

# HD® MILWAUKEE-EIGHT™ VALVETRAIN & COMPONENT CATALOG

May 29, 2025





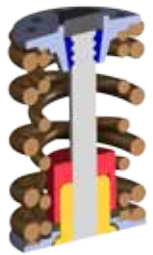
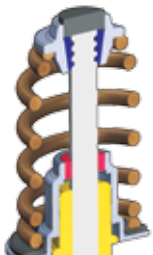

## THE RIGHT PARTS FOR THE JOB!

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



# PRODUCT OVERVIEW

HARLEY-DAVIDSON

	<p><b>0.625" Lift Beehive Valve Spring Kit • High Lift</b></p> <ul style="list-style-type: none"> <li>• These M8 Beehive Spring Kits were improved to better match the spring pressures and rates being required by the industry</li> <li>• Lightweight Titanium or Heat Treated Steel Retainers and Beehive Springs reduce reciprocating mass while providing the spring forces required for high-lift camshaft and sustained high rpm's</li> <li>• KPMI® made OEM replacement seals, #71046-8 are included for a more complete performance valvetrain solution</li> </ul>
	<p><b>0.640" Lift Conical PSI Spring • High Lift</b></p> <ul style="list-style-type: none"> <li>• KPMI® designed and custom wound 0.640" lift springs manufactured by Performance Springs Inc.</li> <li>• Lightweight Titanium or Heat Treated Steel Retainers and Beehive Springs reduce reciprocating mass while providing the spring forces required for high-lift camshaft and sustained high rpm's</li> <li>• Ultra strong high angle 9° HT Steel keepers resist "pull thru" and provide a non-rotating solution, recommended when using Titanium Valves</li> <li>• KPMI® made OEM replacement seals, #71046-8 are included for a more complete performance valvetrain solution</li> </ul>
	<p><b>0.675" Lift Rocker Shim Conversion System Valve Spring Kit • Dual Spring</b></p> <ul style="list-style-type: none"> <li>• Innovative design adds a Ø9.5mm hardened steel shim between the valve tip and rocker arm, increasing rocker wipe area and adding Titanium Valve compatibility</li> <li>• The Ø9.5mm shim increases allowable rocker wipe area for maximum valve lift</li> <li>• Up to 0.675" valve lift compatibility</li> <li>• Offered with either Titanium or H.T. Steel retainers</li> <li>• Includes Heavy Duty H.T. Steel Keepers, Ø9.5mm Steel Shim, and Red Viton® Seals</li> <li>• Ultra strong high angle 9° HT Steel keepers resist "pull thru" and provide a non-rotating solution, recommended when using Titanium Valves</li> </ul>
	<p><b>0.625" Lift Rocker Shim Conversion System Valve Spring Kit • Beehive Spring</b></p> <ul style="list-style-type: none"> <li>• Innovative design adds a Ø9.5mm hardened steel shim between the valve tip and rocker arm, increasing rocker wipe area and adding Titanium Valve compatibility</li> <li>• The Ø9.5mm shim increases allowable rocker wipe area for maximum valve lift</li> <li>• Offered with either Titanium or H.T. Steel retainers</li> <li>• Includes Heavy Duty H.T. Steel Keepers, Ø9.5mm Steel Shim, and Red Viton® Seals</li> <li>• Ultra strong high angle 9° HT Steel keepers resist "pull thru" and provide a non-rotating solution, recommended when using Titanium Valves</li> </ul>
	<p><b>0.630" Lift Lightweight Racing Valve Spring Kit • High Lift</b></p> <ul style="list-style-type: none"> <li>• Lightweight Racing Dual Spring Kits for 0.630" lift</li> <li>• Retainers designed for optimum rocker cover clearance</li> <li>• Offered with either Titanium or H.T. Steel retainers</li> <li>• Includes Heavy Duty H.T. Steel Keepers and Red Viton® Seal</li> <li>• Ultra strong high angle 9° HT Steel keepers resist "pull thru" and provide a non-rotating solution, recommended when using Titanium Valves</li> </ul>



