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MANDATORY

SERVICE BULLETIN

DATE: January 17, 2020

Service Bulletin No. 639
 Engineering Aspects are
 FAA Approved

SUBJECT: Inspection of Rocker Arm, Part Number LW-15014

MODELS AFFECTED: O-320-H2AD, O, LO, TO, LTO-360-E1A6D new, rebuilt, or overhauled engines shipped from Lycoming since June 2017 with less than 500 hours of operation or engines with less than 500 hours of operation since rocker arm replacement

TIME OF COMPLIANCE: At next scheduled oil change, then every 50 hours until 500 hours of engine operation

NOTICE: Incomplete review of all the information in this document can cause errors. Read the entire Service Bulletin to make sure you have a complete understanding of the requirements.

This Service Bulletin is in response to field reports of damaged rocker arms found during an investigation of reported engine roughness. Lycoming has initiated an investigation into these instances. Until root cause and corrective action can be determined, as a precaution Lycoming is requesting the following inspections be completed at 50-hour intervals and any cracking found reported to Lycoming.

Inspection Procedure

1. Remove the rocker arms, push rods, shroud tubes, shroud tube seals, and hydraulic lifters per instructions in the Lycoming “76” Series Engines Overhaul Manual (60294-9). Discard the shroud tube seals and the self-locking nuts.
2. Clean residual oil from the rocker arm.
3. Use a 10X power magnifying glass to inspect the pushrod socket and the outside of the rocker arm for cracks around the oil squirt hole (Figures 1 and 2).

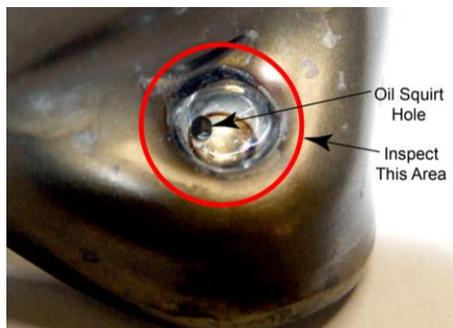


Figure 1
Area to Inspect
(Pushrod Socket Side of the Rocker Arm)



Figure 2
Area to Inspect
(Outside of the Rocker Arm)



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4. If no cracks are found in the area to be inspected:
 - A. Inspect all removed components for damage.
 - B. Reinstall the hydraulic lifters, new shroud tube seals, shroud tubes, push rods, and rocker arms with new self-locking nuts, per instructions in the Lycoming “76” Series Engines Overhaul Manual (60294-9).
 - C. Check dry tappet clearance and adjust as necessary.
 - D. Complete this inspection again at next 50-hour oil change until 500 hours of engine operation.
5. If cracks are found in the area to be inspected (Figures 3 and 4):
 - A. Contact Lycoming Engines by completing and emailing the attached form to TechnicalSupport@Lycoming.com or call Lycoming Technical Support at the phone number on page 1 of this service bulletin.

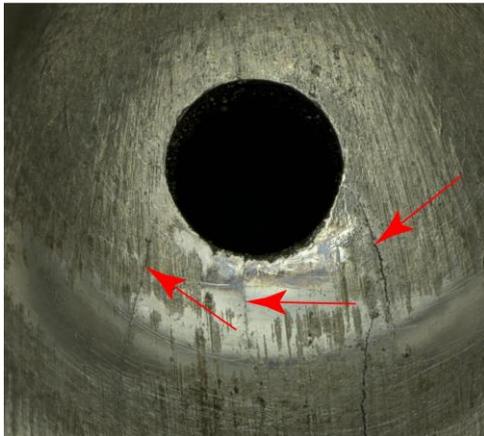


Figure 3

Cracks on the Pushrod Socket Side of the Rocker Arm, Around the Oil Squirt Hole

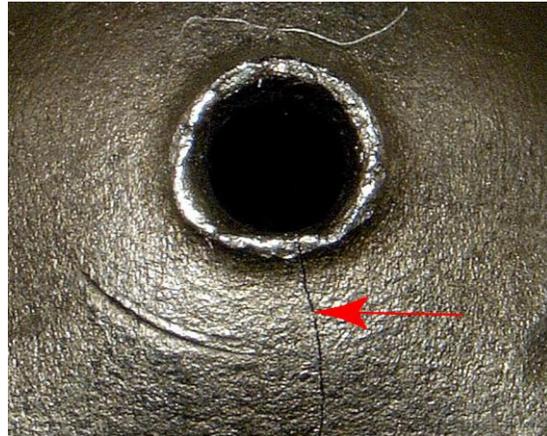


Figure 4

Crack on the Outside of the Rocker Arm, Around the Oil Squirt Hole

- B. Replace the damaged rocker arms. Return the damaged rocker arms to Lycoming Engines.
- C. Inspect all removed components for damage.
- D. Reinstall the hydraulic lifters, new shroud tube seals, shroud tubes, push rods, and new rocker arms with new self-locking nuts, per instructions in the Lycoming “76” Series Engines Overhaul Manual (60294-9).
- E. Check dry tappet clearance and adjust as necessary.
- F. Complete this inspection again at next 50-hour oil change until 500 hours of engine operation after rocker arm replacement.

NOTICE: Once the investigation is complete and the root cause and corrective action has been determined, Lycoming will issue a revision to this service bulletin with the terminating corrective action.

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LW-15014 Rocker Arm Inspection

Owner / Operator:	Contact Information:
Engine Model:	
Engine Serial Number:	Hours of engine service:
Date of Inspection:	Inspection done by:

Cylinder	Rocker Arm	Inspection Result
#1	Intake	
	Exhaust	
#2	Intake	
	Exhaust	
#3	Intake	
	Exhaust	
#4	Intake	
	Exhaust	

Email this form to TechnicalSupport@Lycoming.com