

# OLIVER

## RACING PARTS

Thank you for displaying confidence in us by selecting **Oliver Racing Parts Products**. Our design engineers, machinists, assemblers, and inspectors have utilized their skills and many years of experience to ensure that all **Connecting Rods** meet the high standards of quality and performance for which Oliver has become famous throughout the world.

### IMPORTANT **BOLT** INSTALLATION INSTRUCTIONS STEEL RODS ONLY PLEASE READ CAREFULLY!!

### FAILURE TO FOLLOW ALL INSTRUCTIONS MAY RESULT IN PREMATURE ENGINE FAILURE.

**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, 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".

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

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

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.

The torque and angle method uses the lead of the thread to stretch the bolt the proper amount. To use this method, simply torque the bolts the amount listed in the chart below (this low amount of torque snugs up the bolt and removes lash). Then, using a Snap-On #TA360 torque angle gauge, turn the bolt the listed number of degrees.

<b>Bolt Type</b>	<b>Recommended Stretch</b>	<b>Torque &amp; Angle</b>
3/8 - Oliver /ARP 2000 / WSB	.0050" to .0054"	25 lb/ft + 42 deg
3/8 - Oliver /ARP 3.5	.0052" to .0056"	30 lb/ft + 42 deg
7/16 - Oliver /ARP 2000 / WSB	.0053" to .0057"	30 lb/ft + 42 deg
7/16 - Oliver /A1 / XTF	.0053" to .0057"	30 lb/ft + 44 deg
7/16 - Oliver /ARP 3.5	.0058" to .0062"	30 lb/ft + 54 deg
7/16 - Oliver /ARP CA625	.0058" to .0062"	30 lb/ft + 54 deg

Before bolting the oil pan on, set a torque wrench at 50 lb/ft for 7/16 bolt (40 lb/ft for 3/8 bolt, 30lb/ft for 5/16 bolt), 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.



## ----- (Billet Connecting Rods) -----

**Speedway Rods:** This rod is used in high RPM endurance races such as the Score off-road truck series or in supercharged boat engines that will see wide variations in RPM under extreme loads. Also included are Supercharged, Turbocharged, and Nitrous powerplants in drag racing. Sets are balanced to +/- 1/2 gram on each end. This rod features 7/16" WSB bolts.

**Standard Weight Rods:** This is the work horse of our line. It is used in applications ranging from dirt late models, many off-road truck sanctions, 410 cubic inch sprint cars, and very reliable in fast-bracket drag cars. Sets are balanced to +/- 1/2 gram on each end. This rod features 7/16" WSB bolts.

**Ultra Light Rods:** Designed to be used in engines with lighter reciprocating and rotating weight where acceleration rates are higher. Great for 360 sprint applications or drag racing with manual transmissions. Light weight pistons (430 grams or less) recommended. Sets are balanced to +/- 1/2 gram on each end. This rod features 7/16" WSB bolts.

**Sport Light Rods:** Designed to be used in applications such as the NASCAR late model sportsman series where rules allow only unported cast iron heads, 3.480" stroke and two barrel or four barrel carburetors. Light pistons and pins a must!. Sets are balanced to +/- 1/2 gram on each end. This rod features 3/8" ARP 2000 bolts.

**Big Block Max Series Rods:** This rod is engineered for use in big block supercharged endurance motors such as blown alcohol hydroplanes or nitrous assisted drag racing applications where 8,200 RPM and 1,500+ horsepower are common. Sets are balanced to +/- 1/2 gram on each end. This rod features 7/16" WSB bolts.

**Big Block Standard Rods:** These can be used in all but the most extreme big block applications. Superior strength by design not by bulk, the 6.135" rod weighs just 790 grams. This rod's use includes Super- Modified asphalt cars and naturally aspirated big cubic inch drag cars. Sets are balanced to +/- 1/2 gram on each end. This rod features 7/16" WSB bolts

**Sport Compact:** Designed for today's high rpm 4 and 6 cyl. engines used in drag racing and road racing. These are intended for naturally aspirated and forced induction powerplants; Turbo Extreme offered for high horsepower applications. This rod features 3/8" ARP 2000 bolts.

**All Oliver Connecting Rods may be upgraded to ARP 3.5 or Custom age 625+ bolts at an additional charge.**

# OLIVER

Bolts:  3/8" ARP 2000     7/16" ARP 2000  
 3/8" L19             7/16" L19

Job # \_\_\_\_\_ (for Oliver use only)

Taper  
Max  
Min

Taper Angle  
Max  
Min

Pin Width  
Max  
Min

Beam Width  
Max  
Min

Journal Offset  
Max  
Min

Journal Offset  
Max  
Min

Pin Bore  
Max  
Min

Rod Length  
Max  
Min

Beam Height  
Max  
Min

Journal Bore  
Max  
Min

Journal Thickness  
Max  
Min

Chamfer  
Max  
Min  
Angle

Chamfer  
Max  
Min  
Angle

Lock Thickness  
Max  
Min

Lock Depth 1  
Max  
Min

Lock Depth 2  
Max  
Min

