 4		0%		
		71014-8		Pkg. of 8		0%		
		71014-16		Pkg. of 16		Less- 10%		
		71014-50		Pkg. of 50		Less- 15%		
		71014-100		Pkg. of 100		Less- 20%		

VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)



# SUZUKI® GSX-R™ 600 1997-2000

SUZUKI

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-1006	Intake	.420"	1.225"	55#	157#	.420"	
		Exhaust						
Kit Includes			16	Titanium Retainers	16	CrSi Valve Springs	16	H.T. Steel Basewashers

## Retainer Set • O. E. M. Replacement • Titanium

	KPMI P/N	Type	Material	Quantity
	60-6156	Intake	Titanium	Pkg. of 16
		Exhaust		

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.435"	0.460"	0.875"	1.020"	0.460"	0.1750"	0.4170" / Std.	60-6130		
								+0.001"	60-6131	
								+0.010"	60-6140	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Intake
				0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71014-4			Pkg. of 4		0%		
	71014-8			Pkg. of 8		0%		
	71014-16			Pkg. of 16		Less- 10%		
	71014-50			Pkg. of 50		Less- 15%		
71014-100			Pkg. of 100		Less- 20%			

# SUZUKI® GSX-R™ 600 / 750 2004-2018

## Cam Tower Bolt • H.T. Steel

**NEW PRODUCTS**

	KPMI P/N	Thread	Hex	T. L. -A-	O. L. -B-	Flange Ø -C-	Quantity	Kit Quantity	Rep. OEM P/N
	60-61450	M6 x 1.0	10mm	18mm	40mm	12.57mm	20ea.	Pkg. of 20	09103-06266
									09103-06026
	41005-4	M6 x 1.0	10mm	18mm	40mm	12.57mm	4ea.	Pkg. of 4	09103-06266
0.495"						09103-06026			

Works with other applications (see dimensions for compatibility)

**ORDER 650-557-2046**

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# SUZUKI® KING QUAD's 700-750 2005-'18



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## Valve Spring Kit • Lightweight Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-61500	Intake	.390"	1.440"	50#	148#	.390"	
		Exhaust						
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-61550	Intake	.390"	1.440"	50#	148#	.390"	
		Exhaust						
Kit Includes			4	H.T. Steel Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	60-61512	Intake	36.00mm	1.417"	0.2160"	20°	3.695"	Standard
	60-61516	Exhaust	33.00mm	1.299"	0.2155"	20°	3.705"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Cam Tower Bolt • H.T. Steel

**NEW PRODUCTS**

	KPMI P/N	Thread	Hex	T. L. -A-	O. L. -B-	Flange Ø -C-	Quantity	Kit Quantity	Rep. OEM P/N
	60-61545	M6 x 1.0	10mm	18mm	40mm	12.57mm	8ea.	Pkg. of 8	09103-06266
						0.495"			09103-06026
	41005-4	M6 x 1.0	10mm	18mm	40mm	12.57mm	4ea.	Pkg. of 4	09103-06266
0.495"						09103-06026			

Works with other applications (see dimensions for compatibility)

## Tappets • Shim On Bottom Conv. • H.T. Steel

**NEW PRODUCTS**

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	60-61530	Std.	None	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"	Pkg. of 4
	60-61540	Std.	DLC Coated	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"	Pkg. of 4

Please refer to KPMI® Tappet Section at KPMI® online [www.kpmi.us](http://www.kpmi.us) or in back of catalog, when selecting other size tappets.

## Valve Guides • C630 Bronze

**NEW PRODUCTS**

	A	B	C	D	E	F	G	Intake	Exhaust
	0.620"	0.655"	0.645"	0.825"	0.460"	0.2155"	0.4167" / Std.		60-61520
								+0.001"	60-61521
								+0.002"	60-61522
								+0.010"	60-61529


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# SUZUKI® KING QUAD's 700-750 2005-'18


SUZUKI

## Valve Guide Seals • Viton®


Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		<b>71016-4</b>				Pkg. of 4		0%
		<b>71016-8</b>				Pkg. of 8		0%
		<b>71016-16</b>				Pkg. of 16		Less- 10%
		<b>71016-50</b>				Pkg. of 50		Less- 15%
		<b>71016-100</b>				Pkg. of 100		Less- 20%

# SUZUKI® GS™ 750 PRE-1980

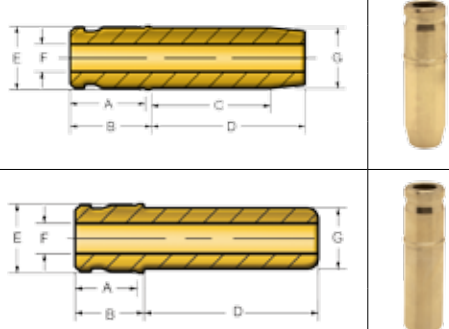
## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>60-0891</b>	Intake	.480"	1.375"	78#	250#	.480"
		Exhaust					
<b>Kit Includes</b>	8	CrSi Valve Springs					


## Retainer Set • Titanium

	KPMI P/N	Type	Material					
	<b>60-6106</b>	Intake	Titanium	Titanium				
		Exhaust						
<b>Set Includes</b>	8	Titanium Retainers	8	H. T. Steel Keepers Pr.				

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.620"	0.670"	0.860"	1.115"	0.495"	0.2745"	0.4752" / Std.		<b>60-0860</b>	
								+0.002"	<b>60-0861</b>	
							+0.015"	<b>60-4090</b>		
0.620"	0.670"	---	1.115"	0.495"	0.2745"	0.4752" / Std.			<b>60-0864</b>	
							+0.002"		<b>60-0865</b>	
							+0.015"		<b>60-4107</b>	

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
7.0mm	0.374"	0.560"	4	A	B	C	D	Intake
				0.475"±0.005"	0.430"	0.115"	0.240"	Exhaust
		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		<b>71019-4</b>				Pkg. of 4		0%
		<b>71019-8</b>				Pkg. of 8		0%
		<b>71019-16</b>				Pkg. of 16		Less- 10%
		<b>71019-50</b>				Pkg. of 50		Less- 15%
		<b>71019-100</b>				Pkg. of 100		Less- 20%

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# SUZUKI® DR™ 750 / 800 BIG 1988-'98



## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.440"	0.490"	0.785"	1.165"	0.495"	0.2745"	0.4752"		<b>60-60090</b>
							+0.002"		<b>60-60092</b>
							+0.004"		<b>60-60094</b>
							+0.015"		<b>60-60099</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
7.0mm	0.374"	0.560"	4	0.475"±0.005"	0.430"	0.115"	0.240"	Exhaust
	Part Number			Quantity		Quantity Discount		
	<b>71019-4</b>			Pkg. of 4		0%		
	<b>71019-8</b>			Pkg. of 8		0%		
	<b>71019-16</b>			Pkg. of 16		Less- 10%		
	<b>71019-50</b>			Pkg. of 50		Less- 15%		
	<b>71019-100</b>			Pkg. of 100		Less- 20%		

# SUZUKI® GS™ 750 E/ ES/ L/ T 1980-1986

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>60-1028</b>	Intake	.390"	1.215"	50#	138#	.390"
		Exhaust					
Kit Includes			16	CrSi Valve Springs			

## Retainer Set • O. E. M. Replacement • Titanium

	KPMI P/N	Type	Material	Quantity
	<b>60-1034T</b>	Intake	Titanium	Pkg. of 16
		Exhaust		
Note : Fits O.E.M. Springs				

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	<b>60-60220</b>	Intake	27.50mm	1.083"	0.2145"	27°	3.380"	Standard
	<b>60-4301</b>	Intake	28.50mm	1.122"	0.2155"	23°	3.435"	Oversize
	<b>60-4311</b>	Intake	29.50mm	1.161"	0.2155"	23°	3.435"	Oversize
	<b>60-4302</b>	Intake	31.00mm	1.220"	0.2155"	23°	3.435"	Oversize
	<b>60-4304</b>	Exhaust	24.50mm	0.965"	0.2145"	27°	3.415"	Oversize
<b>60-4305</b>	Exhaust	25.00mm	0.984"	0.2145"	27°	3.415"	Oversize	



# SUZUKI® GS™ 750 E/ ES/ L/ T 1980-1986

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust		
		0.465"	0.510"	0.780"	0.940"	0.488"	0.2160"	0.4365" / Std.		<b>60-1029</b>		
									+0.002"		<b>60-1030</b>	
									+0.015"		<b>60-4030</b>	
									+0.065"		<b>60-1052</b>	
<b>Valve Guides • C630 Bronze • Special 5.0mm Conversion</b>												
		A	B	C	D	E	F	G	Intake	Exhaust		
		0.465"	0.510"	0.780"	0.940"	0.488"	0.1950"	0.4365"		<b>60-4298</b>		
		<b>Special Blank</b>										
		A	B	C	D	E	F	G	Intake	Exhaust		
		0.465"	---	---	1.285"	0.435"	0.2145"	0.6250"±0.010		<b>60-4031</b>		

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
		Part Number			Quantity		Quantity Discount	
		<b>71016-4</b>	Pkg. of 4		0%			
		<b>71016-8</b>	Pkg. of 8		0%			
		<b>71016-16</b>	Pkg. of 16		Less- 10%			
		<b>71016-50</b>	Pkg. of 50		Less- 15%			
		<b>71016-100</b>	Pkg. of 100		Less- 20%			

## Valve Guide Seals • Viton® For Special 5.0mm Conversion

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
		Part Number			Quantity		Quantity Discount	
		<b>71015-4</b>	Pkg. of 4		0%			
		<b>71015-8</b>	Pkg. of 8		0%			
		<b>71015-16</b>	Pkg. of 16		Less- 10%			
		<b>71015-50</b>	Pkg. of 50		Less- 15%			
		<b>71015-100</b>	Pkg. of 100		Less- 20%			

# SUZUKI® GSX-R™ 750 1986-1992

## Valve Spring Only Kit • High Performance For 1986-1990 Models


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>60-1002</b>	Intake	.440"	1.215"	55#	170#	.440"
		Exhaust					
Kit Includes			16	CrSi Valve Springs			

ORDER 650-557-2046


# SUZUKI® GSX-R™ 750 1986-1992



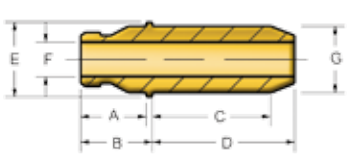

## Valve Spring Only Kit • High Performance For 1991-1992 Models

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-1003	Intake	.440"	1.255"	45#	158#	.440"
		Exhaust					
Kit Includes			16	CrSi Valve Springs			

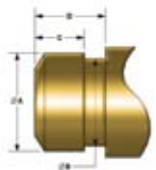

## Retainer Set • Titanium

	KPMI P/N	Type	Material	Models	Quantity
	60-6155	Intake	Titanium	1986-1990	Pkg. of 16
		Exhaust			
Note : Fits O.E.M. Springs and KPMI® Spring Kit PN 60-1002					

## Valve Guides • C630 Bronze


 	A	B	C	D	E	F	G	Intake	Exhaust	
	0.410"	0.450"	0.740"	0.890"	0.467"	0.1955"	0.4170" / Std.		60-4156-1	
								+0.002"	60-4157-1	
								+0.006"	60-4159-1	
								+0.085"	60-4160-1	

## Valve Guide Seals • Viton®


Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
 	Part Number			Quantity		Quantity Discount		
	71015-4			Pkg. of 4		0%		
	71015-8			Pkg. of 8		0%		
	71015-16			Pkg. of 16		Less- 10%		
	71015-50			Pkg. of 50		Less- 15%		
71015-100			Pkg. of 100		Less- 20%			

# SUZUKI® GSX-R™ 750 1993-1995

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-60040	Intake	.440"	1.230"	50#	158#	.440"	
		Exhaust						
Kit Includes			16	Titanium Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers

## Retainer Set • O. E. M. Replacement • Titanium

	KPMI P/N	Type	Material	Quantity
	60-6154	Intake	Titanium	Pkg. of 16
		Exhaust		
Note : Fits O.E.M. Springs				



# SUZUKI® GSX-R™ 750 1993-1995

## Valve Guides • C630 Bronze

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>Intake</b>	<b>Exhaust</b>
	0.655"	0.680"	0.770"	0.915"	0.460"	0.1760"	0.4170" / Std.	<b>60-6000</b>	
								+0.002"	<b>60-6002</b>
							+0.010"	<b>60-6010</b>	

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust
			<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>	
			<b>71014-4</b>		Pkg. of 4		0%	
			<b>71014-8</b>		Pkg. of 8		0%	
			<b>71014-16</b>		Pkg. of 16		Less- 10%	
			<b>71014-50</b>		Pkg. of 50		Less- 15%	
<b>71014-100</b>		Pkg. of 100		Less- 20%				

# SUZUKI® GSX-R™ 750 SRAD 1996-1999

## Valve Spring Kit • Lightweight Racing

	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>	
	<b>60-1005</b>	Intake	.420"	1.220"	55#	157#	.420"	
		Exhaust						
<b>Kit Includes</b>			16	Titanium Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers

## Retainer Set • O. E. M. Replacement • Titanium

	<b>KPMI P/N</b>	<b>Type</b>	<b>Material</b>	<b>Quantity</b>
	<b>60-6155</b>	Intake	Titanium	Pkg. of 16
		Exhaust		
Note : Fits O.E.M. Springs				

## Valve Guides • C630 Bronze

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>Intake</b>	<b>Exhaust</b>
	0.435"	0.460"	0.875"	1.020"	0.460"	0.1755"	0.4170" / Std.	<b>60-6130</b>	
								+0.002"	<b>60-6131</b>
							+0.010"	<b>60-6140</b>	

# SUZUKI® GSX-R™ 750 SRAD 1996-'99



## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Intake
								Exhaust
		<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>	
		<b>71014-4</b>			Pkg. of 4		0%	
		<b>71014-8</b>			Pkg. of 8		0%	
		<b>71014-16</b>			Pkg. of 16		Less- 10%	
		<b>71014-50</b>			Pkg. of 50		Less- 15%	
		<b>71014-100</b>			Pkg. of 100		Less- 20%	

# SUZUKI® GS™ 850 1979-1983

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>60-0891</b>	Intake	.480"	1.375"	78#	250#	.480"
		Exhaust					
<b>Kit Includes</b>	8	CrSi Valve Springs					

## Retainer Set • Titanium

	KPMI P/N	Type	Material					
	<b>60-6106</b>	Intake	Titanium					
		Exhaust						
<b>Set Includes</b>	8	Titanium Retainers	8	H. T. Steel 15° Jumbo Keepers Pr.				

# SUZUKI® GS™ 1000 PRE-1981

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>60-0891</b>	Intake	.480"	1.375"	78#	250#	.480"
		Exhaust					
<b>Kit Includes</b>	8	CrSi Valve Springs					

## Retainer Set • Titanium

	KPMI P/N	Type	Material					
	<b>60-6106</b>	Intake	Titanium					
		Exhaust						
<b>Set Includes</b>	8	Titanium Retainers	8	H. T. Steel 15° Jumbo Keepers Pr.				



# SUZUKI® GS™ 1000 PRE-1981

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.620"	0.670"	0.860"	1.115"	0.495"	0.2745"	0.4752" / Std.	<b>60-0860</b>		
									+0.002"	<b>60-0861</b>	
							+0.015"	<b>60-4090</b>			
		0.620"	0.670"	---	1.115"	0.495"	0.2745"	0.4752" / Std.		<b>60-0864</b>	
									+0.002"		<b>60-0865</b>
									+0.015"		<b>60-4107</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type	
				A	B	C	D	Intake	Exhaust
7.0mm	0.374"	0.560"	4	0.475"±0.005"	0.430"	0.115"	0.240"	Intake	Exhaust
		Part Number		Quantity		Quantity Discount			
		<b>71019-4</b>		Pkg. of 4		0%			
		<b>71019-8</b>		Pkg. of 8		0%			
		<b>71019-16</b>		Pkg. of 16		Less- 10%			
		<b>71019-50</b>		Pkg. of 50		Less- 15%			
<b>71019-100</b>		Pkg. of 100		Less- 20%					

## Tappets • Shim On Bottom Conv. • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	<b>60-1026</b>	Std.	None	33.50mm	1.3184"	1.250"	1.025"	0.313"	0.115"
<b>60-4220</b>	+0.020	None	34.00mm	1.3380"	1.258"	1.025"	0.313"	0.115"	Pkg. of 1

Requires Kibblewhite® Shim On Bottom Retainers # 60-6106 (Pkg. of 8). Refer to KPMI® Tappet Section, in back of catalog, when selecting other size tappets.

# SUZUKI® GSX-R1000™ 2001-2004

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>60-60146</b>	Intake	.440"	1.320"	46#	154#	.440"
Exhaust							
<b>Kit Includes</b>			16 Titanium Retainers	16 CrSi Valve Springs	16 H. T. Steel Basewashers		

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	<b>60-60140</b>	Intake	29.00mm	1.142"	0.1568"	20°	3.740"	Standard
	<b>60-60141</b>	Intake	30.00mm	1.181"	0.1568"	20°	3.740"	Oversize
	<b>60-60143</b>	Exhaust	24.00mm	0.945"	0.1563"	20°	3.755"	Standard
<b>60-60144</b>	Exhaust	25.00mm	0.984"	0.1563"	20°	3.755"	Oversize	

ORDER 650-557-2046



# SUZUKI® GSX-R1000™ 2001-2004



## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.425"	0.450"	0.750"	0.990"	0.385"	0.1570"	0.3573" / Std.		<b>60-60150</b>
							+0.001"		<b>60-60151</b>
							+0.002"		<b>60-60152</b>
							+0.010"		<b>60-60159</b>

# SUZUKI® GSX-R™ 1000 2005-2008

## Valve Spring Only Kit • "Performance Rebuild" Beehive NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>60-60950</b>	Intake	.425"	1.335"	60#	181#	.425"
		Exhaust					
<b>Kit Includes</b>			16	CrSi Valve Springs	16	H. T. Steel Basewashers	

- These springs have been designed to provide pressures to control stainless steel valves. Experienced engine builders who are running aggressive camshafts or higher than factory RPM's may choose to run these elevated pressures with titanium valves as well
- These high quality replacement springs have been designed to exceed the OEM specifications by fitting precisely on the spring shoulder diameter of both the OEM retainers, and KPMI H.T. Steel retainers (P/N 60-60941)
- This kit also includes H.T. Steel basewashers in order to achieve a precision fitment on the large end of our beehive spring which, better controls the lateral motion of the spring, ensuring longer life and less wear on the spring, retainer, and basewasher.
- KPMI® has gone a step further and specified the latest in spring materials and processing, for an extremely robust design that will last longer than anything currently on the market
- Unique features of this spring include is beehive variable rate wind to reduce the chances of spring surge due to cam harmonics, Super-Clean Chrome Silicon wire with additional Vanadium and Nickel added for increased strength, and a gas nitrided and double shot peened finish for greater fatigue life

## Retainer Set • O. E. M. Replacement • H. T. Steel NEW PRODUCTS

	KPMI P/N	Type	Material	Quantity
	<b>60-60941</b>	Intake	H.T. Steel	Pkg. of 16
		Exhaust		

- By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer
- These retainers are intended as an OEM replacement and are completely compatible with the OEM springs, keepers, and shims
- The spring shoulder diameter has been designed to match the OEM retainer and spring as well as KPMI's beehive spring (P/N 60-60950), making this retainer your high performance OEM alternative

## Valve Spring Kit • Lightweight Racing and Stainless Steel Conversion


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>60-60600</b>	Intake	<b>Titanium Valve Only</b>					
		Exhaust	.445"	1.330"	43#	152#	.445"	
		Intake	<b>Stainless Steel Conversion</b>					
		Exhaust	.370"	1.245"	65#	156#	.370"	
<b>Kit Includes</b>			16	Titanium Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers
			16	Spring Shims		16	Spring Shims	

To achieve the proper installed height when using the stainless valve conversion, it may be necessary to utilize the 0.030" & 0.060" shims provided with the kit.




# SUZUKI® GSX-R™ 1000 2005-2008

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>60-60612</b>	Intake	30.00mm	1.181"	0.1765"	25°	3.760"	Standard
	<b>60-60616</b>	Exhaust	24.00mm	0.945"	0.1760"	14°	3.750"	Standard
Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.								


## Valve • Titanium • Tensilite® • Intake

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>60-60614T</b>	Intake	31.00mm	1.220"	0.1765"	25°	3.755"	Oversize

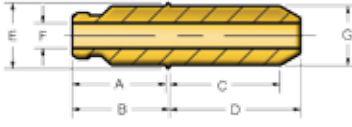

## Valve • White Diamond® • Inconel® • Exhaust

**NEW PRODUCTS**

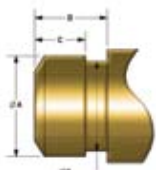

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>60-60618K</b>	Exhaust	24.00mm	0.945"	0.1760"	14°	3.750"	Standard

Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures, where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

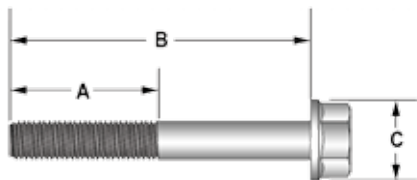
## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust		
		0.520"	0.545"	0.730"	0.945"	0.410"	0.1760"	0.3773" / Std.		<b>60-60620</b>		
									+0.001"		<b>60-60621</b>	
									+0.002"		<b>60-60622</b>	
									+0.010"		<b>60-60629</b>	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Intake
				0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust
		Part Number		Quantity		Quantity Discount		
		<b>71014-4</b>		Pkg. of 4		0%		
		<b>71014-8</b>		Pkg. of 8		0%		
		<b>71014-16</b>		Pkg. of 16		Less- 10%		
		<b>71014-50</b>		Pkg. of 50		Less- 15%		
<b>71014-100</b>		Pkg. of 100		Less- 20%				

## Cam Tower Bolt • H.T. Steel

	KPMI P/N	Thread	Hex	T. L. -A-	O. L. -B-	Flange Ø -C-	Quantity	Kit Quantity	Rep. OEM P/N
	<b>60-61450</b>	M6 x 1.0	10mm	18mm	40mm	12.57mm	20ea.	Pkg. of 20	09103-06266 09103-06026
	<b>41005-4</b>	M6 x 1.0	10mm	18mm	40mm	12.57mm 0.495"	4ea.	Pkg. of 4	09103-06266 09103-06026

Works with other applications (see dimensions for compatibility)

**ORDER 650-557-2046**

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# SUZUKI® GSX-R™ 1000 2009-2016



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## Valve Spring Only Kit • "Performance Rebuild" Beehive

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-61700	Intake	.425"	1.335"	60#	181#	.425"
		Exhaust					
Kit Includes			16	CrSi Valve Springs	16	H. T. Steel Basewashers	

- These high quality replacement springs have been designed to exceed the OEM specifications by fitting precisely on the spring shoulder diameter of both the OEM retainers, and KPMI H.T. Steel retainers (P/N 60-61701)
- This kit also includes H.T. Steel basewashers in order to achieve a precision fitment on the large end of our beehive spring which, better controls the lateral motion of the spring, ensuring longer life and less wear on the valvetrain components
- KPMI® has gone a step further and specified the latest in spring materials and processing, for an extremely robust design that will last longer than anything currently on the market
- Unique features of this spring include a beehive variable rate wind to reduce the chances of spring surge due to cam harmonics, Super-Clean Chrome Silicon wire with additional Vanadium and Nickel added for increased strength, and a gas nitrided and double shot peened finish for greater fatigue life

## Retainer Set • O. E. M. Replacement • H. T. Steel

**NEW PRODUCTS**

	KPMI P/N	Type	Material	Quantity
	60-61701	Intake	H.T. Steel	Pkg. of 16
		Exhaust		

- By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer
- These retainers are intended as an OEM replacement and are completely compatible with the OEM springs, keepers, and shims
- The spring shoulder diameter has been designed to match the OEM retainer and spring as well as KPMI's beehive spring (P/N 60-61700), making this retainer your high performance OEM alternative

## Valve Spring Kit • Lightweight Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-61650	Intake	.445"	1.330"	43#	152#	.445"	
		Exhaust						
Kit Includes			16	Titanium Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers

## Valve • Titanium • Tensilite® • Intake

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	60-61662T	Intake	31.00mm	1.220"	0.1765"	25°	3.755"	Standard

## Valve Guides • C630 Bronze

**NEW PRODUCTS**

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.520"	0.545"	0.730"	0.945"	0.410"	0.1760"	0.3773" / Std.	60-61670		
								+0.001"	60-61671	
								+0.002"	60-61672	
								+0.010"	60-61679	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	Part Number			Quantity			Quantity Discount	
	71016-4			Pkg. of 4			0%	
	71016-8			Pkg. of 8			0%	
	71016-16			Pkg. of 16			Less- 10%	
	71016-50			Pkg. of 50			Less- 15%	
71016-100			Pkg. of 100			Less- 20%		

VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)



# SUZUKI® GSX-R™ 1000 2009-2016

## Cam Tower Bolt • H.T. Steel


**NEW PRODUCTS**

	KPMI P/N	Thread	Hex	T. L. -A-	O. L. -B-	Flange Ø -C-	Quantity	Kit Quantity	Rep. OEM P/N
	<b>60-61690</b>	M6 x 1.0	10mm	18mm	40mm	12.57mm 0.495"	20ea.	Pkg. of 20	09103-06266 09103-06026
<b>41005-4</b>	M6 x 1.0	10mm	18mm	40mm	12.57mm 0.495"	4ea.	Pkg. of 4	09103-06266 09103-06026	


Works with other applications (see dimensions for compatibility)

# SUZUKI® GS™ 1100 E / ES / S 1980-1986

## Valve Spring Only Kit • High Performance


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>60-1028</b>	Intake	.390"	1.215"	50#	138#	.390"
Exhaust							
<b>Kit Includes</b>			16	CrSi Valve Springs			

## Retainer Set • O. E. M. Replacement • Titanium

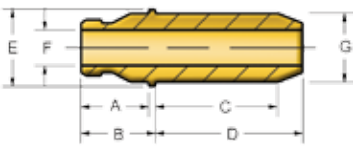
	KPMI P/N	Type	Material	Quantity
	<b>60-1034T</b>	Intake	Titanium	Pkg. of 16
Exhaust				

Note : Fits O.E.M. Springs and KPMI® Spring Kit PN 60-1028

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks
	<b>60-60220</b>	Intake	27.50mm	1.083"	0.2145"	27°	3.380"	Standard
	<b>60-4301</b>	Intake	28.50mm	1.122"	0.2155"	23°	3.435"	Oversize
	<b>60-4311</b>	Intake	29.50mm	1.161"	0.2155"	23°	3.435"	Oversize
	<b>60-4302</b>	Intake	31.00mm	1.220"	0.2155"	23°	3.435"	Oversize
	<b>60-4304</b>	Exhaust	24.50mm	0.965"	0.2145"	27°	3.415"	Oversize
	<b>60-4305</b>	Exhaust	25.00mm	0.984"	0.2145"	27°	3.415"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.465"	0.510"	0.780"	0.940"	0.488"	0.2160"	0.4365" / Std.		<b>60-1029</b>
							+0.002"	<b>60-1030</b>	
							+0.015"	<b>60-4030</b>	
							+0.065"	<b>60-1052</b>	
<b>Valve Guides • C630 Bronze • Special 5.0mm Conversion</b>									
A	B	C	D	E	F	G	Intake	Exhaust	
0.465"	0.510"	0.780"	0.940"	0.488"	0.1950"	0.4365"		<b>60-4298</b>	



# SUZUKI® GS™ 1100 E / ES / S 1980-1986



## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71016-4		Pkg. of 4	0%	
				71016-8		Pkg. of 8	0%	
				71016-16		Pkg. of 16	Less- 10%	
				71016-50		Pkg. of 50	Less- 15%	
				71016-100		Pkg. of 100	Less- 20%	

## Valve Guide Seals • Viton® For Special 5.0mm Conversion

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71015-4		Pkg. of 4	0%	
				71015-8		Pkg. of 8	0%	
				71015-16		Pkg. of 16	Less- 10%	
				71015-50		Pkg. of 50	Less- 15%	
				71015-100		Pkg. of 100	Less- 20%	

# SUZUKI® GSX-R™ 1100 1986-1990

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-1002	Intake	.440"	1.215"	55#	170#	.440"
		Exhaust					
Kit Includes			16	CrSi Valve Springs			

## Retainer Set • Titanium

	KPMI P/N	Type	Material	Quantity
	60-4155	Intake	Titanium	Pkg. of 16
		Exhaust		
Note : Fits O.E.M. Springs and KPMI® Spring Kit PN 60-1002				

## Valve • White Diamond® • Stainless

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	60-4216H	Intake	28.50mm	1.122"	0.1958"	19°	3.390"	Standard
	60-4218H	Intake	30.00mm	1.181"	0.1958"	19°	3.390"	Oversize
	60-4215H	Exhaust	25.00mm	0.984"	0.1948"	17°	3.360"	Standard
	60-4217H	Exhaust	26.00mm	1.024"	0.1948"	17°	3.360"	Oversize



# SUZUKI® GSX-R™ 1100 1986-1990

SUZUKI

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.410"	0.450"	0.740"	0.890"	0.467"	0.1955"	0.4170" / Std.	<b>60-4156-1</b>		
									+0.002"	<b>60-4157-1</b>	
									+0.006"	<b>60-4159-1</b>	
							+0.085"	<b>60-4160-1</b>			

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
		Part Number			Quantity		Quantity Discount	
		<b>71015-4</b>			Pkg. of 4		0%	
		<b>71015-8</b>			Pkg. of 8		0%	
		<b>71015-16</b>			Pkg. of 16		Less- 10%	
		<b>71015-50</b>			Pkg. of 50		Less- 15%	
<b>71015-100</b>			Pkg. of 100		Less- 20%			

# SUZUKI® GSX-R™ 1100 1991-1992

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>60-1003</b>	Intake	.440"	1.255"	45#	158#	.440"
		Exhaust					
Kit Includes			16	CrSi Valve Springs			

## Valve • White Diamond® • Stainless

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>60-6091H</b>	Intake	28.50mm	1.122"	0.1958"	19°	3.450"	Standard
	<b>60-6092H</b>	Exhaust	25.00mm	0.984"	0.1948"	17°	3.420"	Standard

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.410"	0.450"	0.740"	0.890"	0.467"	0.1955"	0.4170" / Std.	<b>60-4156-1</b>		
									+0.002"	<b>60-4157-1</b>	
									+0.006"	<b>60-4159-1</b>	
							+0.085"	<b>60-4160-1</b>			

204

ORDER 650-557-2046

# SUZUKI® GSX-R™ 1100 1991-1992



## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		71015-4				Pkg. of 4		0%
		71015-8				Pkg. of 8		0%
		71015-16				Pkg. of 16		Less- 10%
		71015-50				Pkg. of 50		Less- 15%
		71015-100				Pkg. of 100		Less- 20%

# SUZUKI® GSX-R™ 1100 1993-1998

- Water Cooled

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-60040	Intake	.440"	1.235"	50#	158#	.440"	
		Exhaust						
<b>Kit Includes</b>			16	Titanium Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers

## Retainer Set • O. E. M. Replacement • Titanium

	KPMI P/N	Type	Material	Quantity
	60-6154	Intake	Titanium	Pkg. of 16
		Exhaust		
Note : Fits O.E.M. Springs				

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.520"	0.545"	0.730"	0.945"	0.410"	0.1760"	0.3773" / Std.		60-60620
								+0.001"	60-60621
								+0.002"	60-60622
								+0.010"	60-60629

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.5mm	0.331"	0.370"	4	A	B	C	D	Intake
				0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust
		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		71014-4				Pkg. of 4		0%
		71014-8				Pkg. of 8		0%
		71014-16				Pkg. of 16		Less- 10%
		71014-50				Pkg. of 50		Less- 15%
		71014-100				Pkg. of 100		Less- 20%

VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)



# SUZUKI® GS™ 1150 1984-1986

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-1028	Intake	.390"	1.215"	50#	138#	.390"
		Exhaust					
Kit Includes			16	CrSi Valve Springs			

## Retainer Set • O. E. M. Replacement • Titanium

	KPMI P/N	Type	Material	Quantity
	60-1034T	Intake	Titanium	Pkg. of 16
		Exhaust		
Note : Fits O.E.M. Springs and KPMI® Spring Kit PN 60-1028				

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	60-60220	Intake	27.50mm	1.083"	0.2145"	27°	3.380"	Standard
	60-4301	Intake	28.50mm	1.122"	0.2155"	23°	3.435"	Oversize
	60-4311	Intake	29.50mm	1.161"	0.2155"	23°	3.435"	Oversize
	60-4302	Intake	31.00mm	1.220"	0.2155"	23°	3.435"	Oversize
	60-4304	Exhaust	24.50mm	0.965"	0.2145"	27°	3.415"	Oversize
	60-4305	Exhaust	25.00mm	0.984"	0.2145"	27°	3.415"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.465"	0.510"	0.780"	0.940"	0.488"	0.2160"	0.4365" / Std.		<b>60-1029</b>
							+0.002"		<b>60-1030</b>
							+0.015"		<b>60-4030</b>
							+0.065"		<b>60-1052</b>
<b>Valve Guides • C630 Bronze • Special 5.0mm Conversion</b>									
A	B	C	D	E	F	G	Intake	Exhaust	
0.465"	0.510"	0.780"	0.940"	0.488"	0.1950"	0.4365"		<b>60-4298</b>	

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type	
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake	
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust	
				Part Number				Quantity	Quantity Discount
				<b>71016-4</b>				Pkg. of 4	0%
				<b>71016-8</b>				Pkg. of 8	0%
				<b>71016-16</b>				Pkg. of 16	Less- 10%
				<b>71016-50</b>				Pkg. of 50	Less- 15%
			<b>71016-100</b>				Pkg. of 100	Less- 20%	

## Valve Guide Seals • Viton® For Special 5.0mm Conversion

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type	
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake	
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust	
				Part Number				Quantity	Quantity Discount
				<b>71015-4</b>				Pkg. of 4	0%
				<b>71015-8</b>				Pkg. of 8	0%
				<b>71015-16</b>				Pkg. of 16	Less- 10%
				<b>71015-50</b>				Pkg. of 50	Less- 15%
			<b>71015-100</b>				Pkg. of 100	Less- 20%	

**ORDER 650-557-2046**



# SUZUKI® HAYABUSA™ 1999-2017



SUZUKI

## Valve Spring Kit • "Shim in Tappet" Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-60750	Intake	.490"	1.455"	65#	195#	.415"
		Exhaust					
	Kit Includes			16	Titanium Retainers	16	CrSi Valve Springs
			16	H. T. Steel Basewashers	16	H. T. Steel Tappets	

This high lift kit is designed for maximum performance applications on 1999-2014 models. It includes KPMI® "Shim in Tappet" design tappets that solve the issues of retainer counter-bore ovaling and adjustment shims becoming dislodged. It is especially recommended for use with reduced base circle cams.

