



Technical Service Bulletin

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TSB180045

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Enhanced Oiling Rocker Lever Identification

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Warranty Statement

The information in this document has no effect on present warranty coverage or repair practices, nor does it authorize TRP or Campaign actions.

Contents

Product Affected

- ISX (All Versions)
- ISX15 (All Versions)
- QSX15 (All Versions)
- X15 (All Versions)

Description of Change

This document announces the release of new intake and exhaust rocker levers with an enhanced lubricating oil feed to the cam follower roller to cam follower roller pin interface and how to identify the new rocker levers.

Reason for Change

A revised rocker lever design provides additional lubricating oil feed to improve robustness against cam follower roller to cam follower roller pin joint.

Service Instructions

⚠ CAUTION ⚠

**New and used rocker levers must be lubricated as directed in the Service Manual.
Severe engine damage can result if rocker levers are not properly lubricated.**

Lubrication of the roller pins has **always** been advised for rocker levers but emphasis is placed on this guidance as a result of lubricating oil feed changes on new rocker levers. See the corresponding Service Manual. Reference Procedure 003-009 in Section 3.

Service Parts Availability

Service parts are available. See Table 1 for part numbers.

Table 1, Service Parts				
Part Description	Existing Part Number	Obsolete	Superseded	New Part Number
Front Exhaust Rocker Lever	4386045	Yes	Yes	5484228
Rear Exhaust Rocker Lever	4386046	Yes	Yes	5484229
Front Intake Rocker Lever	4386047	Yes	Yes	5484230
Rear Intake Rocker Lever	4386048	Yes	Yes	5484231

Part Compatibility

- New rocker levers are interchangeable and can be intermixed within an engine.
- Reference Table 2 in TSB120053.

Part Identification

New rocker lever design has:

- A roller pin which is black in color. See Figure 1 below.
- A drilling on bottom leg of rocker lever. See Figure 2 below.

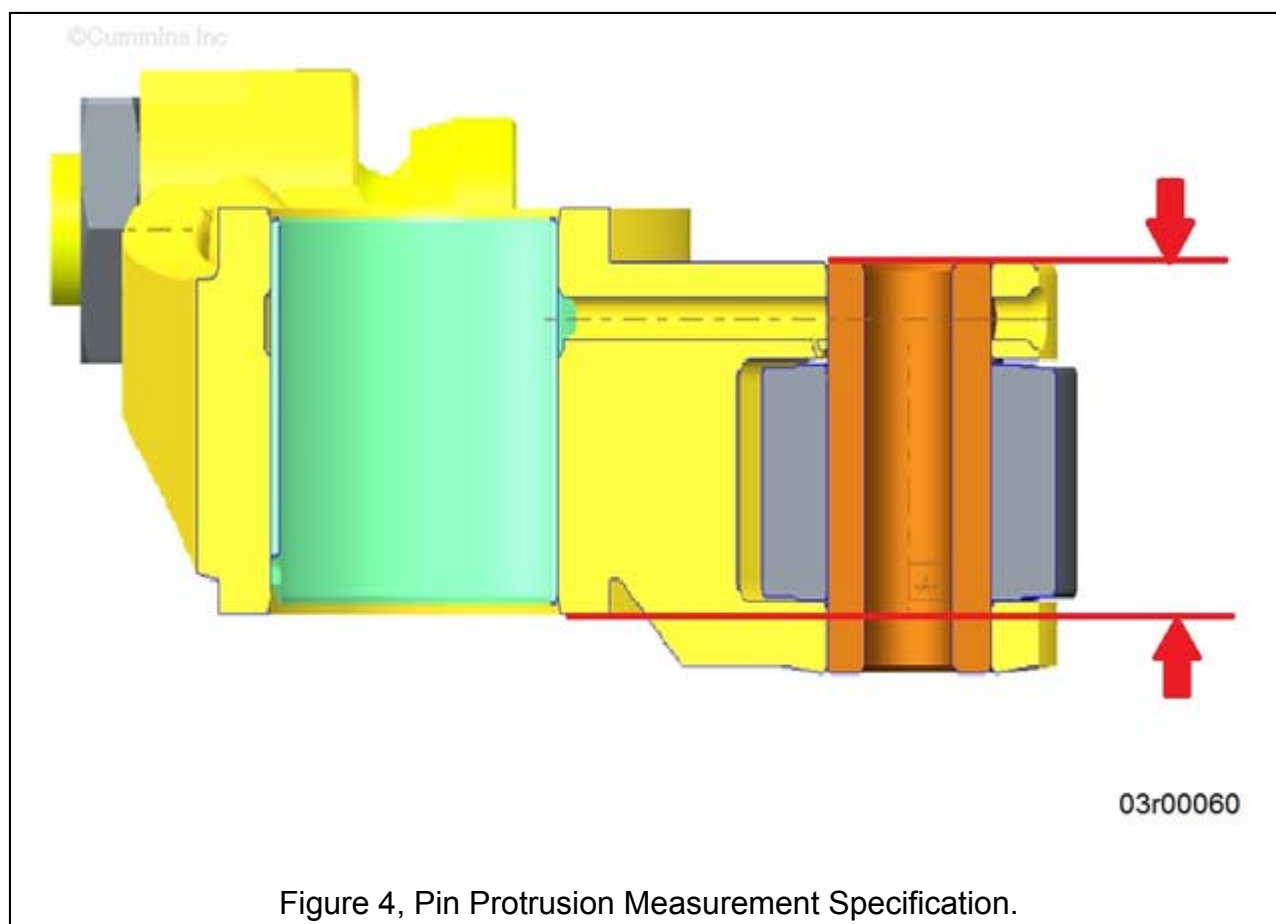




Normal vs Abnormal Rocker Lever Appearance:

Pin Protrusion: Since the introduction of the hollow pin design, in some cases, it has been identified to have the cam follower pin to be protruding out of the side of the rocker lever cast surface. This condition is often associated with a pin and roller seizure issue (See Figure 3 below). This visual appearance condition does also exist on new production parts to a lesser extent and is considered normal. The graphics below have been provide to give an anticipated range of pin position (Figure 4). The amount of pin that protrudes past the cast surface may vary to the normal manufacturing process. If rocker levers are found to exceed the specifications provided, the rocker lever may need replaced.





Pin Protrusion Measurement Method and Specification

The pin location is determined by measuring the distance from the face of the cam follower pin from the side of the rocker lever that has the thick cast leg (it is also the surface that is on the same side of the lever as the adjusting screw) to the opposite thrust face of the rocker lever. The specification limit for this distance is 25.25 +/- 0.3 mm. See Figure 4.

Table 2, Production Information

ESN First	Build Date ¹	Engine	Plant
80005342	8 September 2017	QSX15 Tier4 Final	Jamestown Engine Plant
80027808	7 December 2017	ISX e5	Jamestown Engine Plant
80030450	15 December 2017	All remaining 15 liter engines	Jamestown Engine Plant
¹ Engine build date can be found on the engine dataplate.			

Note : Some engines built after engine serial number (ESN) first may contain a mix of existing and new part numbers.

Document History

Date	Details
2018-4-13	Module Created

Last Modified: 27-Apr-2018