# PRODUCT OVERVIEW









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	<p><b>Engine Kit with Lightweight Racing Valve Spring Kit</b></p> <ul style="list-style-type: none"> <li>• KPMI® complete Valve Spring Kit that meets or exceeds OEM specifications</li> <li>• Seals (where applicable)</li> <li>• Keeper (where applicable)</li> <li>• KPMI® White Diamond® Valves, Stock Head Dia.</li> </ul>
	<p><b>Valve Kit • White Diamond® • EV8</b></p> <ul style="list-style-type: none"> <li>• <b>A Full Set of KPMI® White Diamond® Valves, Stock Head Dia.</b> 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. Each valve is designed using Finite Element Analysis software, and profiles are tested on our computerized flow bench. Strict attention is paid to the surface preparation of the valves, and the purity of the chrome is closely monitored. A 360 degree anode is used to produce the highest possible grade of hard chrome finish. White Diamond® Valves are light, strong, one piece forgings with profiles that provide excellent flow characteristics</li> </ul>
	<p><b>Blank Valves • Tensilite® • Titanium</b></p> <ul style="list-style-type: none"> <li>• One piece forged Titanium alloy offers uninterrupted grain flow</li> <li>• Superior tensile strength and stability at and above operating temperatures</li> <li>• Every surface either fully CNC machined or precision ground</li> <li>• Super-finished stem allowing for Formula 1 level coating consistency</li> <li>• 100% Chromium Nitride (CrN) PVD coated</li> <li>• Material and workmanship that provide outstanding durability and performance</li> <li>• Competitive pricing allowing for a value conscious rebuild</li> </ul>
	<p><b>Valve • White Diamond® • EV8 or Inconel®</b></p> <ul style="list-style-type: none"> <li>• 1 piece forging with White Diamond™ hard chrome stems for impervious wear resistance</li> <li>• Inconel® 751 exhaust valves designed to outperform in the most extreme forced induction or racing applications</li> <li>• Flow bench tested to optimize exhaust profiles</li> <li>• 100% Quality Controlled</li> </ul>
	<p><b>Valve Guides • Manganese Bronze</b></p> <ul style="list-style-type: none"> <li>• High quality C630 and Manganese Bronze guides with improved tolerances over OEM</li> <li>• Excellent heat transfer capabilities</li> <li>• Perfect for high performance applications</li> <li>• Fine outer diameter surface finish to maximize surface contact with the head and ease installation</li> <li>• Shortened guides allowing for higher lift</li> <li>• Undersized bores providing the ability to create desired valve stem clearances (See CR-2357)</li> </ul>
	<p><b>Valve Guides • C630 Bronze</b></p> <p>We choose to use the copper based C63000 nickel-aluminum bronze as a material to make our bronze valve guides because of its ideal characteristics for the application. The 5% nickel content provides superior resistance to wear, and the approximately 80 percent copper content delivers outstanding heat conductivity. KPMI® guide profiles are designed to have minimal effect on the airstream while maintaining critical cross sectional thickness in high temperature areas, which promotes high performance and endurance.</p>
	<p><b>Valve Guide Kits • Manganese Bronze</b> <span style="color: red; font-weight: bold;">NEW PRODUCTS</span></p> <ul style="list-style-type: none"> <li>• Popular sizes of our Manganese guides with seals, kitted for one engine at a savings</li> </ul>



# PRODUCT OVERVIEW

HARLEY-DAVIDSON

	<p><b>Valve Guide Seal • Tophat</b></p> <ul style="list-style-type: none"> <li>• KPMI® Recommended O.E.M. Replacement Valve Guide Seals</li> <li>• Exceeds O.E.M. Specifications</li> <li>• Your High Performance O.E.M. Alternative</li> <li>• Compatible with O.E.M. and KPMI® Spring Kits and Valve Guides</li> </ul>
	<p><b>Reamer • High Speed Steel</b></p> <p>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.</p> <p><b>Important Note:</b> Do not attempt to use these reamers to size C630 guides. It is also not advisable to use on a bronze guide after being used on cast iron.</p>
	<p><b>Reamer • Solid Carbide</b></p> <p>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.</p>
	<p><b>Cylinder Studs • H.T. Steel</b></p> <ul style="list-style-type: none"> <li>• Heat treated 180,000 PSI aircraft alloy steel</li> <li>• Centerless ground to remove material imperfections</li> <li>• Rolled threads for the strongest threads period</li> <li>• Black oxide treated for enhanced corrosion resistance</li> <li>• The M8 Cylinder Stud solution</li> </ul>
	<p><b>Rocker Arm Tower Stud Kit • H.T. Steel</b></p> <ul style="list-style-type: none"> <li>• Nuts are machined from billet high tensile steel and heat treated</li> <li>• Studs are heat treated 180,000 PSI aircraft alloy steel</li> <li>• Both nut and stud have rolled threads for the strongest possible threads</li> <li>• Both nut and stud are black oxide treated for enhanced corrosion resistance</li> <li>• This kit is the M8 rocker tower solution</li> </ul>
	<p><b>Nuts • H.T. Steel</b></p> <p>These nuts are single point machined from high tensile strength Aircraft Alloy Steel. During the machining process close tolerances and smooth surface finishes are maintained. 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 provides excellent corrosion resistance and appearance.</p>