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-60760	Intake	.490"	1.455"	65#	190#	.415"	
		Exhaust						
	Kit Includes			16	Titanium Retainers	16	CrSi Valve Springs	16

This high lift kit is designed for maximum performance applications on 1999-2014 models, and includes lightweight titanium retainers as well as high lift, super-clean chrome silicon wire dual valve springs.

## Valve Spring Kit • Lightweight Racing NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-60900	Intake	.490"	1.455"	65#	190#	.415"	
		Exhaust						
	Kit Includes			16	H. T. Steel Retainers	16	CrSi Valve Springs	16

KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With 65lbs of seat pressure these kits are the ultimate setup for any 1999-'14 'Busa street/strip tuner.

## Retainer Set • O. E. M. Replacement • H. T. Steel NEW PRODUCTS

	KPMI P/N	Type	Material	Quantity
	60-60901	Intake	H. T. Steel	Pkg. of 16
		Exhaust		

Note : Fits O.E.M. Springs and KPMI® Spring Kit PN 60-60900

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-60560	Intake	.490"	1.455"	65#	195#	.415"
		Exhaust					
	Kit Includes			16	CrSi Valve Springs		

This spring set fits the stock retainers and bases on all 1999-2015 'Busa models. It is the street/strip tuner's answer for high performance valve springs.



# SUZUKI® HAYABUSA™ 1999-2017

## Valve Kit • High Performance Racing

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	60-60910	Intake	34.00mm	1.339"	0.1962"	21°	3.745"	Oversize
		Exhaust	27.50mm	1.083"	0.1956"	17°	3.735"	Standard
Kit Includes		8	Intake Titanium Valves			8	Exhaust Inconel® Valves	

The High Performance Racing Valve Kit for the Suzuki Hayabusa is a specially formulated combination of valve materials and sizes, designed in conjunction with top racers, for maximum performance. The kit includes a +1mm oversize Tensilite Titanium Intake Valve and a White Diamond Inconel Exhaust Valve (standard head size). Components are designed for increased air flow and resistance to the high operating temperatures from applications running forced induction and/or exotic fuels. This combination has been offered as a kit to provide the greatest value for builders and racers looking for the ultimate valve setup.

## Valve • Titanium • Tensilite® • Intake

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	60-60413T	Intake	34.00mm	1.339"	0.1962"	21°	3.745"	Oversize

All titanium valves are 1 piece forged for superior strength over a 2 piece valve. The Tensilite PVD CrN coating is a state of the art process, which is much tougher than the OEM oxidizing process. These +1mm oversized valves offer a 33% savings in mass over the '99-'07 steel valves and come within 2 grams of the '08 and later titanium valves.

## Valves • White Diamond® • Inconel® • Exhaust

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	60-60436K	Exhaust	27.50mm	1.083"	0.1956"	17°	3.735"	Standard
	60-60437K	Exhaust	28.50mm	1.122"	0.1956"	17°	3.735"	Oversize

Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures, where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	60-60008	Intake	33.00mm	1.299"	0.1962"	18°	3.740"	Standard
	60-60009	Intake	34.00mm	1.339"	0.1962"	18°	3.750"	Oversize
	60-60010	Exhaust	27.50mm	1.083"	0.1956"	17°	3.735"	Standard
	60-60011	Exhaust	28.50mm	1.122"	0.1956"	17°	3.725"	Oversize

## Valve Guide Installer NEW PRODUCTS

	KPMI P/N	O.L.	Body Ø	Inner Ø 1	Inner Ø 2	Depth 1	Depth 2	Quantity
		A	B	C	D	E	F	
	60-61400	8.000"	0.615"	0.425"	0.348"	0.285"	0.650"	Pkg. of 1

Specifically designed for KPMI's Cast Iron, C630 and Manganese Bronze guides

## Valve Guide Remover NEW PRODUCTS

	KPMI P/N	O.L.	Body Ø	Ø 1	Ø 2	Length 1	Length 2	Quantity
		A	B	C	D	E	F	
	60-61405	8.000"	0.615"	0.182"	0.397"	1.000"	4.000"	Pkg. of 1

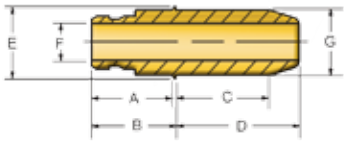

Works with other applications (see dimensions for compatibility)

**ORDER 650-557-2046**

# SUZUKI® HAYABUSA™ 1999-2017

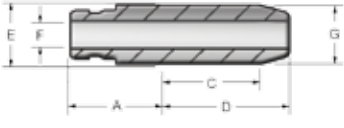



## Valve Guides • C630 Bronze • Manganese Bronze NEW PRODUCTS


		A	B	C	D	E	F	G	Intake / Exhaust	
		0.560"	0.585"	0.650"	0.860"	0.460"	0.1962"	0.4170" / Std.	C630 Bronze	Manganese
										+0.001"
								+0.002"	60-60021	60-60021-M
								+0.004"	60-60022	60-60022-M
								+0.010"	60-60024	60-60024-M
								+0.010"	60-60029	60-60029-M

For sizing **KPMI® Manganese Bronze Valve guides** please use Reamer #GR-1970. For a complete listing of hones and reamers please see component section in back of catalog.

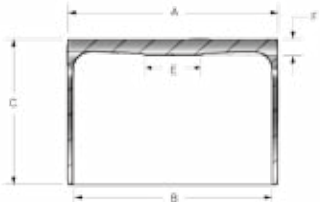
## Valve Guides • Cast Iron NEW PRODUCTS

		A	B	C	D	E	F	G	Intake / Exhaust	
		0.585"	----	0.650"	0.860"	0.415"	0.1931"	0.4170" / Std.	60-60020-C	
										+0.001"
								+0.002"	60-60022-C	
								+0.004"	60-60024-C	
								+0.010"	60-60029-C	

## Valve Guide Seals • Viton®

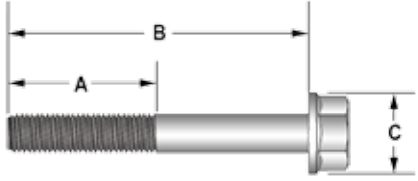
Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
			Part Number		Quantity		Quantity Discount	
			71015-4		Pkg. of 4		0%	
			71015-8		Pkg. of 8		0%	
			71015-16		Pkg. of 16		Less- 10%	
			71015-50		Pkg. of 50		Less- 15%	
			71015-100		Pkg. of 100		Less- 20%	

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	60-60014	Intake	None	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"	Pkg. of 16
		Exhaust								
60-60035	Intake	None	28.50mm	1.1220"	1.058"	0.763"	0.320"	0.098"	Pkg. of 16	
	Exhaust									
60-60335	Intake	DLC Coated	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"	Pkg. of 16	
	Exhaust									

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting other size tappets.

## Cam Tower Bolt • H.T. Steel NEW PRODUCTS

	KPMI P/N	Thread	Hex	T. L. -A-	O. L. -B-	Flange Ø -C-	Quantity	Kit Quantity	Rep. OEM P/N
	60-61465	M6 x 1.0	10mm	18mm	40mm	12.57mm	16ea.	Pkg. of 20	09103-06266
		M6 x 1.0	10mm	18mm	45mm	0.495	4ea.		09103-06026
M6 x 1.0		10mm	18mm	45mm	0.495	4ea.	09103-06165		
41005-4	M6 x 1.0	10mm	18mm	40mm	12.57mm	4ea.	Pkg. of 4	09103-06266	
					0.495"			09103-06026	
41006-4	M6 x 1.0	10mm	18mm	45mm	12.57mm	4ea.	Pkg. of 4	09103-06165	
					0.495"			09103-06293	

Works with other applications (see dimensions for compatibility)

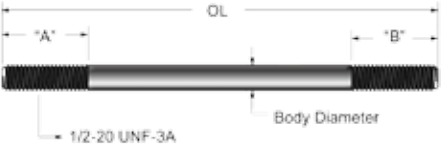


# SUZUKI® HAYABUSA™ 1999-2017

SUZUKI

## Cylinder Stud Kit • H. T. Steel • Oversize • 1/2" -20 Thread

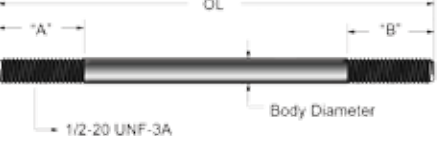
**NEW PRODUCTS**

	KPMI P/N	Material	O.L.	Body Dia.	A	B	Remarks
	<b>60-61200</b>	H. T. Steel	8.200"	0.498"	1.340"	1.340"	1/2" Dia. Oversize
	<b>Kit Includes</b>	10	H. T. Steel Studs	10	H. T. Steel Nuts	10	H. T. Steel Washers

- 1/2" Oversized studs for maximum strength, intended for high HP and forced induction applications
- High quality CNC machined, heat treated steel nuts and studs with rolled threads for maximum tensile strength
- 12- Point Nut pattern allows maximum power transmission and clearance when installing
- Cases must be drilled and tapped for 1/2-20 thread, prior to installation
- Aftermarket head/base gaskets that can accept a 1/2" diameter stud are required
- Black Oxided for enhanced corrosion resistance
- Nuts also sold separately, see the KPMI® "Tools & Components" section of our website and catalog for purchasing information

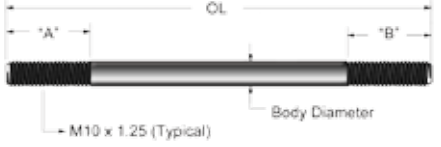
## Cylinder Stud • H. T. Steel • Oversize • 1/2" -20 Thread

**NEW PRODUCTS**

	KPMI P/N	Material	O.L.	Body Dia.	A	B	Remarks
	<b>60-61201</b>	H. T. Steel	8.200"	0.498"	1.340"	1.340"	1/2" Dia. Oversize
	<b>Includes</b>	10	H. T. Steel Studs				

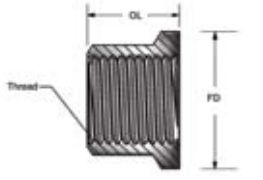
- Replaces the stock cylinder head bolt design, with a superior stud / nut configuration
- 1/2" Oversized studs for maximum strength, intended for high HP and forced induction applications
- High quality CNC machined, heat treated steel studs with rolled threads (not cut) for maximum tensile strength

## Cylinder Studs • H. T. Steel • M10 x 1.25 Thread

	KPMI P/N	Material	O.L.	Body Dia.	A	B	Remarks
	<b>60-60825</b>	H. T. Steel	8.010"	0.370"	1.155"	1.310"	Std. Length
	<b>Includes</b>	10	H. T. Steel Studs		10	H. T. Steel Washers	

- High quality CNC machined, ground and heat treated steel studs with rolled threads for maximum tensile strength
- Black Oxided for enhanced corrosion resistance

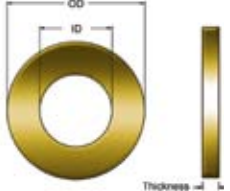
## Cylinder Nuts • Steel

	KPMI P/N	Material	F.D.	O.L.	Thread	Quantity
	<b>41002-4</b>	H.T. Steel	0.786"	0.520"	1/2-20 UNF 3A	Pkg. of 4
	<b>60-60820</b>	H.T. Steel	0.740"	0.750"	M10 x 1.25	Pkg. of 10
	<b>41001-4</b>	H.T. Steel	0.740"	0.750"	M10 x 1.25	Pkg. of 4

**NEW PRODUCTS**

- High quality CNC machined, heat treated steel nuts with rolled threads for maximum tensile strength
- Black Oxided for enhanced corrosion resistance

## Washers • Spacers for 10M x 1.25 Thread

	KPMI P/N	Material	O.D.	O.L.	Thickness	Quantity
	<b>60-60840</b>	Stainless Steel	0.787"	0.413"	0.079"	Pkg. of 10
	<b>60-60835</b>	Apmco - 45	0.740"	0.396"	0.100"	Pkg. of 10

Note: Washers may be needed with +0.200" Length Studs

210

**ORDER 650-557-2046**

# TRIUMPH® 500 TWIN 1958-1973



## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	70-70030	Intake	.455"	1.205"	74#	206#	.455"
		Exhaust					
<b>Kit Includes</b>	4	Titanium Retainers	4	CrSi Valve Springs	4	H. T. Steel Basewashers	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	70-4290	Intake	39.12mm	1.540"	0.3105"	23°	3.480"	Standard
	70-4292	Intake	40.64mm	1.600"	0.3105"	23°	3.500"	Oversize
	70-4291	Exhaust	33.66mm	1.325"	0.3100"	27°	3.425"	Standard
	70-4293	Exhaust	34.93mm	1.375"	0.3100"	27°	3.445"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.560"	0.610"	0.620"	1.160"	0.550"	0.3105"	0.5010" / Std.		<b>70-0339</b>
							+0.002"		<b>70-0340</b>
							+0.004"		<b>70-0341</b>
							+0.006"		<b>70-0342</b>
						+0.015"		<b>70-4031</b>	
No seal required.									

## Fork Bushing • Nickel Bronze

	KPMI P/N	Type	O.D.	I.D.	O.L.	Quantity
	70-0646	Top	1.4990"	1.3075"	1.000"	Pkg. of 1
	70-0647	Bottom	1.4945"	1.2495"	0.875"	Pkg. of 1

Note: Fits 1963-1970 Triumph 500 Twin's.

## Crankshaft Bushings • Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	70-0817	Bronze	1.814"	1.439"	1.035"	Standard	Pkg. of 1
	70-0818	Bronze	1.814"	1.429"	1.035"	-0.010"	Pkg. of 1
	70-0819	Bronze	1.814"	1.419"	1.035"	-0.020"	Pkg. of 1
	70-0820	Bronze	1.814"	1.409"	1.035"	-0.030"	Pkg. of 1

Machined from high quality mill certified SAE660 Bearing Bronze (custom sizes available).

For all the applications available for Kibblewhite's Triumph® line of products, please refer online to the Triumph® section of the [www.kpmi.us](http://www.kpmi.us) website, under **British Bike**.



# TRIUMPH® PRE-UNIT 500/ 650 1951-'62

TRIUMPH

## Valves • Black Diamond™ • Black Nitroreg Stems • For Pre-Unit 650 1956-1962

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>70-70380</b>	Intake	38.10mm	1.500"	0.3105"	R1.4	3.790"	Standard
	<b>70-70385</b>	Exhaust	34.11mm	1.343"	0.3100"	15°	3.775"	Standard

Welded tips (no lash caps required).

## Valve Guides • C630 Bronze • Manganese

	A	B	C	D	E	F	G	Intake / Exhaust	
	0.460"	0.610"	0.840"	1.390"	0.680"	0.3105"	0.5010" / Std.	C630 Bronze	Manganese
							+0.002"	<b>70-0331</b>	<b>70-0331-M</b>
							+0.004"	<b>70-0332</b>	<b>70-0332-M</b>
							+0.006"	<b>70-0333</b>	<b>70-0333-M</b>
							+0.015"	<b>70-0334</b>	<b>70-0334-M</b>
							+0.050"	<b>70-0840</b>	<b>70-0840-M</b>
Note : No seal required.							+0.050"	<b>70-4033</b>	<b>70-4033-M</b>

For sizing KPMI® Cast Iron and Manganese Bronze Valve guides please use Reamers #GR-3115. For a complete listing of hones and reamers please see component section in back of catalog.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.315"	0.405"	0.820"	1.370"	0.680"	0.3105"	0.5010" / Std.	<b>70-0331S</b>	
							+0.002"	<b>70-0332S</b>	
							+0.004"	<b>70-0333S</b>	
							+0.006"	<b>70-0334S</b>	
							+0.015"	<b>70-0840S</b>	
	Machined for seal, seals sold separately.							+0.050"	<b>70-4033S</b>

## Valve Guide Seals • Viton® • 6.00mm Coverison Systems

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.465"	0.550"	1	A	B	C	D	Intake
				0.500"±0.010"	0.445"	0.230"	0.280"	Exhaust
				Part Number			Quantity	Quantity Discount
				<b>71012-4</b>			Pkg. of 4	0%
				<b>71012-8</b>			Pkg. of 8	0%
				<b>71012-16</b>			Pkg. of 16	Less- 10%
				<b>71012-50</b>			Pkg. of 50	Less- 15%
				<b>71012-100</b>			Pkg. of 100	Less- 20%

## Thrust Washer • Transmission • C674 Bronze • For Pre-Unit 650's 1960-1962

	KPMI P/N	Material	O.D.	O.L.	Thickness	Quantity
	<b>70-0474</b>	Bronze	1.280"	0.880"	0.090"	Pkg. of 1

Note: Transmission thrust washer for needle bearing gearbox

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**ORDER 650-557-2046**

# TRIUMPH® PRE-UNIT 500/ 650 1951-'62



## Fork Bushing • Nickel Bronze

	KPMI P/N	Type	O.D.	I.D.	O.L.	Quantity
	70-0646	Top	1.4990"	1.3075"	1.000"	Pkg. of 1
	70-0647	Bottom	1.4945"	1.2495"	0.875"	Pkg. of 1

## Camshaft Bushings • Nickel Bronze

	KPMI P/N	Type	O.D.	I.D.	O.L.	Quantity
	70-0458	Outer (Timing Side)	1.270"	0.8740"	1.000"	Pkg. of 1
	70-0467	Inner (Drive Side)	1.0015"	0.809"	0.937"	Pkg. of 1

## Wrist Pin Bushings • Bearing Bronze

	KPMI P/N	Type	O.D.	I.D.	O.L.	Quantity
	70-0459	Rod (Small End)	0.815"	0.6885"	1.031"	Pkg. of 1

## Push Rods Alloy Tube • For Pre-Unit 650's 1956-1962

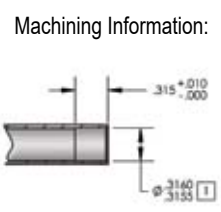
	KPMI P/N	Material	A	B	Quantity
	70-0301	H.T. Steel Endpieces	6.302"	6.022"	Pkg. of 4

Made from light, strong, and tough, aircraft quality heat treated seamless aluminum tubing. These push rods are assembled with hardened steel ends that are held to exacting radius and surface finish tolerances. They are a perfect match for the rocker and tappet. After assembly, the OD of the entire push rod is precision ground to create a part that is first class in finish, fit, and function. This is the push rod of choice for Triumph racers, rebuilders, and restorers around the world.

## Blank Pushrods • Steel • Chrome Moly Tube

**NEW PRODUCTS**

	A	Ø.371" OD		
	B	9.120" Overall Length		
	C	Ø.305" ID Before Machining		
	D	E	F	G
	R.156	0.420"	0.120"	0.310"
KPMI P/N	Model	Material	Kit Includes	
90512-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	2 Female Ended Pushrods / 2 Female Endpieces	
90512-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	4 Female Ended Pushrods / 4 Female Endpieces	



1. Break ID edge only at .015 x 45°

Blank Pushrods Kits (sets of 2 and 4) can be machined to desired length and assembled by KPMI® for a flat fee of \$120.00. Orders can be placed by using the Custom Pushrod Order Form found on our website at [www.kpmi.us/forms.html](http://www.kpmi.us/forms.html).

## Keeper Set • O.E.M. Replacement

		KPMI P/N	Style	A	B	C	D	E	Quantity
		51017-4	Shouldered Square Bead	0.310	7.0°	---	0.245"	0.369"	4Pr.

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# TRIUMPH® PRE-UNIT 500/ 650 1951-'62

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## Tappet Blocks • Racing For Pre-Unit 500 / 650 1946 -1968

	KPMI P/N	Material	Camshaft Lift	O.D.	Quantity
	70-70360	Bronze - 674	0.450"	1.0005"	Pkg. of 1
	70-70362	Bronze - 674	0.450"	1.0005"	Pkg. of 2
	70-70370	Cast Iron - G2	0.450"	1.0005"	Pkg. of 1
	70-70372	Cast Iron - G2	0.450"	1.0005"	Pkg. of 2

Note : See KPMI® P/N GR-3120/ CR-3120 for the piloted reamer and P/N GH-3125 for the 5/16" ball hone suitable for this application. For a complete listing of hones and reamers please see component section in back of catalog.

# TRIUMPH® 650 / 750 1963-1983

## • 6.00mm Conversion System

### Valve Spring Kit • Beehive For Triumph 650

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	70-70510	Intake	.460"	1.375"	90#	220#	.460"
		Exhaust					
	Kit Includes	4	Titanium Retainers		4	H. T. Steel Keepers	
4		CrSi Valve Springs		4	H. T. Steel Basewashers		

Note: Must use 6.0mm Valves and Guides

### Valve Spring Kit • Beehive For Triumph 750

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	70-70520	Intake	.460"	1.375"	90#	220#	.460"
		Exhaust					
	Kit Includes	4	Titanium Retainers		4	H. T. Steel Keepers	
4		CrSi Valve Springs		4	H. T. Steel Basewashers		

Note: Must use 6.0mm Valves and Guides

### Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	70-70550	Intake	40.64mm	1.600"	0.2355"	23°	3.850"	Standard
	70-70551	Intake	42.16mm	1.660"	0.2355"	23°	3.830"	Oversize
	70-70553	Exhaust	36.58mm	1.440"	0.2350"	29°	3.780"	Standard
	70-70554	Exhaust	38.10mm	1.500"	0.2350"	29°	3.760"	Oversize

Note: Welded tips (no lash caps required). Titanium Valves Available Custom

### Lash Caps • H.T. Steel

	KPMI P/N	Material	"A"	"B"	"C"	"D"	"C" - "D"	Quantity
	94008-4	H.T. Steel	6.00mm	0.315"	0.120"	0.080"	0.040"	Pkg. of 4
			0.2362"					

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**ORDER 650-557-2046**



# TRIUMPH® 650 / 750 1963-1983



## • 6.00mm Conversion System

### Valve Guides • C630 Bronze • 6.00mm Conversion Systems

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.330"	0.500"	0.820"	1.370"	0.685"	0.2350"	0.5010" / Std.	70-70530		
									+0.002"	70-70532	
		One seal supplied with each guide.							+0.015"	70-70545	

### Valve Guide Seals • Viton® • 6.00mm Conversion Systems

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.371"	0.480"	5	A	B	C	D	Intake
				0.385"±0.002"	0.341"	0.120"	0.255"	Exhaust
		Part Number			Quantity		Quantity Discount	
		71017-4			Pkg. of 4		0%	
		71017-8			Pkg. of 8		0%	
		71017-16			Pkg. of 16		Less- 10%	
		71017-50			Pkg. of 50		Less- 15%	
		71017-100			Pkg. of 100		Less- 20%	

These seals are designed to work with the KPMI® Guides.

# TRIUMPH® 650 / 750 1963-1983

### Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	70-0300	Intake	.520"	1.420"	104#	234#	.520"	
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Keepers	
			4	H.A. 7075-T6 Retainers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	70-70170	Intake	.520"	1.420"	104#	234#	.520"	
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Keepers	
			4	Titanium Retainers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	*70-70400	Intake	.460"	1.310"	90#	220#	.460"	
		for 650cc Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers	4
			4	CrSi Valve Springs	4	H. T. Steel Retainers	4	H. T. Steel Basewashers
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	70-70450	Intake	.460"	1.310"	90#	220#	.460"	
		for 750cc Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers	4
			4	CrSi Valve Springs	4	H. T. Steel Retainers	4	H. T. Steel Basewashers

\*O.E.M. Replacement Keepers available in pairs P/N 51017-4

### Valve Spring Kit • Beehive • For Triumph 650

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	70-70270	Intake	.460"	1.375"	90#	220#	.460"	
		Exhaust						
Kit Includes			4	H. T. Steel Retainers	4	CrSi Valve Springs	4	H. T. Steel Basewashers

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# TRIUMPH® 650 / 750 1963-1983

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## Valve Spring Kit • Beehive • For Triumph 750

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	70-70280	Intake	.460"	1.375"	90#	220#	.460"	
		Exhaust						
Kit Includes			4	H. T. Steel Retainers	4	CrSi Valve Springs	4	H. T. Steel Basewashers

## Valve Spring Kit • O. E. M. Replacement For Triumph 650

	KPMI P/N	Type	Kit Includes						
			H. T. Steel Retainers	H. T. Steel Keepers	CrSi Valve Springs	H. T. Steel Basewashers			
	70-70140	Intake	4	70-70141	Use O.E.M	4	70-70143	4	70-70145
		Exhaust							
Max Valve Lift		Installed Height		Seat Pressure		Open Pressure		@ Lift	
.415"		1.250"		68#		145#		.348"	

This kit is designed for stock valve lift and up to 0.415".  
 O.E.M. Replacement keepers available in pairs #51017-4.  
 1963-1965: Basewasher and springs are not direct O.E.M. replacements, all spring kit parts must be used together.  
 1966-1972: All components are direct O.E.M. replacements. These O.E.M. replacements parts may be purchased separately using the above part numbers.  
 It may be necessary to use KPMI® shortened valve guides (KPMI® #70-033X/M/S) to achieve higher than stock lift.

## Valve Spring Kit • O. E. M. Replacement For Triumph 750

	KPMI P/N	Type	Kit Includes						
			H. T. Steel Retainers	H. T. Steel Keepers	CrSi Valve Springs	H. T. Steel Basewashers			
	70-70250	Intake	4	70-70251	Use O.E.M	4	70-70253	4	70-70255
		Exhaust							
Max Valve Lift		Installed Height		Seat Pressure		Open Pressure		@ Lift	
.415"		1.250"		68#		145#		.348"	

This kit is designed for stock valve lift and up to 0.415".  
 All components are the quality you can expect from KPMI®, manufactured to exact O.E.M. specifications. These O.E.M. replacements parts may be purchased separately using the above part numbers.  
 It may be necessary to use KPMI® shortened valve guides (KPMI® #70-033X/M/S) to achieve higher than stock lift.

## Valve Guides • C630 Bronze • Manganese

		A	B	C	D	E	F	G	Intake / Exhaust		
										C630 Bronze	Manganese
		0.460"	0.610"	0.840"	1.390"	0.680"	0.3105"	0.5010" / Std.		70-0331	70-0331-M
								+0.002"		70-0332	70-0332-M
								+0.004"		70-0333	70-0333-M
								+0.006"		70-0334	70-0334-M
								+0.015"		70-0840	70-0840-M
						+0.050"		70-4033	70-4033-M		
Note : No seal required.											

For sizing KPMI® Cast Iron and Manganese Bronze Valve guides please use Reamers #GR-3115. For a complete listing of hones and reamers please see component section in back of catalog.

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.315"	0.405"	0.820"	1.370"	0.680"	0.3105"	0.5010" / Std.		70-0331S	
								+0.002"		70-0332S	
								+0.004"		70-0333S	
								+0.006"		70-0334S	
								+0.015"		70-0840S	
								+0.050"		70-4033S	
Machined for seal, seals sold separately.											

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# TRIUMPH® 650 / 750 1963-1983



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## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	70-4228	Intake	40.64mm	1.600"	0.3105"	1.5" R	3.850"	Standard
	70-4229	Intake	42.16mm	1.660"	0.3105"	1.5" R	3.830"	Oversize
	70-4230	Exhaust	36.58mm	1.440"	0.310"	24°	3.780"	Standard
	70-4231	Exhaust	38.10mm	1.500"	0.310"	24°	3.760"	Oversize

## Valves • Untreated Stems • O.E.M. Replacement (RAW)

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	70-70500	Intake	40.64mm	1.600"	0.3105"	1.5" R	3.850"	Standard
	70-70501	Intake	42.16mm	1.660"	0.3105"	1.5" R	3.830"	Oversize
	70-70504	Exhaust	36.58mm	1.440"	0.310"	24°	3.780"	Standard
	70-70505	Exhaust	38.10mm	1.500"	0.310"	24°	3.760"	Oversize

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.465"	0.550"	1	0.500"±0.010"	0.445"	0.230"	0.280"	Intake
								Exhaust
				Part Number		Quantity	Quantity Discount	
				71012-4		Pkg. of 4	0%	
				71012-8		Pkg. of 8	0%	
				71012-16		Pkg. of 16	Less- 10%	
				71012-50		Pkg. of 50	Less- 15%	
				71012-100		Pkg. of 100	Less- 20%	

## Tappet Blocks • Racing For Pre-Unit 500 / 650 1946 -1968 NEW PRODUCTS

	KPMI P/N	Material	Camshaft Lift	O.D.	Quantity
	70-70360	Bronze - 674	0.450"	1.0005"	Pkg. of 1
	70-70362	Bronze - 674	0.450"	1.0005"	Pkg. of 2
	70-70370	Cast Iron - G2	0.450"	1.0005"	Pkg. of 1
	70-70372	Cast Iron - G2	0.450"	1.0005"	Pkg. of 2

Note : See KPMI® P/N GR-3120/ CR-3120 for the piloted reamer and P/N GH-3125 for the 5/16" ball hone suitable for this application. For a complete listing of hones and reamers please see component section in back of catalog.

## Tappet Blocks • Racing For 650 / 750 1969 -1983 NEW PRODUCTS

	KPMI P/N	Material	Camshaft Lift	O.D.	Quantity
	70-0448	Bronze - 674	0.450"	1.0005"	Pkg. of 1
	70-70332	Bronze - 674	0.450"	1.0005"	Pkg. of 2
	70-70340	Cast Iron - G2	0.450"	1.0005"	Pkg. of 1
	70-70342	Cast Iron - G2	0.450"	1.0005"	Pkg. of 2

Note : See KPMI® P/N GR-3120/ CR-3120 for the piloted reamer and P/N GH-3125 for the 5/16" ball hone suitable for this application. For a complete listing of hones and reamers please see component section in back of catalog.

## Clutch Springs

	KPMI P/N	Description	A	B	C	Quantity
	70-0124	3 Clutch Spring Models	0.452"	0.662"	1.858"	Pkg. of 3
	70-0465	4 Clutch Spring Models	0.452"	0.662"	1.858"	Pkg. of 4

Manufactured from high quality chrome silicon wire, they are designed to supply 20% more plate load than stock springs.

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# TRIUMPH® 650 / 750 1963-1983

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## Thrust Washer • Transmission • C674 Bronze

	KPMI P/N	Material	O.D.	I.D.	Thickness	Quantity
	70-0474	Bronze	1.280"	0.880"	0.090"	Pkg. of 1
Note: Transmission thrust washer for needle bearing gearbox						

## Thrust Washer • Clutch • C674 Bronze

	KPMI P/N	Material	O.D.	I.D.	Thickness	Quantity
	70-0476	Bronze	2.625"	2.020"	0.060"	Pkg. of 1
	70-0477	Bronze	2.625"	1.837"	0.060"	Pkg. of 1

## Fork Bushing • Nickel Bronze

	KPMI P/N	Type	O.D.	I.D.	O.L.	Quantity
	70-0646	Top	1.4990"	1.3075"	1.000"	Pkg. of 1
	70-0647	Bottom	1.4945"	1.2495"	0.875"	Pkg. of 1

## Camshaft Bushings • Nickel Bronze

	KPMI P/N	Type	O.D.	I.D.	O.L.	Quantity
	70-0458	Outer (Timing Side)	1.270"	0.8740"	1.000"	Pkg. of 1
	70-0467	Inner (Drive Side)	1.0015"	0.809"	0.937"	Pkg. of 1

## Wrist Pin Bushings • Bearing Bronze

	KPMI P/N	Type	O.D.	I.D.	O.L.	Quantity
	70-0459	Rod (Small End)	0.815"	0.6885"	1.031"	Pkg. of 1

## High Gear Bushings • Bronze • For 650 1963-1972 Models

	KPMI P/N	Type	O.D.	I.D.	O.L.	Quantity
	70-70160	4-Speed	0.910"	0.810"	1.100"	1 Pr.

These bushings are designed to replace the single OEM style bushing. They maintain the same bearing surface while the gap between each bushing provides a large cavity for oil to pool, aiding in lubrication of the shaft.

## Push Rods Alloy Tube • H.T. Steel Endpieces

	KPMI P/N	Material	A	B	Quantity
	70-0301	H.T. Steel Endpieces (for 650)	6.302"	6.022"	Pkg. of 4
	70-0447	H.T. Steel Endpieces (for 750)	5.905"	5.625"	Pkg. of 4

Made from light, strong, and tough, aircraft quality heat treated seamless aluminum tubing. These push rods are assembled with hardened steel ends that are held to exacting radius and surface finish tolerances. They are a perfect match for the rocker and tappet. After assembly, the OD of the entire push rod is precision ground to create a part that is first class in finish, fit, and function. This is the push rod of choice for Triumph racers, rebuilders, and restorers around the world.

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# TRIUMPH® 650 / 750 1963-1983



## Lash Caps • H.T. Steel

	KPMI P/N	Material	"A"	"B"	"C"	"D"	"C" - "D"	Quantity
	94001-4	H.T. Steel	7.94mm 0.3126"	0.395"	0.160"	0.080"	0.080"	Pkg. of 4

## Clutch Push Rod • H.T. Steel

	KPMI P/N	Material	Type	A	B	Quantity
	70-0505	H.T. Steel	Drill Rod ( H.T. tips)	11.812"	0.219"	Pkg. of 1

## Blank Pushrods • Steel • Chrome Moly Tube

**NEW PRODUCTS**

	A	Ø.371" OD	Machining Information: 					
	B	9.120" Overall Length						
	C	Ø.305" ID Before Machining						
	D	R.156	E	0.420"	F	0.120"	G	0.310"
	KPMI P/N		Model	Material		Kit Includes		
90512-2		Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips		2 Female Ended Pushrods / 2 Female Endpieces			
90512-4		Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips		4 Female Ended Pushrods / 4 Female Endpieces			

Blank Pushrods Kits (sets of 2 and 4) can be machined to desired length and assembled by KPMI® for a flat fee of \$120.00. Orders can be placed by using the Custom Pushrod Order Form found on our website at [www.kpmi.us/forms.html](http://www.kpmi.us/forms.html).

## Keeper Set • O.E.M. Replacement • H.T. Steel

		KPMI P/N	Style	A	B	C	D	E	Quantity
		51017-4	Shouldered Square Bead	0.310	7.0°	---	0.245"	0.369"	4Pr.

