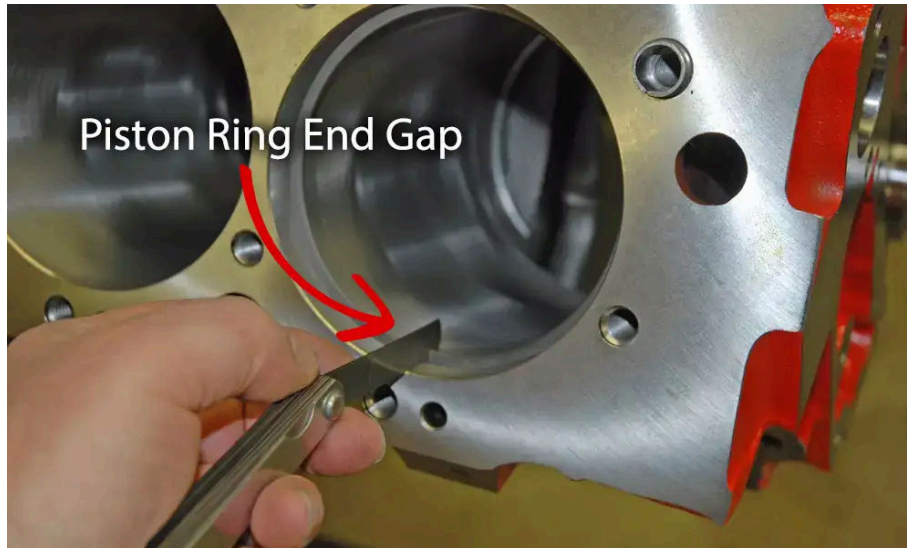


Calculate Piston Ring End Gap

Replacing A Cars Piston Rings

Mark

PISTON-TRIBE
REV UP YOUR ENGINES...



What is the Piston Rings “End Gap”, and why does it matter so much?

We all know that metal on metal is bad, but when metal heats up, it expands, which in turn, increases the chances of contact.

To prevent this, we set a carefully calculated end gap in each of the piston rings to cater for expansion when operating at higher temperatures.

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Calculate Piston Ring End Gap



A Generic Formula To Calculate Piston Ring End Gap

End Gap = Cylinder Bore Diameter × End Gap Factor

End Gap Factors

Top Compression Ring

Naturally Aspirated Engines: 0.004" per inch of bore diameter.

Forced Induction (Turbocharged/Supercharged) or Nitrous Engines:
0.005" to 0.006" per inch of bore diameter.

Second Compression Ring

Typically 0.001" to 0.002" larger than the top ring.

Oil Control Ring

Calculate Piston Ring End Gap



Usually between 0.015" to 0.025", depending on the application.

Example Calculation

For a 4.00-inch bore on a naturally aspirated engine:

$$\text{Top Ring End Gap} = 4.00 \times 0.004 = 0.016 \text{ inches}$$

$$\text{Second Ring End Gap} = 4.00 \times 0.005 = 0.020 \text{ inches}$$

Head to PistonTribe.com for more information