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Installation Instructions for KPMI Part No: **30-30300**

Honda CB450 / 500 “5.0mm Conversion” 1965 - '76

Lightweight Racing Valve Spring Kit

A) 30-30300 Kit Includes

Qty	Application	Description
4 - Pcs	Intake / Exhaust	Titanium Retainers
4 - Prs	Intake / Exhaust	H.T. Steel Keepers
4 - Prs	Intake / Exhaust	Chrome Silicon Springs
4 - Pcs	Intake / Exhaust	H.T. Steel Basewashers

B) Recommended Installed Height - Intake/Exhaust

* The following installed height was achieved by finishing the valve job so a 1.410" valve stem protrusion (see Figure 1) could be measured using KPMI conversion valves and lash caps

1. Installed Height (Outer Spring) . . . . . **1.180"**
2. Seat Pressure . . . . . **72 #**
3. Open Pressure at .300" lift . . . . . **148 #**
4. Open Pressure at .460" lift . . . . . **188 #**
5. Max Valve Lift . . . . . **.460"**

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. Valve to valve at overlap and valve to piston clearances, should be checked even when stock cams and pistons are being run.
5. Failure to check valve train clearances can result in serious damage to an engine

Packaged:_____ Date:_____

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TECH TIPS

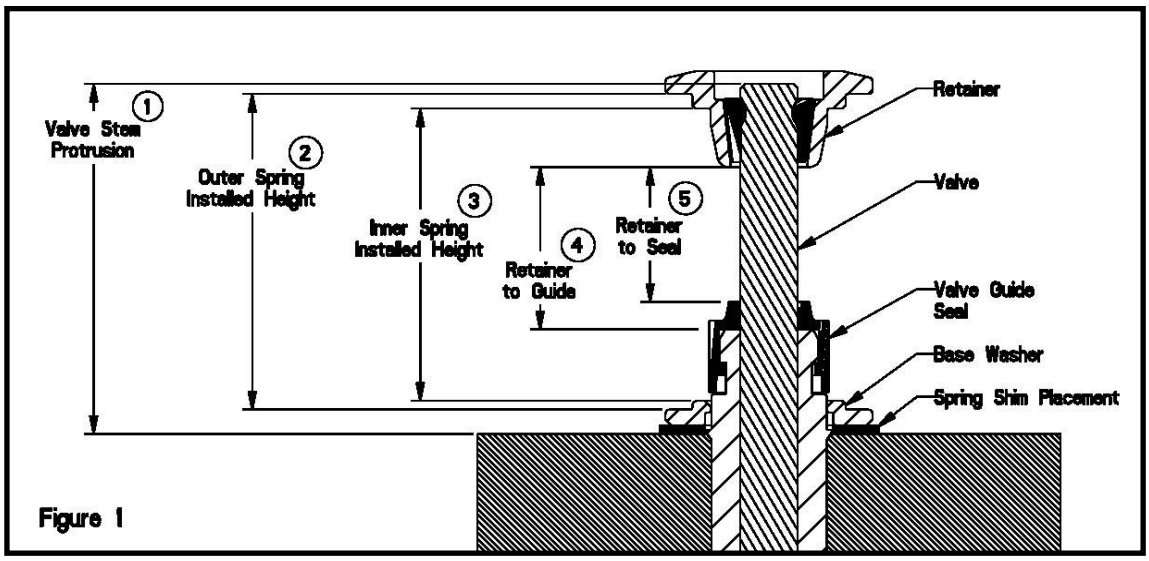

Figure 1

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 1and Notes 3 & 4.

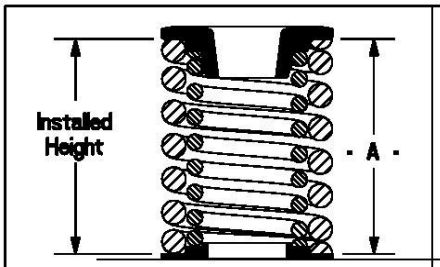

Figure 2

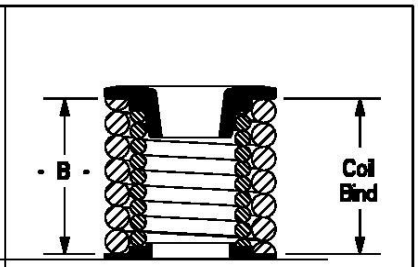

Figure 3

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.