# TRIUMPH® TRIDENT™ 1971-1976

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	70-70350	Intake	.400"	1.350"	95#	242#	.400"	
		Exhaust						
Kit Includes			6	Titanium Retainers	6	CrSi Valve Springs	6	H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems • For 1971-1972 Models

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks
	70-1009	Intake	38.86mm	1.530"	0.3105"	1.5" R	3.975" Standard
	70-1010	Intake	40.39mm	1.590"	0.3105"	1.5" R	3.950" Oversize
	70-1011	Exhaust	33.40mm	1.315"	0.3100"	25°	3.915" Standard
	70-1012	Exhaust	35.56mm	1.400"	0.3100"	25°	3.890" Oversize

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# TRIUMPH® TRIDENT™ 1971-1976

TRIUMPH

## Valves • Black Diamond™ • Black Nitroreg Stems • For 1973-1976 Models

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>70-0885</b>	Intake	38.86mm	1.530"	0.3105"	1.5" R	3.735"	Standard
	<b>70-0852</b>	Intake	40.39mm	1.590"	0.3105"	1.5" R	3.710"	Oversize
	<b>70-0886</b>	Exhaust	33.40mm	1.315"	0.3100"	25°	3.680"	Standard
	<b>70-0853</b>	Exhaust	35.56mm	1.400"	0.3100"	25°	3.655"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.460"	0.560"	0.760"	1.310"	0.560"	0.3105"	0.5010" / Std.	<b>70-0343</b>		
								+0.002"	<b>70-0344</b>	
								+0.015"	<b>70-4153</b>	

No seal required

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.330"	0.430"	0.765"	1.315"	0.560"	0.3105"	0.5010" / Std.	<b>70-0812</b>		
								+0.002"	<b>70-0813</b>	
								+0.004"	<b>70-0814</b>	
								+0.006"	<b>70-0815</b>	
							+0.015"	<b>70-4039</b>		

One seal supplied with each guide.

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type	
				A	B	C	D	Intake	Exhaust
5/16"	0.465"	0.550"	1	0.500"±0.010"	0.445"	0.230"	0.280"	Intake	Exhaust
	<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>			
	<b>71012-4</b>			Pkg. of 4		0%			
	<b>71012-8</b>			Pkg. of 8		0%			
	<b>71012-16</b>			Pkg. of 16		Less- 10%			
	<b>71012-50</b>			Pkg. of 50		Less- 15%			
<b>71012-100</b>			Pkg. of 100		Less- 20%				

# TRIUMPH® 865 2001-2010

## Valve Spring Kit • Lightweight Racing • Shim Under Conversion

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>70-70300</b>	Intake	.450"	1.415"	55#	191#	.450"	
		Exhaust						
	<b>Kit Includes</b>			8	Titanium Retainers	8	H. T. Steel Keeper Pr.	8
			8	H. T. Steel Basewashers	8	H. T. Steel Tappets	8	Adj. Shims 9.5mm OD

Spring Kit requires 9.5mm adjustment shims. See Kibblewhite® Adjustment Shim Section in back of catalog for more information.

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# TRIUMPH® 865 2001-2010



## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	70-70120	Intake	.450"	1.280"	52#	166#	.450"	
		Exhaust						
Kit Includes			8	Titanium Retainers	8	CrSi Valve Springs	8	H. T. Steel Basewashers

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.625"	0.670"	0.995"	0.995"	0.590"	0.2150"	0.5338" / Std.		70-70320
							+0.001"		70-70321
							+0.002"		70-70322
							+0.010"		70-70329

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71016-4			Pkg. of 4		0%		
	71016-8			Pkg. of 8		0%		
	71016-16			Pkg. of 16		Less- 10%		
	71016-50			Pkg. of 50		Less- 15%		
71016-100			Pkg. of 100		Less- 20%			

# TRIUMPH® VARIOUS 885cc-955cc 1997-2001

• T509 885cc 1997-1998

• T595 / 955I / 955cc 1997-2001

## Valve Spring Kit • Lightweight Racing • Shim Under Conversion

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	70-70035	Intake	.440"	1.375"	68#	201#	.440"	
		Exhaust						
Kit Includes			12	Titanium Retainers	12	H. T. Steel Keeper Pr.	12	CrSi Valve Springs
			12	H. T. Steel Basewashers	12	H. T. Steel Tappets	12	Spacers

Spring Kit requires 9.5mm adjustment shims. See Kibblewhite® Adjustment Shim Section in back of catalog for more information.

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	70-70026	Intake	.440"	1.375"	65#	204#	.440"	
		Exhaust						
Kit Includes			12	Titanium Retainers	12	H. T. Steel Keeper Pr.	12	CrSi Valve Springs
			12	H. T. Steel Basewashers	12	Spacers		

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# YAMAHA® RAPTOR™ 250 2008-2013

YAMAHA

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80550	Intake	.440"	1.240"	65#	192#	.440"	
		Exhaust						
Kit Includes			2	Titanium Retainers	2	CrSi Valve Springs	2	H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	80-80562	Intake	34.00mm	1.339"	0.2355"	15°	3.690"	Standard
	80-80563	Intake	35.00mm	1.378"	0.2355"	15°	3.670"	Oversize
	80-80566	Exhaust	28.50mm	1.122"	0.2350"	23°	3.640"	Standard

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust
		0.455"	0.490"	0.845"	1.245"	0.480"	0.2355"	0.4552" / Std.	80-80570	
								+0.002"	80-80572	
								+0.010"	80-80579	
		0.455"	0.490"	0.975"	1.295"	0.480"	0.2350"	0.4552" / Std.		80-80580
								+0.002"		80-80582
								+0.010"		80-80589

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.371"	0.480"	5	A	B	C	D	Intake
				0.385"±0.002"	0.341"	0.120"	0.255"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71017-2			Pkg. of 2		0%		
	71017-4			Pkg. of 4		0%		
	71017-8			Pkg. of 8		0%		
	71017-16			Pkg. of 16		Less- 10%		
	71017-50			Pkg. of 50		Less- 15%		
71017-100			Pkg. of 100		Less- 20%			

# YAMAHA® SR™ / TT™ / XT™ 250 1976-1981

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust
		0.645"	0.765"	0.970"	1.200"	0.905"	0.3135"	0.5535" / Std.		80-8100
								+0.001"		80-8101
								+0.010"	80-8110	

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# YAMAHA® SRX™ 250 / XT™ 250 / 350 1984-2000



YAMAHA

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.470"	0.610"	0.585"	0.850"	0.470"	0.2160"	0.4350" / Std.	<b>80-8030</b>	
								+0.002"	<b>80-8032</b>
							+0.015"	<b>80-8039</b>	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>		
	<b>71016-4</b>			Pkg. of 4		0%		
	<b>71016-8</b>			Pkg. of 8		0%		
	<b>71016-16</b>			Pkg. of 16		Less- 10%		
	<b>71016-50</b>			Pkg. of 50		Less- 15%		
<b>71016-100</b>			Pkg. of 100		Less- 20%			

# YAMAHA® TTR™ 250 1999-2006

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>80-80000</b>	Intake	.380"	1.165"	32#	75#	.380"	
		Exhaust						
<b>Kit Includes</b>			4	Titanium Retainers	4	CrSi Valve Springs	4	H. T. Steel Basewashers

The springs in these kits are wound from super clean chrome silicon wire that has been heat treated and shot peened. These components offer optimal fitment, keeping lateral movement to a minimum. They work together as a system, providing long life, and maximum performance.

# YAMAHA® WR™ / YZ™ 250F 2001-2013

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>80-80066</b>	Intake	.380"	1.105"	39#	86#	.380"	
		Exhaust						
	<b>Kit Includes</b>			3	In Titanium Retainers	3	In CrSi Valve Springs	3
			2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
			3	In Viton® Seals		2	Ex Viton® Seals	

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>80-80850</b>	Intake	.380"	1.105"	39#	86#	.380"	
	<b>Kit Includes</b>			3	In Titanium Retainers	3	In CrSi Valve Springs	3
			2	Outer In Black Diamond™ Valves		1	Center In Black Diamond™ Valves	

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# YAMAHA® WR™ / YZ™ 250F 2001-2013

YAMAHA

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>80-80073</b>	Intake	23.00mm	0.906"	0.1568"	25°	3.150"	Standard
	<b>80-80075</b>	Intake (Center)	23.00mm	0.906"	0.1568"	25°	3.095"	Standard
	<b>80-80077</b>	Exhaust	24.50mm	0.965"	0.1758"	25°	3.070"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	<b>80-80073T</b>	Intake	23.00mm	0.906"	0.1570"	25°	3.150"	Titanium	5NL-12112-30-00
	<b>80-80075T</b>	Intake (Center)	23.00mm	0.906"	0.1570"	25°	3.090"	Titanium	5NL-12111-30-00
	<b>80-80077T</b>	Exhaust	24.50mm	0.965"	0.1758"	25°	3.070"	Titanium	5NL-12121-10-00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.375"	.400"	0.520"	0.720"	.400"	0.1570"	0.3563" / Std.	<b>80-80080</b>	
							+0.001"	<b>80-80081</b>	
							+0.002"	<b>80-80082</b>	
							+0.010"	<b>80-80089</b>	
	0.405"	.430"	0.590"	0.790"	.440"	0.1760"	0.3958" / Std.		<b>80-80090</b>
							+0.001"		<b>80-80091</b>
							+0.002"		<b>80-80092</b>
							+0.010"		<b>80-80099</b>

## Valve Guide Seal Kits • High Performance

		Intake Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs			
		4.0mm	0.320"	0.355"	5	A	B	C	D
		0.285"±0.002"	0.245"	0.120"	0.215"				
		Exhaust Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs			
		4.5mm	0.331"	0.370"	4	A	B	C	D
		0.321"±0.002"	0.281"	0.120"	0.240"				
<b>Part Number</b>		<b>80-80440</b>		<b>Kit Includes</b>		3	Intake Viton® Seals	2	Exhaust Viton® Seals

# YAMAHA® WR™ / YZ™ 250F / FX 2014-2018

## Valve Spring Kit • Lightweight Racing for Titanium Valves

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>80-80900</b>	Intake	.425"	1.180"	48#	151#	.425"	
		Exhaust	.400"	1.125"	40#	119#	.400"	
	<b>Kit Includes</b>			2	In Titanium Retainers	2	In CrSi Valve Springs	2
			2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers

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# YAMAHA® WR™ / YZ™ 250F / FX 2014-2018



## Valve Spring Kit • Lightweight Racing for Stainless Valves

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-81400	Intake	.395"	1.150"	55#	151#	.395"	
		Exhaust	.370"	1.100"	46#	119#	.370"	
Kit Includes			2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
			2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers

## Intake Only • Titanium Valve Kits

	KPMI P/N	Type	*Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-80970	Intake	.425"	1.180"	48#	151#	.425"
	Kit Includes			2	Intake Titanium Retainers	2	Intake CrSi Valve Springs
			2	Intake H. T. Steel Basewashers	2	Intake Tensilite® Titanium Valves	

\* It may be necessary to use KPMI shortened valve guides (KPMI® #80-8092X & 80-8093X) to achieve higher than stock lift.

## Top End Service Kit For WR / YZ 250F 2014-2016

**NEW PRODUCTS**

	KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-81200	77.00mm	Intake	.395"	1.150"	55#	151#	.395"	
			Exhaust	.370"	1.100"	46#	119#	.370"	
	Kit Includes			2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
				2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
			2	In Black Diamond™ Valves	2	Ex Black Diamond™ Valves			
			1	High Compression Racing Piston Kit	1	Top End Gasket Kit			

**IMPORTANT NOTE:** The piston, rings, valves and pin clips in this kit are designed to work together as a system. They are **NOT COMPATIBLE** with O.E.M. components and should **ONLY** be used with the components in this KPMI® Top End Service Kit.

## Components • Replacement • Top End Service Kit For WR / YZ 250F 2014-2016

**NEW PRODUCTS**

KPMI P/N	Description	Specification
80-81400	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
80-80912	Intake, Standard Valve	Valves • Black Diamond™ • Black Nitronex Stems
80-80916	Exhaust, Standard Valve	Valves • Black Diamond™ • Black Nitronex Stems
80-81201	Gasket Kit	Includes: Base gasket, Engine case gasket, Exhaust gasket, Head gasket, Washers, Valve stem seals
80-81202	Piston Rings	1 complete set
80-81203	Piston Pin	1 piece
80-81204	Piston Pin Clips	1 pair
80-81205	Piston	Includes: Pin, Rings, Clips, Piston

These components are intended for use with the KPMI® Top End Kit and are not intended for OEM compatibility.

## Valves • Black Diamond™ • Black Nitronex Stems

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	80-80912	Intake	31.00mm	1.220"	0.1962"	18°	3.265"	Standard
	80-80916	Exhaust	25.00mm	0.984"	0.1760"	30°	3.235"	Standard

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N	
	80-80912T	Intake	31.00mm	1.220"	0.1962"	18°	3.280"	Titanium	1SM-12111-10-00
	80-80916T	Exhaust	25.00mm	0.984"	0.1760"	30°	3.235"	Titanium	1SM-12121-10-00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

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# YAMAHA® WR™ / YZ™ 250F / FX 2014-2018

## Valve Guides • C630 Bronze

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>Intake</b>	<b>Exhaust</b>
	0.350"	0.360"	0.535"	0.905"	0.430"	0.1962"	0.3957" / Std.	<b>80-80920</b>	
							+0.001"	<b>80-80921</b>	
							+0.002"	<b>80-80922</b>	
							+0.010"	<b>80-80929</b>	
	0.330"	0.340"	0.615"	1.015"	0.391"	0.1760"	0.3563" / Std.		<b>80-80930</b>
							+0.001"		<b>80-80931</b>
							+0.002"		<b>80-80932</b>
							+0.010"		<b>80-80939</b>

## Valve Guide Seal Kits • High Performance

	<b>Intake Stem Diameter</b>	<b>O.L.</b>	<b>Seal O.D.</b>	<b>Seal Style</b>	<b>Designed for these guide specs</b>			
					<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
	<b>Exhaust Stem Diameter</b>	<b>O.L.</b>	<b>Seal O.D.</b>	<b>Seal Style</b>	<b>Designed for these guide specs</b>			
					<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
<b>Part Number</b>	<b>80-80990</b>	<b>Kit Includes</b>		2	Intake Viton® Seals	2	Exhaust Viton® Seals	

# YAMAHA® YZ™ 250F 2019

## Valve Spring Kit • Lightweight Racing NEW PRODUCTS

	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>
	<b>80-82300</b>	Intake	.420"	1.315"	69#	187#	.420"
		Exhaust	.400"	1.160"	52#	149#	.400"
	<b>Kit Includes</b>	2	In Titanium Retainers	2	*In CrSi Valve Springs	2	In H. T. Steel Basewashers
2		Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	

\*The Intake springs for this kit include a progressively wound Outer Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.

## Intake Only • Steel Valve Conversion Kit NEW PRODUCTS

	<b>KPMI P/N</b>	<b>Type</b>	<b>**Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>
	<b>80-82350</b>	Intake	.420"	1.315"	69#	187#	.420"
		<b>Kit Includes</b>	2	Intake Titanium Retainers	2	*Intake CrSi Valve Springs	
	2		Intake H. T. Steel Basewashers	2	Intake Black Diamond™ Valves		

\*\*The Intake springs for this kit include a progressively wound Outer Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium NEW PRODUCTS

	<b>KPMI P/N</b>	<b>Type</b>	<b>Head Diameter</b>	<b>Stem Diameter</b>	<b>Tulip</b>	<b>O. L.</b>	<b>Material</b>	<b>Rep. OEM P/N</b>
	<b>80-82312T</b>	Intake	31.00mm	1.220"	0.1962"	18°	Titanium	B7B-12111-00-00
	<b>80-82316T</b>	Exhaust	25.00mm	0.984"	0.1760"	30°	Titanium	1SM-12121-10-00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

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# YAMAHA® YZ™ 250F 2019



## Valves • Black Diamond™ • Black Nitroreg Stems

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>80-82312</b>	Intake	31.00mm	1.220"	0.1962"	18°	3.245"	Standard
	<b>80-82316</b>	Exhaust	25.00mm	0.984"	0.1760"	30°	3.240"	Standard

## Valve Guides • C630 Bronze

**NEW PRODUCTS**

	A	B	C	D	E	F	G	Intake	Exhaust
	0.435"	0.470"	0.415"	0.745"	0.430"	0.1962"	0.3957" / Std. +0.001"	<b>80-82320</b> <b>80-82321</b>	
	0.330"	0.365"	0.590"	0.815"	0.391"	0.1760"	0.3563" / Std. +0.001"		<b>80-82330</b> <b>80-82331</b>
							+0.002"		<b>80-82332</b>
							+0.010"		<b>80-82329</b> <b>80-82339</b>

## Valve Guide Seal Kits • High Performance

**NEW PRODUCTS**

	Intake Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				
	5.0mm	0.350"	0.405"	4	A	B	C	D	
	Exhaust Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				
	4.5mm	0.331"	0.370"	4	A	B	C	D	
Part Number		<b>80-82345</b>		Kit Includes		2	Intake Viton® Seals	2	Exhaust Viton® Seals

# YAMAHA® YFM™ 350 / 400 1987-2014

- **BIG BEAR™** 350 1987-'99
- **GRIZZLY™** 350 2007-'14
- **RAPTOR™** 350 2004-'13
- **WARRIOR™** 350 1987-'04
- **WOLVERINE™** 350 1995-'09
- **BIG BEAR™** 400 2000-'12
- **KODIAK™** 400 1987-'06

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>80-8000</b>	Intake	.475"	1.325"	97#	266#	.475"
		Exhaust					
Kit Includes			2	Titanium Retainers	2	H. T. Steel Keepers Pr.	
			2	CrSi Valve Springs	2	H. T. Steel Basewashers	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>80-80012</b>	Intake	40.00mm	1.575"	0.2750"	23°	4.020"	Standard
	<b>80-80013</b>	Intake	41.00mm	1.614"	0.2750"	23°	4.020"	Oversize
	<b>80-80014</b>	Exhaust	34.00mm	1.339"	0.2745"	29°	3.945"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.475"	0.515"	1.100"	1.290"	0.520"	0.2750"	0.4942" / Std.	<b>80-8010</b>	
							+0.002"	<b>80-8012</b>	
							+0.010"	<b>80-8020</b>	

Use O.E.M. valve guide seal.

VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)

YAMAHA



# YAMAHA® WR™ / YZ™ 400F / 426F 1998-'02

YAMAHA

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-80100	Intake	.375"	1.105"	39#	85#	.375"
		Exhaust	.375"	1.105"	39#	85#	.375"
	Kit Includes	3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers
2		Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
3		In Viton® Seals		2	Ex Viton® Seals		

## Valves • White Diamond® • Stainless

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	80-8055H	Intake	27.00mm	1.063"	0.1765"	15°	3.320"	Standard
	80-8056H	Intake (Center)	27.00mm	1.063"	0.1765"	15°	3.280"	Standard
	80-8057H	Exhaust	28.00mm	1.102"	0.1955"	25°	3.220"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing White Diamond™ Valves.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.550"	0.580"	0.510"	0.640"	0.430"	0.1765"	0.3957" / Std.	80-80110	
							+0.002"	80-80112	
							+0.010"	80-80119	
	0.580"	0.610"	0.580"	0.695"	0.420"	0.1955"	0.3957" / Std.		80-80120
							+0.002"		80-80122
							+0.010"		80-80129

Use O.E.M. valve guide seal.

## Valve Guide Seal Kits • High Performance

	In / Ex Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs			
	A	B	C	D				
	4.5mm	0.331"	0.370"	4	0.321"±0.002"	0.281"	0.120"	0.240"
Part Number	80-80106		Kit Includes		3	Intake Viton® Seals	2	Exhaust Viton® Seals

## Keeper Set • O.E.M. Replacement

**NEW PRODUCTS**

		KPMI P/N	Style	Type	A	B	C	D	E	Quantity
		80-80130	Single Radius Bead	Intake	0.177"	6.0°	0.186"	0.221"	0.212"	3 Pr.
				Exhaust	0.196"	6.5°	0.181"	0.216"	0.270"	2 Pr.

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

# YAMAHA® VARIOUS 450cc 2003-'19

- WR™ 450 2003-'15
- YZ™ 450F 2003-'09
- YFZ™ 450 2004-'09
- YFZ™ 450X 2008-'11
- YFZ™ 450R 2009-'19
- YFZ™ 450R SE 2010-'19

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-80206	Intake	.380"	1.105"	39#	86#	.380"
		Exhaust	.380"	1.105"	39#	86#	.380"
	Kit Includes	3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers
2		Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
3		In Viton® Seals		2	Ex Viton® Seals		

**ORDER 650-557-2046**

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# YAMAHA® VARIOUS 450cc 2003-'19



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## Top End Service Kit For YZ 450F 2003-'05 / WR 450 2003-'06

**NEW PRODUCTS**

KPMI P/N	Piston Bore Size	Type		Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
		Intake	Exhaust						
80-81900	95.00mm	Intake	.380"	1.105"	39#	86#	.380"		
		Exhaust	.380"	1.105"	39#	86#	.380"		
		Kit Includes		3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers
		2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers		
		2	In Std. (Outer) White Diamond® Valves	1	In Std. (Center) White Diamond® Valves	2	Ex Std. White Diamond® Valves		
		3	In Viton® Seals		2	Ex Viton® Seals			
		1	High Compression Racing Piston Kit		1	Top End Gasket Kit			
<p><b>IMPORTANT NOTE:</b> The piston, rings, valves and pin clips in this kit are designed to work together as a system. They are <b>NOT COMPATIBLE with O.E.M. components</b> and should <b>ONLY</b> be used with the components in this KPMI® Top End Service Kit.</p>									

## Components • Replacement • Top End Service Kit For YZ 450F 2003-'05 / WR 450 2003-'06


**NEW PRODUCTS**

KPMI P/N	Description	Specification
80-80206	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
80-80213H	Intake, Standard (Outer) Valve	Valves • White Diamond® • Stainless
80-80215H	Intake, Standard (Center) Valve	Valves • White Diamond® • Stainless
80-80217H	Exhaust, Standard Valve	Valves • White Diamond® • Stainless
80-81901	Gasket Kit	<b>Includes:</b> Head Gasket 95mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Oil Line Washers (2), Head Drain Washers (1), Oil Line Washers 4 Req (1).
80-81902	*Piston Rings	1 complete set
80-81903	*Piston Pin	1 piece
80-81904	*Piston Pin Clips	1 pair
80-81905	*Piston	Includes: Pin, Rings, Clips, Piston

\*These components are intended for use with the KPMI® Top End Kit and are not intended for OEM compatibility.

## Top End Service Kit For YZ 450F 2006-'09 / WR 450 2007-'15

**NEW PRODUCTS**

KPMI P/N	Piston Bore Size	Type		Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
		Intake	Exhaust						
80-82000	95.00mm	Intake	.380"	1.105"	39#	86#	.380"		
		Exhaust	.380"	1.105"	39#	86#	.380"		
		Kit Includes		3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers
		2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers		
		2	In Std. (Outer) White Diamond® Valves	1	In Std. (Center) White Diamond® Valves	2	Ex Std. White Diamond® Valves		
		3	In Viton® Seals		2	Ex Viton® Seals			
		1	High Compression Racing Piston Kit		1	Top End Gasket Kit			
<p><b>IMPORTANT NOTE:</b> The piston, rings, valves and pin clips in this kit are designed to work together as a system. They are <b>NOT COMPATIBLE with O.E.M. components</b> and should <b>ONLY</b> be used with the components in this KPMI® Top End Service Kit.</p>									

## Components • Replacement • Top End Service Kit For YZ 450F 2006-'09 / WR 450 2007-'15

**NEW PRODUCTS**

KPMI P/N	Description	Specification
80-80206	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
80-80213H	Intake, Standard (Outer) Valve	Valves • White Diamond® • Stainless
80-80215H	Intake, Standard (Center) Valve	Valves • White Diamond® • Stainless
80-80217H	Exhaust, Standard Valve	Valves • White Diamond® • Stainless
80-82001	Gasket Kit	<b>Includes:</b> Head Gasket 95mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Oil Line Washers (2), Head Drain Washers (1), Oil Line Washers 4 Req (1).
80-82002	*Piston Rings	1 complete set
80-82003	*Piston Pin	1 piece
80-82004	*Piston Pin Clips	1 pair
80-82005	*Piston	Includes: Pin, Rings, Clips, Piston

\*These components are intended for use with the KPMI® Top End Kit and are not intended for OEM compatibility.

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# YAMAHA® VARIOUS 450cc 2003-'19

YAMAHA

## Cylinder Head Service Kit for YZ450F 2003-'05 / WR450 2003-'06 NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-82050	Intake	.380"	1.105"	39#	86#	.380"	
		Exhaust	.380"	1.105"	39#	86#	.380"	
	Kit Includes	3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers	
		2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
		3	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves			
		3	In Std. C630 Valves Guides	2	Ex Std. C630 Valves Guides			
1		Top End Gasket Kit						

## Components • Replacement • Cylinder Head Service Kit for YZ450F 2003-'05 / WR450 2003-'06 NEW PRODUCTS

KPMI P/N	Description	Specification
80-80206	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
80-80213H	Intake, Standard (Outer) Valve	Valve • White Diamond® • Stainless
80-80215H	Intake, Standard (Center) Valve	Valve • White Diamond® • Stainless
80-80217H	Exhaust, Standard Valve	Valve • White Diamond® • Stainless
80-80220	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
80-80230	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
80-82051	Gasket Kit	<b>Includes:</b> Head Gasket 95mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Oil Line Washers (2), Head Drain Washers (1), Oil Line Washers 4 Req (1).

## Cylinder Head Service Kit for YZ450F 2006-'09 / WR450 2007-'15 / YFZ450R 2009-'16 NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-82060	Intake	.380"	1.105"	39#	86#	.380"	
		Exhaust	.380"	1.105"	39#	86#	.380"	
	Kit Includes	3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers	
		2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
		3	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves			
		3	In Std. C630 Valves Guides	2	Ex Std. C630 Valves Guides			
1		Top End Gasket Kit						

## Components • Replacement • Cylinder Head Service Kit for YZ450F 2006-'09 / WR450 2007-'15 / YFZ450R 2009-'16 NEW PRODUCTS

KPMI P/N	Description	Specification
80-80206	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
80-80213H	Intake, Standard (Outer) Valve	Valve • White Diamond® • Stainless
80-80215H	Intake, Standard (Center) Valve	Valve • White Diamond® • Stainless
80-80217H	Exhaust, Standard Valve	Valve • White Diamond® • Stainless
80-80220	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
80-80230	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
80-82061	Gasket Kit	<b>Includes:</b> Head Gasket 95mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Oil Line Washers (2), Drain Plug Gasket (1), Oil Line Washers (4)



# YAMAHA® VARIOUS 450cc 2003-'19



- WR™ 450 2003-'15
- YZ™ 450F 2003-'09
- YFZ™ 450 2004-'09
- YFZ™ 450X 2008-'11
- YFZ™ 450R 2009-'19
- YFZ™ 450R SE 2010-'19

## Intake Only • Stainless Valve Conversion Kits

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>80-80950</b>	Intake	.380"	1.105"	39#	86#	.380"
	Kit Includes		3	In Titanium Retainers	3	In CrSi Valve Springs	3
			3	In Viton® Seals	3	In White Diamond® Valves	

## Valves • White Diamond® • Stainless

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	<b>80-80213H</b>	Intake	27.00mm	1.063"	0.1765"	15°	3.040"	Standard
	<b>80-80214H</b>	Intake	28.00mm	1.102"	0.1765"	15°	3.030"	Oversize
	<b>80-80215H</b>	Intake	27.00mm	1.063"	0.1765"	15°	3.000"	Std.(Center)
	<b>80-80216H</b>	Intake	28.00mm	1.102"	0.1765"	15°	2.990"	OS (Center)
	<b>80-80217H</b>	Exhaust	28.00mm	1.102"	0.1956"	20°	2.955"	Standard
<b>80-80218H</b>	Exhaust	29.00mm	1.142"	0.1956"	20°	2.945"	Oversize	

Must use Kibblewhite® Lightweight Valve Spring Kits when installing White Diamond® Valves.

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N	
	<b>80-80213T</b>	Intake	27.00mm	1.063"	0.1765"	15°	3.030"	Titanium	5TA-12112-00-00
	<b>80-80215T</b>	Intake (Center)	27.00mm	1.063"	0.1765"	15°	2.995"	Titanium	5TA-12111-00-00
	<b>80-80217T</b>	Exhaust	28.00mm	1.102"	0.1957"	20°	2.950"	Titanium	5TA-12121-00-00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.350"	0.385"	0.480"	0.680"	0.430"	0.1768"	0.3957" / Std.	<b>80-80220</b>	
							+0.001"	<b>80-80221</b>	
							+0.002"	<b>80-80222</b>	
							+0.010"	<b>80-80229</b>	
	0.350"	0.385"	0.510"	0.680"	0.430"	0.1961"	0.3957" / Std.		<b>80-80230</b>
						+0.001"		<b>80-80231</b>	
						+0.002"		<b>80-80232</b>	
						+0.010"		<b>80-80239</b>	

## Valve Guide Seal Kits • High Performance

	In / Ex Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs			
	4.5mm /	0.331"	0.370"	4	A	B	C	D
Part Number	<b>80-80710</b>	Kit Includes	3	Intake Viton® Seals	2	Exhaust Viton® Seals		

## Keeper Set • O.E.M. Replacement NEW PRODUCTS

	KPMI P/N	Style	Type	A	B	C	D	E	Quantity
	<b>80-80715</b>	Single Radius Bead	Intake	0.177"	6.0°	0.186"	0.221"	0.212"	3 Pr.
			Exhaust	0.196"	6.5°	0.181"	0.216"	0.270"	2 Pr.

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

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# YAMAHA® YZ™ 450F 2010-2013

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80750	Intake	.450"	1.185"	46#	155#	.450"	
		Exhaust	.450"	1.185"	46#	155#	.450"	
Kit Includes			2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
			2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers

The use of KPMI® guides(#80-8077X and #80-8078X) may be necessary when using higher than stock lift cams.

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-81050	Intake	.450"	1.185"	46#	155#	.450"
	Kit Includes			2	Intake Titanium Retainers	2	Intake CrSi Valve Springs
			2	Intake H. T. Steel Basewashers	2	Intake Black Diamond™ Valves	

The use of KPMI® guides(#80-8077X and #80-8078X) may be necessary when using higher than stock lift cams.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	80-80762	Intake	36.00mm	1.417"	0.2158"	20°	3.280"	Standard
	80-80763	Intake	37.00mm	1.457"	0.2158"	20°	3.280"	Oversize
	80-80766	Exhaust	30.00mm	1.181"	0.2155"	20°	3.385"	Standard
	80-80767	Exhaust	31.00mm	1.220"	0.2155"	20°	3.385"	Oversize

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N	
	80-80762T	Intake	36.00mm	1.417"	0.2160"	20°	3.280"	Titanium	33D-12111-00-00
	80-80766T	Exhaust	30.00mm	1.181"	0.2155"	20°	3.375"	Titanium	33D-12121-00-00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.540"	0.540"	0.560"	0.775"	0.432"	0.2160"	0.4352" / Std.	80-80770	
							+0.001"	80-80771	
							+0.002"	80-80772	
							+0.010"	80-80779	
	0.390"	0.390"	0.760"	1.030"	0.432"	0.2155"	0.4352" Std.		80-80780
							+0.001"		80-80781
							+0.002"		80-80782
							+0.010"		80-80789

# YAMAHA® YZ™ 450F 2010-2013



## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
6.0mm	0.333"	0.455"	2	0.365"±0.002"	0.325"	0.120"	0.235"	Exhaust
		<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>	
		71040-4			Pkg. of 4		0%	
		71040-8			Pkg. of 8		0%	
		71040-16			Pkg. of 16		Less- 10%	
		71040-50			Pkg. of 50		Less- 15%	
		71040-100			Pkg. of 100		Less- 20%	

# YAMAHA® YZ™ 450F 2014-'17 / 450FX 2016-'18

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80750	Intake	.450"	1.185"	46#	155#	.450"	
		Exhaust	.450"	1.185"	46#	155#	.450"	
<b>Kit Includes</b>			2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
			2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers

The use of KPMI® guides(#80-8077X and #80-8078X) may be necessary when using higher than stock lift cams.

## Cylinder Head Service Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-82070	Intake	.450"	1.185"	46#	155#	.450"	
		Exhaust	.450"	1.185"	46#	155#	.450"	
<b>Kit Includes</b>			2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
			2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
			2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
			2	In Std. C630 Valves Guides	2	Ex Std. C630 Valves Guides		
			1	Top End Gasket Kit				

## Components • Replacement • Cylinder Head Service Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
80-80750	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
80-80872	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
80-80876	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
80-80770	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
80-80780	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
80-82071	Gasket Kit	<b>Includes:</b> Head Gasket 97mm (1), Valve Stem Seals (4), Base Gasket (1), Cam Chain Tensioner Gasket (1), Exhaust Gasket (1)

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# YAMAHA® YZ™ 450F 2014-'17 / 450FX 2016-'18

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	*Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>80-81100</b>	Intake	.450"	1.185"	46#	155#	.450"	
	<b>Kit Includes</b>		2	Intake Titanium Retainers		2	Intake CrSi Valve Springs	
			2	Intake H. T. Steel Basewashers		2	Intake Black Diamond™ Valves	

The use of KPMI® guides(#80-8077X and #80-8078X) may be necessary when using higher than stock lift cams.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Head Height	Stem Diameter	Tulip	O. L.	Remarks
	<b>80-80872</b>	Intake	37.00mm	1.457"	0.2158"	20°	3.280"	Standard
	<b>80-80876</b>	Exhaust	30.50mm	1.201"	0.2155"	28°	3.380"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter	Head Height	Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	<b>80-80872T</b>	Intake	37.00mm	1.457"	0.2160"	18°	3.280"	Titanium	1SL-12111-00-00
	<b>80-80876T</b>	Exhaust	30.50mm	1.201"	0.2155"	28°	3.375"	Titanium	1SL-12121-00-00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.540"	0.540"	0.560"	0.775"	0.432"	0.2160"	0.4352" / Std.	<b>80-80770</b>	
							+0.001"	<b>80-80771</b>	
							+0.002"	<b>80-80772</b>	
							+0.010"	<b>80-80779</b>	
	0.390"	0.390"	0.760"	1.030"	0.432"	0.2155"	0.4352" Std.		<b>80-80780</b>
							+0.001"		<b>80-80781</b>
							+0.002"		<b>80-80782</b>
							+0.010"		<b>80-80789</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.333"	0.455"	2	A	B	C	D	Intake
				0.365"±0.002"	0.325"	0.120"	0.235"	Exhaust
	<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>		
	<b>71040-4</b>			Pkg. of 4		0%		
	<b>71040-8</b>			Pkg. of 8		0%		
	<b>71040-16</b>			Pkg. of 16		Less- 10%		
	<b>71040-50</b>			Pkg. of 50		Less- 15%		
<b>71040-100</b>			Pkg. of 100		Less- 20%			

# YAMAHA® SR™ / TT™ / XT™ 500 1976-1981



YAMAHA

## Valve Spring Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-81500	Intake	.515"	1.690"	117#	254#	.515"
		Exhaust					
Kit Includes			2	H.T. Steel Retainers	2	H.T. Steel Keeper Pr.	
			2	CrSi Valve Springs	2	H.T. Steel Spring Shims	

This kit supersedes KPMI® spring only kit **80-0514**, which is no longer available

## Retainer Set • H. T. Steel

	KPMI P/N	Type	Material				
	80-80350	Intake	H.T. Steel				
		Exhaust					
Set Includes		2	H.T. Steel Retainers		2	H. T. Steel Keepers Pr.	

