



U.S. Department
of Transportation

Federal
Aviation
Administration

Airworthiness Concern Sheet

Date: December 16, 2025

Reply to: Eastern Certification Branch
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Make: Lycoming
Model / Series: IO-360
Serial Numbers: N/A
Reason for Airworthiness Concern:
Engine shutdowns during power reduction to idle

Federal Aviation Administration (FAA) Description of Airworthiness Concern

Operators and Original Equipment Manufacturers have reported instances of un-commanded engine shutdowns on aircraft equipped with Lycoming IO-360 engines and AVStar manufactured vertical and horizontal mounted fuel servos when the throttle was reduced to idle (hereinafter “rollbacks” or “rollback events”).

These events have been reported on production and in-service Cessna 172S and 172R as well as the Piper Archer III, Pilot 100i, and Seminole aircraft having IO-360 engines. The FAA is asking operators and maintainers of aircraft with IO-360 engines for information if they have experienced similar issues on their aircraft, regardless of fuel servo manufacturer or installation orientation.

Request for Information:

The FAA is interested in receiving any information on engine rollback occurrences while on the ground or during any phase of flight. Helpful information may include (but not limited to):

- ☐ The configuration of the aircraft:
 - o Model and serial number of the aircraft
 - o Total flight hours and cycles on the aircraft and engine since new and overhaul and monthly usage rate
 - o Fuel Servo manufacturer, part number, serial number, time since new, cycles since new, time since overhaul, cycles since overhaul, and installation orientation (horizontal or vertical)
 - o Any installed modifications or replacement parts (e.g. fuel servo related PMA parts, engine STCs, etc.)
- ☐ The flight conditions during the rollback event:
 - o Phase of flight and maneuvers
 - o Airspeed
 - o Altitude
 - o Weather conditions such as wind speed and direction, or any observed turbulence
- ☐ Details of the rollback event including the event date, action(s) performed by the pilot, boost pump power state, and the outcome
- ☐ Post-flight inspection findings after the event that may have contributed to the rollback event, e.g. sources of leakage, condition of parts, frequent idle adjustments, rough running engine, location of visible contamination, engine maintenance performed prior to the event, improper fuel, etc.

Please provide any other information you feel may be helpful for us to consider as part of our evaluation.

This Airworthiness Concern Sheet (ACS) is intended as a means for FAA Aviation Safety Engineers to coordinate airworthiness concerns with aircraft owners/operators through associations and type clubs. At this time, the FAA has not made a determination on what type of corrective action (if any) should be taken. The resolution of this airworthiness concern could involve Airworthiness Directive (AD) action or a Special Airworthiness Information Bulletin (SAIB), or the FAA could determine that no action is needed at this time. The FAA's final determination will depend in part on the information received in response to this ACS.

The FAA endorses dissemination of this technical information to all manufacturers and requests association and type club comments.

Attachments:

- ☐ Service Difficulty Report
- ☐ Accident/Incident Data System
- ☐ Service Letter / Bulletin
- ☐ Special Airworthiness Information Bulletin
- ☐ Federal Aviation Administration or National Transportation Safety Board Safety Recommendation
- ☐ Airworthiness Directive
- ☐ Alternate Means of Compliance
- ☐ Risk Analysis

Transmittal:

- ☒ Federal Aviation Administration
- ☒ Airplane Owners and Pilots Association
- ☒ Experimental Aircraft Association
- ☒ Type Club
- ☒ Type Certificate Holder
- ☒ Other: Flight school organizations including National Association of Flight Instructors and Flight School Associations of North America

Response Requested By:

- ☐ Emergency (10 days)
- ☐ Alert (30 days)
- ☒ Information (90 days)