# PRODUCT OVERVIEW




	<p><b>Keeper Set • O.E.M. Replacement</b></p> <p>All KPMI® keepers are single-point machined from high tensile strength billet material (with the exception of forged styles). What this means is that each keeper is machined from billet high tensile strength material. 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.</p>
	<p><b>Cylinder Dowel • Steel</b></p> <ul style="list-style-type: none"> <li>• <b>Rounded End for Effortless Installation</b></li> <li>• <b>Tapered End for Quick Alignment</b></li> <li>• <b>Black Oxide Coated for Corrosion Resistance</b></li> <li>• <b>Harley-Davidson® M8 OEM Replacement Dowel</b></li> <li>• <b>See Dimensions for Fitment</b></li> </ul>
	<p><b>Valve Seats • High Chrome</b></p> <ul style="list-style-type: none"> <li>• <b>18-22% Chromium for resistance to abrasion, corrosion, and deformation</b></li> <li>• <b>1-2% Nickel content, which lends to corrosion-resistance and toughness</b></li> <li>• <b>Machined from solid bar stock and g round to exacting tolerances</b></li> <li>• <b>The alternative to Powder Metal</b></li> <li>• <b>Machined as a continuous chip</b></li> <li>• <b>Use KPMI® “High Chromium Seats” for your next gasoline or diesel engine rebuild</b></li> </ul>
	<p><b>Valve Seats • Powdered Metal</b></p> <p>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.</p> <p>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.</p>
	<p><b>Valve Seats • Nickel Aluminum Bronze</b></p> <p>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&amp;D effort during which we recorded and verified results with 4&amp;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.</p> <p>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.</p>





# HD® M8™ (& CVO's) 2017-2025


**2023-2024 CVO's check valve lift to determine compatibility with KPMI® spring kits**

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

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-21205	Intake	.550"	1.500"	85#	257#	.550"
		Exhaust					
	Kit Includes		8	Titanium Retainers		8	CrSi Valve Springs
		8	**H. T. Steel Basewashers		8	*Red Viton® Seals	

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-21215	Intake	.550"	1.500"	85#	257#	.550"
		Exhaust					
	Kit Includes		8	H. T. Steel Retainers		8	CrSi Valve Springs
		8	**H. T. Steel Basewashers		8	*Red Viton® Seals	

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	***20-21800	Intake	.625"	1.500"	85#	280#	.625"
		Exhaust					
	Kit Includes		8	Titanium Retainers		8	CrSi Valve Springs
		8	**H. T. Steel Basewashers		8	*Red Viton® Seals	

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	***20-21850	Intake	.625"	1.500"	85#	280#	.625"
		Exhaust					
	Kit Includes		8	H. T. Steel Retainers		8	CrSi Valve Springs
		8	**H. T. Steel Basewashers		8	*Red Viton® Seals	


\*\*\* Compatibility Notice: This spring kit has not been designed for aftermarket rocker arms with increased mass and/or rocker ratio.

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-24350	Intake	.640"	1.580"	83#	285#	.640"
		Exhaust					
	Kit Includes		8	Titanium Retainers		8	PSI Valve Springs
8			H. T. Steel Keeper (9°)		8	*Red Viton® Seals	

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-24400	Intake	.640"	1.580"	83#	285#	.640"
		Exhaust					
	Kit Includes		8	H. T. Steel Retainers		8	PSI Valve Springs
8			H. T. Steel Keeper (9°)		8	*Red Viton® Seals	

- KPMI® designed and custom wound 0.640" lift springs manufactured by PSI.
- Lightweight Titanium or Heat Treated Steel Retainers and Beehive Springs reduce reciprocating mass while providing the spring forces required for highlift camshaft and sustained high rpm's
- Ultra strong high angle 9° HT Steel keepers resist "pull thru"

## Valve Spring Kit • Ovate Wire Beehive

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

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

\*\*Note : These basewashers are designed to fit on top of either the OEM or KPMI® Tophat seals provided in this kit.

