Connecting Rod Caution on 1997-2017 Cummins ISX/QSX 15.0L Diesel Engines

The AERA Technical Committee offers the following information on connecting rod cautions for 1997-2017 Cummins ISX/QSX 15.0L Diesel engines. This information should be referenced anytime connecting rods are scheduled to be removed from these engines.

Only the fracture split connecting rods are presently a production part for 15.0L engines. This document is intended to make the field aware of this change and provide important information about these rods.

- Production Start Date: 10/1/12
- First engine serial number (ESN): 79614966

During production trial runs, a limited number of ISX15 and QSX15 engines were produced with fracture split connecting rods prior to the production start date and ESN listed above.

**Important Note:** During engine disassembly, machined connecting rod assemblies may be mixed with fracture split connecting rod assemblies within the same engine. The saw cut and fracture split connecting rods do require different rod bearings, so it is important to order and install the correct bearings. While Cummins considers intermixing acceptable, to eliminate some confusion, it is recommended one rod design be used within an engine.

Connecting rods with a fracture split surface must be treated with caution. The two pieces of the connecting rod cannot be rubbed together. This will damage the mating surfaces. Do not drop either piece of the connecting rod. Fracture split connecting rods must only be handled if the two pieces of the connecting rod are tightened to the correct specification, or are completely separated.

The fracture joint may produce debris at each separation. Use solvent and a nylon bristle brush to clean the contact surface between the connecting rod and the connecting rod cap. Dry the contact surface with compressed air. Make sure that the rod cap is installed on the connecting rod from which it was removed, and that the rod cap is properly oriented when installing. Both the rod cap and the connecting rod are serialized on one face to make sure of proper orientation.

If the rod cap is placed backwards on the connecting rod, the mating fracture surface will be damaged and the rod must be replaced. To help prevent that possibility, the rod and the cap have been serialized and should be assembled so they mate. See Figure 1.
Important Note: Fracture split rod cap screw torque specification and sequence remains the same as the saw cut connecting rods.

It is important to understand and identify whether the rod has a fracture split or a saw cut connection. For identification, the fracture split connecting rod will have a visible hole drilled in the cap as shown in the photo below.
NOTE: Minimize the number of joint interactions between the connecting rod and the rod cap on fractured rods. There are only a finite number of times a connecting rod and rod cap can be assembled and removed before the joint loses its proper interaction.

The fracture split connecting rod requires a different large end rod bearing than the previous saw cut connecting rod. The bearings are specific to the connecting rod design and are not backwards compatible. The oil drilling in the connecting rod and upper bearing shell will not be aligned if the wrong bearing is used.

<table>
<thead>
<tr>
<th>Connecting Rod Design</th>
<th>Connecting Rod</th>
<th>Rod Bearing Kit</th>
<th>Upper Rod Bearing Shell</th>
<th>Lower Rod Bearing Shell</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fracture Split</td>
<td>2882582</td>
<td>2882087</td>
<td>3686435*</td>
<td>3686436*</td>
</tr>
<tr>
<td></td>
<td>(Sold as 288258200NX)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saw Cut</td>
<td>4059429</td>
<td>4089405</td>
<td>4925971*</td>
<td>4925975*</td>
</tr>
<tr>
<td></td>
<td>(Sold as 405942900NX, 405924900RX)</td>
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* Currently, the upper and lower rod bearing shells are not sold individually from Cummins or any other bearing manufacturer at the time of this bulletin publication. Reference the rod bearing kit part number for the appropriate part number for connecting rod design.

Do not damage the fracture split surface on the connecting rod or connecting rod cap while the connecting rod caps are removed. While working with the rods, do not set the connecting rod or rod cap on the fracture split connection. This may cause polishing and damage to the mating surface.