



## Instructions for Deck Height Measuring Tool - EMPI Part #5756

This tool measures the distance from the top of the cylinder down to the top of the piston. A distance referred to as deck height when the piston is at the top dead center (TDC) position. It is important to know the deck height when assembling an engine, as this distance should not be less than 1.5 mm (.060) or the piston may hit the head. The deck height measurement is also necessary in determining the compression ratio. In blue printing an engine all the deck heights should be as equal to one another as possible. This helps make the compression in all the cylinders equal for maximum performance. To measure the deck height follow these steps:

1. Assemble the engine until the cylinders and pistons are on. Be sure to use the cylinder gasket if you plan on using it in the final assembly.
2. Thread the calibrated bolt in the plate until it is flush with the other side of the plate. This should be done by placing the plate on a flat surface and turning the bolt until it stops. With the bolt in this flush position mark a corner of its hex head and make a corresponding mark on the plate. This allows you to see how far you turn the bolt.
3. Place the plate through the studs on the top of the cylinder. The half moon opening in the plate should be on the bottom side of the piston as the head studs have an off set pattern allowing the plate to go on one way. Using the four spacer sleeves provided torque the plate down with the same torque requirements for bolting on the head.
4. Turn the engine over until the piston being measured is at the top of the cylinder. Rotate the crank back and forth with the piston coming to and going past the top (TDC) position, while doing this slowly turn down the calibrated bolt. Note how many turns you are making until the piston slightly touches the bolt. Each complete turn equals 1mm (.040") thus a quarter turn is .25 mm (.010).

**NOTE:** You may also measure the deck height in the same fashion by placing different combinations of feeler gages through the half moon opening between the plate and piston. There is also a slot provided for the use of calipers or a dial indicator.

**NOTE:** You may buy another single plate to make a dual plate kit, if so check their thickness if different note this when checking cylinder heights. Bolt both plates on side by side cylinders and check the deck height the same as in steps 1 thru 4. You can also compare the heights of the cylinder with one another by the use of a straight edge. Place the straight edge on the top of the plates to be sure they are the same heights and are sitting square and flat with one another.

99-4066/0104



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