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.645"	0.765"	0.970"	1.200"	0.905"	0.3135"	0.5535" / Std.	<b>80-8100</b>		
								+0.001"	<b>80-8101</b>	
								+0.010"	<b>80-8110</b>	

Use O.E.M. valve guide seal

# YAMAHA® SR™ / TT™ / XT™ 550 / 600 1982-1995

## Valve Spring Kit • High Lift

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80241	Intake	.438"	1.220"	70#	197#	.438"	
		Exhaust						
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	H. T. Steel Basewashers

# YAMAHA® XJ™ 650 / 700 1980-1984

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80200	Intake	.440"	1.335"	75#	200#	.440"	
		Exhaust						
Kit Includes			8	Titanium Retainers	8	CrSi Valve Springs	8	H. T. Steel Keeper Pr.

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# YAMAHA® XS™ 650 1970-1983

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## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-80340	Intake	.515"	1.450"	100#	228#	.515"
		Exhaust					
Kit Includes			4	Titanium Retainers	4	H. T. Steel Keeper Pr.	
			4	CrSi Valve Springs	4	H. T. Steel Basewashers	

Must use Kibblewhite® Guides with high lift cams. This kit is supplied with radiused bead keepers and must be used with radius groove valves

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	80-80380	Intake	41.15mm	1.620"	0.3145"	25°	4.105"	Standard
	80-80381	Intake	42.15mm	1.659"	0.3145"	25°	4.085"	Oversize
	80-80383	Exhaust	35.15mm	1.384"	0.3140"	29°	4.030"	Standard
	80-80384	Exhaust	36.15mm	1.423"	0.3140"	29°	4.010"	Oversize

These valves utilize a radiused keeper groove. To install in models prior to 1973, use with radius beaded keepers #51012-4

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.430"	0.550"	0.840"	1.290"	0.905"	0.3140"	0.5930" / Std.	80-80370		
									+0.001"	80-80371	
									+0.002"	80-80372	
								+0.010"	80-80379		
		0.430"	0.550"	1.150"	1.550"	0.905"	0.3140"	0.5930" / Std.		80-80360	
									+0.001"		80-80361
									+0.002"		80-80362
								+0.010"		80-80369	

Use O.E.M. valve guide seal

# YAMAHA® VARIOUS 660'S 2001-2008

- GRIZZLY™ 2002-2008
- RAPTOR™ 2001-2005
- RHINO™ 2004-2007

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-80030	Intake	.450"	1.205"	55#	145#	.345"
		Exhaust					
Kit Includes			5	Titanium Retainers	5	CrSi Valve Springs	
			3	In H. T. Steel Basewashers	2	Ex H. T. Steel Basewashers	

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# YAMAHA® VARIOUS 660'S 2001-2008



- GRIZZLY™ 2002-2008
- RAPTOR™ 2001-2005
- RHINO™ 2004-2007

## Valves • Black Diamond™ • Black Nitroeng Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	80-80060	Intake	30.00mm	1.181"	0.2355"	15°	3.960"	Standard
	80-80061	Intake	31.00mm	1.220"	0.2355"	15°	3.960"	Oversize
	80-80063	Exhaust	32.00mm	1.260"	0.2348"	25°	3.650"	Standard
	80-80064	Exhaust	33.00mm	1.299"	0.2348"	25°	3.650"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.315"	0.350"	1.125"	1.255"	0.495"	0.2345"	0.4550" / Std.	80-80040	
							+0.001"	80-80041	
							+0.002"	80-80042	
							+0.010"	80-80049	
	0.440"	0.475"	0.860"	0.990"	0.495"	0.2348"	0.4550" / Std.		80-80050
							+0.001"		80-80051
							+0.002"		80-80052
							+0.010"		80-80059

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.371"	0.480"	5	A	B	C	D	Intake
				0.385"±0.002"	0.341"	0.120"	0.255"	Exhaust
			Part Number	Quantity		Quantity Discount		
			71017-4	Pkg. of 4		0%		
			71017-8	Pkg. of 8		0%		
			71017-16	Pkg. of 16		Less- 10%		
			71017-50	Pkg. of 50		Less- 15%		
		71017-100	Pkg. of 100		Less- 20%			

## Keeper Set • O.E.M. Replacement

NEW PRODUCTS

		KPMI P/N	Style	Type	A	B	C	D	E	Quantity
		51028-4	Single Radius Bead	Intake Exhaust	0.235"	7.0°	0.075"	0.238"	0.295"	4 Pr.

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

# YAMAHA® VARIOUS 700'S 2006-2019

- GRIZZLY™ 2007-2015
- RAPTOR™ 2006-2018
- RHINO™ 2008-2013
- VIKING™ 2014-2019

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80410	Intake	.480"	1.420"	54#	195#	.480"	
		Exhaust						
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	H. T. Steel Basewashers

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# YAMAHA® VARIOUS 700'S 2006-2019

- GRIZZLY™ 2007-2015
- RAPTOR™ 2006-2018
- RHINO™ 2008-2013
- VIKING™ 2014-2019

## Cylinder Head Service Kit **NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-82080	Intake	.480"	1.420"	54#	195#	.480"
		Exhaust					
	Kit Includes	4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
2		In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves			
4		In / Ex Std. C630 Valves Guides	1	Top End Gasket Kit			

## Components • Replacement • Cylinder Head Service Kit **NEW PRODUCTS**

KPMI P/N	Description	Specification
80-80410	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
80-80430	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
80-80433	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
80-80420	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
80-82081	Gasket Kit	<b>Includes:</b> Head Gasket 103mm Bore (1), Base Gasket, Exhaust Gasket (2), Throttle Body O-ring (1), Water Pump O-ring (1), Thermostat O-ring (1), Cam Cover O-ring (1), Valve Cover O-rings (2), Valve Seal (4), Cam Chain Tensioner Gasket (1)

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	80-80430	Intake	38.00mm	1.496"	0.2355"	11°	4.025"	Standard
	80-80431	Intake	39.00mm	1.535"	0.2355"	11°	4.010"	Oversize
	80-80432	Intake	40.00mm	1.575"	0.2355"	11°	4.010"	Oversize (+2mm)
	80-80433	Exhaust	32.00mm	1.260"	0.2350"	25°	3.785"	Standard
	80-80434	Exhaust	33.00mm	1.299"	0.2350"	25°	3.770"	Oversize
	80-80435	Exhaust	34.00mm	1.339"	0.2350"	25°	3.770"	Oversize (+2mm)

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.485"	0.525"	0.790"	1.110"	0.495"	0.2350"	0.4550" / Std.		80-80420
							+0.001"		80-80421
							+0.002"		80-80422
							+0.010"		80-80429

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.371"	0.480"	5	A	B	C	D	Intake
				0.385"±0.002"	0.341"	0.120"	0.255"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71017-4			Pkg. of 4		0%		
	71017-8			Pkg. of 8		0%		
	71017-16			Pkg. of 16		Less- 10%		
	71017-50			Pkg. of 50		Less- 15%		
71017-100			Pkg. of 100		Less- 20%			

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# YAMAHA® VARIOUS 700'S 2006-2019

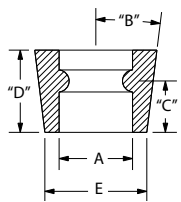



- GRIZZLY™ 2007-2015
- RAPTOR™ 2006-2018

- RHINO™ 2008-2013
- VIKING™ 2014-2019

## Keeper Set • O.E.M. Replacement

**NEW PRODUCTS**


		KPMI P/N	Style	Type	A	B	C	D	E	Quantity
		<b>51028-4</b>	Single Radius Bead	Intake	0.235"	7.0°	0.075"	0.238"	0.295"	4 Pr.
			Exhaust							

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.


# YAMAHA® YXZ 1000R 2016-2019

## Valve Spring Kit • Lightweight Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>80-81300</b>	Intake	.445"	1.300"	53#	167#	.445"	
	Exhaust							
<b>Kit Includes</b>			12	Titanium Retainers	12	CrSi Valve Springs	12	H. T. Steel Basewashers

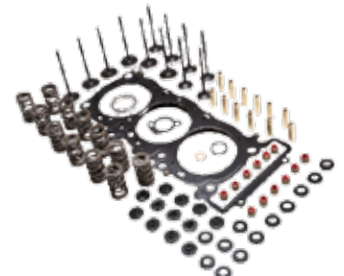
  

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>80-81700</b>	Intake	.445"	1.300"	53#	167#	.445"	
	Exhaust							
<b>Kit Includes</b>			12	H. T. Steel Retainers	12	CrSi Valve Springs	12	H. T. Steel Basewashers

It may be necessary to use **KPMI® Shortened Valve Guides # 80-81320**, to achieve higher stock lift.

## Cylinder Head Service Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>80-82090</b>	Intake	.445"	1.300"	53#	167#	.445"	
	Exhaust							
<b>Kit Includes</b>			12	In / Ex H. T. Steel Retainers	12	In / Ex CrSi Valve Springs	12	In / Ex H. T. Steel Basewashers
			6	In Std. Black Diamond™ Valves	6	Ex Std. Black Diamond™ Valves		
			12	In / Ex Std. C630 Valves Guides	1	Top End Gasket Kit		

## Components • Replacement • Cylinder Head Service Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
<b>80-81700</b>	Spring Kit	<b>Includes:</b> H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers
<b>80-81312</b>	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
<b>80-81316</b>	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
<b>80-81320</b>	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
<b>80-82091</b>	Gasket Kit	<b>Includes:</b> Head Gasket 82.5mm (1), Valve Stem Seals (12), Engine Case Gasket (1), Exhaust Gasket (3), O-ring (1), Copper Washer (1)


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# YAMAHA® YXZ 1000R 2016-2019

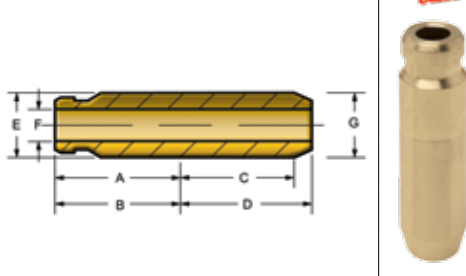
## Valves • Black Diamond™ • Black Nitroreg Stems

**NEW PRODUCTS**

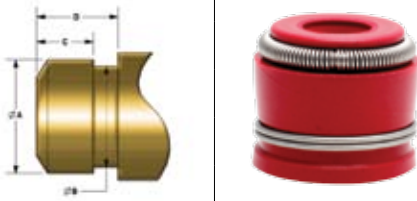
	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>80-81312</b>	Intake	31.00mm	1.220"	0.1765"	15°	3.495"	Standard
	<b>80-81313</b>	Intake	32.00mm	1.260"	0.1765"	15°	3.495"	Oversize
	<b>80-81316</b>	Exhaust	26.00mm	1.024"	0.1760"	25°	3.470"	Standard
	<b>80-81317</b>	Exhaust	27.00mm	1.063"	0.1760"	25°	3.470"	Oversize

## Valve Guides • C630 Bronze

**NEW PRODUCTS**

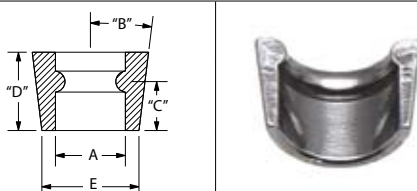
	A	B	C	D	E	F	G	Intake	Exhaust
	0.530"	0.530"	0.585"	0.750"	0.354"	0.1760"	0.3564" / Std.		<b>80-81320</b>
								+0.001"	<b>80-81321</b>
								+0.002"	<b>80-81322</b>
								+0.004"	<b>80-81324</b>
								+0.010"	<b>80-81329</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type	
4.5mm	0.331"	0.370"	4	A	B	C	D	Intake	
				0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust	
			<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
			<b>71014-4</b>				Pkg. of 4		0%
			<b>71014-8</b>				Pkg. of 8		0%
			<b>71014-12</b>				Pkg. of 12		0%
			<b>71014-16</b>				Pkg. of 16		Less- 10%
			<b>71014-50</b>				Pkg. of 50		Less- 15%
			<b>71014-100</b>				Pkg. of 100		Less- 20%

## Keeper Set • O.E.M. Replacement

**NEW PRODUCTS**

	KPMI P/N	Style	Type	A	B	C	D	E	Quantity
	<b>80-81330</b>	Single Radius Bead	Intake	0.177"	6.0°	0.186"	0.221"	0.212"	12 Pr.
			Exhaust						


Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

For all the applications available for Kibblewhite's Yamaha® YXZ 1000R line of products, please refer online to the Yamaha® section of the [www.kpmi.us](http://www.kpmi.us) website, under **ATV / UTV**


# YAMAHA® FJ™ 1100/ 1200 1984-1993




## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-1017	Intake	.500"	1.390"	60#	210#	.500"
		Exhaust					
Kit Includes			16	CrSi Valve Springs			

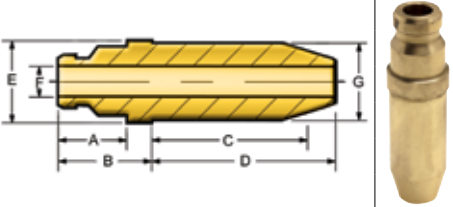
## Retainer Set • Shim On Bottom Conversion • Titanium

	KPMI P/N	Type	Material				
	80-1019	Intake	Titanium				
		Exhaust					
Set Includes		16	Titanium Retainers	16	H. T. Steel Keepers Pr.		
Retainer may not be used separately as O.E.M. replacement. Use of Shim On Bottom conversion Tappet, PN 80-1020, is required when using these retainers. Retainers require the use of 9.5mm adjustment shim; see KPMI® Adjustment Shim Section in back of catalog for more information.							

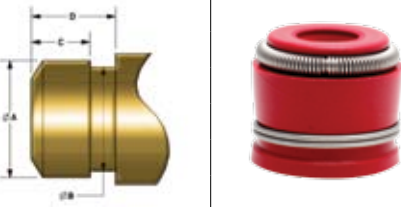
## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	80-8120	Intake	29.00mm	1.142"	0.2160"	20°	3.700"	Standard
	80-8122	Intake	30.50mm	1.201"	0.2160"	20°	3.690"	Oversize
	80-8121	Exhaust	25.00mm	0.984"	0.2155"	20°	3.690"	Standard
	80-8123	Exhaust	26.00mm	1.024"	0.2155"	20°	3.690"	Oversize

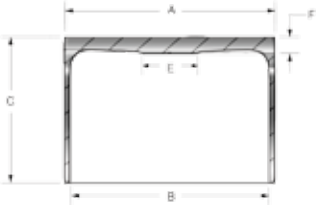
## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.470"	0.610"	0.695"	0.960"	0.470"	0.2160"	0.4350" / Std.		80-4172
							+0.002"		80-4173
							+0.004"		80-4180
							+0.006"		80-4181
							+0.015"		80-4174

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71016-4			Pkg. of 4		0%		
	71016-8			Pkg. of 8		0%		
	71016-16			Pkg. of 16		Less- 10%		
	71016-50			Pkg. of 50		Less- 15%		
71016-100			Pkg. of 100		Less- 20%			

## Tappets • Shim On Bottom Conv. • H.T. Steel


	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	80-1020	Intake	None	28.00mm	1.1016"	1.040"	0.860"	0.310"	0.135"	Pkg. of 16
		Exhaust								
Use of Shim On Bottom conversion Retainer Set, PN 80-1019, is required when using these tappets. Refer to KPMI® Tappet Section, in back of catalog, when selecting other size tappets.										




# YAMAHA® V-MAX™ 1985-2007

YAMAHA

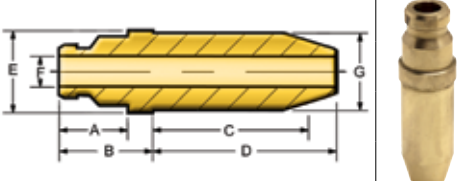
## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-8021	Intake	.450"	1.375"	65#	198#	.450"
		Exhaust					
Kit Includes			16	CrSi Valve Springs			

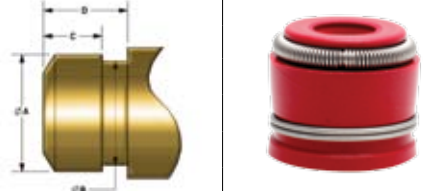
## Retainer Set • Shim On Bottom Conversion • Titanium

	KPMI P/N	Type	Material			
	80-8023	Intake	Titanium			
		Exhaust				
Set Includes		16	Titanium Retainers	16	H. T. Steel Keepers Pr.	
Retainer may not be used separately as O.E.M. replacement. Use of Shim On Bottom conversion <b>Tappet, PN 80-1020</b> , is required when using these retainers. Retainers require the use of 9.5mm adjustment shim; see KPMI® Adjustment Shim Section in back of catalog for more information.						

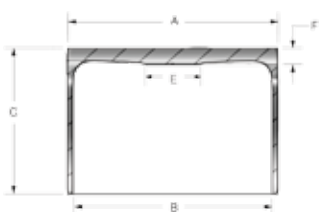
## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.470"	0.610"	0.585"	0.850"	0.470"	0.2160"	0.4350" / Std.	<b>80-8030</b>		
								+0.002"	<b>80-8032</b>	
								+0.015"	<b>80-8039</b>	

## Valve Guide Seals • Viton®


Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
		Part Number		Quantity		Quantity Discount		
		<b>71016-4</b>		Pkg. of 4		0%		
		<b>71016-8</b>		Pkg. of 8		0%		
		<b>71016-16</b>		Pkg. of 16		Less- 10%		
		<b>71016-50</b>		Pkg. of 50		Less- 15%		
		<b>71016-100</b>		Pkg. of 100		Less- 20%		

## Tappets • Shim On Bottom Conv. • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	80-1020	Intake	None	28.00mm	1.1016"	1.040"	0.860"	0.310"	0.135"	Pkg. of 16
		Exhaust								
Use of Shim On Bottom conversion <b>Retainer Set, PN 80-1023</b> , is required when using these tappets. Refer to <b>KPMI® Tappet Section</b> , in back of catalog, when selecting other size tappets.										

# YAMAHA® XS™ 1100 1978-1981

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-0449	Intake	.440"	1.275"	85#	215#	.440"
		Exhaust					
Kit Includes			8	CrSi Valve Springs			

Note: Use OEM Retainers.

**ORDER 650-557-2046**

# YAMAHA® YZF™ R1 1998-2003



YAMAHA

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80250	Intake	.380"	1.200"	28#	74#	.380"	
		Exhaust	.380"	1.120"	38#	84#	.380"	
Kit Includes			12	In Titanium Retainers	20	CrSi Valve Springs	12	In H. T. Steel Basewashers
			8	Ex Titanium Retainers	8	Ex Viton® Seals	8	Ex H. T. Steel Basewashers

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80394	Intake	.350"	1.370"	30#	90#	.350"	
		Exhaust	.315"	1.415"	44#	95#	.315"	
Kit Includes			12	In CrSi Valve Springs	8	Ex. CrSi Valve Springs	8	Ex H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	80-80280	Intake	23.00mm	0.906"	0.1568"	15°	3.620"	Standard
	80-80281	Intake	23.50mm	0.925"	0.1568"	15°	3.620"	Oversize
	80-80283	Intake	23.00mm	0.906"	0.1568"	15°	3.565"	Standard (Center)
	80-80284	Intake	23.50mm	0.925"	0.1568"	15°	3.565"	Oversize (Center)
	80-80286	Exhaust	24.50mm	0.965"	0.1757"	25°	3.505"	Standard
80-80287	Exhaust	25.00mm	0.984"	0.1757"	25°	3.505"	Oversize	

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.580"	0.610"	0.520"	0.710"	0.381"	0.1568"	0.3563" / Std	80-80190	
							+0.001"	80-80191	
							+0.010"	80-80199	
Intake - Use O.E.M valve guide seal									
	0.580"	0.610"	0.510"	0.690"	0.420"	0.1757"	0.3955" / Std.		80-80180
							+0.001"		80-80181
							+0.010"		80-80189

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Exhaust
				0.321"±0.005"	0.281"	0.120"	0.240"	
				Part Number		Quantity		Quantity Discount
				71014-4		Pkg. of 4		0%
				71014-8		Pkg. of 8		0%
				71014-16		Pkg. of 16		Less- 10%
				71014-50		Pkg. of 50		Less- 15%
			71014-100		Pkg. of 100		Less- 20%	



# YAMAHA® YZF™ R1 2004-2006

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80500	Intake	.340"	1.325"	48#	118#	.340"	
		Exhaust						
Kit Includes			12	In Titanium Retainers	20	CrSi Valve Springs	12	In H. T. Steel Basewashers
			8	Ex Titanium Retainers	8	Ex H. T. Steel Basewashers		

# YAMAHA® YZF™ R1 2007-2008

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80650	Intake	.400"	1.410"	50#	188#	.400"	
		Exhaust	.400"	1.280"	66#	167#	.400"	
Kit Includes			8	In Titanium Retainers	8	Ex Titanium Retainers	8	In CrSi Valve Springs
			8	Ex CrSi Valve Springs	8	In H. T. Steel Basewashers		
			8	In H. T. Steel Basewashers	8	Ex H. T. Steel Basewashers		

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	80-80666	Exhaust	25.00mm	0.989"	0.1760"	15°	3.565"	Standard
	80-80667	Exhaust	26.00mm	1.024"	0.1760"	15°	3.565"	Oversize

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valves • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	80-80662T	Intake	31.00mm	1.220"	0.1960"	25°	3.590"	Standard
	80-80663T	Intake	32.00mm	1.260"	0.1960"	25°	3.590"	Oversize

## Keeper Set • O.E.M. Replacement

**NEW PRODUCTS**

	KPMI P/N	Style	Type	A	B	C	D	E	Quantity
	80-80660	Single Radius Bead	Intake	0.177"	6.0°	0.186"	0.221"	0.212"	8 Pr.
			Exhaust	0.196"	6.5°	0.181"	0.216"	0.270"	8 Pr.

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

# YAMAHA® VARIOUS 1049cc TRIPLES 2008-'15



• FX NYTRO™ 2008-2014

• SRVIPER™ 2014-2015

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-80450	Intake	.445"	1.300"	53#	162#	.445"
		Exhaust					
Kit Includes	12	Titanium Retainers	12	CrSi Valve Springs	12	H. T. Steel Basewashers	

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-81800	Intake	.445"	1.300"	53#	162#	.445"
		Exhaust					
Kit Includes	12	H. T. Steel Retainers	12	CrSi Valve Springs	12	H. T. Steel Basewashers	

It may be necessary to use KPMI® Shortened Valve Guides # 80-80470, to achieve higher stock lift.

## Valves • Black Diamond™ • Black Nitroeg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	80-80462	Intake	31.00mm	1.220"	0.1765"	15°	3.495"	Standard
	80-80463	Intake	32.00mm	1.260"	0.1765"	15°	3.495"	Oversize
	80-80466	Exhaust	26.00mm	1.024"	0.1760"	25°	3.470"	Standard
	80-80467	Exhaust	27.00mm	1.063"	0.1760"	25°	3.470"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.530"	0.530"	0.585"	0.750"	0.354"	0.1760"	0.3564" / Std.	80-80470		
								+0.001"	80-80471	
								+0.002"	80-80472	
								+0.004"	80-80474	
							+0.010"	80-80479		

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type	
4.5mm	0.331"	0.370"	4	A	B	C	D	Intake	
				0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust	
	Part Number			Quantity		Quantity Discount			
	71014-4			Pkg. of 4		0%			
	71014-8			Pkg. of 8		0%			
	71014-12			Pkg. of 12		0%			
	71014-16			Pkg. of 16		Less- 10%			
	71014-50			Pkg. of 50		Less- 15%			
71014-100			Pkg. of 100		Less- 20%				

## Keeper Set • O.E.M. Replacement

	KPMI P/N	Style	Type	A	B	C	D	E	Quantity
	80-80495	Single Radius Bead	Intake	0.177"	6.0°	0.186"	0.221"	0.212"	12 Pr.
			Exhaust						

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	80-80492	Intake	None	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"	Pkg. of 1
		Exhaust								

Refer to KPMI® Tappet Section, in back of catalog, when selecting other size tappets.

VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)



# YAMAHA® APEX™ / RX-1 (ALL MODELS) 2003-'10

YAMAHA

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80600	Intake	.365"	1.100"	40#	85#	.365"	
		Exhaust						
Kit Includes			12	In Titanium Retainers	12	In CrSi Valve Springs	12	In H. T. Steel Basewashers
			8	Ex Titanium Retainers	8	Ex CrSi Valve Springs	8	Ex H. T. Steel Basewashers
			8	Ex Viton® Seals				

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80394	Intake	.350"	1.370"	30#	90#	.350"	
		Exhaust	.315"	1.415"	44#	95#	.315"	
Kit Includes			12	In CrSi Valve Springs	8	Ex. CrSi Valve Springs	8	Ex H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	80-80612	Intake	23.00mm	0.906"	0.1568"	15°	3.620"	Standard
	80-80613	Intake	23.50mm	0.925"	0.1568"	15°	3.620"	Oversize
	80-80614	Intake	23.00mm	0.906"	0.1568"	15°	3.565"	Standard (Center)
	80-80615	Intake	23.50mm	0.925"	0.1568"	15°	3.565"	Oversize (Center)
	80-80616	Exhaust	24.50mm	0.965"	0.1757"	25°	3.505"	Standard
80-80617	Exhaust	25.00mm	0.984"	0.1757"	25°	3.505"	Oversize	

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.580"	0.610"	0.520"	0.710"	0.381"	0.1568"	0.3563" / Std	80-80620	
							+0.001"	80-80621	
							+0.010"	80-80629	
Intake - Use O.E.M valve guide seal									
	0.580"	0.610"	0.510"	0.690"	0.420"	0.1757"	0.3955" / Std.		80-80630
							+0.001"		80-80631
							+0.010"		80-80639

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Exhaust
				0.321"±0.005"	0.281"	0.120"	0.240"	
	Part Number			Quantity		Quantity Discount		
	71014-4			Pkg. of 4		0%		
	71014-8			Pkg. of 8		0%		
	71014-16			Pkg. of 16		Less- 10%		
	71014-50			Pkg. of 50		Less- 15%		
71014-100			Pkg. of 100		Less- 20%			

**ORDER 650-557-2046**



# YAMAHA® MR-1™ WATERCRAFT ENG. 2002-'13



YAMAHA

- FX1000™ 2002-2006
  - FX140™ 2002-2004
  - SR230™ 2003-2007
  - AR230™ 2004-2009
  - FX™ MODELS 2004-2006
- SX230™ 2004-2009
  - AR210™ 2006-2013
  - SR210™ 2006-2007
  - SX210™ 2006-2013
  - 212SS/ X™ 2008-2010
- 232 LIMITED 2008-2009
  - VX CRUISER™ 2011-2013
  - WAVE RUNNER™ FX's & VX's 2005-2013

## Valve Spring Kit • Lightweight Racing

NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>80-81150</b>	Intake	.365"	1.100"	40#	85#	.365"
		Exhaust					
	<b>Kit Includes</b>	12	In Titanium Retainers	12	In CrSi Valve Springs	12	In H. T. Steel Basewashers
	8	Ex Titanium Retainers	8	Ex CrSi Valve Springs	8	Ex H. T. Steel Basewashers	
	8	Ex Viton® Seals					

## Valves • Black Diamond™ • Black Nitroreg Stems

NEW PRODUCTS

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>80-81162</b>	Intake	23.00mm	0.906"	0.1568"	15°	3.620"	Standard
	<b>80-81163</b>	Intake	23.50mm	0.925"	0.1568"	15°	3.620"	Oversize
	<b>80-81164</b>	Intake	23.00mm	0.906"	0.1568"	15°	3.565"	Standard (Center)
	<b>80-81165</b>	Intake	23.50mm	0.925"	0.1568"	15°	3.565"	Oversize (Center)
	<b>80-81166</b>	Exhaust	24.50mm	0.965"	0.1757"	25°	3.505"	Standard
	<b>80-81167</b>	Exhaust	25.00mm	0.984"	0.1757"	25°	3.505"	Oversize

## Valve Guides • C630 Bronze

NEW PRODUCTS

	A	B	C	D	E	F	G	Intake	Exhaust
	0.580"	0.610"	0.520"	0.710"	0.381"	0.1568"	0.3563" / Std	<b>80-81170</b>	
							+0.001"	<b>80-81171</b>	
							+0.010"	<b>80-81179</b>	
Intake - Use O.E.M valve guide seal									
	0.580"	0.610"	0.510"	0.690"	0.420"	0.1757"	0.3955" / Std.		<b>80-81180</b>
							+0.001"		<b>80-81181</b>
							+0.010"		<b>80-81189</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Exhaust
				0.321"±0.005"	0.281"	0.120"	0.240"	
	<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>		
	<b>71014-4</b>			Pkg. of 4		0%		
	<b>71014-8</b>			Pkg. of 8		0%		
	<b>71014-16</b>			Pkg. of 16		Less- 10%		
	<b>71014-50</b>			Pkg. of 50		Less- 15%		
<b>71014-100</b>			Pkg. of 100		Less- 20%			



# YAMAHA® 1.8L 4V WATERCRAFT 2008-'19

YAMAHA

## Valve Spring Kit • High Performance Lightweight Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-81000	Intake	.425"	1.375"	85#	221#	.425"
		Exhaust					
Kit Includes	16	Titanium Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers	

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-81600	Intake	.425"	1.375"	85#	221#	.425"
		Exhaust					
Kit Includes	16	H.T. Steel Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers	

- Spring Kit is designed with increased spring rate and higher lift compatibility over the stock components
- Spring Kit is specifically designed for high boost / high RPM applications
- CNC'd Titanium or H.T. Steel Retainers and Cr-Si dual springs provide valvetrain control at high RPM with high performance camshaft compatibility

## Valves • White Diamond® • Stainless • Inconel®

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	80-81012H	Intake	34.00mm	1.339"	0.2159"	15°	3.560"	Standard (Stainless)
	*80-81016K	Exhaust	29.00mm	1.142"	0.2154"	25°	3.535"	Standard (Inconel®)

\*Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures, where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

## Valve Guides • C630 Bronze

**NEW PRODUCTS**

		A	B	C	D	E	F	G	Intake	Exhaust
		0.435"	0.495"	0.730"	1.020"	0.475"	0.2154"	0.3774" / Std.		<b>80-81020</b>
									+0.001"	<b>80-81021</b>
									+0.002"	<b>80-81022</b>
									+0.010"	<b>80-81029</b>

## Valve Guide Seals • Viton®


Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.333"	0.455"	2	A	B	C	D	Intake
				0.365"±0.002"	0.325"	0.120"	0.235"	Exhaust
		Part Number				Quantity		Quantity Discount
		<b>71040-4</b>				Pkg. of 4		0%
		<b>71040-8</b>				Pkg. of 8		0%
		<b>71040-16</b>				Pkg. of 16		Less- 10%
		<b>71040-50</b>				Pkg. of 50		Less- 15%
<b>71040-100</b>				Pkg. of 100		Less- 20%		

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**ORDER 650-557-2046**


## BMW™ M3™ • E36

### Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	90-90010	Intake	.500"	1.430"	50#	191#	.500"
		Exhaust					
<b>Kit Includes</b>			24	Titanium Retainers	24	CrSi Valve Springs	
			24	H. T. Steel Basewashers (Outer)	24	H. T. Steel Basewashers (Inner)	

## MITSUBISHI™ 3.0L 24V 6G72


### Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	97-97040	Intake	.465"	1.300"	88#	219#	.465"	
		Exhaust						
<b>Kit Includes</b>			24	Titanium Retainers	24	CrSi Valve Springs	24	H. T. Steel Basewashers


## PORSCHE™ 911 / 930 / 964 / 2V

2.0L / 2.2L / 2.4L / 2.7L / 3.0L / 3.2L / 3.3L

### Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	98-98000	Intake	.540"	1.485"	91#	226#	.540"	
		Exhaust						
<b>Kit Includes</b>			12	Titanium Retainers	12	CrSi Valve Springs	12	H. T. Steel Basewashers

### Valve Spring Kit • Turbocharged Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	98-98010	Intake	.540"	1.455"	100#	233#	.540"
		Exhaust					
<b>Kit Includes</b>			12	Titanium Retainers	12	CrSi Valve Springs	
			12	H. T. Steel Basewashers (Outer)	12	H. T. Steel Shims	



# DOWELS

Here at KPMI®, we pay attention to the finest of details. We have created a set of multi-use steel dowels that aid in cylinder to head, cylinder to case, and cam support cover to case alignment. These dowels are designed to work in various applications dependent on need for a solid or hollow dowel. Ease of installation and serviceability, especially on faced heads and cylinders, were at the forefront when designing these dowels. Additionally, all KPMI® dowels are single-point machined and heat treated (where applicable) to create a lasting product. KPMI® dowels are conveniently packaged in quantities of: 4, 8, and 20. A 5% value added savings has been built into the 20 quantity pack.

