

Advisory Wire

REFERENCE NO: AW300-27-0388, Rev.8

ATA: 27-41

EFFECTIVITY: Challenger 300
Challenger 350

SUBJECT: Horizontal Stabilizer Trim
Uncommanded Motion

1. REFERENCES:

- 1.1. Airplane Flight Manual (AFM), Section 03-23
- 1.2. CL300 AFM Temporary Revision (TR) TR-91-1
- 1.3. CL350 AFM TR-22-1
- 1.4. CL300 AFM TR-92
- 1.5. CL350 AFM TR-23
- 1.6. Airworthiness Directive (AD) CF-2022-03 TCCA EASA
- 1.7. Airworthiness Directive (AD) CF-2022-24 TCCA EASA
- 1.8. Service Bulletin (SB) 100-27-21, 350-27-011 – Special Check/Modification – Pitch Trim System – Replacement of Pitch Trim Switches on Pilot and Co-Pilot Control Wheels, dated 21 March 2022
- 1.9. Airworthiness Directive (AD) 2022-12-02 FAA
- 1.10. Global Alternative Means of Compliance (AMOC) AMOC-2022-00863-T
- 1.11. Airworthiness Directive (AD) 2023-02-01 FAA
- 1.12. Service Bulletin (SB) 100-27-22, 350-27-012 – Modification – Pitch Trim System – Installation of Pitch/Roll Trim Switch Relays, dated 29 December 2022
- 1.13. Airworthiness Directive (AD) CF-2023-77 [TCCA](#) [EASA](#)

2. INTRODUCTION:

This Advisory Wire revision is to inform Operators of the release of Transport Canada Continuing Airworthiness (TCCA) AD (Ref. 1.13) to mandate the incorporation of SBs (Ref. 1.12).

This Advisory Wire is also to remind Operators of the release of Federal Aviation Administration (FAA) AD (Ref. 1.11) to mandate the incorporation of SBs (Ref. 1.8).

3. DESCRIPTION:

Initial investigation has determined that a failure of a pitch trim switch led to either an inoperative switch in one or both directions or to an Advisory STAB TRIM FAULT (Cyan) message to be posted. In two of the events, there was subsequently an uncommanded motion and associated crew actions that led to the fully

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nose-down position without the trim clacker. This occurred when the crew attempted to trim manually after the Autopilot (A/P) was disconnected. Due to the nature of the failure and the priority given to pilot trim inputs over the co-pilot side, an attempted co-pilot trim activation resulted in inappropriate stabilizer motion being commanded via the (faulty) pilot side switch, opposite to the direction of the co-pilot trim input. In all cases, the crew took the necessary actions to land the aircraft safely.

Bombardier SBs (Ref. 1.8) were released on March 21st 2022, to inspect the trim switch serial number and replace them if they are part of the suspected batch.

Bombardier has updated the AFM with procedures and guidance applicable to these scenarios. The BEFORE STARTING ENGINE – TRIM SYSTEM check was revised to address the early switch failure detection (Ref. 1.2 and ref 1.3). The NON-NORMAL CAUTIONS and ADVISORIES procedures were also modified and/or added to cover the in-flight considerations (Ref. 1.4 and ref 1.5). Bombardier recommends that operators adopt these procedures.

Crews should also be familiar with the “Pitch Axis Uncommanded Motion or Trim Clacker Tone” procedure (Ref. 1.1). As this procedure may not be frequently reviewed or exercised, operators should reacquaint themselves with this immediate action as a precautionary measure. It should be noted that the Master Disconnect Switch (MSW) interrupts the trim system but does not turn it OFF; if the MSW is released, the trim system can operate again, and uncommanded motion can resume. If a subsequent trim command is made from the opposite side, the uncommanded motion may resume regardless of the direction of the trim input. As uncommanded motion may not be accompanied by the trim clacker, the pilots first cue to adopt the above procedures may be increased out of trim forces.

4. ACTION:

Operators should be aware of the release of the AD (Ref. 1.13) and SBs (Ref. 1.12) released to prevent an uncommanded horizontal stabilizer motion in the case of a pilot pitch/roll trim switch failure.

Operators are also reminded about the ADs (Ref. 1.7 and 1.11) and SBs (Ref. 1.8) released to ensure the suspected pitch trim switches serial numbers are removed and replaced. SBs (Ref. 1.8) is managed by dedicated schedule and can be planned by contacting bacs_isit@aero.bombardier.com.

Crews should incorporate and adopt the AFM TRs (Ref. 1.4 and 1.5) to comply with the ADs (Ref. 1.6 and 1.9) and familiarize themselves with the location of the Trim Malfunction procedures in the Quick Reference Handbook (QRH).

Operators should be aware of the information in this AW and the potential for horizontal stabilizer trim uncommanded motion. Any occurrences should be reported to your local FSR and/or Bombardier CRC.

Any aircraft with an Advisory STAB TRIM FAULT (Cyan) message must not be dispatched using the Master Minimum Equipment List (MMEL) until the trim switches are thoroughly tested as outlined in the Dispatch Deviation Guide (DDG).

Should you have any queries pertaining to this AW or requiring additional information please contact your Bombardier Field Service Representative (FSR) or the Customer Response Center (CRC).