

## Installation Instructions for MPS Hayabusa Cylinder Head Kit

1) 1-0651 Kit Includes:

- a) 8 x 71-60-60770      KPM Valve Hayabusa Intake Triple Groove 33mm
- b) 8 x 71-60-60772      KPM Valve Hayabusa Exhaust Triple Groove 27.5mm
- c) 1 x 71-1300-S-50      KPM Valve Springs Hayabusa 65# (16 prs)
- d) 1 x 71-60-60761      KPM Retainers Titanium Hayabusa (16 pcs)
- e) 1 x 71-60-60807      KPM Keepers Triple Groove Hayabusa (16 prs)
- f) 1 x 71-60-60805      KPM Lower Collars H T Steel Hayabusa (16 pcs)
- g) 16 x 1-0634            MPS Hayabusa Valve Seal

2) Recommended Installed Height – Intake/Exhaust

- a) Installed Height ..... 1.450”-1.460”
- b) Seat Pressure ..... 65 lbs
- c) Open Pressure @ 0.415” lift ..... 195 lbs
- d) Max Valve Lift ..... 0.490”\*

\*Note: For systems with higher than stock lift it may be necessary to use shortened valve guides

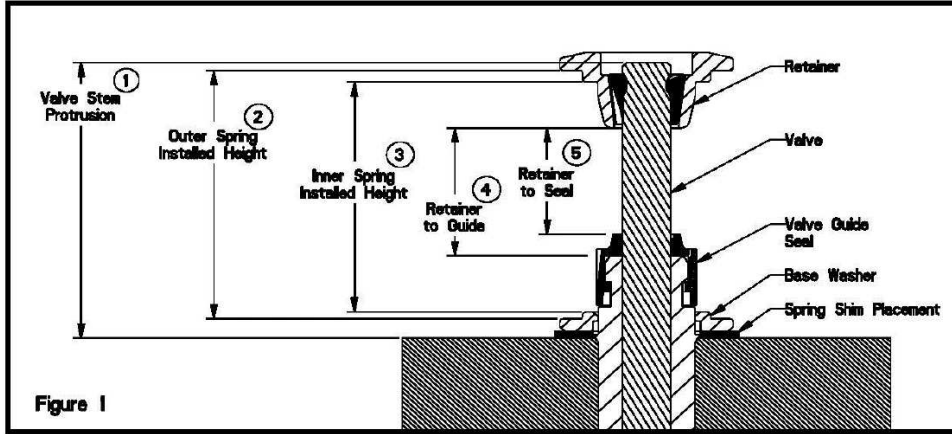
3) Notes:

- a) The difference between the installed height and the coil bind height is considered “free-travel”
  - i) The coil bind height is determined by compressing the spring(s) 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.
- b) Free-travel should always be gross valve lift +0.060” for safe operation.
- c) Retainer – to – Seal / Guide clearance should also be gross valve lift +0.060+ for safe operation.
- d) Failure to check valve train clearances can result in serious damage to an engine

Packaged By: \_\_\_\_\_

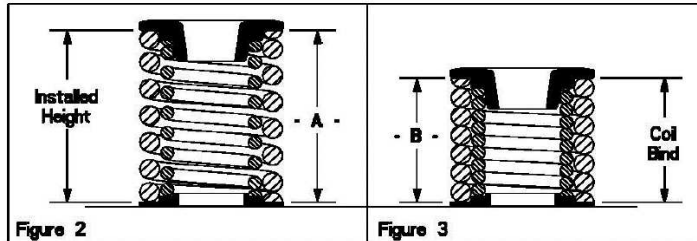
Date: \_\_\_\_\_

**TECH TIPS**



**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 Basewasher when assembled (See Figure 1).
3. Inner spring installed height is measured where the inner spring contacts the Retainer and Basewasher 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).



**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(s) 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 +0.060" for safe operation.
3. Retainer-to-Seal / Guide clearance should also be gross valve lift +0.060" for safe operation.
4. Failure to check valve train clearances can result in serious damage to an engine.