

Aluminum Connecting Rod

These forged aluminum connecting rods are precision designed specifically for drag racing applications. Lightweight yet very strong for high rpm usage. Uses standard piston pin sizes. (Sold individually.)

P-149-90	426 Hemi "gas" - 6.86" center-to-center.
P5249-91	426 Hemi "fueler" - 6.86" center-to-center.

BASIC CONNECTING ROD PREPARATION

Note: The following information is for the preparation of steel connecting rods only.

Rods should be checked for alignment; bores should be parallel. Check big and small ends for size. Use only a Sunnen rod reconditioner for this purpose. For serious racing engines that will be used at high engine speeds such as in Pro Stock racing, size the big end of the rod to the minimum diameter to get the maximum crush from the bearing (.0002" undersize-2.2798" actual).

Using a small file, deburr rods, paying particular attention to the mating surfaces and tab groove. You need the clamping effect of a 60 micro bore. The sides should be polished by hand on a flat plate using #600 paper. Proper side clearance should be .008" to .017", total two rods. Do not increase side clearance past .017" as this increases the oil demand of the engine. It will also allow too much oil on the cylinder walls which will overload the rings and allow excess oil in the combustion chambers.

In an engine that is to be used in a high rpm situation, the rods and rod bolts should be Magna-Glo checked for cracks or forging flaws.

A race engine should use heavy duty rod bolts and nuts.

The rod bearing clearances should be .002" to .003".

The rod bolt head should be seated against the flat, machined surface in the rod.

Some engines use floating piston pins. On these engines, the pin-to-rod clearance should be checked. Clearance should be .001". On engines that use a pressed pin, the amount of the interface should be 6-8 mils. Around .001" pressed fit is common. Do not assume that it's correct; measure it!

- Shot-peening the rods is recommended if they aren't already.
- To increase pin oiling, drill one 3/32" diameter hole with a chamfer in the top of the rod when using floating pins. The best location for this oiling hole is the top of the rod above the pin (Figure 4-4).
- There is another small hole that may be found in connecting rods. This hole is not used in race rods. It only occurs in production-based rods such as heavy duty trucks. The hole is used to lubricate the cylinder walls. Do not add one if you do not have one. For racing purposes, it is best if a solid bearing shell is used so that the hole doesn't function.

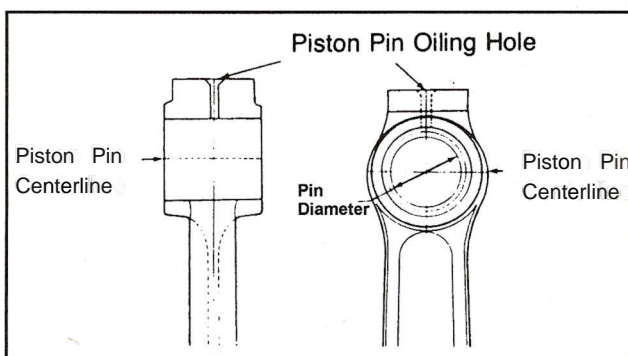


Figure 4 - 4

SPECIAL CONNECTING ROD INSTALLATION PROCEDURES

Side Clearance

Do not increase connecting rod side clearance beyond the specified .017" (the acceptable range is .008" to .017"). Excessive side clearance increases the oil demand of the engine as a result of excessive oil leakage past the rods. Increasing oil demand reduces the oil available for lubrication and cooling at high engine speeds.

Excessive side clearance also increases the amount of oil sprayed on the cylinder walls. Because 426 Hemi piston rings are a low tension design for reduced friction, the oil rings cannot control the additional oil on the cylinder walls. The excessive oil then ends up in the combustion chamber and can cause pre-ignition. (By definition, oil is a very low octane fuel!)