

Fig. 6-141 Piston Pin Removal

NOTE: Keep piston pins in order so that they can be installed in the piston from which they were removed.

b. Installation

1. Lubricate piston pin and pin holes in piston with engine oil to facilitate installation.
2. Place Piston Pin Support, J-8390-8, on arbor press with Spring, J-8390-4, and Spacer, J-8390-2,

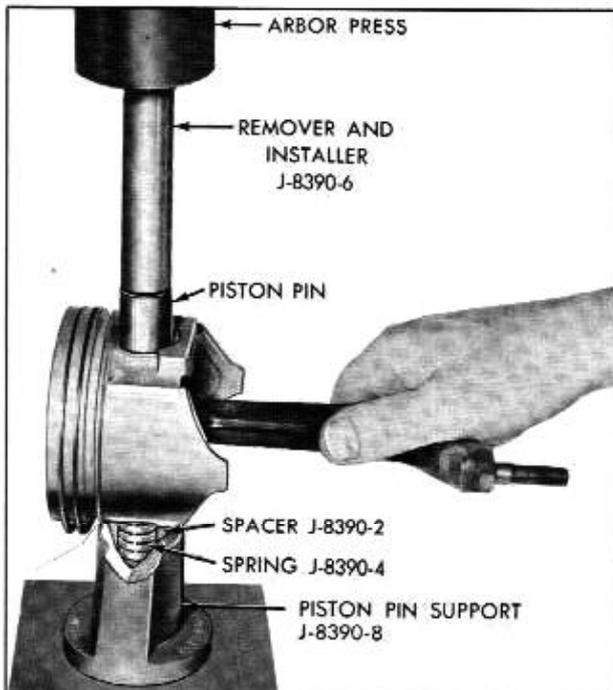


Fig. 6-142 Piston Pin Installation

with solid end over spring in position in Support, Fig. 6-142.

3. Position connecting rod in its respective piston so that, when assembly is installed in engine, side of piston stamped with the letter "R" is toward rear of the engine and number on lower end of rod is down. (Numbers 1, 3, 5, and 7 are in the left bank, and 2, 4, 6, and 8 are in the right bank.)

4. Position piston with connecting rod on Piston Pin Support, and insert piston pin into position as shown in Fig. 6-142.

5. Place Piston Pin Remover and Installer, J-8390-6, on piston pin and press pin until it bottoms on spacer in support. Remove piston and connecting rod from support. Center pin in piston, this will properly locate the connecting rod on the piston pin and piston.

NOTE: Piston pins are a selective fit to the piston and are not available separately. Piston pins will not wear enough to cause a knock or tapping until after very high mileage, and in such cases, a new piston and pin assembly should be installed.

125. Piston Clearance

When measuring piston diameter, the micrometer should be placed $\frac{3}{16}$ inch below the cross slot or $\frac{1}{4}$ inch below the oil ring groove, Fig. 6-143. Cylinders must be measured by placing the micrometer $1\text{-}\frac{1}{8}$ inches from the top, and perpendicular to the centerline of the face.

An identification letter is stamped on the valve lifter compartment cover rail next to the



Fig. 6-143 Measuring Piston Diameter

inside edge of the cylinder head. The letters are in groups of two for adjacent cylinders (such as "H" "B") midway between the two cylinders. This letter denotes the cylinder-piston size as shown in the following table:

Letter	Cylinder Size (Diameter in Inches)	Piston Size (Diameter in Inches)
A	4.1290 - 4.1292	4.1282 - 4.1284
B	4.1292 - 4.1294	4.1284 - 4.1286
C	4.1294 - 4.1296	4.1286 - 4.1288
D	4.1296 - 4.1298	4.1288 - 4.1290
E	4.1298 - 4.1300	4.1290 - 4.1292
H	4.1300 - 4.1302	4.1292 - 4.1294
J	4.1302 - 4.1304	4.1294 - 4.1296
K	4.1304 - 4.1306	4.1296 - 4.1298
L	4.1306 - 4.1308	4.1298 - 4.1300
M	4.1308 - 4.1310	4.1300 - 4.1302

The table indicates ten piston sizes ranging in steps of .002 inch from 4.1282 inches to 4.1302 inches. This makes it possible to maintain the .008 to .0012 inch piston to cylinder wall clearance. The sizes shown apply to 70°F.

If double letters (such as "AA", "BB") appear on the cylinder head face of the block just below the cylinder bore, it indicates that the cylinder has been bored to .010 inch over the diameter indicated by a single letter in the chart. For example, a cylinder with the letters "CC" stamped on the block would have a diameter of 4.1394 inches to 4.1396 inches; a matching piston for this size would have a diameter of 4.1386 inches to 4.1388.

Orders for service pistons after the end of the 1967 model year will be filled in sizes "H, J or K" and "HH, JJ or KK" through the servicing Parts Warehouses. These service pistons are to be ordered only as "standard" or ".0100 inch oversize", they are not supplied by code size.

1967 engine cylinder bores must not be reconditioned to more than .0100 inch oversize as pistons are not available over this range.

While the 1967 model is in production, specific code size pistons "A" through "M" and "AA" through "MM" are available from the factory Parts Warehouse in Detroit on a special order basis.

NOTE: Before special ordering specific code size pistons, it is very important to check the sizes of the cylinder bores by actual measurement. Actual measurement at the time of replacement is the only certain way to avoid error in ordering.

An outside micrometer and an inside micrometer are required to determine piston clearance.

The outside micrometer, used for measuring piston diameter, must be adjusted to turn freely so that it can be adjusted up to the piston with a very light turning effort on the screw. If it is adjusted to get a frictional feel over the piston, it will show several tenths of a thousandth smaller than its actual size. With practice, fractional thousandths can be checked accurately.

The inside micrometer for measuring the cylinders may be used with or without an extension handle. It should be adjusted so the screw turns sufficiently tight to retain its setting while checking the cylinder at the different points to be measured.

The direct readings shown on the inside micrometer should not be taken as the cylinder sizes. With one end of the micrometer contacting the cylinder wall and the other being oscillated, adjust the micrometer until it will just slip through the cylinder with a light drag. Remove the micrometer, and measure its length with the outside micrometer, obtaining the same feel as when measuring the piston.

By this method, even if the two micrometers do not agree in readings, no error will result in arriving at the actual clearance of the piston in the cylinder.

126. Connecting Rod Alignment

Connecting rods are carefully aligned at the factory and it is not necessary to check their alignment in the field. Only in cases of damage will they become misaligned. If this condition does exist, the piston, pin and rod assembly should be replaced. Do not attempt to straighten connecting rods.

127. Connecting Rod and Piston— Installation

1. Remove connecting rod cap from connecting rod and install bearing inserts in both cap and rod, being careful to locate bearing tangs in locating notches.

2. Install Connecting Rod Guide Set, J-3224, on rod bolts to protect crankpin journals.

3. Using Piston Ring Compressor, J-22095, position capless rod and piston in cylinder bore with arrow in trough pointing toward front of engine (letter "R" on piston toward rear) Fig. 6-144.

4. Using wood hammer handle, push piston and connecting rod down into position on crankpin and remove Connecting Rod Guide Set, J-3224.

CAUTION: Extreme care must be exercised when installing pistons and rods to be sure rod