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## IMPORTANT BOLT INSTALLATION INSTRUCTIONS TO BE USED FOR

### STEEL RODS ONLY

**PLEASE READ CAREFULLY! FAILURE TO FOLLOW ALL INSTRUCTIONS MAY RESULT IN PREMATURE ENGINE FAILURE AND/OR PERSONAL INJURY.**

**DO NOT USE METAL STAMPS** to number rods. Metal stamps may disturb the roundness of the rod bore. Paint toolmaker's layout dye on the rod and cap, and then inscribe numbers.

**NEVER** use bolts to draw cap down on rod. Locate cap dowel sleeves into the counterbores of the rod. Then, **CAREFULLY** tap cap into place.

**CLEARANCES** vary, as to application. Measuring bearing surface at 12:00 o'clock and 6:00 o'clock, the general rule is approximately .001" clearance per 1.000" of crankpin diameter. Wrist pin clearance generally runs from .0007" to .0015".

**OIL PRESSURE:** We recommend 10 lbs. of oil pressure for every 1000 RPM. Thus, 7000 RPM = 70 lbs. oil pressure (hot).

**Clean** all parts thoroughly to remove all dirt and foreign oils. Spread bolt lube on threads and under flange of bolt and tighten per instructions below.

For any fastener to supply clamp loads high enough to keep the parts together, it must be stretched the proper amount. Torque does not measure or insure proper bolt stretch, it measures friction. This is why we prefer the stretch method for tightening rod fasteners.

To use the stretch method, measure and note the free length of each bolt before tightening with a stretch gauge or a micrometer with ball end attachments. Then, using the chart below, tighten the bolt until the proper stretch is achieved.

<u>Bolt Type</u>	<u>Recommended Stretch</u>	<u>Torque &amp; Angle</u>
<input type="checkbox"/> 3/8 - ARP 2000	.0052" to .0057"	25 ft lbs + 55 deg

**As a final check to make sure no bolts were missed:** Set a torque wrench at 50 ft lbs, and check all rod bolts. If any bolt turns before reaching the preset torque, it has not been properly tightened. **You must loosen these bolts and tighten them properly.**

Bolt Length	Bolt #1	Bolt #2	Bolt #3	Bolt #4	Bolt #5	Bolt #6	Bolt #7	Bolt #8
Pre-Install								
1 <sup>st</sup> Installation								
Removed								
2 <sup>nd</sup> Installation								
Removed								
3 <sup>rd</sup> Installation								

**When removed, if the bolt length changes more than 0.001" from pre-install length, it MUST BE REPLACED. A stretched bolt is worthless and will fail, resulting in possible damage and/or personal injury.**