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## Installation Instructions for “ESP” H-Beam Rod Sets

Thank you for purchasing Eagle Specialty Products forged 4340 steel H-Beam connecting rods. We strive to maintain the highest quality products and services. To ensure optimum service, please read the following instructions thoroughly. Proper installation is crucial to insure dependable service life. If you need any further assistance or have any questions, please contact our technical department at (662)796-7373.

**General:** Always disassemble and thoroughly clean all rod bolt surfaces. Do not use metal stamps to number rods. Felt tip markers or tool maker’s dye are excellent alternatives.

**Fastener Assembly:** Rod bolt threads and underside of head of the bolt should be lubricated with ARP Ultra Torque Assembly Lube. Do not use oil or Loctite. Cap should be seated on rod by aligning cap by hand and lightly tapping into place. Alternate tightening bolts to avoid cocking cap.

**Torque method:** “Snug” each bolt to ensure proper seating and alignment of cap. Torque each bolt in one motion to the appropriate value using a calibrated torque wrench.

**Stretch method:** Each bolt should start completely relaxed. A box-end wrench is installed on the head of the bolt. The stretch gauge is installed and set to “zero”. Use the wrench to tighten the bolt until the appropriate stretch is realized. **DO NOT** remove the stretch gauge during tightening. Doing so will result in erroneous measurement of bolt stretch.

**Warning:** If any other lubricant is used on bolt, bolt stretch method must be used due to different lubricant properties. Improper bolt torque will cause premature bolt failure.

<u>Thread Size &amp; Material</u>	<u>Socket/Bolt Head Size</u>	<u>Torque</u>	<u>Bolt Stretch</u>
3/8” ARP 8740	7/16”	40 ft-lbs	.0040”-.0045”
7/16” ARP 8740	7/16”	63 ft-lbs	.0059”-.0063”
7/16” ARP 2000	7/16”	75 ft-lbs	.0064”-.0068”
7/16” ARP L-19	1/2”	79 ft-lbs	.0073”-.0077”
3/8” ARP 2000	7/16”	43 ft-lbs	.0055-.0059”
5/16”ARP 2000	3/8”	28 ft-lbs	.0048”-.0052”
5/16” ARP Custom Age 625+	3/8”	32 ft-lbs	.0062”-.0066”

**Maintenance:** To accurately determine the life of rod bolts, it is recommended that a log of the bolts’ original free-standing (untorqued) length should be kept and recorded upon subsequent teardowns for inspection. The free-standing length should be checked against its original length. If there is an increase of .001” or more, or if there is any permanent deformation or galling, the bolt should be replaced.

**Caution:** Rod bolts are manufactured from high grade steel and are vulnerable to corrosion. Care should be taken when handling fasteners to prevent exposing to moisture. Bolts should be handled by the bolt head. Bolts should always be lubricated prior to handling or storage.

**Clearances:** Refer to manufacturer’s specifications for bearing oil clearance and rod side-clearance. Eagle rods may be physically larger than O.E. rods in some areas. Because of this, minor clearancing of the block, main cap girdle, and/or other areas may be required. A minimum of .050” clearance is recommended between the rod and the block, cam, etc

**Guarantee:** Eagle Specialty Products, Inc. guarantees that all of its products are free from defects in material and craftsmanship. This guarantee is void on any products that show evidence of misapplication, improper installation, abuse, lack of proper maintenance or alteration from original condition. Compensation is limited to replacement of Eagle Specialty Products, Inc. parts only. Labor and other related costs or damages are not included. Eagle Specialty Products, Inc. are not responsible for incidental, consequential, or collateral damages to property or personal injury damages to the extent permitted by law.

Connecting Rod Bolt Free Length Log Sheet								
	DATE <input type="text"/>		DATE <input type="text"/>		DATE <input type="text"/>		DATE <input type="text"/>	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
#1	<input type="text"/>	<input type="text"/>						
#2	<input type="text"/>	<input type="text"/>						
#3	<input type="text"/>	<input type="text"/>						
#4	<input type="text"/>	<input type="text"/>						
#5	<input type="text"/>	<input type="text"/>						
#6	<input type="text"/>	<input type="text"/>						
#7	<input type="text"/>	<input type="text"/>						
#8	<input type="text"/>	<input type="text"/>						