

Squish Indicator Guide

Introduction:

The squish indicator is used to measure squish clearance (the distance between the top of the piston at it's highest point and the cylinder head). This indicator reads in 0.001 inch increments. This tool works only with engines that feature a spark plug that is both concentric to, and axially aligned with the bore. It will not work correctly on cylinders with an angled or off center spark plug.

How to measure squish clearance:

Begin by removing the spark plug, then remove cylinder (and cylinder head, if applicable), and piston from the engine. Optionally you may remove the ring from the piston for ease of measurement.

Thoroughly clean the engine components to insure an accurate measurement. Pay special attention to the spark plug threads and sealing face.

- Screw the squish tool into the spark plug hole and tighten gently by hand.
- Slide the piston into the cylinder with or without a ring, and push it firmly to the top of the cylinder. Hold the piston in this position and adjust the outer ring of the dial until it reads zero. Note: On the dial indicator there is a locking screw for the outer ring. You may want to lock this screw to make sure the ring doesn't move inadvertently during assembly/disassembly.
- Slide out the piston and carefully unscrew the indicator from the cylinder being careful not to move the outer ring of the dial.
- Assemble the engine as normal. Make note of the thickness of your cylinder and head gaskets in case adjustments are needed.
- Once the engine is assembled install the indicator into the spark plug hole. Rotate the engine to top dead center and record the reading on the dial. The reading should be somewhere less than zero. Count the dial away from zero to obtain the squish clearance.
- If the squish clearance is acceptable then remove the tool and finish assembly.
- If the squish clearance is too much or too little change your head and or base gasket thickness and repeat the measurement process.

Tips:

Make sure the tip of the indicator is screwed on tightly. If it is loose the measurement will be inconsistent and inaccurate.

It is a good idea to run the measurement twice to be sure you are getting a consistent result. The result should be +/- 0.001" from the first to the second measurement.

The dial should always be read counter-clockwise from zero. Use the smaller red numbers on the dial instead of the larger black ones.

There is a smaller dial inside the larger dial. This is the one-tenths place (0.1xx"). This can come in handy if your engine has way too much squish clearance.

Recommended Squish Clearance:

Engine Size	Minimum	Maximum
20-50cc	0.020"	0.040"
50-80cc	0.025"	0.045"

Please keep in mind that these numbers are approximate and depend on many factors.

Any variation from the manufacturers recommended squish clearance can cause severe engine damage. Please use these numbers only for estimation and always consult the manufacturer specifications before setting squish clearance.

Happy brapping!



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