Material	OD	ID	OL	Rep. HD® OEM P/N
Steel	0.5575"	0.375"	0.505"	16573-83A
	<b>KPMI P/N</b>	<b>Quantity</b>	<b>Discount</b>	<b>Fits</b>
	<b>83070-4</b>	Pkg. of 4	0%	Evolution 1984-'99 XL 1100cc 1986-'87 Evo Sportster 883cc 1986-'17 Evo Sportster 1200cc 1988-'17
	<b>83070-8</b>	Pkg. of 8	0%	
	<b>83070-20</b>	Pkg. of 20	Less-5%	

- Black Oxide Coated for Corrosion Resistance
- Designed for HD® Evolution OEM Replacement
- Can Also Be Used as Multipurpose Dowel

- See Dimensions for Fitment
- Supersedes **part number 20-2099**

Material	OD	ID	OL	Rep. HD® OEM P/N
Steel	0.4365"	0.323"	0.610"	16595-99A

	<b>KPMI P/N</b>	<b>Quantity</b>	<b>Discount</b>	<b>Fits</b>
	<b>83080-4</b>	Pkg. of 4	0%	Twin Cam 88" 1999-'07 Twin Cam 88"-103" 2005-'17
	<b>83080-8</b>	Pkg. of 8	0%	
	<b>83080-20</b>	Pkg. of 20	Less-5%	

- Black Oxide Coated for Corrosion Resistance
- Designed for HD® Twin Cam OEM Replacement
- Can Also Be Used as Multipurpose Dowel

- See Dimensions for Fitment
- Supersedes **part number 20-20413**

Material	OD 1	OD 2 O/S	OL	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
H.T. Steel	0.250"	0.252"	0.520"	50-8022	366

	<b>KPMI P/N</b>	<b>Quantity</b>	<b>Discount</b>	<b>Fits</b>
	<b>83240-4</b>	Pkg. of 4	0%	Panhead 1948-'65 Shovelhead 1966-83 Evolution 1984-'99 Evo Sportster 883cc 1986-'17 Evo Sportster 1200cc 1988-'17
	<b>83240-8</b>	Pkg. of 8	0%	
	<b>83240-20</b>	Pkg. of 20	Less-5%	

- S&S "Oversized" Dowel for 4" to 4-3/8" Cylinders
- Black Oxide Coated for Corrosion Resistance
- Heat Treated Steel

- Cone Dowel for 1948-'05 Various HD® Applications
- See Description Below for Special Design Features

This KPMI® dowel has been designed to replace the S&S .250" cylinder dowel, or to be used as desired. This dowel features a unique witness line in the center of the part which serves two purposes. First, this witness line serves as a marker for proper installation height and, second, to create two distinct halves of the part. One end of the dowel has a .252" diameter with a machined dimple on the end so you know to use that end in the case or cylinder. The other half incorporates a .250" diameter. This purpose-made change in diameter, and interference, ensures a snug fit on one end and a slip fit on the other as well as fret free use.

Material	OD	ID	OL	Rep. HD® OEM P/N
Steel	0.375"	0.272"	0.400"	16589-99A

	<b>KPMI P/N</b>	<b>Quantity</b>	<b>Discount</b>	<b>Fits</b>
	<b>83250-4</b>	Pkg. of 4	0%	Milwaukee-Eight 2017-'18
	<b>83250-8</b>	Pkg. of 8	0%	
	<b>83250-20</b>	Pkg. of 20	Less-5%	

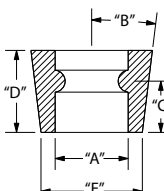

- Black Oxide Coated for Corrosion Resistance
- Rounded End Installed in Cylinder or Case
- Tapered End Installed in Head or Cam-Support Cover

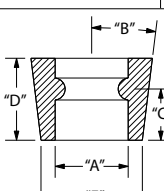

- Designed as HD® M8 OEM Replacement
- Can Also Be Used as Multipurpose Dowel
- See Dimensions for Fitment

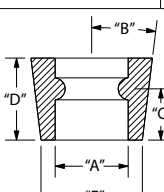

Designed for the Harley Davidson® Milwaukee-Eight engine, this dowel can also serve as a multi-purpose alignment pin. Our dowel incorporates OEM elements while increasing ease of installation through the overall shape of the part. A radiused end allows for easy insertion into the cylinder or case, and a tapered end provides hassle-free location of the mating holes in the head or cam-support cover. This commonly-sized dowel will serve its purpose wherever you see fit.

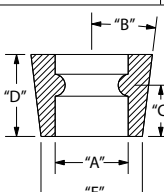

**ORDER 650-557-2046**

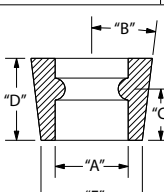

All KPMI® keepers are single-point machined from high tensile strength billet material (with the exception of forged multi-bead styles). After machining, the keepers are split, tumbled and then heat treated. At KPMI® we pay close attention to the surface finish and tolerance of all diameters, taper angle, and bead location. This type of detail insures repeatability you can count on. All Kibblewhite® Keepers are sold in pairs of 4, 8, 16, 50, and 100. \* The bead height is referenced from the minor diameter of the keeper to the center of the bead.

Single Radius Bead					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.275"</b>	7.0°	0.160"	0.340"	0.349"	12011-004
		Part Number		Quantity	
		51001-4		4 Pairs	
		51001-8		8 Pairs	
		51001-16		16 Pairs	
		51001-50		50 Pairs	
		51001-100		100 Pairs	
Note: See 51008 series for shortened version					

Single Radius Bead					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.215"</b>	10.0°	0.076"	0.210"	0.285"	---
		Part Number		Quantity	
		51002-4		4 Pairs	
		51002-8		8 Pairs	
		51002-16		16 Pairs	
		51002-50		50 Pairs	
		51002-100		100 Pairs	

Single Radius Bead					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.196"</b>	7.0°	0.185"	0.225"	0.279"	---
		Part Number		Quantity	
		51004-4		4 Pairs	
		51004-8		8 Pairs	
		51004-16		16 Pairs	
		51004-50		50 Pairs	
		51004-100		100 Pairs	

Single Radius Bead					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.275"</b>	15.0°	0.135"	0.300"	0.350"	---
		Part Number		Quantity	
		51006-4		4 Pairs	
		51006-8		8 Pairs	
		51006-16		16 Pairs	
		51006-50		50 Pairs	
		51006-100		100 Pairs	

Single Radius Bead					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.275"</b>	7.0°	0.188"	0.323"	0.342"	12011-004
		Part Number		Quantity	
		51008-4		4 Pairs	
		51008-8		8 Pairs	
		51008-16		16 Pairs	
		51008-50		50 Pairs	
		51008-100		100 Pairs	
Note: Keeper, 51008 is shortened to increase tip length					



# KEEPERS

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## Single Radius Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.215"</b>	10.0°	0.199"	0.237"	0.288"	---
		<b>Part Number</b>		<b>Quantity</b>	
		51010-4		4 Pairs	
		51010-8		8 Pairs	
		51010-16		16 Pairs	
		51010-50		50 Pairs	
		51010-100		100 Pairs	

## Single Radius Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.275"</b>	7.0°	0.190"	0.340"	0.349"	11 34 0 026 460 (Non-rotating)
		<b>Part Number</b>		<b>Quantity</b>	
		51011-4		4 Pairs	
		51011-8		8 Pairs	
		51011-16		16 Pairs	
		51011-50		50 Pairs	
		51011-100		100 Pairs	

## Single Radius Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.315"</b>	15.0°	0.100"	0.300"	0.344"	---
		<b>Part Number</b>		<b>Quantity</b>	
		51012-4		4 Pairs	
		51012-8		8 Pairs	
		51012-16		16 Pairs	
		51012-50		50 Pairs	
		51012-100		100 Pairs	

## Single Radius Bead

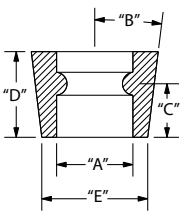

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.235"</b>	7.0°	0.153"	0.250"	0.300"	---
		<b>Part Number</b>		<b>Quantity</b>	
		51013-4		4 Pairs	
		51013-8		8 Pairs	
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		51013-100		100 Pairs	

## Single Radius Bead

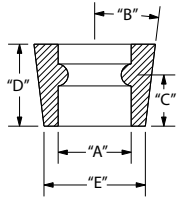

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.196"</b>	10.0°	0.160"	0.200"	0.308"	---
		<b>Part Number</b>		<b>Quantity</b>	
		51015-4		4 Pairs	
		51015-8		8 Pairs	
		51015-16		16 Pairs	
		51015-50		50 Pairs	
		51015-100		100 Pairs	

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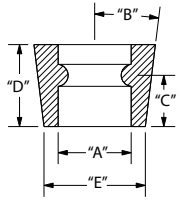

### Single Radius Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.315"</b>	10.0°	0.235"	0.285"	0.417"	71-1166
		<b>Part Number</b>		<b>Quantity</b>	
		51023-4		4 Pairs	
		51023-8		8 Pairs	
		51023-16		16 Pairs	
		51023-50		50 Pairs	
		51023-100		100 Pairs	

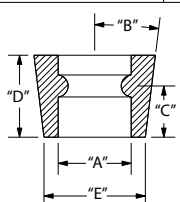

### Single Radius Bead NEW PRODUCTS

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.215"</b>	7.0°	0.179"	0.214"	0.262"	14781-MEB-670
		<b>Part Number</b>		<b>Quantity</b>	
		51024-4		4 Pairs	
		51024-8		8 Pairs	
		51024-16		16 Pairs	
		51024-50		50 Pairs	
		51024-100		100 Pairs	

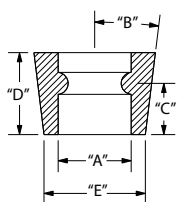

### Single Radius Bead NEW PRODUCTS

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.196"</b>	7.0°	0.170"	0.205"	0.236"	14781-MAT-000
		<b>Part Number</b>		<b>Quantity</b>	
		51025-4		4 Pairs	
		51025-8		8 Pairs	
		51025-16		16 Pairs	
		51025-50		50 Pairs	
		51025-100		100 Pairs	

### Single Radius Bead NEW PRODUCTS

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.177"</b>	6.0°	0.186"	0.221"	0.212"	1WG-12118-00-00 3S0-E2118-00-00
		<b>Part Number</b>		<b>Quantity</b>	
		51026-4		4 Pairs	
		51026-8		8 Pairs	
		51026-16		16 Pairs	
		51026-50		50 Pairs	
		51026-100		100 Pairs	

### Single Radius Bead NEW PRODUCTS

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.196"</b>	6.5°	0.181"	0.216"	0.270"	1AA-12118-00-00
		<b>Part Number</b>		<b>Quantity</b>	
		51027-4		4 Pairs	
		51027-8		8 Pairs	
		51027-16		16 Pairs	
		51027-50		50 Pairs	
		51027-100		100 Pairs	



# KEEPERS

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TOOLS & COMPONENTS

## Single Radius Bead NEW PRODUCTS

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.235"</b>	7.0°	0.075"	0.238"	0.295"	4G0-12118-00-00
		<b>Part Number</b>		<b>Quantity</b>	
		51028-4		4 Pairs	
		51028-8		8 Pairs	
		51028-16		16 Pairs	
		51028-50		50 Pairs	
		51028-100		100 Pairs	

## Single Radius Bead NEW PRODUCTS

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.275"</b>	9.0°	0.300"	0.345"		---
		<b>Part Number</b>		<b>Quantity</b>	
		51030-4		4 Pairs	
		51030-8		8 Pairs	
		51030-16		16 Pairs	
		51030-50		50 Pairs	
		51030-100		100 Pairs	

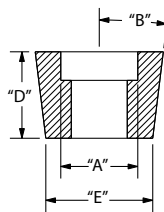

## Shouldered Square Bead

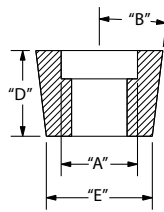

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.375"</b>	15.0°	----	0.305"	0.403"	188228-36
		<b>Part Number</b>		<b>Quantity</b>	
		51005-4		4 Pairs	
		51005-8		8 Pairs	
		51005-16		16 Pairs	
		51005-50		50 Pairs	
		51005-100		100 Pairs	

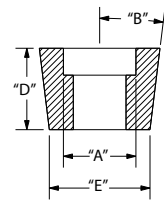

## Shouldered Square Bead

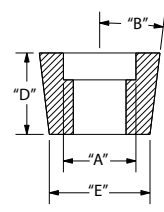

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.310"</b>	15.0°	----	0.315"	0.381"	---
		<b>Part Number</b>		<b>Quantity</b>	
		51007-4		4 Pairs	
		51007-8		8 Pairs	
		51007-16		16 Pairs	
		51007-50		50 Pairs	
		51007-100		100 Pairs	

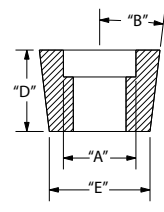



Shouldered Square Bead					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.310"</b>	15.0°	----	0.343"	0.375"	18228-30
		Part Number		Quantity	
		51009-4		4 Pairs	
		51009-8		8 Pairs	
		51009-16		16 Pairs	
		51009-50		50 Pairs	
		51009-100		100 Pairs	

Shouldered Square Bead					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.310"</b>	7.0°	----	0.245"	0.369"	40-0167, 71-3748, WE259, WE259A, 99-0062/3
		Part Number		Quantity	
		51017-4		4 Pairs	
		51017-8		8 Pairs	
		51017-16		16 Pairs	
		51017-50		50 Pairs	
		51017-100		100 Pairs	

Shouldered Square Bead					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.315"</b>	15.0°	----	0.315"	0.379"	---
		Part Number		Quantity	
		51018-4		4 Pairs	
		51018-8		8 Pairs	
		51018-16		16 Pairs	
		51018-50		50 Pairs	
		51018-100		100 Pairs	

Shouldered Square Bead					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.310"</b>	7.0°	----	0.250"	0.371"	---
		Part Number		Quantity	
		51020-4		4 Pairs	
		51020-8		8 Pairs	
		51020-16		16 Pairs	
		51020-50		50 Pairs	
		51020-100		100 Pairs	

Shouldered Square Bead					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.310"</b>	15.0°	----	0.235"	0.380"	18228-30
		Part Number		Quantity	
		51022-4		4 Pairs	
		51022-8		8 Pairs	
		51022-16		16 Pairs	
		51022-50		50 Pairs	
		51022-100		100 Pairs	



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TOOLS & COMPONENTS

## Single Square Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.310"</b>	15.0°	0.220"	0.365"	0.360"	---
		<b>Part Number</b>		<b>Quantity</b>	
		51003-4		4 Pairs	
		51003-8		8 Pairs	
		51003-16		16 Pairs	
		51003-50		50 Pairs	
		51003-100		100 Pairs	

## Single Square Bead

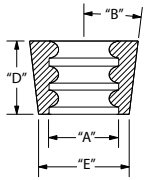

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.310"</b>	7.0°	0.190"	0.380"	0.380"	18229-83
		<b>Part Number</b>		<b>Quantity</b>	
		51014-4		4 Pairs	
		51014-8		8 Pairs	
		51014-16		16 Pairs	
		51014-50		50 Pairs	
		51014-100		100 Pairs	

## Single Square Bead NEW PRODUCTS

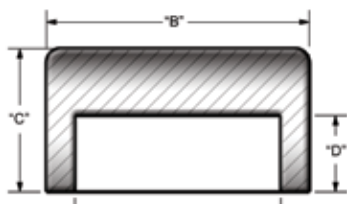
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.310"</b>	9.0°	0.155"	0.345"	0.398"	---
		<b>Part Number</b>		<b>Quantity</b>	
		51031-4		4 Pairs	
		51031-8		8 Pairs	
		51031-16		16 Pairs	
		51031-50		50 Pairs	
		51031-100		100 Pairs	

## Triple Radius Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.275"</b>	7.0°	---	0.290"	0.345"	18260-02
		<b>Part Number</b>		<b>Quantity</b>	
		51016-4		4 Pairs	
		51016-8		8 Pairs	
		51016-16		16 Pairs	
		51016-50		50 Pairs	
		51016-100		100 Pairs	

<b>Triple Radius Bead</b> <span style="float: right; border: 1px solid black; padding: 2px;">NEW PRODUCTS</span>					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.236"</b>	7.0°	---	0.200"	0.282"	18100060
			Part Number	Quantity	
			<b>51029-4</b>	4 Pairs	
			<b>51029-8</b>	8 Pairs	
			<b>51029-16</b>	16 Pairs	
			<b>51029-50</b>	50 Pairs	
			<b>51029-100</b>	100 Pairs	

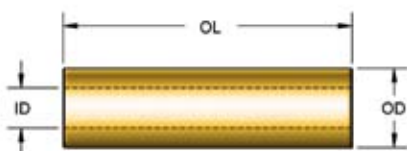
## LASH CAPS



KPMI® lash caps are machined from a tough steel that is heat treated to a specific depth, creating a hard impact and wear resistant surface, with a ductile core so they do not crack.

<b>Lash Caps</b>										
Qty. 4 KPMI P/N	Qty. 8 KPMI P/N	Qty. 16 KPMI P/N	Qty. 50 KPMI P/N	Qty. 100 KPMI P/N	"A" Bore Diameter		"B" Outside Diameter	"C" Overall Length	"D" Counterbore Depth	("C"- "D") Roof Thickness
<b>94001-4</b>	<b>94001-8</b>	<b>94001-16</b>	<b>94001-50</b>	<b>94001-100</b>	7.94mm	0.3126"	0.395"	0.160"	0.080"	0.080"
<b>94002-4</b>	<b>94002-8</b>	<b>94002-16</b>	<b>94002-50</b>	<b>94002-100</b>	7.00mm	0.2756"	0.355"	0.160"	0.080"	0.080"
<b>94003-4</b>	<b>94003-8</b>	<b>94003-16</b>	<b>94003-50</b>	<b>94003-100</b>	6.50mm	0.2595"	0.335"	0.120"	0.080"	0.040"
<b>94004-4</b>	<b>94004-8</b>	<b>94004-16</b>	<b>94004-50</b>	<b>94004-100</b>	5.50mm	0.2165"	0.295"	0.090"	0.050"	0.040"
<b>94005-4</b>	<b>94005-8</b>	<b>94005-16</b>	<b>94005-50</b>	<b>94005-100</b>	5.00mm	0.1969"	0.277"	0.090"	0.050"	0.040"
<b>94006-4</b>	<b>94006-8</b>	<b>94006-16</b>	<b>94006-50</b>	<b>94006-100</b>	5.00mm	0.1969"	0.277"	0.230"	0.150"	0.080"
<b>94007-4</b>	<b>94007-8</b>	<b>94007-16</b>	<b>94007-50</b>	<b>94007-100</b>	5.00mm	0.1969"	0.277"	0.175"	0.100"	0.075"
<b>94008-4</b>	<b>94008-8</b>	<b>94008-16</b>	<b>94008-50</b>	<b>94008-100</b>	6.00mm	0.2282"	0.315"	0.120"	0.080"	0.040"

## MANGANESE BLANK GUIDES



The Manganese blank guides are designed with large OD's and long lengths to allow maximum versatility and can be machined to fit a large variety of applications. The Manganese material is easily reamed, and then can be delicately finished with our high quality ball hones. These blank guides are a perfect choice for repair work or machining a custom guide for hard to find applications.

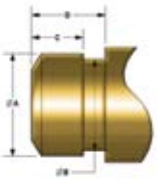

<b>Manganese Blank Guides</b> <span style="float: right; border: 1px solid black; padding: 2px;">NEW PRODUCTS</span>					
KPMI P/N	ID	OD	OL	Quantity	Fits
<b>20-20380</b>	7.0mm	0.740"	2.700"	Pkg. of 1	Universal
<b>20-20381</b>	0.308"	0.740"	2.700"	Pkg. of 1	Universal
<b>20-20382</b>	0.372"	0.740"	2.700"	Pkg. of 1	Universal
<b>20-20383</b>	0.341"	0.740"	2.700"	Pkg. of 1	Universal



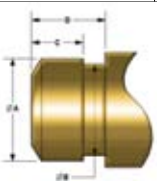

# VALVE GUIDE SEALS

All KPMI® seals are conveniently packaged in quantities of: 4, 8, 16, 50, and 100. Value added savings have been built into the 16, 50, and 100 quantity packs with 10, 15, and 20% savings respectively. Select your seal type and then use the diagram and specifications to ensure your valve guides share the same dimensions for a proper fit.

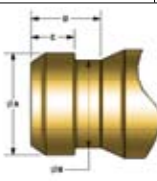

## Seal Style 1 - Solid Viton®

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
8.0mm	0.285"	0.455"	0.466"-0.475"	0.411"-0.430"	0.040"	0.135"	764.1.013.1A
			KPMI P/N		Quantity		
 		71043-4		Pkg. of 4		0%	
		71043-8		Pkg. of 8		0%	
		71043-16		Pkg. of 16		Less- 10%	
		71043-50		Pkg. of 50		Less- 15%	
		71043-100		Pkg. of 100		Less- 20%	

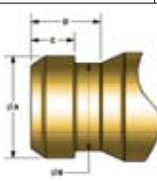

## Seal Style 1 - Solid Viton®

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5/16"	0.465"	0.550"	0.500"±0.010"	0.445"	0.230"	0.280"	---
			KPMI P/N		Quantity		
 		71012-4		Pkg. of 4		0%	
		71012-8		Pkg. of 8		0%	
		71012-16		Pkg. of 16		Less- 10%	
		71012-50		Pkg. of 50		Less- 15%	
		71012-100		Pkg. of 100		Less- 20%	

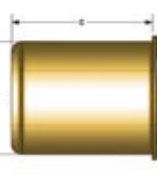

## Seal Style 2 - Solid Viton® w/ Tension Spring

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
4.0mm	0.310"	0.380"	0.315"±0.005"	0.270"	0.120"	0.235"	12209-KT7-013
			KPMI P/N		Quantity		
 		71013-4		Pkg. of 4		0%	
		71013-8		Pkg. of 8		0%	
		71013-16		Pkg. of 16		Less- 10%	
		71013-50		Pkg. of 50		Less- 15%	
		71013-100		Pkg. of 100		Less- 20%	

## Seal Style 2 - Solid Viton® w/ Tension Spring

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5.5mm	0.330"	0.455"	0.365"±0.002"	0.325"	0.120"	0.235"	51Y-12119-00-00
			KPMI P/N		Quantity		
 		71040-4		Pkg. of 4		0%	
		71040-8		Pkg. of 8		0%	
		71040-16		Pkg. of 16		Less- 10%	
		71040-50		Pkg. of 50		Less- 15%	
		71040-100		Pkg. of 100		Less- 20%	

## Seal Style 3 - Solid Viton® w/ Metal Jacket & Integral Spring Base

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs			Spring Shoulder Dia.	Rep. OEM P/N
			A	B	C		
5.0mm	0.460"	0.975"	0.355"±0.005"	---	0.290"	0.674"	420431671
			KPMI P/N		Quantity		
 		71047-4		Pkg. of 4		0%	
		71047-8		Pkg. of 8		0%	
		71047-16		Pkg. of 16		Less- 10%	
		71047-50		Pkg. of 50		Less- 15%	
		71047-100		Pkg. of 100		Less- 20%	

**NEW PRODUCTS**

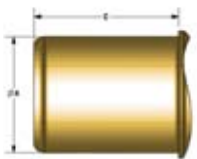
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# VALVE GUIDE SEALS



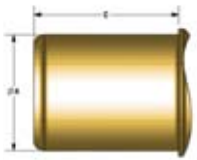
## Seal Style 3 - Solid Viton® w/ Metal Jacket & Integral Spring Base

**NEW PRODUCTS**

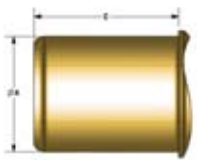
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs			Spring Shoulder Dia.	Rep. OEM P/N			
			A	B	C					
	0.630"	1.043"	A	B	C	0.697"	3610212			
			0.435"±0.005"					---	0.480"	
			KPMI P/N					Quantity		Quantity Discount
			71048-4					Pkg. of 4		0%
			71048-8					Pkg. of 8		0%
			71048-16					Pkg. of 16		Less- 10%
71048-50			Pkg. of 50		Less- 15%					
71048-100			Pkg. of 100		Less- 20%					

## Seal Style 3 - Solid Viton® w/ Metal Jacket & Integral Spring Base

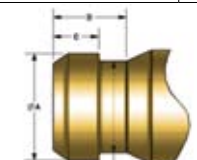
**NEW PRODUCTS**

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs			Spring Shoulder Dia.	Rep. OEM P/N			
			A	B	C					
	0.712"	1.170"	A	B	C	0.707"	18100044			
			0.475"±0.005"					---	0.545"	
			KPMI P/N					Quantity		Quantity Discount
			71046-4					Pkg. of 4		0%
			71046-8					Pkg. of 8		0%
			71046-16					Pkg. of 16		Less- 10%
71046-50			Pkg. of 50		Less- 15%					
71046-100			Pkg. of 100		Less- 20%					

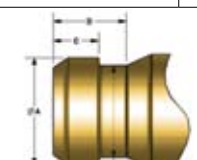
## Seal Style 3 - Solid Viton® w/ Metal Jacket & Integral Spring Base

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs			Spring Shoulder Dia.	Rep. OEM P/N			
			A	B	C					
	0.974"	1.457"	A	B	C	0.970"	18094-02A			
			0.560"±0.005"					---	0.700"	
			KPMI P/N					Quantity		Quantity Discount
			71030-4					Pkg. of 4		0%
			71030-8					Pkg. of 8		0%
			71030-16					Pkg. of 16		Less- 10%
71030-50			Pkg. of 50		Less- 15%					
71030-100			Pkg. of 100		Less- 20%					

## Seal Style 4 - Solid Viton® w/ Choker & Tension Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N			
			A	B	C	D				
	0.331"	0.370"	A	B	C	D	12209-ML0-722			
			0.321"±0.005"					0.281"	0.120"	0.240"
			KPMI P/N					Quantity		Quantity Discount
			71014-4					Pkg. of 4		0%
			71014-8					Pkg. of 8		0%
			71014-16					Pkg. of 16		Less- 10%
71014-50				Pkg. of 50		Less- 15%				
71014-100				Pkg. of 100		Less- 20%				

## Seal Style 4 - Solid Viton® w/ Choker & Tension Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N			
			A	B	C	D				
	0.350"	0.405"	A	B	C	D	09289-05011			
			0.340"±0.005"					0.303"	0.125"	0.230"
			KPMI P/N					Quantity		Quantity Discount
			71015-4					Pkg. of 4		0%
			71015-8					Pkg. of 8		0%
			71015-16					Pkg. of 16		Less- 10%
71015-50				Pkg. of 50		Less- 15%				
71015-100				Pkg. of 100		Less- 20%				



# VALVE GUIDE SEALS

All KPMI® seals are conveniently packaged in quantities of: 4, 8, 16, 50, and 100. Value added savings have been built into the 16, 50, and 100 quantity packs with 10, 15, and 20% savings respectively. Select your seal type and then use the diagram and specifications to ensure your valve guides share the same dimensions for a proper fit.

## Seal Style 4 - Solid Viton® w/ Choker & Tension Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5.5mm	0.320"	0.440"	0.358"±0.005"	0.320"	0.110"	0.200"	12206.502-005
		KPMI P/N		Quantity		Quantity Discount	
		71016-4		Pkg. of 4		0%	
		71016-8		Pkg. of 8		0%	
		71016-16		Pkg. of 16		Less- 10%	
		71016-50		Pkg. of 50		Less- 15%	
71016-100		Pkg. of 100		Less- 20%			

## Seal Style 4 - Solid Viton® w/ Choker & Tension Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
6.5mm	0.353"	0.560"	0.475"±0.005"	0.415"	0.115"	0.260"	12209-300-003
		KPMI P/N		Quantity		Quantity Discount	
		71018-4		Pkg. of 4		0%	
		71018-8		Pkg. of 8		0%	
		71018-16		Pkg. of 16		Less- 10%	
		71018-50		Pkg. of 50		Less- 15%	
71018-100		Pkg. of 100		Less- 20%			

## Seal Style 4 - Solid Viton® w/ Choker & Tension Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
7.0mm	0.374"	0.560"	0.475"±0.005"	0.430"	0.115"	0.240"	92049-016
		KPMI P/N		Quantity		Quantity Discount	
		71019-4		Pkg. of 4		0%	
		71019-8		Pkg. of 8		0%	
		71019-16		Pkg. of 16		Less- 10%	
		71019-50		Pkg. of 50		Less- 15%	
71019-100		Pkg. of 100		Less- 20%			

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
4.0mm	0.320"	0.355"	0.285"±0.002"	0.245"	0.120"	0.215"	---
		KPMI P/N		Quantity		Quantity Discount	
		71039-4		Pkg. of 4		0%	
		71039-8		Pkg. of 8		0%	
		71039-16		Pkg. of 16		Less- 10%	
		71039-50		Pkg. of 50		Less- 15%	
71039-100		Pkg. of 100		Less- 20%			

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

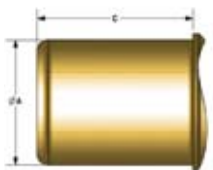

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5.0mm	0.320"	0.435"	0.305"±0.002"	0.265"	0.100"	0.195"	77036027000
		KPMI P/N		Quantity		Quantity Discount	
		71041-4		Pkg. of 4		0%	
		71041-8		Pkg. of 8		0%	
		71041-16		Pkg. of 16		Less- 10%	
		71041-50		Pkg. of 50		Less- 15%	
71041-100		Pkg. of 100		Less- 20%			

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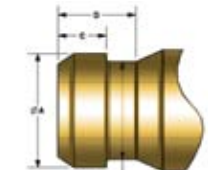

# VALVE GUIDE SEALS



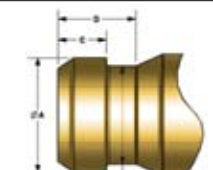

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
5.5mm	0.540"	0.524"	A	B	C	D	---
			0.435"±0.002"	---	---	0.410"	
		KPMI P/N		Quantity		Quantity Discount	
		71038-4		Pkg. of 4		0%	
		71038-8		Pkg. of 8		0%	
		71038-16		Pkg. of 16		Less- 10%	
		71038-50		Pkg. of 50		Less- 15%	
		71038-100		Pkg. of 100		Less- 20%	

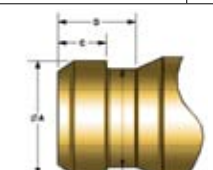

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
5.5mm	0.315"	0.455"	A	B	C	D	420430420
			0.325"±0.002"	0.310"	0.110"	0.220"	
		KPMI P/N		Quantity		Quantity Discount	
		71042-4		Pkg. of 4		0%	
		71042-8		Pkg. of 8		0%	
		71042-16		Pkg. of 16		Less- 10%	
		71042-50		Pkg. of 50		Less- 15%	
		71042-100		Pkg. of 100		Less- 20%	

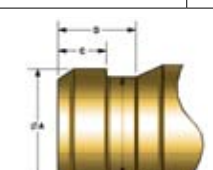

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
6.0mm	0.371"	0.480"	A	B	C	D	5H0-12119-00-00
			0.385"±0.002"	0.341"	0.120"	0.255"	
		KPMI P/N		Quantity		Quantity Discount	
		71017-4		Pkg. of 4		0%	
		71017-8		Pkg. of 8		0%	
		71017-16		Pkg. of 16		Less- 10%	
		71017-50		Pkg. of 50		Less- 15%	
		71017-100		Pkg. of 100		Less- 20%	

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
6.0mm	0.400"	0.560"	A	B	C	D	711230510
			0.435"±0.002"	0.400"	0.120"	0.285"	
		KPMI P/N		Quantity		Quantity Discount	
		71025-4		Pkg. of 4		0%	
		71025-8		Pkg. of 8		0%	
		71025-16		Pkg. of 16		Less- 10%	
		71025-50		Pkg. of 50		Less- 15%	
		71025-100		Pkg. of 100		Less- 20%	

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
6.5mm	0.315"	0.520"	A	B	C	D	59036027000
			0.435"±0.002"	0.395"	0.120"	0.210"	
		KPMI P/N		Quantity		Quantity Discount	
		71029-4		Pkg. of 4		0%	
		71029-8		Pkg. of 8		0%	
		71029-16		Pkg. of 16		Less- 10%	
		71029-50		Pkg. of 50		Less- 15%	
		71029-100		Pkg. of 100		Less- 20%	



# VALVE GUIDE SEALS

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## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
6.0mm	0.524"	0.615"	A	B	C	D	---
			0.495"±0.002"	---	---	0.385"	
			KPMI P/N		Quantity	Quantity Discount	
			71031-4		Pkg. of 4	0%	
			71031-8		Pkg. of 8	0%	
			71031-16		Pkg. of 16	Less- 10%	
			71031-50		Pkg. of 50	Less- 15%	
			71031-100		Pkg. of 100	Less- 20%	

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
6.0mm	0.394"	0.555"	A	B	C	D	---
			0.447"±0.002"	---	---	0.265"	
			KPMI P/N		Quantity	Quantity Discount	
			71037-4		Pkg. of 4	0%	
			71037-8		Pkg. of 8	0%	
			71037-16		Pkg. of 16	Less- 10%	
			71037-50		Pkg. of 50	Less- 15%	
			71037-100		Pkg. of 100	Less- 20%	

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
7.0mm	0.517"	0.550"	A	B	C	D	022-1516
			0.435"±0.002"	---	---	0.310"	
			KPMI P/N		Quantity	Quantity Discount	
			71026-4		Pkg. of 4	0%	
			71026-8		Pkg. of 8	0%	
			71026-16		Pkg. of 16	Less- 10%	
			71026-50		Pkg. of 50	Less- 15%	
			71026-100		Pkg. of 100	Less- 20%	

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

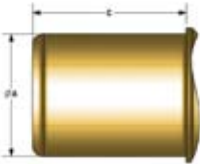

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
7.0mm	0.510"	0.665"	A	B	C	D	---
			0.560"±0.002"	---	---	0.375"	
			KPMI P/N		Quantity	Quantity Discount	
			71028-4		Pkg. of 4	0%	
			71028-8		Pkg. of 8	0%	
			71028-16		Pkg. of 16	Less- 10%	
			71028-50		Pkg. of 50	Less- 15%	
			71028-100		Pkg. of 100	Less- 20%	



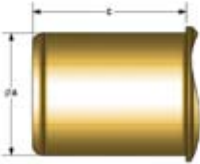

# VALVE GUIDE SEALS



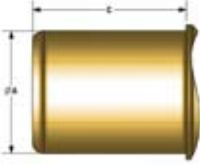

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
7.0mm	0.360"	0.520"	A	B	C	D	764.1.087.1A
			0.383"-0.389"	---	---	0.255"	
		KPMI P/N		Quantity		Quantity Discount	
		71044-4		Pkg. of 4		0%	
		71044-8		Pkg. of 8		0%	
		71044-16		Pkg. of 16		Less- 10%	
		71044-50		Pkg. of 50		Less- 15%	
		71044-100		Pkg. of 100		Less- 20%	

