



Better Pistons Since 1922

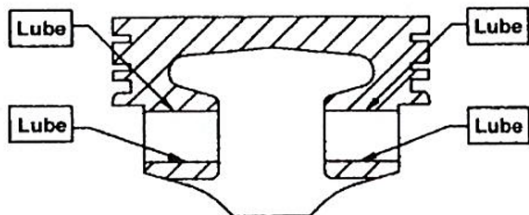
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Prevent Pin Galling

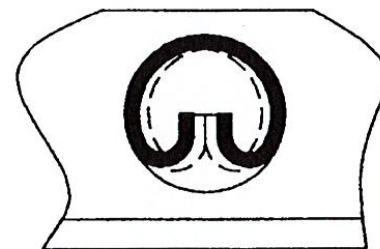
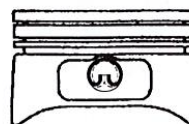


1. High quality assembly lubricant must be used between the pin and pin bore. Do not use grease. Failure to properly lubricate the areas indicated may result in pin seizure.
2. It is recommended the connecting rod be heated and the pin fitted by hand to insure no damage occurs to the pin and pin bore **cold pressing the pin through the rod eye is not recommended** due to possible scuffing of the pin surface and pin bore.
3. Re-lubricate after assembly, pin should move freely in the pin bore.

Lock Ring Installation

1. Lockrings should always be installed with their gaps down.
2. The compression of the lockring to install in the lock ring grooves should be minimized to avoid the loss of spring tension. Over compressing of the lockring may cause failure.

LOCK RING INSTALLATION



Piston Fitting for Skirt Coated Pistons

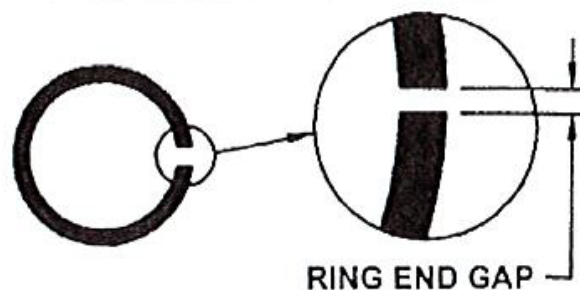


Dial Window

1. A "C" suffix has been added to the part numbers of pistons with anti-friction dry lubricant.
2. The label on the piston container indicates, "COATED" and lists the "Recommended Finished Bore Diameter."
3. A Piston Skirts **with** DIAL WINDOWS are designed to use a standard micrometer for measuring the skirt diameter.
B Pistons **without** DIAL WINDOWS are approximately .001" total in diameter larger measuring over the coating. Do not include the coating thickness to the clearance dimension.

HYPEREUTECTIC TOP RING GAP PROCEDURE

"H" suffix (hypereutectic) pistons require an increase in ring end gap of 40% on the top ring only. The 2nd and oil ring can use factory recommended end gaps. Failure to provide sufficient top ring end gap will cause a portion of the top ring land to break as the ring ends butt and lock tight in the cylinder. The broken piece will cause further piston or engine damage.



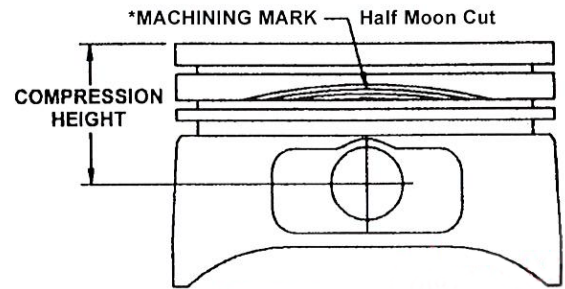
RING END GAP

Top ring example: Factory minimum recommended gap = 0.16
40% increase in gap = $(.016 \times .40) + .016 = .022$ inch
 $(.016 \times .40 = .006)$ $.006" + .016" = .022"$ Gap

GENERAL DATA

1. Some piston lands have a *machining mark called a half moon cut above the pin hole on one side only. The machining mark is made during the skirt finishing operation and in no way affects the pistons function or performance.
2. Piston to cylinder clearance:
Honing a cylinder to a finished diameter of the nominal bore size plus the piston over size will provide proper piston to cylinder clearance for normal operation.

Example: Chevrolet 350
1436 Piston
(4.0000" nominal bore diameter) + (.030" oversize) = 4.0300"
Hone the cylinder to 4.0300" for a .030" oversize piston.



3. It is important that when resizing the cylinders of a metric engine you use **millimeter** oversizes carried to a six decimal place for finished cylinder diameter calculations.

.25mm = .009843 **0.5mm** = .019685 **0.75mm** = .029528
1.0mm = .039370 **1.5mm** = .059055

4. ***Pistons used in severe duty or marine applications may require additional clearance.***

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