16-9603 Cylinder Head CC Measuring Kit

Assemble the cylinder head completely, with the proper valves and springs. And Install the spark plug. Make sure that the sealing surface on the head is clean.

Place the head on a flat surface with the chamber facing up. Make sure that the head is level, this will require the use of shims or spacers.

Choose the applicable measuring disc from the 3 sizes provided – 85.5, 90.5 / 92, or 94mm. Be sure to remove the protective paper coating from both sides of the disc.
Apply a thin coat of white grease around the outer edge of the sealing surface on the cylinder head and install the clear plastic disc. Press gently around the edge of the disc to make sure it is sealed with the white grease.

Fill the plastic syringe with liquid, preferably a liquid with some color for easier visibility. Some use ATF.
Adjust the fluid level to exactly 60cc's. Carefully fill the cylinder head chamber through the hole in the center of the disc. Fill the chamber entirely until it is at the bottom of the disc hole. Remove any air bubbles by carefully moving the head around and gently tapping on the disc, routing the bubbles out through the filler hole.
Record the volume of fluid used from the syringe and use this for any calculating compression. If additional fluid is needed it is recommended that you refill the syringe to 60cc's and subtract accordingly from there.

Although compression can be determined by measuring just one cylinder, it is recommended that all of the chambers are measured in case of variances that may need to be addressed.

Compression Ratio Formula

$$\frac{\text{(Volume of one Cylinder + Head Chamber CC's + Deck CC's)}}{\text{(Head CC's + Deck CC'c)}} = \text{Compression Ratio}$$

Other useful charts can be found in your EMPI catalog.

99-4382-7/09

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