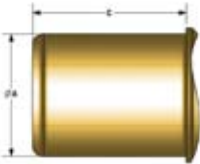

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
8.0mm	0.374"	0.598"	A	B	C	D	E6TZ6571A
			0.427"±0.002"	---	---	0.265"	
		KPMI P/N		Quantity		Quantity Discount	
		71027-4		Pkg. of 4		0%	
		71027-8		Pkg. of 8		0%	
		71027-16		Pkg. of 16		Less- 10%	
		71027-50		Pkg. of 50		Less- 15%	
		71027-100		Pkg. of 100		Less- 20%	

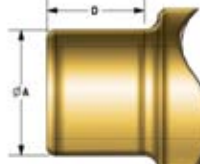

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
5/16"	0.412"	0.566"	A	B	C	D	35178930
			0.420"±0.002"	---	---	0.275"	
		KPMI P/N		Quantity		Quantity Discount	
		71010-4		Pkg. of 4		0%	
		71010-8		Pkg. of 8		0%	
		71010-16		Pkg. of 16		Less- 10%	
		71010-50		Pkg. of 50		Less- 15%	
		71010-100		Pkg. of 100		Less- 20%	

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring NEW PRODUCTS

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
5/16"	0.514"	0.671"	A	B	C	D	---
			0.530"±0.002"	---	---	0.330"	
		KPMI P/N		Quantity		Quantity Discount	
		71045-4		Pkg. of 4		0%	
		71045-8		Pkg. of 8		0%	
		71045-16		Pkg. of 16		Less- 10%	
		71045-50		Pkg. of 50		Less- 15%	
		71045-100		Pkg. of 100		Less- 20%	

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

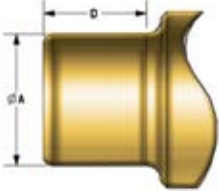

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
3/8"	0.516"	0.661"	A	B	C	D	---
			0.562"±0.002"	---	---	0.210"	
		KPMI P/N		Quantity		Quantity Discount	
		71011-4		Pkg. of 4		0%	
		71011-8		Pkg. of 8		0%	
		71011-16		Pkg. of 16		Less- 10%	
		71011-50		Pkg. of 50		Less- 15%	
		71011-100		Pkg. of 100		Less- 20%	



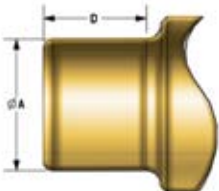

# VALVE GUIDE SEALS

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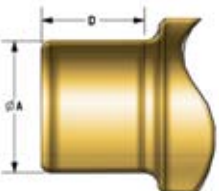

## Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5/16"	0.386"	0.512"	A	B	C	D	5403212
			0.425"±0.002"	---	---	0.235"	
 		KPMI P/N		Quantity		Quantity Discount	
		71003-4		Pkg. of 4		0%	
		71003-8		Pkg. of 8		0%	
		71003-16		Pkg. of 16		Less- 10%	
		71003-50		Pkg. of 50		Less- 15%	
		71003-100		Pkg. of 100		Less- 20%	

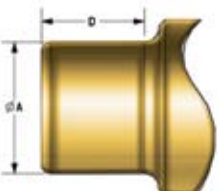

## Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5/16"	0.510"	0.600"	A	B	C	D	---
			0.500"±0.002"	---	---	0.365"	
 		KPMI P/N		Quantity		Quantity Discount	
		71006-4		Pkg. of 4		0%	
		71006-8		Pkg. of 8		0%	
		71006-16		Pkg. of 16		Less- 10%	
		71006-50		Pkg. of 50		Less- 15%	
		71006-100		Pkg. of 100		Less- 20%	

## Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5/16"	0.517"	0.510"	A	B	C	D	8921209
			0.415"±0.002"	---	---	0.350"	
 		KPMI P/N		Quantity		Quantity Discount	
		71008-4		Pkg. of 4		0%	
		71008-8		Pkg. of 8		0%	
		71008-16		Pkg. of 16		Less- 10%	
		71008-50		Pkg. of 50		Less- 15%	
		71008-100		Pkg. of 100		Less- 20%	

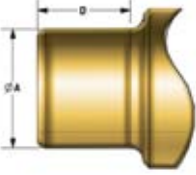

## Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5/16"	0.506"	0.632"	A	B	C	D	---
			0.530"±0.002"	---	---	0.365"	
 		KPMI P/N		Quantity		Quantity Discount	
		71009-4		Pkg. of 4		0%	
		71009-8		Pkg. of 8		0%	
		71009-16		Pkg. of 16		Less- 10%	
		71009-50		Pkg. of 50		Less- 15%	
		71009-100		Pkg. of 100		Less- 20%	

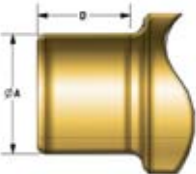

# VALVE GUIDE SEALS



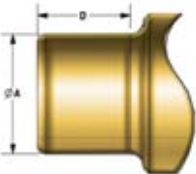

## Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
<b>11/32"</b>	0.510"	0.596"	A	B	C	D	---
			0.500"±0.002"				
		KPMI P/N		Quantity		Quantity Discount	
		71005-4		Pkg. of 4		0%	
		71005-8		Pkg. of 8		0%	
		71005-16		Pkg. of 16		Less- 10%	
		71005-50		Pkg. of 50		Less- 15%	
		71005-100		Pkg. of 100		Less- 20%	

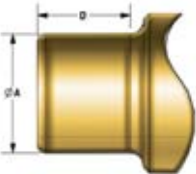

## Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
<b>11/32"</b>	0.514"	0.654"	A	B	C	D	---
			0.562"±0.002"				
		KPMI P/N		Quantity		Quantity Discount	
		71007-4		Pkg. of 4		0%	
		71007-8		Pkg. of 8		0%	
		71007-16		Pkg. of 16		Less- 10%	
		71007-50		Pkg. of 50		Less- 15%	
		71007-100		Pkg. of 100		Less- 20%	

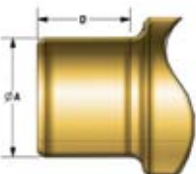

## Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
<b>3/8"</b>	0.502"	0.626"	A	B	C	D	---
			0.530"±0.002"				
		KPMI P/N		Quantity		Quantity Discount	
		71001-4		Pkg. of 4		0%	
		71001-8		Pkg. of 8		0%	
		71001-16		Pkg. of 16		Less- 10%	
		71001-50		Pkg. of 50		Less- 15%	
		71001-100		Pkg. of 100		Less- 20%	

## Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
<b>3/8"</b>	0.518"	0.650"	A	B	C	D	---
			0.562"±0.002"				
		KPMI P/N		Quantity		Quantity Discount	
		71002-4		Pkg. of 4		0%	
		71002-8		Pkg. of 8		0%	
		71002-16		Pkg. of 16		Less- 10%	
		71002-50		Pkg. of 50		Less- 15%	
		71002-100		Pkg. of 100		Less- 20%	

## Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

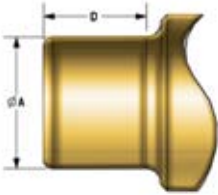

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
<b>3/8"</b>	0.507"	0.600"	A	B	C	D	---
			0.500"±0.002"				
		KPMI P/N		Quantity		Quantity Discount	
		71004-4		Pkg. of 4		0%	
		71004-8		Pkg. of 8		0%	
		71004-16		Pkg. of 16		Less- 10%	
		71004-50		Pkg. of 50		Less- 15%	
		71004-100		Pkg. of 100		Less- 20%	



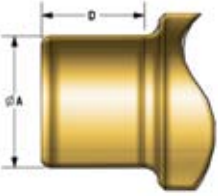

# VALVE GUIDE SEALS

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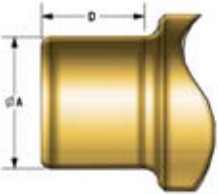

## Seal Style 7 - H.D. OEM Style Solid Teflon w/ a Metal Jacket

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
<b>5/16"</b>	0.385"	0.565"	A	B	C	D	18001-83B
			0.420"±0.002"	---	---	0.315"	
 		KPMI P/N		Quantity		Quantity Discount	
		71032-4		Pkg. of 4		0%	
		71032-8		Pkg. of 8		0%	
		71032-16		Pkg. of 16		Less- 10%	
		71032-50		Pkg. of 50		Less- 15%	
		71032-100		Pkg. of 100		Less- 20%	

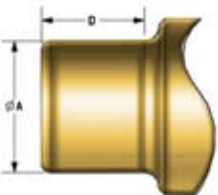

## Seal Style 7 - H.D. OEM Style Solid Teflon w/ a Metal Jacket

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
<b>5/16"</b>	0.375"	0.630"	A	B	C	D	1804698
			0.530"±0.002"	---	---	0.295"	
 		KPMI P/N		Quantity		Quantity Discount	
		71033-4		Pkg. of 4		0%	
		71033-8		Pkg. of 8		0%	
		71033-16		Pkg. of 16		Less- 10%	
		71033-50		Pkg. of 50		Less- 15%	
		71033-100		Pkg. of 100		Less- 20%	

## Seal Style 7 - H.D. OEM Style Solid Teflon w/ a Metal Jacket

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
<b>11/32"</b>	0.375"	0.630"	A	B	C	D	---
			0.530"±0.002"	---	---	0.365"	
 		KPMI P/N		Quantity		Quantity Discount	
		71034-4		Pkg. of 4		0%	
		71034-8		Pkg. of 8		0%	
		71034-16		Pkg. of 16		Less- 10%	
		71034-50		Pkg. of 50		Less- 15%	
		71034-100		Pkg. of 100		Less- 20%	

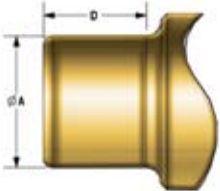

## Seal Style 7 - H.D. OEM Style Solid Teflon w/ a Metal Jacket

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
<b>3/8"</b>	0.375"	0.660"	A	B	C	D	---
			0.562"±0.002"	---	---	0.315"	
 		KPMI P/N		Quantity		Quantity Discount	
		71035-4		Pkg. of 4		0%	
		71035-8		Pkg. of 8		0%	
		71035-16		Pkg. of 16		Less- 10%	
		71035-50		Pkg. of 50		Less- 15%	
		71035-100		Pkg. of 100		Less- 20%	

# VALVE GUIDE SEALS



## Seal Style 7 - H.D. OEM Style Solid Teflon w/ a Metal Jacket

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
3/8"	0.400"	0.720"	0.625"±0.002"	---	---	0.310"	1800081
 		KPMI P/N		Quantity		Quantity Discount	
		71036-4		Pkg. of 4		0%	
		71036-8		Pkg. of 8		0%	
		71036-16		Pkg. of 16		Less- 10%	
		71036-50		Pkg. of 50		Less- 15%	
		71036-100		Pkg. of 100		Less- 20%	

# INSTALLATION PROTECTORS



The flexible thin wall protectors are designed to fit over the top of the valve stem, protecting the sealing element from any sharp edges that might damage it during installation.

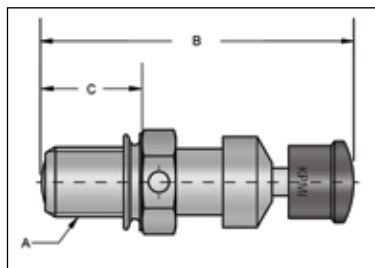
**20-20637 / 20-20638 / 20-20639**

## Installation Protector

KPMI P/N (2-pack)	KPMI P/N (1-pack)	Application	Stem Diameter	Fits		Color
20-20634	20-20637	Evolution & Ironhead Sportster Intake	5/16"	71032-4	71033-4	Green
20-20635	20-20638	Ironhead Sportster Exhaust	11/32"	71034-4		Clear
20-20636	20-20639	Panhead & Shovelhead 74" & Shovelhead 80"	3/8"	71035-4	71036-4	Red

# COMPRESSION RELEASE VALVES

**NEW PRODUCTS**



- KPMI® Compression Release valves are state of the art and priced competitively
- Designed to reduce "hot start" issues and starter / battery loads
- 5-7 Newtons of closing force resistance, for high demand applications
- Custom molded knobs ensure a cool touch and easy operation
- Embossed with the KPMI® brand to ensure product quality

**20-21260 / 20-21255 / 20-21250**

## Compression Release Valves

KPMI P/N (2-pack)	KPMI P/N (20-pack)	A	B	C	Note
20-21250	20-21265	M10 x 1	1.400"	0.350"	Fits Evos, Shortened thread for ease of installation, 6N closing force
20-21255	20-21270	M10 x 1	1.730"	0.350"	Fits Twin Cams, Shortened thread for ease of installation, 6N closing force
20-21260	20-21275	M10 x 1	1.750"	0.500"	6N closing force

**VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)**



# INSTALLATION TOOLS

These installation tools for OE style seals are manufactured from high strength 6061-T6 Aluminum for increased durability when compared to plastic installers. The tools are designed for precision fitment onto the seal OD to help the builder center the seal over the valve guide so that a few light strikes from a hammer will set the seal. Radiused top striking surface reduces the likelihood of a burr forming from deformation. Each installation tool is color coded and laser marked for each seal size by guide diameter.



**20-20830**



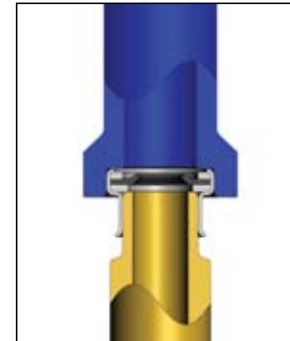
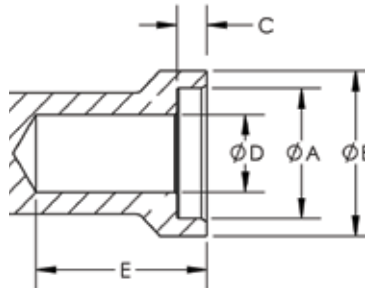
**20-20831**



**20-20832**



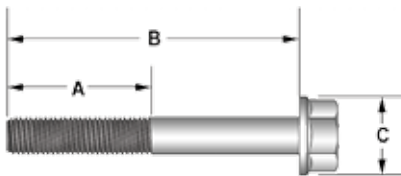
**20-20833**



Installation Tools								
KPMI P/N (1-pack)	Application	ØA	ØB	C	ØD	E	Fits KPMI Seal P/N	Color
<b>20-20830</b>	Evolution 5/16" Stem	Ø0.575	0.860	0.160	0.404	0.910	71032-4	Red
<b>20-20831</b>	Shovelhead 80"	Ø0.728	0.860	0.160	0.404	0.910	71036-4	Blue
<b>20-20832</b>	Ironhead Sportster In/ Ex	Ø0.638	0.860	0.160	0.404	0.910	71033-4   71034-4	White
<b>20-20833</b>	Panhead & Shovelhead 74"	Ø0.673	0.860	0.160	0.404	0.910	71035-4	Black

Installation Tool Kit	
KPMI P/N	Description
<b>20-20835</b>	Kit includes all 4 sizes of installations

# CAM TOWER BOLTS



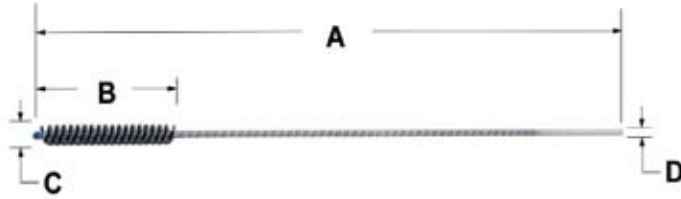
**41005-4**

- Manufactured from high tensile strength heat treated steel for superior strength over OEM bolts
- Strong enough for repeated removal and installation
- Black Oxide treatment for corrosion resistance
- Reduced flange diameters designed specifically with clearance for installation in cam tower braces
- Works with other applications (see dimensions for compatibility)

Cam Tower Bolt • Steel - Generic <span style="color:red">NEW PRODUCTS</span>							
KPMI P/N	Thread	Hex Pattern	Thread Length -A-	Shank Length -B-	Flange Ø -C-	Quantity	Rep. OEM P/N
<b>41005-4</b>	M6 x 1.0	10mm	18mm	40mm	12.57mm 0.495"	Pkg. of 4	09103-06266 09103-06026
<b>41006-4</b>	M6 x 1.0	10mm	18mm	45mm	12.57mm 0.495"		Pkg. of 4

**ORDER 650-557-2046**

# BALL HONES



- Silicon Carbide composite for Bronze or Cast Iron
- Ideal for finishing a reamed hole
- Cleaning up a used guide
- Minor sizing less than a thou



## Ball Hones - Universal

KPMI P/N	Description	Overall Length "A"	Hone Head Length "B"	Hone Diameter "C"	Shank Diameter "D"
<b>GH-1574</b>	4.0mm valve guide hone	6.010"	0.925"	0.180"	0.055"
<b>GH-1771</b>	4.5mm valve guide hone	6.010"	0.975"	0.205"	0.060"
<b>GH-1968</b>	5.0mm valve guide hone	8.055"	1.775"	0.220"	0.085"
<b>GH-2165</b>	5.5mm valve guide hone	8.120"	1.790"	0.240"	0.085"
<b>GH-2362</b>	6.0mm valve guide hone	7.975"	1.590"	0.260"	0.110"
<b>GH-2755</b>	7.0mm valve guide hone	7.975"	2.075"	0.325"	0.130"
<b>GH-3125</b>	5/16 (.3125") valve guide hone	8.125"	2.225"	0.375"	0.145"
<b>GH-3750</b>	3/8 (.3750") valve guide hone	8.050"	2.190"	0.415"	0.145"

BC Series Flex-Hone are manufactured by Brush Research (BRM). The BC Series Flex-Hone tool is designed for use on any type or size of valve guide from 4mm up to 3/8" in diameter. This guide hone is designed for surface finishing and cross hole deburring. Although Ball Hones have many uses, KPMI® offers them primarily to be used after a guide has been reamed. Using a Ball Hone after reaming creates a uniform surface free of irregularity, which improves surface contact and reduces the risk of galling or seizure. Please see our FAQ for recommended clearances.

# NUTS

These nuts are manufactured from a premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth to create hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.

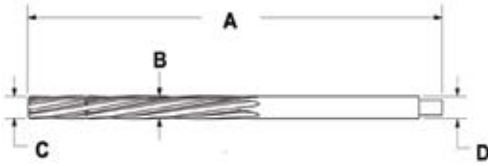


Nuts <span style="color: red; font-weight: bold;">NEW PRODUCTS</span>					
KPMI P/N	Thread	Overall Length	Flange Diameter	HEX Pattern	Quantity
<b>41001-4</b>	M10 x 1.25	0.750"	0.740"	14mm	Pkg. of 4
<b>41002-4</b>	1/2-20 UNF	0.520"	0.786"	14mm	Pkg. of 4
<b>41003-4</b>	M8 x 1.25	0.385"	0.670"	13mm	Pkg. of 4
<b>41004-4</b>	3/8-24 UNF	0.390"	0.625"	7/16"	Pkg. of 4



# HIGH SPEED STEEL REAMERS

KPMI® valve guide reamers are manufactured from premium hardened High Speed Steel. The advertised finished reamer diameters are ground to: +/- .0002". These spiral fluted reamers incorporate a 1.00" long pilot (reduced diameter) which gets inserted into an unfinished guide bore, to align the reamer to the valve guide centerline, during the sizing process. These reamers have been specifically designed for KPMI® Manganese Bronze and Cast Iron valve guides. Do not attempt to use these reamers to size C630 Nickel Aluminum Bronze guides. Also, once a reamer is used on Cast Iron, it is not advisable to then use it on a bronze guide.



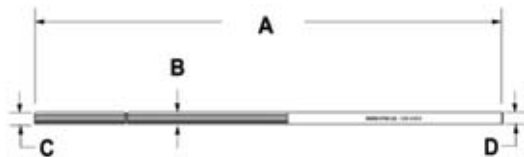
**GR-3770 / GR-2770**

## Reamers

KPMI P/N	Description	Overall Length A	Cutting Diameter B	Pilot Diameter C	Shank Diameter D
<b>GR-1970</b>	0.1970 HSS valve guide reamer	7.125"	0.1970"	0.191"	0.190"
<b>GR-2357</b>	0.1970 HSS valve guide reamer	7.125"	0.2357"	0.229"	0.288"
<b>GR-2770</b>	0.2770 HSS valve guide reamer	7.125"	0.2770"	0.271"	0.270"
<b>GR-2820</b>	0.2820 HSS valve guide reamer	7.125"	0.2820"	0.272"	0.275"
<b>GR-3100</b>	0.3100 HSS valve guide reamer	7.125"	0.3100"	0.304"	0.303"
<b>GR-3110</b>	0.3110 HSS valve guide reamer	7.125"	0.3110"	0.305"	0.304"
<b>GR-3115</b>	0.3115 HSS valve guide reamer	7.125"	0.3115"	0.305"	0.304"
<b>GR-3120</b>	0.3120 HSS valve guide reamer	7.125"	0.3120"	0.306"	0.305"
<b>GR-3400</b>	0.3400 HSS valve guide reamer	7.125"	0.3400"	0.334"	0.333"
<b>GR-3410</b>	0.3410 HSS valve guide reamer	7.125"	0.3410"	0.335"	0.334"
<b>GR-3730</b>	0.3730 HSS valve guide reamer	7.125"	0.3730"	0.367"	0.336"
<b>GR-3770</b>	0.3770 HSS valve guide reamer	7.125"	0.3770"	0.371"	0.370"
<b>GR-3775</b>	0.3775 HSS valve guide reamer	7.125"	0.3775"	0.371"	0.370"
<b>GR-3780</b>	0.3780 HSS valve guide reamer	7.125"	0.3780"	0.372"	0.371"
<b>GR-3790</b>	0.3790 HSS valve guide reamer	7.125"	0.3790"	0.373"	0.372"

# SOLID CARBIDE REAMERS

KPMI® Carbide valve guide reamers are manufactured from Solid Carbide. All KPMI® reamers are ground to: +/- .0002". KPMI® carbide reamers are straight-flute and have a 6-flute design. The pilot portion of KPMI® reamers are 1.0" to 1.5" long. Insert the pilot into a guide that you intend to size. Using a hand held drill, apply honing oil or ATF before and during reaming a guide. KPMI® reamers have been specifically designed for Manganese Bronze valve guides and Cast Iron. Do not attempt to use these reamers to size C630 Nickel Aluminum Bronze guides. Also, once a reamer is used on Cast Iron, it's not advisable to then use it on a bronze guide.



**NEW PRODUCTS**



**CR-1971 / CR-3115**

## Solid Carbide Reamers

KPMI P/N	Description	Overall Length A	Cutting Diameter B	Pilot Diameter C	Shank Diameter D
<b>CR-1971</b>	0.1971 carbide valve guide reamer	7.625"	0.1971"	0.192"	0.190"
<b>CR-2170</b>	0.2170 carbide valve guide reamer	7.625"	0.2170"	0.212"	0.211"
<b>CR-2357</b>	0.2357 carbide valve guide reamer	7.625"	0.2357"	0.230"	0.228"
<b>CR-2768</b>	0.2768 carbide valve guide reamer	7.625"	0.2768"	0.271"	0.269"
<b>CR-3110</b>	0.3110 carbide valve guide reamer	7.625"	0.3110"	0.306"	0.304"
<b>CR-3115</b>	0.3115 carbide valve guide reamer	7.625"	0.3115"	0.306"	0.304"
<b>CR-3120</b>	0.3120 carbide valve guide reamer	7.625"	0.3120"	0.307"	0.305"
<b>CR-3775</b>	0.3775 carbide valve guide reamer	7.625"	0.3775"	0.372"	0.370"

**ORDER 650-557-2046**



# HIGH PERFORMANCE BLANK PUSHRODS



- KPMI® Pushrods are designed with thin walled Chrome Moly tube for increased stiffness over OEM components.
- Male and female endpieces are made from hardened steel and offer increased wear resistance over aluminum OEM parts.
- Blank Pushrod Kits come with one female endpiece pressed into the body and loose endpieces specified in the kit.
- Designed for BSA® and Triumph® applications but can be used as desired (see dimensions for fitment).
- Custom length pushrods up to 9" in "B" dimension available upon request.



90502-2

## Blank Pushrods • Steel • Alloy Tube for Various Applications

				<b>A</b> Ø.371" OD		Machining Information:  1. Break ID edge only at .015 x 45°			
				<b>B</b> 9.120" Overall Length					
				<b>C</b> Ø.305" ID Before Machining					
		<b>D</b> R.156	<b>E</b> 0.420"			<b>D</b> R.124	<b>E</b> 0.675"		
		<b>F</b> 0.120"	<b>G</b> 0.310"			<b>F</b> 0.375"	<b>G</b> 0.310"		
KPMI P/N	Model	Material				Kit Includes			
90502-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips				2 Female Ended Pushrods / 2 Male Endpieces			
90512-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips				2 Female Ended Pushrods / 2 Female Endpieces			
90502-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips				4 Female Ended Pushrods / 4 Male Endpieces			
90512-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips				4 Female Ended Pushrods / 4 Female Endpieces			

Blank Pushrods Kits (sets of 2 and 4) can be machined to desired length and assembled by KPMI® for a flat fee of \$120.00. Orders can be placed by using the Custom Pushrod Order Form found on our website at [www.kpmi.us/forms.html](http://www.kpmi.us/forms.html).

# VALVE GUIDE INSTALLATION & REMOVAL TOOLS

- Machined to properly fit KPMI® Hayabusa valve guide designs
- Extra-long handles provide ergonomically grooved gripping area and the ability to work in tough to reach situations
- Guide installation tool is designed to register on uniquely designed seal relief minimizing guide deformation on the seal end, ensuring proper height above the head without guess and check measuring as seen in Figure (1)
- Guide removal tool allows the user to drive any 5mm guide with a 10mm outer diameter through lengthy guide bores thanks to its added length below the gripping area shown in Figure (2)
- Driver material is a high strength bronze purposefully selected for its shock absorption capabilities allowing for comfortable use as well as compatibility with cast and bronze guides



Figure 1    Figure 2

60-61400 / 60-61405

## Special - Valve Guide Installer

	KPMI P/N	O.L	Body Ø	Inner Ø 1	Inner Ø 2	Depth 1	Depth 2	Quantity
		A	B	C	D	E	F	
	60-61400	8.000"	0.615"	0.425"	0.348"	0.285"	0.650"	Pkg. of 1

## Install & Remove Valve Guides - Universal

	KPMI P/N	O.L	Body Ø	Ø 1	Ø 2	Length 1	Length 2	Quantity
		A	B	C	D	E	F	
	60-61405	8.000"	0.615"	0.182"	0.397"	1.000"	4.000"	Pkg. of 1

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# BLACK DIAMOND™ VALVE BLANKS

TOOLS & COMPONENTS

The Proprietary Black Diamond™ process is not a coating. It penetrates and treats the steel to a depth of .002", so it can never peel or flake off. Coatings such as chrome are "surface build ups" that rely on adhesion to remain intact. They can crack, peel, and flake off, depositing abrasive debris in the guide, causing wear and seizure. The Black Diamond™ process creates an extremely hard and smooth finish, preventing accelerated wear on the stem and keeper groove areas. This hard smooth finish has a low coefficient of friction, making it less aggressive on the valve guide, and promoting longer guide life. In exhaust environments, the Black Diamond™ process offers increased resistance to corrosion which is critical for long life.



Black Diamond™ Valve Blanks						
KPMI Part No.	Type	Head Diameter		Stem Diameter	Tulip Profile	Overall Length
3/8" Stem Diameter						
20-4194B	IN	54.00mm	2.125"	0.3765"	23°	5.000"
20-4195B	EX	47.00mm	1.850"	0.3745"	29°	5.000"
5/16" Stem Diameter						
20-4171B2	IN	57.15mm	2.250"	0.3100"	23°	5.000"
20-4171B1	IN	53.34mm	2.100"	0.3100"	23°	5.000"
20-4171B	IN	50.80mm	2.000"	0.3100"	23°	5.000"
20-4170B2	EX	44.45mm	1.750"	0.3096"	30°	5.000"
20-4170B	EX	43.56mm	1.715"	0.3096"	40°	5.000"
8.0mm Stem Diameter						
11-10011	IN	46.00mm	1.811"	0.3145"	18°	5.000"
7.0mm Stem Diameter						
11-10008	IN	50.80mm	2.000"	0.2750"	23°	5.200"
40-4178B	IN	42.00mm	1.654"	0.2745"	23°	5.000"
6.5mm Stem Diameter						
30-30228B	IN	42.00mm	1.653"	0.2590"	20°	5.000"
6.0mm Stem Diameter						
93-93015B	IN	42.00mm	1.653"	0.2352"	23°	5.000"
20-21019	IN	44.00mm	1.732"	0.2347"	10°	5.200"
5.5mm Stem Diameter						
30-30244B	IN	40.00mm	1.575"	0.2158"	20°	5.000"
60-4303B	IN	34.00mm	1.339"	0.2155"	23°	5.000"
40-4176B	EX	29.00mm	1.142"	0.2145"	29°	5.000"
5.0mm Stem Diameter						
60-60012B	IN	34.00mm	1.339"	0.1962"	18°	5.000"
60-60013B	EX	28.50mm	1.122"	0.1953"	17°	5.000"
60-60076B	IN	40.00mm	1.575"	0.1962"	20°	5.000"
4.5mm Stem Diameter						
11-10004	IN	34.00mm	1.339"	0.1760"	18°	5.000"
11-10005	IN	32.00mm	1.260"	0.1765"	18°	5.000"
11-10006	EX	28.00mm	1.102"	0.1755"	20°	5.000"
11-10007	EX	26.00mm	1.024"	0.1755"	20°	5.000"
4.0mm Stem Diameter						
11-10000	IN	32.00mm	1.260"	0.1568"	18°	5.000"
11-10001	IN	28.00mm	1.102"	0.1568"	18°	5.000"
11-10002	EX	26.00mm	1.024"	0.1563"	20°	5.000"
11-10003	EX	24.00mm	0.945"	0.1563"	20°	5.000"

# TENSILITE® TITANIUM / WHITE DIAMOND® WHITE BLANKS



Tensilite® Titanium Valve Blanks						
KPMI Part No.	Type	Head Diameter	Stem Diameter	Tulip Profile	Overall Length	
7.0mm Stem Diameter						
40-4244T	IN / Ex	48.00mm	1.890"	0.2745"	17°	5.100"
40-4238T	IN / Ex	42.00mm	1.654"	0.2745"	23°	5.000"
6.0mm Stem Diameter						
11-10020T	IN / EX	42.00mm	1.653"	0.2355"	23°	5.320"
5.5mm Stem Diameter						
60-1062T	IN / Ex	40.00mm	1.575"	0.2155"	20°	5.000"
60-1060T	IN / Ex	34.00mm	1.339"	0.2155"	20°	5.000"
5.0mm Stem Diameter						
11-10017T	IN / Ex	38.00mm	1.496"	0.1960"	18°	5.000"
11-10019T	IN / Ex	29.00mm	1.142"	0.1955"	20°	5.000"
4.5mm Stem Diameter						
11-10016T	IN / Ex	28.00mm	1.102"	0.1755"	20°	4.300"
4.0mm Stem Diameter						
11-10013T	IN / Ex	30.00mm	1.181"	0.1568"	18°	5.000"
11-10014T	IN / Ex	26.00mm	1.024"	0.1560"	20°	5.000"

White Diamond® Valve Blanks							
KPMI Part No.	Type	Head Diameter	Stem Diameter	Tulip Profile	Overall Length	AV&V Part No.	
5/16" Stem Diameter							
*20-20975BH	IN	55.88mm	2.200"	0.3108"	25°	5.700"	AV2200BC
*20-20980BH	IN	53.34mm	2.100"	0.3108"	24°	5.700"	AV2100BC
*20-20985BH	EX	43.18mm	1.700"	0.3106"	25°	5.700"	AV1700BC
*Note: Bi-metallic composition provides the ability to flame harden the valve tip for when added wear resistance is an absolute must.							
7.0mm Stem Diameter							
40-4178BH	IN	42.01mm	1.657"	0.2745"	23°	5.200"	---
40-4179BH	EX	33.00mm	1.299"	0.2745"	29°	5.200"	---
5.0mm Stem Diameter							
60-4310BH	IN / EX	34.00mm	1.339"	0.1958"	23°	4.900"	---

Kibblewhite® Tensilite® titanium valves are manufactured from solid U.S. milled titanium bar. The titanium bar is cut, and forged, and then the stem is pulled from the forging process and cross-sectionally reduced.

These one piece forgings made from 6AL4V or 6-2-4-2 titanium alloy reflect the latest developments in titanium valve alloys. These alloys have superior hardness, strength, and thermal characteristics.

After final grinding and machining, Tensilite® valves are encased in a hard Chromium Nitride (CrN) shell. CrN offers excellent resistance to impact, abrasion and corrosion.

These qualities and its low coefficient of friction make CrN the coating of choice for high performance titanium valves.



**Tensilite®  
Valve Blank**

We fully CNC machine our White Diamond® Valves from a one-piece forging of either EV8 Stainless Steel or Inconel-751. These materials have proven heat and corrosion resistance properties and are hard chromed with a 360 degree anode to produce the highest possible grade of hard chrome finish.