**ORDER 650-557-2046**




# HD® M8™ (& CVO's) 2017-2025







**2023-2024 CVO's check valve lift to determine compatibility with KPMI® spring kits**

## Valve Spring Kit • Ovate Wire Beehive

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

## Valve Spring Kit • Rocker Shim Conversion System • Dual Spring

		KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure
		20-23400	Intake	.675" Max	1.600"	86#	317#
				.660"	1.585"	91#	317#
				.645"	1.570"	96#	317#
			Exhaust	.630"	1.555"	101#	317#
				.615"	1.540"	107#	317#
		Kit Includes		8	Titanium Retainers	8	CrSi Valve Springs
		8	H. T. Steel Basewashers	8	*Red Viton® Seals		
		8	H. T. Steel Keeper (9°)	8	H. T. Steel Adj. Shim		

		KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure
		20-23450	Intake	.675" Max	1.600"	86#	317#
				.660"	1.585"	91#	317#
				.645"	1.570"	96#	317#
			Exhaust	.630"	1.555"	101#	317#
				.615"	1.540"	107#	317#
		Kit Includes		8	H. T. Steel Retainers	8	CrSi Valve Springs
		8	H. T. Steel Basewashers	8	*Red Viton® Seals		
		8	H. T. Steel Keeper (9°)	8	H. T. Steel Adj. Shim		


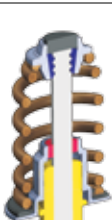
### IMPORTANT NOTES:


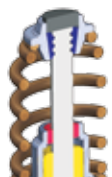
**Modification Necessary:** To maximize shim contact in the retainer, KPMI recommends "tipping" (shortening the valve tip). See KPMI® installation instructions for more info.

**Stem Protrusion:** There is anticipated to be a rough 0.100" increase in effective stem protrusion with the use of the shim.

**Valve Guide Compatibility:** This system must be run with KPMI's newer style M8 valve guides, which are shortened for 0.675" valve lift. See KPMI® installation instructions for more info.

## Valve Spring Kit • Rocker Shim Conversion System • Beehive Spring

		KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
		20-23900	Intake	.625"	1.500"	85#	280#	.625"
			Exhaust					
		Kit Includes		8	Titanium Retainers		8	CrSi Valve Springs
		8	H. T. Steel Basewashers		8	*Red Viton® Seals		
		8	H. T. Steel Keeper (9°)		8	H. T. Steel Adj. Shim		

		KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
		20-23950	Intake	.625"	1.500"	85#	280#	.625"
			Exhaust					
		Kit Includes		8	H. T. Steel Retainers		8	CrSi Valve Springs
		8	H. T. Steel Basewashers		8	*Red Viton® Seals		
		8	H. T. Steel Keeper (9°)		8	H. T. Steel Adj. Shim		

### IMPORTANT NOTES:

**Modification Necessary:** To maximize shim contact in the retainer, KPMI recommends "tipping" (shortening the valve tip). See KPMI® installation instructions for more info.

**Stem Protrusion:** There is anticipated to be a rough 0.100" increase in effective stem protrusion with the use of the shim.

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

**\*\*Note :** These basewashers are designed to fit on top of either the OEM or KPMI® Tophat seals provided in this kit.

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



# HD® M8™ (& CVO's) 2017-2025


**2023-2024 CVO's check valve lift to determine compatibility with KPMI® spring kits**


## Booster Shims • H.T. Steel

KPMI P/N	Outside Diameter	Inside Diameter	Thickness	Quantity
92034-8	1.100"	0.719"	0.015"	Pkg of 8
92019-8	1.100"	0.719"	0.030"	Pkg of 8
92012-8	1.100"	0.719"	0.060"	Pkg of 8

Note: Compatible with KPMI® Spring Kit #'s 20-21800 and 20-21850. All KPMI® shims are conveniently packaged in quantities of : 4, 8, 16, 50, and 100. For all the shims available, please refer online to the shim section of the [www.kpmi.us](http://www.kpmi.us) website, under Precision Components.

