FAA
Aviation Safety

SPECIAL AIRWORTHINESS INFORMATION BULLETIN

SAIB: CE-19-01 R1
SUBJ: Engine Oil and Airplane Hour Meter; Pressure Switch Failure **Date:** December 6, 2022

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin is to alert owners, operators, and maintenance technicians of **Textron Aviation Inc. (Textron) (Type Certificate previously held by Cessna Aircraft Company) Model 172R and 172S** airplanes of an airworthiness concern, specifically failure of the "Sensor-Oil Pressure (Hobbs Switch)", part number (P/N) 83278, as it is referred to in the illustrated parts catalogue. These engine oil pressure switches could have been provided new with the airplane or as replacement parts.

This SAIB is being revised to incorporate new service information, remove the Model 182 and 206 airplanes, and add recommendation (f). The Model 182 and 206 airplanes are being removed because they are experiencing fewer ongoing issues.

The FAA issued airworthiness directive (AD) 2013-11-11, which requires a life limit of 3,000 hours time-in-service (TIS) on engine oil pressure switch P/N 83278.

At this time, this airworthiness concern is not an unsafe condition that would warrant AD action under Title 14 of the Code of Federal Aviation Regulations (14 CFR) part 39. The information and recommendations provided herein are intended to raise awareness of an issue that has a continued operational safety history and to advocate preventative actions.

Background

The above-referenced engine oil pressure switch is used to drive the following:

- the red "OIL PRESS" warning annunciator on pre-Garmin G1000 equipped airplanes; or
- the red "OIL PRESSURE" annunciation on the primary flight display of G1000 equipped airplanes; and
- the airplane hour meter on Textron airplanes.

NOTE: the oil pressure gauge/indicator is driven by a separate dedicated pressure transducer.

The FAA is aware of premature failure of this engine oil pressure switch in which engine oil was found leaking from the pressure switch housing and/or found to have been pumped overboard, which can lead to obscured vision through the windshield with limited forward visibility, loss of all engine oil, and consequent engine failure. The Model 172S airplanes that are currently in production position the switch on the engine accessory housing in a more benign environment, helping to prolong the life of the switch. The FAA has found that the original switch location on the crankcase, subjects the switch to a vibratory environment, which is more likely to result in the premature failures noted above.

Recommendations

The FAA recommends the following:

a. Be aware of this failure, which may be difficult to detect, and pass this information along to any other applicable owner/operator or technician.

b. Investigate any oil residue found on the forward fuselage upper cowling deck and/or windshield for root cause and take corrective action before further flight.

c. Inspect the oil pressure switch installation on the top rear or upper rear of the engine case, looking for:

- Oil seepage or staining around the oil pressure switch mount location;
- Wet, moist, or slippery oil pressure switch housing or wire leads; and
- Tool marks on the housing or any other indications of over-torque at installation.

d. Take corrective action and replace any engine oil pressure switch found with any of the above conditions before further flight per the applicable model Textron maintenance manual.

e. For any engine oil pressure switch P/N 83278 installed on the right crankcase location, replace within 1,000 hours TIS per the applicable model Textron maintenance manual. Note: Textron has issued Instructions for Continued Airworthiness (ICA) Supplement ICA-172-79-00001A (for the Model 172 Maintenance Manual), which establishes a 1,000-hour TIS airworthiness limitation with the pressure switch installed in the original, crankcase-mounted location. This includes Model 172R airplanes, serial numbers 17280001 through 17281622, and Model 172S airplanes, serial numbers 172S00001 through 172S12620.

f. Relocation: Remove the engine oil pressure switch mounted on the right crankcase and install a new oil pressure switch, P/N 83278, in the left-hand accessory housing location in accordance with Textron Service Bulletin SEB-79-10. Engine oil pressure switches located on the accessory housing should be replaced every 3,000 hours TIS per AD 2013-11-11.
Note: The equivalent of Service Bulletin SEB-79-10 has been incorporated in production on Model 172S airplanes serial number 172S12621 and higher.

For Further Information, Contact

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For Related Service Information Contact

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