**White Diamond®  
Valve Blank**

For all the blank valves available, please refer online to the valve blanks section of the [www.kpmi.us](http://www.kpmi.us) website, under **Precision Components**

**VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)**



# TAPPETS

TOOLS & COMPONENTS



H.T. Steel



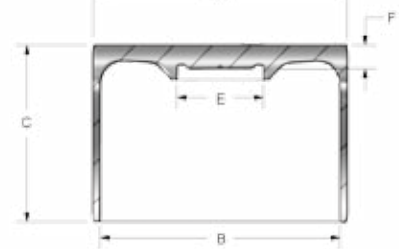
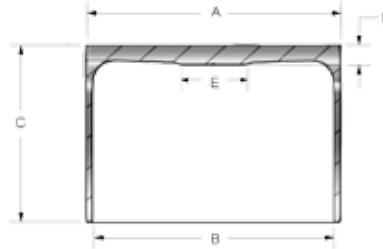
H.T. Steel Plus DLC Coated



Shim On Bottom (SOB)



Shim In Tappet (SIT)



### Tappet / Shim On Bottom (SOB)

Qty.1 Part Number	Outside Diameter A		Inside Diameter B	Overall Length C	Button Diameter E	Roof Thickness F
600-100001	26.00mm	1.0232"	0.970"	0.790"	0.236"	0.115"
600-100050	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"
600-100200	28.00mm	1.1016"	1.040"	0.860"	0.310"	0.135"
600-100202	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"
600-100250	28.50mm	1.1220"	1.058"	0.763"	0.320"	0.098"
600-100500	31.00mm	1.2195"	1.156"	0.800"	0.325"	0.108"
600-100525	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"
600-100700	33.00mm	1.2980"	1.235"	1.025"	0.340"	0.115"
600-100750	33.50mm	1.3184"	1.250"	1.025"	0.340"	0.115"
600-100800	34.00mm	1.3380"	1.258"	1.025"	0.313"	0.115"
600-101095	36.95mm	1.4547"	1.388"	1.040"	0.400"	0.105"
600-101300	39.00mm	1.5350"	1.457"	1.040"	0.400"	0.145"

### Tappet / Shim In Tappet (SIT)

Qty.1 Part Number	Outside Diameter A		Inside Diameter B	Overall Length C	Shim Diameter E	Roof Thickness F
600-100205	28.00mm	1.1017"	1.038"	0.763"	0.375"	0.100"

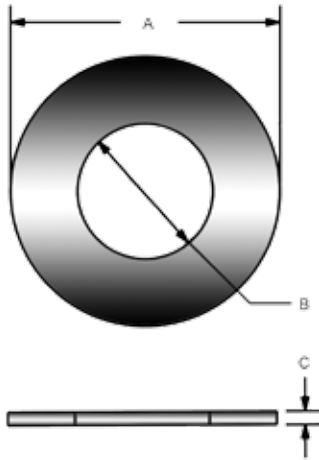
Kibblewhite® Engineers design our tappets using Finite Element Stress Analysis (FEA) software. This software allows our engineers to lighten the tappets without sacrificing strength so we can create the strongest, lightest tappets possible. These tappets are machined from aircraft quality solid steel bar stock. They undergo a proprietary heat treat process that creates a hard surface and a non brittle-core, maximizing toughness and wear resistance. Kibblewhite® tappets are run in high performance automotive and motorcycle applications including Motocross, Flat Track, Road Race, Drag Race, and Land Speed Racing at the Bonneville Salt Flats.

### Tappet / DLC Coated

Qty.1 Part Number	Outside Diameter A		Inside Diameter B	Overall Length C	Button Diameter E	Roof Thickness F
600-100202-DLC	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"
600-100525-DLC	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"

Our coated tappets undergo a low temperature PVD process to deposit a DLC film, which is extremely hard and has a very low coefficient of friction. These properties help the tappet to maintain its durability in extreme duty situations. Although KPMI® never recommends running a camshaft off the edge of the tappet, this coating may help increase durability in these applications.

# SHIMS BOOSTER / VALVE SPRING

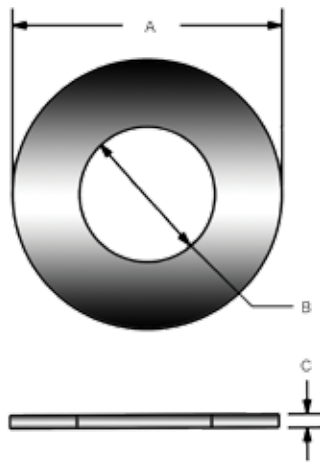


## Shims - Booster / Valve Spring

Qty 4 Part No.	Qty 8 Part No.	Qty 16 Part No.	Qty 50 Part No.	Qty 100 Part No.	Outside Diameter A	Inside Diameter B	Thickness C
92001-4	92001-8	92001-16	92001-50	92001-100	1.437"	0.645"	0.015"
92002-4	92002-8	92002-16	92002-50	92002-100	1.437"	0.645"	0.030"
92003-4	92003-8	92003-16	92003-50	92003-100	1.437"	0.645"	0.060"
92004-4	92004-8	92004-16	92004-50	92004-100	0.760"	0.578"	0.060"
92005-4	92005-8	92005-16	92005-50	92005-100	0.760"	0.578"	0.030"
92006-4	92006-8	92006-16	92006-50	92006-100	0.760"	0.578"	0.015"
92007-4	92007-8	92007-16	92007-50	92007-100	0.920"	0.520"	0.030"
92008-4	92008-8	92008-16	92008-50	92008-100	0.920"	0.520"	0.060"
92009-4	92009-8	92009-16	92009-50	92009-100	1.218"	0.875"	0.060"
92010-4	92010-8	92010-16	92010-50	92010-100	1.156"	0.828"	0.030"
92011-4	92011-8	92011-16	92011-50	92011-100	1.020"	0.735"	0.125"
92012-4	92012-8	92012-16	92012-50	92012-100	1.100"	0.721"	0.060"
92013-4	92013-8	92013-16	92013-50	92013-100	1.250"	0.812"	0.060"
92014-4	92014-8	92014-16	92014-50	92014-100	1.250"	0.812"	0.030"
92015-4	92015-8	92015-16	92015-50	92015-100	1.125"	0.719"	0.030"
92016-4	92016-8	92016-16	92016-50	92016-100	1.125"	0.719"	0.060"
92017-4	92017-8	92017-16	92017-50	92017-100	1.312"	0.765"	0.030"
92018-4	92018-8	92018-16	92018-50	92018-100	1.218"	0.875"	0.030"
92019-4	92019-8	92019-16	92019-50	92019-100	1.100"	0.719"	0.030"
92020-4	92020-8	92020-16	92020-50	92020-100	1.000"	0.688"	0.060"
92021-4	92021-8	92021-16	92021-50	92021-100	1.000"	0.765"	0.060"
92022-4	92022-8	92022-16	92022-50	92022-100	1.438"	1.059"	0.030"
92023-4	92023-8	92023-16	92023-50	92023-100	1.000"	0.688"	0.030"
92024-4	92024-8	92024-16	92024-50	92024-100	1.000"	0.688"	0.015"
92025-4	92025-8	92025-16	92025-50	92025-100	1.360"	1.000"	0.060"
92026-4	92026-8	92026-16	92026-50	92026-100	1.360"	1.000"	0.030"
92027-4	92027-8	92027-16	92027-50	92027-100	1.360"	1.000"	0.015"
92028-4	92028-8	92028-16	92028-50	92028-100	1.500"	1.031"	0.060"
92029-4	92029-8	92029-16	92029-50	92029-100	1.500"	1.031"	0.030"
92030-4	92030-8	92030-16	92030-50	92030-100	1.500"	1.031"	0.015"
92031-4	92031-8	92031-16	92031-50	92031-100	1.000"	0.765"	0.030"



# SHIMS BOOSTER / VALVE SPRING



## Shims - Booster / Valve Spring

Qty 4 Part No.	Qty 8 Part No.	Qty 16 Part No.	Qty 50 Part No.	Qty 100 Part No.	Outside Diameter A	Inside Diameter B	Thickness C
92032-4	92032-8	92032-16	92032-50	92032-100	1.000"	0.765"	0.015"
92033-4	92033-8	92033-16	92033-50	92033-100	1.218"	0.875"	0.015"
92034-4	92034-8	92034-16	92034-50	92034-100	1.100"	0.719"	0.015"
92035-4	92035-8	92035-16	92035-50	92035-100	1.250"	0.625"	0.060"
92036-4	92036-8	92036-16	92036-50	92036-100	1.250"	0.625"	0.030"
92037-4	92037-8	92037-16	92037-50	92037-100	1.250"	0.625"	0.015"
92038-4	92038-8	92038-16	92038-50	92038-100	0.970"	0.445"	0.060"
92039-4	92039-8	92039-16	92039-50	92039-100	0.970"	0.445"	0.030"
92040-4	92040-8	92040-16	92040-50	92040-100	0.970"	0.445"	0.015"
92041-4	92041-8	92041-16	92041-50	92041-100	0.915"	0.640"	0.060"
92042-4	92042-8	92042-16	92042-50	92042-100	0.915"	0.640"	0.030"
92043-4	92043-8	92043-16	92043-50	92043-100	0.915"	0.640"	0.015"
92044-4	92044-8	92044-16	92044-50	92044-100	0.796"	0.515"	0.060"
92045-4	92045-8	92045-16	92045-50	92045-100	0.796"	0.515"	0.030"
92046-4	92046-8	92046-16	92046-50	92046-100	0.796"	0.515"	0.015"
92047-4	92047-8	92047-16	92047-50	92047-100	1.312"	0.765"	0.060"
92048-4	92048-8	92048-16	92048-50	92048-100	1.312"	0.765"	0.015"
92049-4	92049-8	92049-16	92049-50	92049-100	1.480"	0.703"	0.060"
92050-4	92050-8	92050-16	92050-50	92050-100	1.480"	0.703"	0.030"
92051-4	92051-8	92051-16	92051-50	92051-100	1.480"	0.703"	0.015"
92052-4	92052-8	92052-16	92052-50	92052-100	1.640"	0.635"	0.060"
92053-4	92053-8	92053-16	92053-50	92053-100	1.640"	0.635"	0.030"
92054-4	92054-8	92054-16	92054-50	92054-100	1.640"	0.635"	0.015"
92055-4	92055-8	92055-16	92055-50	92055-100	1.500"	0.765"	0.060"
92056-4	92056-8	92056-16	92056-50	92056-100	1.500"	0.765"	0.030"
92057-4	92057-8	92057-16	92057-50	92057-100	1.477"	0.765"	0.015"
92058-4	92058-8	92058-16	92058-50	92058-100	1.500"	0.562"	0.060"
92059-4	92059-8	92059-16	92059-50	92059-100	1.500"	0.562"	0.030"
92060-4	92060-8	92060-16	92060-50	92060-100	1.500"	0.562"	0.015"
92061-4	92061-8	92061-16	92061-50	92061-100	1.247"	0.518"	0.060"
92062-4	92062-8	92062-16	92062-50	92062-100	1.247"	0.518"	0.030"
92063-4	92063-8	92063-16	92063-50	92063-100	1.247"	0.518"	0.015"

ORDER 650-557-2046

# SHIMS VALVE ADJUSTMENT



Manufactured from heat treated aircraft quality steel, KPMI® holds exact dimensional tolerances, height and perpendicularity on these shims. KPMI® sets specific hardness and surface finish specifications to insure optimum fit, Performance, strength, and durability. Shims are available in 7.5mm, 9.5mm, and 13.0mm ODs.

All KPMI® adj. shims are conveniently packaged in quantities of: 4, 8, 16, 50, and 100. For more information visit [KPMI.US](http://KPMI.US)



## 7.5mm Shims - Valve Adjustment

Qty 4 Part No.	Qty 8 Part No.	Qty 16 Part No.	Qty 50 Part No.	Qty 100 Part No.	Thickness
93075-4	93075-8	93075-16	93075-50	93075-100	1.20mm
93076-4	93076-8	93076-16	93076-50	93076-100	1.25mm
93077-4	93077-8	93077-16	93077-50	93077-100	1.30mm
93078-4	93078-8	93078-16	93078-50	93078-100	1.35mm
93079-4	93079-8	93079-16	93079-50	93079-100	1.40mm
93080-4	93080-8	93080-16	93080-50	93080-100	1.45mm
93081-4	93081-8	93081-16	93081-50	93081-100	1.50mm
93082-4	93082-8	93082-16	93082-50	93082-100	1.55mm
93083-4	93083-8	93083-16	93083-50	93083-100	1.60mm
93084-4	93084-8	93084-16	93084-50	93084-100	1.65mm
93085-4	93085-8	93085-16	93085-50	93085-100	1.70mm
93086-4	93086-8	93086-16	93086-50	93086-100	1.75mm
93087-4	93087-8	93087-16	93087-50	93087-100	1.80mm
93088-4	93088-8	93088-16	93088-50	93088-100	1.85mm
93089-4	93089-8	93089-16	93089-50	93089-100	1.90mm
93090-4	93090-8	93090-16	93090-50	93090-100	1.95mm
93091-4	93091-8	93091-16	93091-50	93091-100	2.00mm
93092-4	93092-8	93092-16	93092-50	93092-100	2.05mm
93093-4	93093-8	93093-16	93093-50	93093-100	2.10mm
93094-4	93094-8	93094-16	93094-50	93094-100	2.15mm
93095-4	93095-8	93095-16	93095-50	93095-100	2.20mm
93096-4	93096-8	93096-16	93096-50	93096-100	2.25mm
93097-4	93097-8	93097-16	93097-50	93097-100	2.30mm
93098-4	93098-8	93098-16	93098-50	93098-100	2.35mm
93099-4	93099-8	93099-16	93099-50	93099-100	2.40mm
93100-4	93100-8	93100-16	93100-50	93100-100	2.45mm
93101-4	93101-8	93101-16	93101-50	93101-100	2.50mm
93102-4	93102-8	93102-16	93102-50	93102-100	2.55mm
93103-4	93103-8	93103-16	93103-50	93103-100	2.60mm
93104-4	93104-8	93104-16	93104-50	93104-100	2.65mm
93105-4	93105-8	93105-16	93105-50	93105-100	2.70mm
93106-4	93106-8	93106-16	93106-50	93106-100	2.75mm
93107-4	93107-8	93107-16	93107-50	93107-100	2.80mm
93108-4	93108-8	93108-16	93108-50	93108-100	2.85mm
93109-4	93109-8	93109-16	93109-50	93109-100	2.90mm
93110-4	93110-8	93110-16	93110-50	93110-100	2.95mm
93111-4	93111-8	93111-16	93111-50	93111-100	3.00mm
93112-4	93112-8	93112-16	93112-50	93112-100	3.05mm



# SHIMS VALVE ADJUSTMENT



Manufactured from heat treated aircraft quality steel, KPMI® holds exact dimensional tolerances, height and perpendicularity on these shims. KPMI® sets specific hardness and surface finish specifications to insure optimum fit, Performance, strength, and durability. Shims are available in 7.5mm, 9.5mm, and 13.0mm ODs.

All KPMI® adj. shims are conveniently packaged in quantities of: 4, 8, 16, 50, and 100. For more information visit [KPMI.US](http://KPMI.US)

## 7.5mm Shims - Valve Adjustment

Qty 4 Part No.	Qty 8 Part No.	Qty 16 Part No.	Qty 50 Part No.	Qty 100 Part No.	Thickness
93113-4	93113-8	93113-16	93113-50	93113-100	3.10mm
93114-4	93114-8	93114-16	93114-50	93114-100	3.15mm
93115-4	93115-8	93115-16	93115-50	93115-100	3.20mm
93116-4	93116-8	93116-16	93116-50	93116-100	3.25mm
93117-4	93117-8	93117-16	93117-50	93117-100	3.30mm
93118-4	93118-8	93118-16	93118-50	93118-100	3.35mm
93119-4	93119-8	93119-16	93119-50	93119-100	3.40mm
93120-4	93120-8	93120-16	93120-50	93120-100	3.45mm
93121-4	93121-8	93121-16	93121-50	93121-100	3.50mm

## 9.5mm Shims - Valve Adjustment

Qty 4 Part No.	Qty 8 Part No.	Qty 16 Part No.	Qty 50 Part No.	Qty 100 Part No.	Thickness
93001-4	93001-8	93001-16	93001-50	93001-100	1.20mm
93002-4	93002-8	93002-16	93002-50	93002-100	1.25mm
93003-4	93003-8	93003-16	93003-50	93003-100	1.30mm
93004-4	93004-8	93004-16	93004-50	93004-100	1.35mm
93005-4	93005-8	93005-16	93005-50	93005-100	1.40mm
93006-4	93006-8	93006-16	93006-50	93006-100	1.45mm
93007-4	93007-8	93007-16	93007-50	93007-100	1.50mm
93008-4	93008-8	93008-16	93008-50	93008-100	1.55mm
93009-4	93009-8	93009-16	93009-50	93009-100	1.60mm
93010-4	93010-8	93010-16	93010-50	93010-100	1.65mm
93011-4	93011-8	93011-16	93011-50	93011-100	1.70mm
93012-4	93012-8	93012-16	93012-50	93012-100	1.75mm
93013-4	93013-8	93013-16	93013-50	93013-100	1.80mm
93014-4	93014-8	93014-16	93014-50	93014-100	1.85mm
93015-4	93015-8	93015-16	93015-50	93015-100	1.90mm
93016-4	93016-8	93016-16	93016-50	93016-100	1.95mm
93017-4	93017-8	93017-16	93017-50	93017-100	2.00mm
93018-4	93018-8	93018-16	93018-50	93018-100	2.05mm
93019-4	93019-8	93019-16	93019-50	93019-100	2.10mm
93020-4	93020-8	93020-16	93020-50	93020-100	2.15mm
93021-4	93021-8	93021-16	93021-50	93021-100	2.20mm
93022-4	93022-8	93022-16	93022-50	93022-100	2.25mm
93023-4	93023-8	93023-16	93023-50	93023-100	2.30mm
93024-4	93024-8	93024-16	93024-50	93024-100	2.35mm
93025-4	93025-8	93025-16	93025-50	93025-100	2.40mm
93026-4	93026-8	93026-16	93026-50	93026-100	2.45mm
93027-4	93027-8	93027-16	93027-50	93027-100	2.50mm
93028-4	93028-8	93028-16	93028-50	93028-100	2.55mm

**ORDER 650-557-2046**



# SHIMS VALVE ADJUSTMENT



## 9.5mm Shims - Valve Adjustment

Qty 4 Part No.	Qty 8 Part No.	Qty 16 Part No.	Qty 50 Part No.	Qty 100 Part No.	Thickness
93029-4	93029-8	93029-16	93029-50	93029-100	2.60mm
93030-4	93030-8	93030-16	93030-50	93030-100	2.65mm
93031-4	93031-8	93031-16	93031-50	93031-100	2.70mm
93032-4	93032-8	93032-16	93032-50	93032-100	2.75mm
93033-4	93033-8	93033-16	93033-50	93033-100	2.80mm
93034-4	93034-8	93034-16	93034-50	93034-100	2.85mm
93035-4	93035-8	93035-16	93035-50	93035-100	2.90mm
93036-4	93036-8	93036-16	93036-50	93036-100	2.95mm
93037-4	93037-8	93037-16	93037-50	93037-100	3.00mm
93038-4	93038-8	93038-16	93038-50	93038-100	3.05mm
93039-4	93039-8	93039-16	93039-50	93039-100	3.10mm
93040-4	93040-8	93040-16	93040-50	93040-100	3.15mm
93041-4	93041-8	93041-16	93041-50	93041-100	3.20mm
93042-4	93042-8	93042-16	93042-50	93042-100	3.25mm
93043-4	93043-8	93043-16	93043-50	93043-100	3.30mm
93044-4	93044-8	93044-16	93044-50	93044-100	3.35mm
93045-4	93045-8	93045-16	93045-50	93045-100	3.40mm
93046-4	93046-8	93046-16	93046-50	93046-100	3.45mm
93047-4	93047-8	93047-16	93047-50	93047-100	3.50mm

## 13mm Shims - Valve Adjustment

Qty 4 Part No.	Qty 8 Part No.	Qty 16 Part No.	Qty 50 Part No.	Qty 100 Part No.	Thickness
93050-4	93050-8	93050-16	93050-50	93050-100	2.05mm
93051-4	93051-8	93051-16	93051-50	93051-100	2.10mm
93052-4	93052-8	93052-16	93052-50	93052-100	2.15mm
93053-4	93053-8	93053-16	93053-50	93053-100	2.20mm
93054-4	93054-8	93054-16	93054-50	93054-100	2.25mm
93055-4	93055-8	93055-16	93055-50	93055-100	2.30mm
93056-4	93056-8	93056-16	93056-50	93056-100	2.35mm
93057-4	93057-8	93057-16	93057-50	93057-100	2.40mm
93058-4	93058-8	93058-16	93058-50	93058-100	2.45mm
93059-4	93059-8	93059-16	93059-50	93059-100	2.50mm
93060-4	93060-8	93060-16	93060-50	93060-100	2.55mm
93061-4	93061-8	93061-16	93061-50	93061-100	2.60mm
93062-4	93062-8	93062-16	93062-50	93062-100	2.65mm
93063-4	93063-8	93063-16	93063-50	93063-100	2.70mm
93064-4	93064-8	93064-16	93064-50	93064-100	2.75mm
93065-4	93065-8	93065-16	93065-50	93065-100	2.80mm
93066-4	93066-8	93066-16	93066-50	93066-100	2.85mm
93067-4	93067-8	93067-16	93067-50	93067-100	2.90mm
93068-4	93068-8	93068-16	93068-50	93068-100	2.95mm
93069-4	93069-8	93069-16	93069-50	93069-100	3.00mm
93070-4	93070-8	93070-16	93070-50	93070-100	3.05mm
93071-4	93071-8	93071-16	93071-50	93071-100	3.10mm



# SEATS (HIGH CHROME)

TOOLS & COMPONENTS



- 18-22% Chromium for resistance to abrasion, corrosion and deformation
- 1-2% Nickel content, which lends to corrosion-resistance and toughness
- Machined from solid bar stock and ground to exacting tolerances
- The alternative to Powder Metal
- Machines as a continuous chip
- Use KPMI® “High Chromium Seats” for your next gasoline or diesel engine rebuild

KPMI Part Number	Outside Diameter		Inside Diameter		Height	
<b>NEW PRODUCTS</b> 10-HC350	35.00mm	1.378"	26.00mm	1.024"	11.02mm	0.434"
10-HC414	41.40mm	1.630"	29.97mm	1.180"	9.78mm	0.385"
<b>NEW PRODUCTS</b> 10-HC440	43.99mm	1.732"	35.81mm	1.410"	10.92mm	0.430"
10-HC446	44.63mm	1.757"	34.82mm	1.371"	10.92mm	0.430"
<b>NEW PRODUCTS</b> 10-HC447	44.63mm	1.757"	35.81mm	1.410"	10.92mm	0.430"
10-HC462	46.23mm	1.820"	34.93mm	1.375"	11.43mm	0.450"
10-HC477	47.75mm	1.880"	36.45mm	1.435"	10.41mm	0.410"
10-HC478	47.80mm	1.882"	38.61mm	1.520"	10.41mm	0.410"
10-HC493	49.38mm	1.944"	40.01mm	1.575"	10.16mm	0.400"
10-HC494	49.40mm	1.945"	34.93mm	1.375"	11.18mm	0.440"
10-HC510	51.00mm	2.008"	40.89mm	1.610"	11.18mm	0.440"
10-HC518	51.82mm	2.040"	43.18mm	1.700"	10.80mm	0.425"
10-HC525	52.53mm	2.068"	44.45mm	1.750"	8.00mm	0.315"
10-HC526	52.58mm	2.070"	40.89mm	1.610"	11.68mm	0.460"
10-HC541	54.15mm	2.132"	45.72mm	1.800"	11.68mm	0.460"
10-HC542	54.23mm	2.135"	44.45mm	1.750"	10.16mm	0.400"
10-HC549	54.94mm	2.163"	44.45mm	1.750"	11.56mm	0.455"
10-HC573	57.33mm	2.257"	39.37mm	1.550"	12.70mm	0.500"

# SEATS (HIGH CHROME)



## Seat Application

### Replacement Valve Seats For Shovel Head 1200 & 1340

KPMI PN	Type	Outside Diameter	Inside Diameter	Thickness
10-HC493	Intake / Exhaust	1.944"	1.575"	.400"
10-HC542	Intake / Exhaust	2.135"	1.750"	.400"

### Oversize Seats for Shovel, Evolution & Twin Cam- Machining Required

KPMI PN	Type	Outside Diameter	Inside Diameter	Thickness
10-HC414	Intake / Exhaust	1.630"	1.180"	.385"
<b>NEW PRODUCTS</b> 10-HC447	Intake / Exhaust	1.757"	1.410"	.430"
10-HC478	Intake / Exhaust	1.882"	1.530"	.410"
10-HC510	Intake / Exhaust	2.008"	1.610"	.440"
10-HC518	Intake / Exhaust	2.040"	1.700"	.425"
10-HC526	Intake / Exhaust	2.070"	1.610"	.450"
10-HC541	Intake / Exhaust	2.132"	1.800"	.460"
10-HC549	Intake / Exhaust	2.163"	1.750"	.455"

### Iron Head Sportster

KPMI PN	Type	Outside Diameter	Inside Diameter	Thickness
10-HC446	Intake / Exhaust	1.757"	1.371"	.315"
10-HC525	Intake / Exhaust	2.068"	1.750"	0.315

### Milwaukee-Eight

KPMI PN	Type	Outside Diameter	Inside Diameter	Thickness
<b>NEW PRODUCTS</b> 10-HC350	Intake / Exhaust	1.378"	1.024"	.434"
<b>NEW PRODUCTS</b> 10-HC447	Intake / Exhaust	1.757"	1.410"	.430"

### Universal Repair Seat

KPMI PN	Type	Outside Diameter	Inside Diameter	Thickness
<b>NEW PRODUCTS</b> 10-HC350	Intake / Exhaust	1.378"	1.024"	.434"
<b>NEW PRODUCTS</b> 10-HC440	Intake / Exhaust	1.732"	1.410"	.430"
10-HC462	Intake / Exhaust	1.820"	1.375"	.450"
10-HC494	Intake / Exhaust	1.945"	1.375"	.440"
10-HC573	Intake / Exhaust	2.257"	1.550"	.500"
<b>NEW PRODUCTS</b> 10-HC477	Intake / Exhaust	1.880"	1.435"	.410"



# SEATS (POWDERED METAL)



In an effort to develop valve seats that fit our exacting standards, Kibblewhite® tested and chemically separated several iron based valve seats. We specified a combination of materials that gave us a seat with good uniform hardness and resistance to microwelding, wear, and recession. Casting a seat with this combination of alloys was not possible, and only with the latest in Powdered Metal Technology were we able to blend these alloys creating a high density seat with exceptional wear resistance, machinability, and thermal qualities. This material is compatible with all types of fuel blends, resists corrosion and burning, and is machinable with standard tooling.

These seats have been thoroughly tested on the track and street, in high RPM multi-valve applications, high spring load V-twin applications, with leaded and unleaded gasoline, ethanol, methanol, and in naturally aspirated and forced induction applications. In each case they have performed flawlessly, making these the seats of choice for cylinder head builders everywhere.

KPMI Part Number	Outside Diameter		Inside Diameter		Height	
10-SC250	25.00mm	0.984"	17.00mm	0.669"	9.00mm	0.355"
10-SC260	26.00mm	1.024"	18.00mm	0.709"	9.00mm	0.355"
10-SC270	27.00mm	1.063"	19.00mm	0.748"	9.00mm	0.355"
10-SC280	28.00mm	1.102"	20.00mm	0.787"	9.00mm	0.355"
10-SC290	29.00mm	1.142"	21.00mm	0.827"	9.50mm	0.375"
10-SC300	30.00mm	1.181"	22.00mm	0.866"	9.50mm	0.375"
10-SC310	31.00mm	1.220"	23.00mm	0.906"	9.50mm	0.375"
10-SC320	32.00mm	1.260"	24.00mm	0.945"	9.50mm	0.375"
10-SC330	33.00mm	1.299"	25.00mm	0.984"	9.50mm	0.375"
10-SC340	34.00mm	1.339"	26.00mm	1.024"	9.50mm	0.375"
10-SC350	35.00mm	1.378"	26.00mm	1.024"	11.00mm	0.434"
10-SC360	36.00mm	1.417"	27.00mm	1.063"	11.00mm	0.434"
10-SC370	37.00mm	1.457"	28.00mm	1.102"	11.00mm	0.434"
10-SC380	38.00mm	1.496"	29.00mm	1.142"	11.00mm	0.434"
10-SC390	39.00mm	1.535"	30.00mm	1.181"	11.00mm	0.434"
10-SC400	40.00mm	1.575"	30.00mm	1.181"	11.00mm	0.434"
10-SC410	41.00mm	1.614"	31.00mm	1.220"	11.00mm	0.434"
10-SC414	41.43mm	1.631"	30.15mm	1.187"	11.43mm	0.450"
10-SC420	42.00mm	1.654"	32.00mm	1.260"	11.00mm	0.434"
10-SC430	43.00mm	1.693"	33.00mm	1.299"	11.00mm	0.434"
10-SC440	44.00mm	1.732"	34.00mm	1.339"	11.00mm	0.434"
10-SC446	44.62mm	1.757"	35.00mm	1.375"	11.43mm	0.450"
10-SC450	45.00mm	1.772"	34.50mm	1.358"	11.00mm	0.434"
10-SC460	46.00mm	1.811"	35.50mm	1.398"	11.00mm	0.434"
10-SC462	46.20mm	1.819"	34.93mm	1.375"	11.43mm	0.450"
10-SC470	47.00mm	1.850"	36.50mm	1.437"	11.00mm	0.434"
10-SC478	47.78mm	1.881"	36.50mm	1.437"	11.43mm	0.450"
10-SC480	48.00mm	1.890"	37.50mm	1.476"	11.00mm	0.434"
10-SC490	49.00mm	1.929"	38.50mm	1.516"	11.00mm	0.434"
10-SC494	49.40mm	1.945"	38.10mm	1.500"	11.43mm	0.450"
10-SC500	50.00mm	1.969"	39.00mm	1.535"	11.50mm	0.453"
10-SC510	50.98mm	2.007"	39.67mm	1.562"	11.43mm	0.450"
10-SC523	52.32mm	2.060"	39.67mm	1.562"	11.43mm	0.450"
10-SC525	52.53mm	2.068"	42.85mm	1.687"	11.43mm	0.450"
10-SC541	54.15mm	2.132"	42.93mm	1.690"	11.43mm	0.450"
10-SC550	54.97mm	2.164"	44.45mm	1.750"	11.43mm	0.450"
10-SC557	55.73mm	2.194"	45.72mm	1.800"	11.43mm	0.450"
10-SC573	57.30mm	2.256"	47.50mm	1.870"	11.43mm	0.450"

# SEATS (NICKEL ALUMINUM BRONZE)



TITANIUM valves require the use of Kibblewhite® Nickel Aluminum Bronze valve seat inserts. This premium copper based alloy is designed specifically for use with titanium valves. These seats are the product of a 2 year Kibblewhite® R&D effort during which we recorded and verified results with 4&5 valve singles, domestic and foreign sport compacts, multi valve and single cylinder street bikes, as well as British and European 4strokes. In every one of our tests for wear, thermal conductivity, and machinability, the seats surpassed the standard we set for success. These seats have been used successfully with titanium valves in drag race, road race, desert race, motocross, and land speed racing. The seats are tall, have ample material on the ID for shaping, and are offered in several sizes making them truly universal in application. The ODs have a smooth surface finish that offers maximum contact with the head counterbore for optimum heat transfer, and a generous radius on the leading edge to prevent galling during installation.

KPMI Part Number	Outside Diameter		Inside Diameter		Height	
	mm	in	mm	in	mm	in
10-SB240	24.00mm	0.945"	16.00mm	0.630"	9.00mm	0.355"
10-SB250	25.00mm	0.984"	17.00mm	0.669"	9.00mm	0.355"
10-SB260	26.00mm	1.024"	18.00mm	0.709"	9.00mm	0.355"
10-SB270	27.00mm	1.063"	19.00mm	0.748"	9.00mm	0.355"
10-SB275	27.50mm	1.083"	19.00mm	0.748"	9.00mm	0.355"
10-SB280	28.00mm	1.102"	20.00mm	0.787"	9.00mm	0.355"
10-SB285	28.50mm	1.122"	20.00mm	0.787"	9.00mm	0.355"
10-SB290	29.00mm	1.142"	21.00mm	0.827"	9.50mm	0.375"
10-SB295	29.50mm	1.161"	21.00mm	0.827"	9.50mm	0.375"
10-SB300	30.00mm	1.181"	22.00mm	0.866"	9.50mm	0.375"
10-SB305	30.50mm	1.201"	22.00mm	0.866"	9.50mm	0.375"
10-SB310	31.00mm	1.220"	23.00mm	0.906"	9.50mm	0.375"
10-SB315	31.50mm	1.240"	23.00mm	0.906"	9.50mm	0.375"
10-SB320	32.00mm	1.260"	24.00mm	0.945"	9.50mm	0.375"
10-SB325	32.50mm	1.280"	24.00mm	0.945"	9.50mm	0.375"
10-SB330	33.00mm	1.299"	25.00mm	0.984"	9.50mm	0.375"
10-SB335	33.50mm	1.319"	25.00mm	0.984"	9.50mm	0.375"
10-SB340	34.00mm	1.339"	26.00mm	1.024"	9.50mm	0.375"
10-SB345	34.50mm	1.358"	26.00mm	1.024"	9.50mm	0.375"
10-SB350	35.00mm	1.378"	25.00mm	0.984"	11.00mm	0.434"
10-SB355	35.50mm	1.398"	26.00mm	1.024"	11.00mm	0.434"
10-SB360	36.00mm	1.417"	27.00mm	1.063"	11.00mm	0.434"
10-SB365	36.50mm	1.437"	27.00mm	1.063"	11.00mm	0.434"
10-SB370	37.00mm	1.457"	28.00mm	1.102"	11.00mm	0.434"
10-SB375	37.50mm	1.476"	28.00mm	1.102"	11.00mm	0.434"
10-SB380	38.00mm	1.496"	29.00mm	1.142"	11.00mm	0.434"
10-SB385	38.50mm	1.516"	29.00mm	1.142"	11.00mm	0.434"
10-SB390	39.00mm	1.535"	30.00mm	1.181"	11.00mm	0.434"
10-SB395	39.50mm	1.555"	30.00mm	1.181"	11.00mm	0.434"
10-SB400	40.00mm	1.575"	30.00mm	1.181"	11.00mm	0.434"
10-SB405	40.50mm	1.594"	30.00mm	1.181"	11.00mm	0.434"
10-SB410	41.00mm	1.614"	31.00mm	1.220"	11.00mm	0.434"
10-SB415	41.50mm	1.634"	31.00mm	1.220"	11.00mm	0.434"
10-SB420	42.00mm	1.654"	32.00mm	1.260"	11.00mm	0.434"
10-SB430	43.00mm	1.693"	33.00mm	1.299"	11.00mm	0.434"
10-SB440	44.00mm	1.732"	34.00mm	1.339"	11.00mm	0.434"
10-SB450	45.00mm	1.772"	34.50mm	1.358"	11.00mm	0.434"
10-SB460	46.00mm	1.811"	35.50mm	1.398"	11.00mm	0.434"
10-SB470	47.00mm	1.850"	36.50mm	1.437"	11.00mm	0.434"
10-SB480	48.00mm	1.890"	37.50mm	1.476"	11.00mm	0.434"
10-SB490	49.00mm	1.929"	38.50mm	1.516"	11.00mm	0.434"
10-SB500	50.00mm	1.969"	39.00mm	1.535"	11.50mm	0.453"



# LEAD-FREE • CHROME PLATED WHEEL WEIGHTS

SPIN TRUE



The Spin True® Wheel Weights have several advantages beyond other existing Wheel Weight products.