## Valve Spring Kit • Lightweight Racing • Dual Spring

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-23800	Intake	.630"	1.555"	101#	317#	.630"
		Exhaust					
	Kit Includes	8	Titanium Retainers		8	CrSi Valve Springs	
8		H. T. Steel Basewashers		8	*Red Viton® Seals		
8		H. T. Steel Keeper (9°)					


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-23850	Intake	.630"	1.555"	101#	317#	.630"
		Exhaust					
	Kit Includes	8	H. T. Steel Retainers		8	CrSi Valve Springs	
8		H. T. Steel Basewashers		8	*Red Viton® Seals		
8		H. T. Steel Keeper (9°)					

### IMPORTANT NOTES:

**Shortened Guides:** the system must be run with KPMI's new shortened Milwaukee-8 valves guides, or with modified stock guides (see installation instructions for more details)

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


## Engine Kit with Lightweight Racing Valve Spring Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-23350	Intake	.465"	1.410"	80#	212#	.465"	
		Exhaust						
	Kit Includes	8	In / Ex H. T. Steel Retainers		8	In / Ex H.T. Steel Keeprs Pr.		
		8	In / Ex CrSi Valve Springs		8	In / Ex H. T. Steel Basewashers		
		8	In/ Ex Red Viton® Seals					
4		In Std. White Diamond® Valves		4	Ex Std. White Diamond® Valves			

## Components • Replacement • Engine Kit

KPMI P/N	Description	Specification
20-21050	Spring Kit	Includes: H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keepers, Red Viton® Seals
20-21012H	Intake, Standard Valve	Valve • White Diamond® • Hard Chrome
20-21016H	Exhaust, Standard Valve	Valve • White Diamond® • Hard Chrome

## Valve Kit • White Diamond® • EV8

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	20-23300	Intake	1.571"	39.90mm	0.2347"	R0.235	10°	4.015"	Standard
		Exhaust	1.264"	32.11mm	0.2342"	R0.460	24°	4.050"	Standard
	Kit Includes		4	In Std. White Diamond® Valves			4	Ex Std. White Diamond® Valves	



# HD® M8™ (& CVO's) 2017-2025



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## Blank Valves • Tensilite® • Titanium

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks	
						Radius	Angle			
	**20-21019T	Intake	1.732"	44.00mm	0.2347"	R.235	15°	5.000"	+4.00mm	O/S
	20-21061T	Intake	1.654"	42.00mm	0.2347"	R.235	15°	4.750"	+2.00mm	O/S
	**20-21018T	Exhaust	1.417"	36.00mm	0.2342"	R.395	20°	5.000"	+4.00mm	O/S
	20-21063T	Exhaust	1.339"	34.00mm	0.2342"	R.395	20°	4.750"	+2.00mm	O/S

\*\*Note: These valves must be shortened and grooved.  
Must use KPMI® Rocker-shim spring kits, lash caps or other hard tip solution for rocker-tip contact.

## Valve • White Diamond® • EV8 or Inconel®

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks	
						Radius	Angle			
	20-21012H	Intake	1.571"	39.90mm	0.2347"	R0.235	10°	4.015"	OEM	Std. Ev8
	20-21009H	Intake	1.630"	41.40mm	0.2347"	R0.235	10°	4.055"	1.50mm	O/S Ev8
	20-21060H	Intake	1.614"	41.00mm	0.2347"	R0.235	15°	4.035"	1.00mm	O/S Ev8
	20-21061H	Intake	1.654"	42.00mm	0.2347"	R0.235	15°	4.035"	2.00mm	O/S Ev8
	20-21063H	Intake	1.732"	44.00mm	0.2347"	R0.235	15°	4.035"	4.00mm	O/S Ev8
	20-21016H	Exhaust	1.264"	32.11mm	0.2342"	R0.460	24°	4.050"	OEM	Std Ev8
	20-21017H	Exhaust	1.284"	32.61mm	0.2342"	R0.460	24°	4.050"	0.50mm	O/S Ev8
	20-21018K	Exhaust	1.284"	32.61mm	0.2342"	R0.460	24°	4.050"	0.50mm	O/S Inconel
	20-21062K	Exhaust	1.299"	33.00mm	0.2342"	R0.395	20°	4.055"	1.00mm	O/S Inconel
	20-21063K	Exhaust	1.339"	34.00mm	0.2342"	R0.395	20°	4.055"	2.00mm	O/S Inconel
	20-21065K	Exhaust	1.417"	36.00mm	0.2342"	R0.395	20°	4.055"	4.00mm	O/S Inconel

