



Installation Instructions for KPMI Part No: 30-33900

HONDA® • VARIOUS 1000's • 2016-2022
 CRF™ 1000A/D 2017-2019 • Talon™ 1000X/R 2019-2022
Beehive "TURBO" Racing Valve Spring Kit

A) 30-33900 Kit Includes

<u>Qty</u>	<u>Application</u>	<u>Description</u>
8 - Pcs	Intake / Exhaust	HT Steel Retainers
8 - Pcs	Intake / Exhaust	CrSi Beehive Springs
8 - Pcs	Intake / Exhaust	H.T. Steel Basewashers
4 - Pcs	Intake	Spring Shims

B) Recommended Installed Height - Intake/Exhaust

- 1. Installed Height* **1.355"-1.365"**
- 2. Seat Pressure **80 lbs**
- 3. Open Pressure at 0.390" lift **194 lbs**
- 4. Open Pressure at 0.430" lift **205 lbs**
- 5. Max Valve Lift** **0.430"**

* It may be necessary to use the included spring shim underneath the intake basewashers to achieve the listed installation height.

** It may be necessary to use KPMI shortened valve guides (KPMI #30-3382X) to achieve higher than stock lift. Always check clearances.

C) Notes

- 1. The difference between the installed height and the coil bind height is considered "Free-Travel"
The coil bind height is determined by compressing the spring or springs with the retainer and basewasher in place, a vice can be used for this operation, once springs are compressed measure the distance between the retainer and basewasher where the outer spring contacts them.
- 2. Free-travel should always be gross valve lift +.060" for safe operation.
- 3. Retainer to seal and retainer to guide clearance should also be gross valve lift +.060" for safe operation.
- 4. Failure to check valve train clearances can result in serious damage to an engine

Packaged By: _____

Date: _____

TECH TIPS

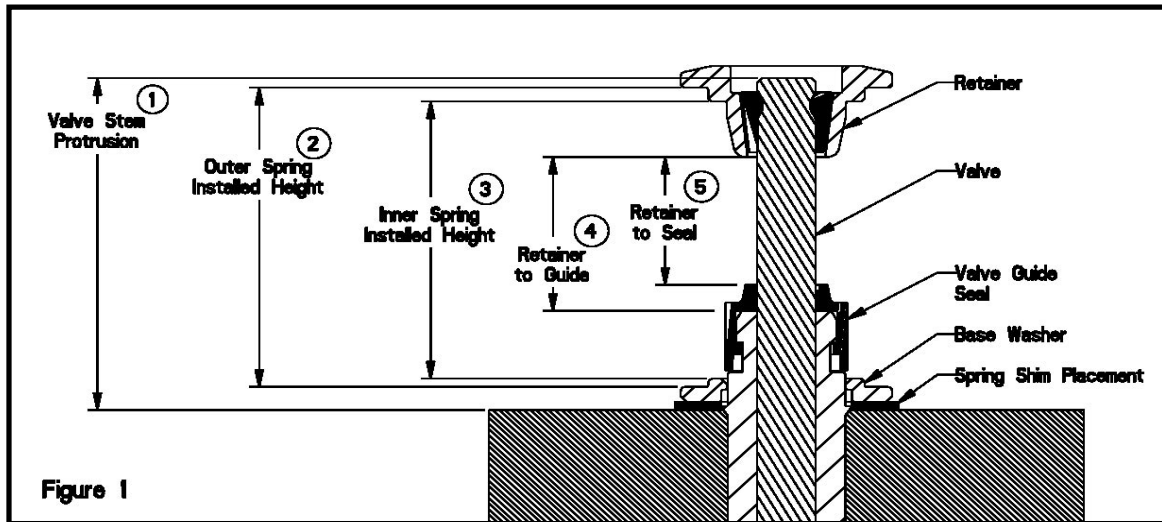


Figure 1

Valve Train Terminology

1. Stem Protrusion is measured from the tip of the valve stem to the cylinder head. See Figure 1.
2. Outer spring installed height is measured where the outer spring contacts the retainer and lower component when assembled. See Figure 1.
3. Inner spring installed height is measured where the inner spring contacts the retainer and lower component when assembled. See Figure 1.
4. Retainer to guide clearance is the distance between the valve guide (w/o the seal) and the bottom of the retainer, with the valve in the closed position. See Figure 1 and Notes 3 & 4.
5. Retainer to seal clearance is the distance between the valve stem seal and the bottom of the retainer, with the valve in the closed position. See Figure 1 and Notes 3 & 4.

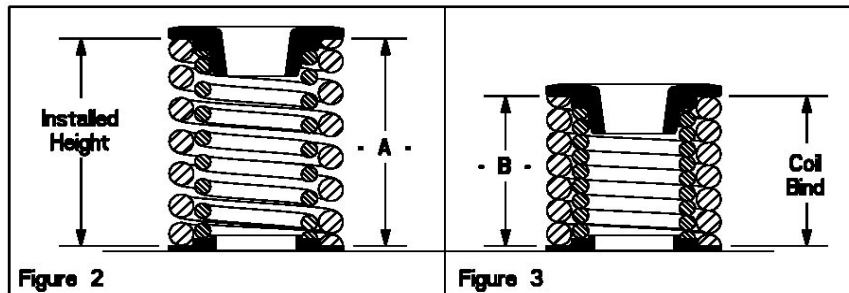


Figure 2

Figure 3

Installed Height

1. In Figure 2 the installed height is measured from where the outer spring contacts the retainer and the basewasher. This measurement is taken when the valve, basewasher, retainer, and keepers are assembled in the cylinder head.

Coil Bind / Solid Height:

1. In Figure 3 the coil bind height is determined by compressing the spring or springs with the retainer and basewasher in place, a vice can be used for this operation, once springs are compressed measure the distance between the retainer and basewasher where the outer spring contacts them.

Notes:

1. The difference between the installed height and the coil bind height is considered "Free-Travel"
2. Free-travel should always be gross valve lift +.060" for safe operation.
3. Retainer to seal and retainer to guide clearance should also be gross valve lift +.060" for safe operation.
4. Failure to check valve train clearances can result in serious damage to an engine.