**Symmetrical Clamping Force:** The Spin True® Wheel Weights (unlike other products) maintain at least four points of contact with the spoke nipple creating a secure and balanced fitment.

**“Lead-Free” Composition:** Unlike many other wheel weights on the market, Spin True® Wheel Weights are manufactured from a material that does not contain lead. This is particularly important for customers in states that have anti-lead legislation.

## 60 Pieces Wheel Weight Kit for Large Spoke Nipples (0.300”Ø - 0.350”Ø)

	KPMI P/N	Kit Includes					
		0.25 Oz Weights Pr.		0.50 Oz Weights Pr.		0.75 Oz Weights Pr.	
	99-99125	10	99-99025	10	99-99035	10	99-99045
		1.00 Oz Weights Pr.		1.25 Oz Weights Pr.		1.50 Oz Weights Pr.	
10	99-99055	10	99-99065	10	99-99075		
Kit Also Includes	1	Allen Wrench	1	Tap	120	Screws	

## 60 Pieces Wheel Weight Kit for Small Spoke Nipples (0.250”Ø - 0.300”Ø)

	KPMI P/N	Kit Includes					
		0.25 Oz Weights Pr.		0.50 Oz Weights Pr.		0.75 Oz Weights Pr.	
	99-99130	10	99-99020	10	99-99030	10	99-99040
		1.00 Oz Weights Pr.		1.25 Oz Weights Pr.		1.50 Oz Weights Pr.	
10	99-99050	10	99-99060	10	99-99070		
Kit Also Includes	1	Allen Wrench	1	Tap	120	Screws	

## 6 Pieces Wheel Weight Sample Kit for Large Spoke Nipples (0.300”Ø - 0.350”Ø)

	KPMI P/N	Kit Includes					
		1	0.25 Oz Weights Pr.	1	0.50 Oz Weights Pr.	1	0.75 Oz Weights Pr.
	99-99135	1	1.00 Oz Weights Pr.	1	1.25 Oz Weights Pr.	1	1.50 Oz Weights Pr.
		1	Allen Wrench	12	Screws		

## 6 Pieces Wheel Weight Sample Kit for Small Spoke Nipples (0.250”Ø - 0.300”Ø)

	KPMI P/N	Kit Includes					
		1	0.25 Oz Weights Pr.	1	0.50 Oz Weights Pr.	1	0.75 Oz Weights Pr.
	99-99140	1	1.00 Oz Weights Pr.	1	1.25 Oz Weights Pr.	1	1.50 Oz Weights Pr.
		1	Allen Wrench	12	Screws		

Note: See Figure1 on how to determine your nipple diameter

## Replacement Screws

	KPMI P/N	Quantity
	99-99105	Pkg. of 240
	99-99106	Pkg. of 120
	99-99107	Pkg. of 40

ORDER 650-557-2046

284

# LEAD-FREE • CHROME PLATED WHEEL WEIGHTS

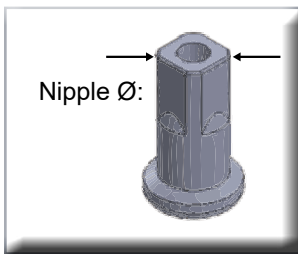


Figure 1



Figure 2



- CNC Machined, Chrome Plated Stainless Steel
- .25oz, .5oz, .75oz, 1oz, 1.25oz and 1.5oz
- Symmetrical Halves Lock Onto the Nipple
- Fits .250" to .350" Nipple Diameters

## Refill Packs

	KPMI P/N	Weight	Nipple Size	Quantity
	<b>99-99020</b>	0.25 Oz	(Ø0.250 - Ø0.300)	10-Wheel Weights 20-Screws
	<b>99-99025</b>	0.25 Oz	(Ø0.300 - Ø0.350)	10-Wheel Weights 20-Screws
	<b>KPMI P/N</b>	<b>Weight</b>	<b>Nipple Size</b>	<b>Quantity</b>
	<b>99-99030</b>	0.50 Oz	(Ø0.250 - Ø0.300)	10-Wheel Weights 20-Screws
	<b>99-99035</b>	0.50 Oz	(Ø0.300 - Ø0.350)	10-Wheel Weights 20-Screws
	<b>KPMI P/N</b>	<b>Weight</b>	<b>Nipple Size</b>	<b>Quantity</b>
	<b>99-99040</b>	0.75 Oz	(Ø0.250 - Ø0.300)	10-Wheel Weights 20-Screws
	<b>99-99045</b>	0.75 Oz	(Ø0.300 - Ø0.350)	10-Wheel Weights 20-Screws
	<b>KPMI P/N</b>	<b>Weight</b>	<b>Nipple Size</b>	<b>Quantity</b>
	<b>99-99050</b>	1.00 Oz	(Ø0.250 - Ø0.300)	10-Wheel Weights 20-Screws
	<b>99-99055</b>	1.00 Oz	(Ø0.300 - Ø0.350)	10-Wheel Weights 20-Screws
	<b>KPMI P/N</b>	<b>Weight</b>	<b>Nipple Size</b>	<b>Quantity</b>
	<b>99-99060</b>	1.25 Oz	(Ø0.250 - Ø0.300)	10-Wheel Weights 20-Screws
	<b>99-99065</b>	1.25 Oz	(Ø0.300 - Ø0.350)	10-Wheel Weights 20-Screws
	<b>KPMI P/N</b>	<b>Weight</b>	<b>Nipple Size</b>	<b>Quantity</b>
	<b>99-99070</b>	1.50 Oz	(Ø0.250 - Ø0.300)	10-Wheel Weights 20-Screws
	<b>99-99075</b>	1.50 Oz	(Ø0.300 - Ø0.350)	10-Wheel Weights 20-Screws

**Note:** See Figure1 on how to determine your nipple diameter

## Spin True® FAQ

**Q: Why is maintaining four points of contact with the spoke nipple better than two points or how other wheel weights work?**

A: The Spin True® Wheel Weights (unlike other products) maintain at least four points of contact with the spoke nipple creating a secure and balanced fitment (See Figure 2).

**Q: What is the finish and is it durable in all-weather / terrains?**

A: Spin True® Wheel Weights are chrome plated Stainless Steel and durable for all manners of usage.

**Q: Will these fit dirt bikes, Harley's, BMW?**

A: These are universal and will fit all motorcycles with spoke wheels using either .250"-.300" or .300"-.350" exposed nipples. Two series of weights tailored to the specific nipple sizes (.250"-.300 and .300"-.350") are available to provide the most complete application coverage.

**Q: Are they reusable?**

A: They are completely reusable.

**Q: Are they larger in physical size compared to other spoke wheel weights?**

A: No. There may be small variations in volume due to slightly varying material density, but it's not significant.

**VISIT US AT [WWW.SPINTRUE.US](http://WWW.SPINTRUE.US)**



# KPMI® APPAREL

## • SNAPBACKS







## • BEANIES



- Black, Navy, and Red
- One Size
- Ribbed knit. Logo Patch
- 100% Acrylic

## • T-Shirts



- Black
- KPMI® screen printed graphics
- Soft 100% Cotton
- Regular fit
- Size : Medium, Large, and Extra Large

## • STICKERS



Item Detail	
Size	Quantity
5 in x 1/4 in	Pkg. of 10
8.5 in x 1.55	Pkg. of 4
10.5 in x 1.88	Pkg. of 4

Item Detail	
Size	Quantity
5 in x 1/4 in	Pkg. of 10
8.5 in x 1.55	Pkg. of 4
10.5 in x 1.88	1 ea.



# KPMI® RACING TEAMS

RACING TEAMS

## Kibblewhite Racing



**Cole Crowley**  
2009 District 36 250cc Champion



**Larry "Spiderman" McBride**  
16 Time Top Fuel World Champion



**Jordan Phillips**  
Grand National Cross Country



**Ton Pels**  
European Super Twin Top Fuel Championship  
7 Time 1st / 2nd Finisher



# KPMI® RACING TEAMS



For the latest racing news, videos and updates on all of the Kibblewhite® Sponsored Racers, please go online to the KPMI® Sponsorship Section of the [www.kpmi.us](http://www.kpmi.us) for complete team coverage!

RACING TEAMS

**Ian King**  
10 Time European Top Fuel Champion



**Sammy Halbert**  
2012 AMA Flat Track Finals/ Expert Singles Champion



**Alp Sungurtekin**  
175MPH Worlds Fastest 650cc Pushrod Engine  
SCTA & AMA LSR Grand National Champion



**Sims Motorsports**  
2012 New record  
with APS-1350-G/ M-2000-G Class



VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)



# KPMI® CUSTOM VALVE ORDER FORM

## KPMI® Custom Valve Order Form

<b>Part Number</b>	
<b>Engr. Approval / Date</b>	

<b>Customer Information</b>	
<b>Contact:</b>	
<b>Company:</b>	
<b>Phone:</b>	<b>Fax:</b>
<b>E-Mail:</b>	<b>Date:</b>
<b>Make:</b>	<b>Disp:</b>
<b>Model:</b>	<b>Years:</b>
<b>Material:</b>	<input type="checkbox"/> S.S. <input type="checkbox"/> Ti. <input type="checkbox"/> Other: _____
<b>Blank Part #:</b>	
<b>Notes:</b>	

<b>Additional Specifications</b>	
<b>Rocker Arm</b>	YES <input type="checkbox"/>
<b>Rocker Arm (w/ Elephant Foot)</b>	YES <input type="checkbox"/>
<b>Cam Follower (Shim &amp; Bucket)</b>	YES <input type="checkbox"/>
<b>Using Lash Cap</b>	YES <input type="checkbox"/>
<b>Intake Valve</b>	YES <input type="checkbox"/>
<b>Exhaust Valve</b>	YES <input type="checkbox"/>

<b>Customer Approval:</b>	
	<b>Date:</b>

Groove Dimensions			
	<b>Radius Groove</b>	<b>Square Groove</b>	<b>Triple Groove</b>
<b>Groove Location:</b>			
<b>Groove Minor Ø:</b>			
<b>Groove Width:</b>			
<b>Groove Radius:</b>	N/A		
<b>Groove Spacing:</b>	N/A		

Groove Location is measured from the tip of the valve to the center of the radius or to the top of the square groove (for the triple groove it is measured from the tip of the valve to the center of the middle radius)

Reduced Dia. Groove Detail (if applicable)	
<b>-A- Undercut Ø:</b>	
<b>-B- Undercut Length:</b>	
<b>-C- Groove Location:</b>	
<b>-D- Groove Ø:</b>	
<b>-E- Groove Width:</b> <small>E = √(A² - (A-D)²) / (A-D)</small>	
<b>-F- Groove Radius:</b>	

Dish Dimensions	
<b>Radius Ø Dish h</b>	<b>Angle Dish h</b>
<b>-A- Dish Radius:</b>	<b>-D- Dish Depth:</b>
<b>-B- Dish Depth:</b>	<b>-E- Dish Width:</b>
<b>-C- Dish Width:</b>	<b>-F- Dish Angle:</b>

# KPMI® CUSTOM GUIDE ORDER FORM



## KPMI® Custom Guide Order Form



	Part Number
	Engr. Approval / Date
<b>Customer Information</b>	
Company:	
Contact:	
Phone:	
Fax:	Date:
E-mail:	
Material:	<input type="checkbox"/> Cast Iron <input type="checkbox"/> Ni Al Bronze <input type="checkbox"/> Manganese <input type="checkbox"/>
Notes:	

**Dist. Above Head**

**Dist. in Port**

**Taper Length**

**Bore Ø**

**Outer Ø**

**Taper Minor Ø**

Shouldered Guide	Snap Ring Guide	Stepped Shoulder Guide

Make:	Model:	Years:
	Disp:	

KIBBLEWHITE™ PRECISION MACHINING, INC. 580H Crespi Dr. Pacifica, CA 94044    PH: 650-557-2046    FX: 650-359-8574  
[www.kpmi.us](http://www.kpmi.us)

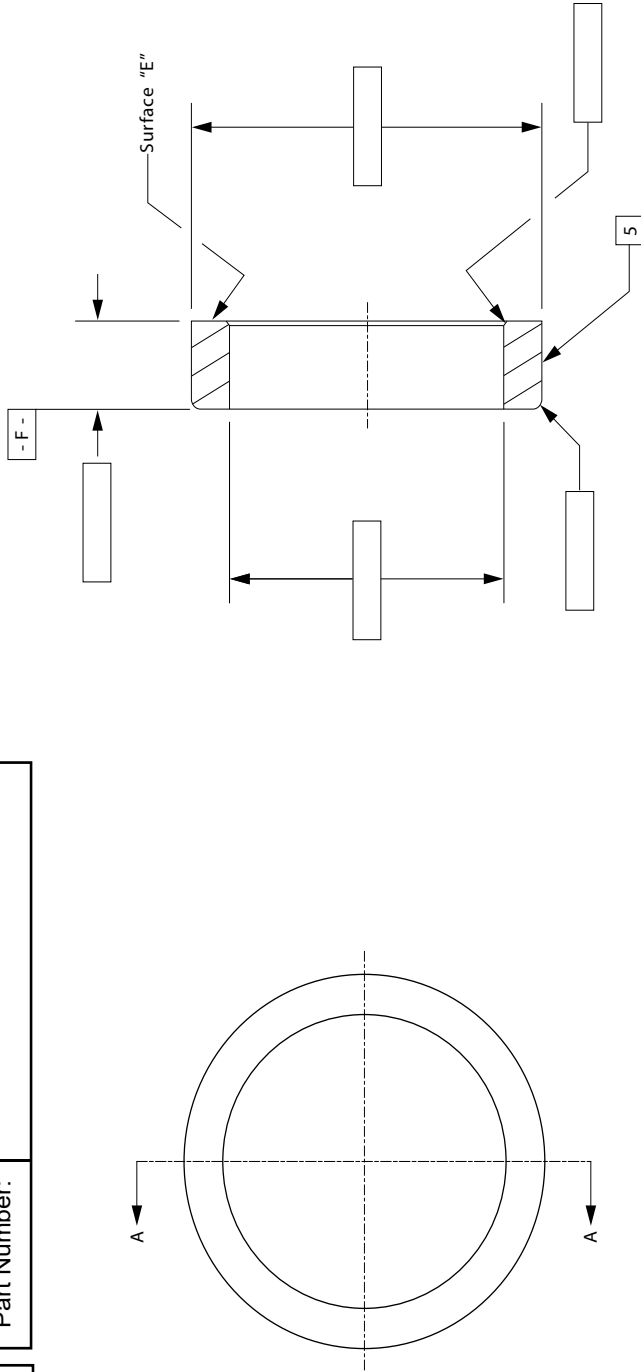


# KPMI® CUSTOM SEAT ORDER FORM

## KPMI® Custom Seat Order Form



Part Number:



### Customer Information

Contact Name:			
Company Name:			
Phone:	Date:	Model:	Years:
Make:			
Disp:			
Customer Approval:		Date:	

### Seat Information

Additional Notes:			
KPMI Blank P/N:			
Material:	<input type="checkbox"/> SAE 630	<input type="checkbox"/> G2 Cast Iron	
Total Cost Per Seat:	(KPMI use only)		Qty.
Total Cost:	(KPMI use only)		

### NOTES:


1. Break and deburr all sharp edges 0.010" X 45°
2. Finish O.D. to RMS-16 parallel and round within 0.0004" (For wall thickness less than 0.120", parallel and round within 0.0008")
3. Surface "E" parallel to Datum F within 0.002"
4. I.D. and O.D. must be concentric within 0.010" TIR
5. I.D. and O.D. must be parallel within 0.002"
6. O.D. must be perpendicular to Datum F within 0.002"
7. (U.O.S.) Unless Otherwise Specified

KIBBLEWHITE™ PRECISION MACHINING, INC. 580H Crespi Dr. Pacifica, CA 94044 PH: 650-557-2046 FX: 650-359-8574

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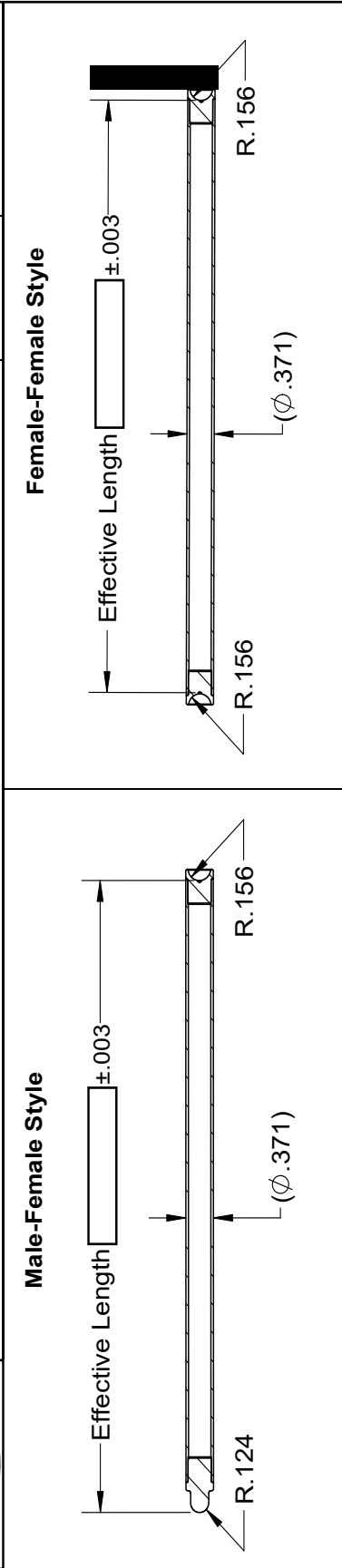
# KPMI® CUSTOM PUSHROD ORDER FORM

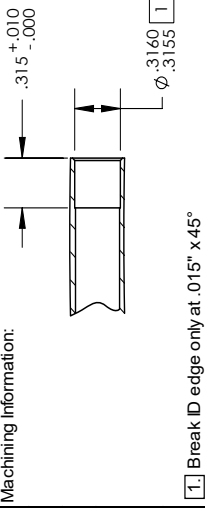
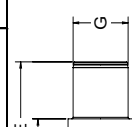




## Custom Pushrod Order Form

Part Number:	
Date:	



Machining Information:						
A:	Ø.371 OD	D	R.124	E	0.675	
B:	9.120 Overall Length	F	0.375	G	0.310	
C:	Ø.305 ID Before Machining					
<b>KPMI P/N</b>	<b>Kit Includes</b>	<b>Model</b>	<b>Material</b>	<b>Retail Pricing</b>		
90502-2	2 Female Ended Pushrods / 2 Loose Male Endpieces	Various	•Thin Wall Chrome Moly Tube •H.T. Steel Tips	\$63.05		
90512-2	2 Female Ended Pushrods / 2 Loose Female Endpieces	Various	•Thin Wall Chrome Moly Tube •H.T. Steel Tips	\$126.13		
90502-4	4 Female Ended Pushrods / 4 Loose Male Endpieces					
90512-4	4 Female Ended Pushrods / 4 Loose Female Endpieces					

<b>Customer Information</b>	
Contact Name:	
Company Name:	
Phone:	
E-mail:	
Make:	Model:      Disp:      Years:

<b>Pushrod Information</b>	
KPMI Blank P/N:	Male-Female
90502-2 QTY:	90502-4 QTY:
Female-Female	
KPMI Blank P/N:	90512-4 QTY:
90512-2 QTY:	90512-4 QTY:
Custom Work Pricing:	KPMI® will custom machine and finish 2 or 4 pushrods for a flat fee of \$120.00.
Notes:	Please visit <a href="http://www.kpmi.us">www.kpmi.us</a> for our complete lineup of pushrods and more.

Customer Approval:	Date:
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KIBBLEWHITE PRECISION MACHINING, INC. 580H Crespi Dr. Pacifica, CA 94044    PH: 650-557-2046  
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# KPMI® PRODUCT ORDER FORM



KIBBLEWHITE PRECISION MACHINING, INC • 580 CRESPI DRIVE UNITS H&I • PACIFICA, CA 94044

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## ORDER FORM

DATE: \_\_\_\_\_ BY: \_\_\_\_\_

CUST #: \_\_\_\_\_ P.O. #: \_\_\_\_\_

BILL TO: \_\_\_\_\_

SHIP TO: \_\_\_\_\_

CONTACT NAME: \_\_\_\_\_

STREET: \_\_\_\_\_

CITY: \_\_\_\_\_

ZIP CODE: \_\_\_\_\_ COUNTRY: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_ FAX NUMBER: \_\_\_\_\_

**UPS**

- RED - 1 Day
- BLUE - 2 Day
- ORANGE - 3 Day
- GROUND

**FEDEX**

- RED - 1 Day
- BLUE - 2 Day
- SAVER - 3 Day

**USPS**

- AIR
- PRIORITY
- EXPRESS

WEIGHT: \_\_\_\_\_

- CREDIT CARD
- WILL CALL
- COD
- OPEN ACCT.

SHIP CHRG \$: \_\_\_\_\_

INS \$: \_\_\_\_\_

COD \$: \_\_\_\_\_

MISC \$: \_\_\_\_\_

**TOTAL \$:** \_\_\_\_\_

ITEM #	QTY ORDERED	KPMI PART NO. / DESCRIPTION	PRICE	NOTES
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

NAME ON CARD: \_\_\_\_\_

CARD NUMBER: \_\_\_\_\_

EXP DATE: \_\_\_\_\_ SEC CODE: \_\_\_\_\_

CONTACT IF BACK ORDERED: Y \_\_\_\_\_ N \_\_\_\_\_

- VISA
- MASTERCARD
- AMER. EXP.
- OTHER

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



# KPMI® DEALER APPLICATION



## Kibblewhite® Precision Machining, Inc.

### Dealer / Credit Application

Page 1 of 2

Company Name \_\_\_\_\_ Resale# \_\_\_\_\_

Street Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Attn: \_\_\_\_\_ County \_\_\_\_\_ Country \_\_\_\_\_

Phone # \_\_\_\_\_ Fax# \_\_\_\_\_ E-Mail \_\_\_\_\_

Type of Business  Partnership  Sole Proprietor  LLC  Corporation Date Business Started \_\_\_\_\_

please check one:  Speed Shop  Machine Shop  Parts Store / Warehouse  Other \_\_\_\_\_

Principal/Owner(s) Name \_\_\_\_\_ Title \_\_\_\_\_ Phone Number \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Soc. Sec# \_\_\_\_\_ Fed. ID# \_\_\_\_\_ WA Contractor # \_\_\_\_\_ Expires \_\_\_\_\_

Tres/Controller \_\_\_\_\_ Years in business under this ownership, at this location \_\_\_\_\_

If in business less than one year, please submit prior business work history.

Name of Bank \_\_\_\_\_ Branch \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Years at this bank \_\_\_\_\_ Account# \_\_\_\_\_

**Trade References:** Please list two firms within the industry and one firm outside the industry.

1. Company \_\_\_\_\_ Phone \_\_\_\_\_ Fax \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

2. Company \_\_\_\_\_ Phone \_\_\_\_\_ Fax \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

3. Company \_\_\_\_\_ Phone \_\_\_\_\_ Fax \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Please indicate the type of account required  C.O.D. (Co check OK - A credit inquiry is required. Please allow 2-weeks for credit inquiry processing.) or  Credit Card account with KIBBLEWHITE PRECISION MACHINING INC. I understand that all account balances are payable to KIBBLEWHITE PRECISION MACHINING, Inc. at the address specified on invoices or statements. I also understand that interest will be charged on past due balances at a **rate not to exceed the applicable legal maximum.**

Handling Fees: Handling fees may apply to all shipments. You will be informed if your shipments will incur a handling fee. Additional Fees: Drop-ship \$15.00 / Wire transfer \$20.00.

**If establishing a credit card account please indicate the following:**

Type of card \_\_\_\_\_ Card Number \_\_\_\_\_ Exp. Date \_\_\_\_\_

Signature \_\_\_\_\_ Printed \_\_\_\_\_ Date \_\_\_\_\_

Title \_\_\_\_\_

Please provide at least two of the following:

- Copy of your business license  Copy of your state sales tax certificate  Copy of an ad from any trade Magazine  Copy of Yellow Pages ad

#### Applicant's Authorization & Agreement

In support of this application KIBBLEWHITE PRECISION MACHINING INC. is hereby authorized to obtain credit and/or financial information from my/our bank(s), other financial institutions or commercial firms with whom I/we have done business. It is understood that any such credit and/or financial information will be held in strict confidence and used only in consideration of this application.

Upon approval of this application, it is agreed that each invoice will be paid in full upon receipt or in accordance with the terms of sale as stated on the invoices(s). Should I/we not pay KIBBLEWHITE PRECISION MACHINING INC. according to term, it is understood that credit privileges may be withdrawn. Should KIBBLEWHITE PRECISION MACHINING INC. find it necessary to obtain assistance in collecting any past due balance, I/we agree to pay interest at the rate of 1.5% per month (or such other rate allowable by State law), reasonable attorney fees, collection fees and/or court costs allowable by law. At KIBBLEWHITE PRECISION MACHINING INC. option, jurisdiction and venue of any suit brought to collect this account shall be had in San Mateo County, CA. A copy of this statement and application has been received.

SIGNATURE \_\_\_\_\_ TITLE \_\_\_\_\_ Fax \_\_\_\_\_

(must be signed by an officer or principal of the firm)

#### PERSONAL GUARANTEE

The undersigned, [print name] \_\_\_\_\_, of the applicant corporation/company hereby agrees to the above terms and conditions and assumes personal responsibility for payment of said corporation's/company's account. It is understood that credit would not be extended to said corporation/company without this assumption of liability.

\_\_\_\_\_  
(owner, partner or corporate officer)

#### CREDIT DEPARTMENT USE ONLY

CUSTOMER# \_\_\_\_\_ CREDIT LIMIT \_\_\_\_\_ TERMS CODE \_\_\_\_\_

CREDIT MANAGER SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

VISIT US AT [WWW.KPMI.US](http://WWW.KPMI.US)



# KPMI® DEALER APPLICATION

## Kibblewhite® Precision Machining, Inc. Dealer / Credit Application Page 2 of 2

The only way to become and sustain KPMI Dealer status is to meet the following requirements:

### Minimum Dealer Requirements

Full Dealer Status (all products available)
<ul style="list-style-type: none"> <li>• 400 U\$D Initial Order (Pre - Paid Only)</li> <li>• 100 U\$D minimum orders thereafter</li> <li>• Purchase a minimum of 1,200 U\$D of product per calendar year</li> <li>• Credit based on approval</li> </ul>

Company Name \_\_\_\_\_

Number of active customers \_\_\_\_\_ Approximate sales last 12 Months \_\_\_\_\_

Primary Focus of your business: \_\_\_\_\_

Types pf equipment served: Motorcycle  Automobile  ATV  Other \_\_\_\_\_

Percentage of business related to engine components: \_\_\_\_\_ %

Other engine components marketed regularly: \_\_\_\_\_

KPMI components would be sold as: KPMI Brand  Bundled with other components  Repackaged in your packaging  Used in OEM applications   
Other \_\_\_\_\_

Geographical areas currently covered in your dealer network:

- US Northwest
- US Southwest
- US Midwest
- US Southeast
- US Northeast
- California
- Canada (NE & Quebec)
- Canada Ontario
- Canadian West
- Canadian Prairie
- Mexico
- Other South America
- Brazil
- Other Central America
- European Union
- Australia
- New Zealand
- Japan
- Korea
- Germany
- Other Asia \_\_\_\_\_
- Other \_\_\_\_\_

Vehicle Manufacturers currently supported by your dealer network:

- Harley-Davidson
- Indian
- Norton
- Triumph
- Honda
- Kawasaki
- Yamaha
- Suzuki
- BMW
- Rotax
- BSA
- Ducati
- Moto Guzzi
- Bombardier
- Polaris
- Acura
- Mitsubishi
- Ford
- Dodge
- Porsche
- Husqvarna
- Other Not Listed: \_\_\_\_\_

Trade magazines your advertisements appear in: \_\_\_\_\_  
\_\_\_\_\_

How KPMI product would fit into your business: \_\_\_\_\_  
\_\_\_\_\_

\* No parts manufactured or sold by Kibblewhite Precision Machining, Inc. are licensed manufactured, sponsored, or endorsed by Harley Davidson, Inc. Use of the word Harley Davidson, various model names and designations are provided solely for reference. There is no affiliation between Kibblewhite Precision Machining, Inc. and Harley-Davidson, Inc. nor is any affiliation implied.

\*\* All other brand names, trademarks or registered trademarks used in this document are property of there respective holders



Since 1939, Kibblewhite® Precision Machining, Inc. (KPMI®), an independent company, has been committed to serving the valvetrain component needs of the powersport industry.

## IMPORTANT TRADEMARK NOTICES

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## TERMS AND POLICIES

**PAYMENTS** - All Dealer/ Distributor orders will be shipped C.O.D., certified check / money order or prepaid by Visa®, MasterCard®, American Express® or bank wire transfer. Company checks will be accepted from Dealers or Distributors after completing a KPMI® Survey/ Application and histories warrant. All international orders should be prepaid in U.S. funds to avoid delays. Proforma invoices are available upon request. Terms are granted by arrangement only.

**DISCOUNTS** - Bank cleared advanced co-check, money order, certified check = \$15.00 discount. Proforma invoices are available upon request.

**HANDLING FEES** - Handling fees may apply to all shipments and you will be informed if your shipments will incur a handling fee. Additional fees: Drop-ship \$15.00 / Wire transfer \$20.00.

**DEALERS** - Becoming a KPMI® Dealer requires completing a Dealer Application / Survey. After a successful survey review a Dealer must initiate and maintain KPMI® Dealer status based on the following policies: 400 U\$D Initial Order (Pre-Paid only), 100 U\$D minimum orders thereafter, purchase a minimum of 1,200 U\$D of product per calendar year.

**DISTRIBUTORS** - Becoming a KPMI® distributor requires contacting KPMI® directly, and requesting a Distributor Application / Survey. Please allow a reasonable amount of time for processing.

**WARRANTY** - All merchandise and services offered by KPMI® are for racing use only. KPMI® warrants to the original purchaser the racing components listed in this catalog as manufactured by us to be free from defects in material and workmanship under normal use and service.

Our obligation under this warranty shall be limited to the repair or exchange of any part(s) which may thus prove defective under normal use and service within 30 days from date of installation by the original purchaser, and which our examination shall disclose to

our satisfaction to be thus defective. This Warranty is expressly in lieu of all other warranties expressed or implied including the warranties of merchantability and fitness for use and all other obligations or liabilities on our part, and we neither assume, nor authorize any person to assume for us, any other liability in connection with the sale of these components. This warranty shall not apply to components or any part thereof which has been subjected to an accident, negligence, alteration, abuse or misuse. We make no warranty whatsoever with regard to accessories or parts not supplied by us. The term "original purchaser," as used in this warranty, shall be deemed to mean that person to whom the components were originally delivered. This warranty shall apply only within the continental United States. Seller makes no warranties which extend beyond that set forth in the preceding paragraph. Subject to applicable State laws.

**SHIPPING** - We ship by Federal Express (FedEx), United Parcel Service (UPS), USPS (upon request) and DHL Express. Shipping charges are added to invoice total.

**BACK ORDERS** - We do not cancel back orders unless requested to do so.

**RETURNS** - We will not accept any returned merchandise without prior consent. All items will be inspected upon receipt. Returns due to shipping error or manufacturing defects will be replaced immediately. No returns after 30 days from invoice date. Parts returned for any other reason will be subject to a 20% or \$15.00 minimum restocking charge. Absolutely no returns on custom manufactured parts.

**MACHINE WORK** - Anything sent to Kibblewhite® Precision Machining to be machined must be accompanied with complete instructions and return address. Please be sure to include a packing list of the parts being sent to us. Any discrepancy that is not accounted for with the package(s) received will be the responsibility of the sender. Any damage to merchandise at the time of receipt will need to be handled by the sender with the carrier.

**CLAIMS** - If damage occurs to any item during transit; it is the responsibility of the freight carrier. Responsibility for the goods is passed from the shipper to carrier when the carrier leaves the point of pickup. All claims must be made with the carrier. We will, however, help you with the claim in any way we can.

**PHONE CALLS** - We cannot accept collect calls. Our Order and Tech Line phone number is (650) 557-2046. After hours & weekends, please leave a message. Our FAX line operates 24-hours a day; the number is (650) 359-8574.

**HOURS** - Monday through Friday 8:30 a.m. – 5 p.m. (Pacific Time). After hours or weekends, please leave a message or send a FAX.

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## WARRANTY & LIABILITY LIMITATIONS

Except as may be expressly set forth in the product invoice, KPMI® makes no representations or warranties as to any of its products, express or implied, including, without limitation, any warranties of merchantability or fitness for a particular purpose, under Section 2314 or 2315 of the California Uniform Commercial Code or otherwise. Motorcycles can be dangerous. KPMI® has no control over the usage of any part. KPMI® expects the Dealer and the Dealer's customers to exercise good judgment as to the proper selection, installation, use, and maintenance of any parts. KPMI® assumes no responsibility for damage or injury of any kind because of the misuse or the improper application or installation of any parts in any way by the Dealer, the Dealer's customers or any other person. KPMI® shall not be liable for any indirect or consequential damages whatsoever. All matters shall be interpreted under California law.

## CURRENT FITMENT INFORMATION

To the best of our knowledge, all the pictures and application information contained herein are accurate as of the date this catalog was approved for printing (August 2017). Because some models had not yet been released at the time, it was not possible to provide application information for these vehicles. Therefore, whenever a part is listed as fitting "to present" this would apply to models that had been able to verify application for by catalog press date ONLY. Please check with your KPMI® dealer or account representative for verification of the latest 2017 model year applications.

## NOTICES

All KPMI® valve guides, standard valves, and spring kits are intended for use as OEM replacement parts, exceeding OEM specifications in terms of durability and or expected cyclical life. Oversize valves are intended for racing vehicles with planned use on closed courses.

## KIBBLEWHITE® PRECISION MACHINING, INC.

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# OUR BUSINESS IS PERFORMANCE



**KIBBLEWHITE PRECISION MACHINING INC.**

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