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

## Valve Guides • C630 Bronze • Manganese Bronze

		A	B	C	D	E	F	G	Intake	
									C630 Bronze	Manganese
		0.425"	0.490"	0.540"	1.110"	0.600"	0.2347"	0.4750" / Std.	20-21020	20-21020M
								+0.001"	20-21021	20-21021M
								+0.002"	20-21022	20-21022M
								+0.010"	20-21029	20-21029M
								+0.021"	---	20-21071M
								+0.022"	---	20-21072M
		A	B	C	D	E	F	G	Exhaust	
									C630 Bronze	Manganese
		0.425"	0.490"	0.600"	1.110"	0.600"	0.2342"	0.4750" / Std.	20-21030	20-21030M
								+0.001"	20-21031	20-21031M
								+0.002"	20-21032	20-21032M
								+0.010"	20-21039	20-21039M
								+0.021"	---	20-21081M
								+0.022"	---	20-21082M

The GR-2357 is OK for cast iron. The CR-2357 should be used for Manganese Bronze

## Valve Guide Seals • Tophat

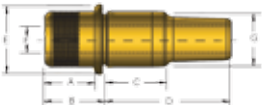
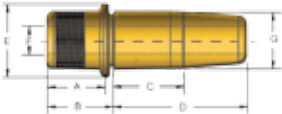

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.712"	1.170"	3	A	B	C	Spring shoulder Ø	Intake
				0.475"±0.002"	---	0.545"	0.707	Exhaust
		Part Number			Quantity		Quantity Discount	
		71046-4			Pkg. of 4		0%	
		71046-8			Pkg. of 8		0%	
		71046-16			Pkg. of 16		Less-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

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# HD® M8™ (& CVO's) 2017-2025

## Valve Guide Kits • Manganese Bronze NEW PRODUCTS

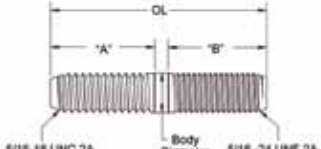
Intake	KPMI P/N	Size	Type	A	B	C	D	E	F	G
	20-24580	Std.	Intake	0.480"	0.545"	0.540"	1.110"	0.600"	0.2347"	0.4750" / Std.
			Exhaust	0.480"	0.545"	0.600"	1.110"	0.600"	0.2342"	0.4750" / Std.
Exhaust	Kit Includes		4	In Std. Mng. Guides			4	Ex Std. Mng. Guides		
			1	O.E.M. Style Seal (Pkg. of 8)						
	KPMI P/N	Size	Type	A	B	C	D	E	F	G
	20-24581	+0.001"	Intake	0.480"	0.545"	0.540"	1.110"	0.600"	0.2347"	0.4760" / O/S
			Exhaust	0.480"	0.545"	0.600"	1.110"	0.600"	0.2342"	0.4760" / O/S
Kit Includes			4	In Std. Mng. Guides			4	Ex Std. Mng. Guides		
			1	O.E.M. Style Seal (Pkg. of 8)						
Standard or +.001" Oversized manganese valve guides, kited with seals at a savings.										

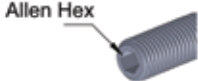
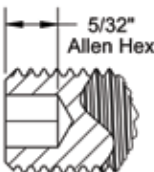
## Cylinder Studs • H.T. Steel

	KPMI P/N	Material	Body Dia.	O. L.	A	B	Quantity	Rep. 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. 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!

## Rocker Arm Tower Stud Kit • H.T. Steel

		<b>KPMI P/N</b>	<b>Material</b>	<b>Body Dia.</b>	<b>O. L.</b>	<b>A</b>		<b>B</b>
		<b>20-21045</b>	H. T. Steel	0.308"	1.680"	0.810"		0.770"
		<b>Includes</b>	8	H. T. Steel Studs		8	H. T. Steel Nuts	

		<p>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. 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!</p>
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## Nuts • H.T. Steel

	KPMI P/N	Material	F.D.	O.L.	Thread	Quantity
	41007-4	H. T. Steel	0.520"	0.350"	5/16-24	Pkg. of 4

Replacement nuts for Rocker Arm Tower Stud Kit, #20-21045, but can be used for general purpose (see diagram for detail)

## Keeper Set • O.E.M. Replacement

	KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
	51029-8	Triple Radius Bead	0.236"	7.0°	---	0.200"	0.282"	8Pr.	18100060
	51034-8	Triple Radius Bead	0.236"	9.0°	---	0.240"	0.289"	8Pr.	---


**ORDER 650-557-2046**

# HD® M8™ (& CVO's) 2017-2025




HARLEY-DAVIDSON

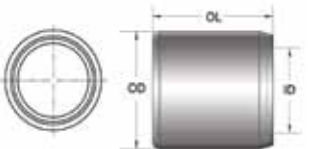
## Reamer • High Speed Steel

	KPMI P/N	Description	A	B	C	D
	GR-2357	0.2357" HSS valve guide reamer	7.125"	0.2357"	0.229"	0.228"


## Reamer • Solid Carbide

	KPMI P/N	Description	A	B	C	D
	CR-2357	0.2357" Carbide Valve Guide Reamer	7.625"	0.2357"	0.230"	0.228"


## Cylinder Dowel • Steel

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


## Valve Seats • High Chrome

	KPMI P/N	O. D.		I. D.		Thickness		Quantity
	10-HC350	35.00mm	1.378"	26.00mm	1.024"	11.02mm	0.434"	Pkg. of 1
	10-HC360S	35.99mm	1.417"	25.98mm	1.023"	8.99mm	0.354"	Pkg. of 1
	10-HC370S	37.02mm	1.457"	27.99mm	1.102"	8.99mm	0.354"	Pkg. of 1
	10-HC445S	44.50mm	1.752"	35.99mm	1.417"	8.99mm	0.354"	Pkg. of 1
	10-HC447	44.63mm	1.757"	35.81mm	1.410"	10.92mm	0.430"	Pkg. of 1

## Valve Seats • Powdered Metal

	KPMI P/N	O. D.		I. D.		Thickness		Quantity
	10-SC350	35.00mm	1.378"	26.00mm	1.024"	11.00mm	0.434"	Pkg. of 1
	10-SC360	36.00mm	1.417"	27.00mm	1.063"	11.00mm	0.434"	Pkg. of 1
	10-SC370	37.00mm	1.457"	28.00mm	1.102"	11.00mm	0.434"	Pkg. of 1
	10-SC380	38.00mm	1.496"	29.00mm	1.142"	11.00mm	0.434"	Pkg. of 1
	10-SC390	39.00mm	1.535"	30.00mm	1.181"	11.00mm	0.434"	Pkg. of 1
	10-SC446	44.62mm	1.757"	35.00mm	1.375"	11.43mm	0.450"	Pkg. of 1
	10-SC450	45.00mm	1.772"	34.50mm	1.358"	11.00mm	0.434"	Pkg. of 1
	10-SC460	46.00mm	1.811"	35.50mm	1.398"	11.00mm	0.434"	Pkg. of 1
	10-SC462	46.20mm	1.819"	34.93mm	1.375"	11.43mm	0.450"	Pkg. of 1
	10-SC470	47.00mm	1.850"	36.50mm	1.437"	11.00mm	0.434"	Pkg. of 1

## Valve Seats • Nickel Aluminum Bronze

	KPMI P/N	O. D.		I. D.		Thickness		Quantity
	10-SB350	35.00mm	1.378"	25.00mm	0.984"	11.00mm	0.434"	Pkg. of 1
	10-SB355	35.50mm	1.398"	26.00mm	1.024"	11.00mm	0.434"	Pkg. of 1
	10-SB360	36.00mm	1.417"	27.00mm	1.063"	11.00mm	0.434"	Pkg. of 1
	10-SB365	36.50mm	1.437"	27.00mm	1.063"	11.00mm	0.434"	Pkg. of 1
	10-SB370	37.00mm	1.457"	28.00mm	1.102"	11.00mm	0.434"	Pkg. of 1
	10-SB375	37.50mm	1.476"	28.00mm	1.102"	11.00mm	0.434"	Pkg. of 1
	10-SB380	38.00mm	1.496"	29.00mm	1.142"	11.00mm	0.434"	Pkg. of 1
	10-SB385	38.50mm	1.516"	29.00mm	1.142"	11.00mm	0.434"	Pkg. of 1
	10-SB390	39.00mm	1.535"	30.00mm	1.181"	11.00mm	0.434"	Pkg. of 1
	10-SB450	45.00mm	1.772"	34.50mm	1.358"	11.00mm	0.434"	Pkg. of 1
	10-SB460	46.00mm	1.811"	35.50mm	1.398"	11.00mm	0.434"	Pkg. of 1
	10-SB470	47.00mm	1.850"	36.50mm	1.437"	11.00mm	0.434"	Pkg. of 1

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