

APPLICABLE: MAINTENANCE & ENGINEERING FLIGHT OPERATIONS

FOR ALL AIRFRAME MANUFACTURERS USING GENERAL AVIATION, GENERAL PRODUCTS AND/OR AUXILIARY POWER UNITS, OWNER/OPERATORS, DISTRIBUTORS, SALES AND SERVICE ORGANIZATIONS, AND FIELD SERVICE REPRESENTATIVES.

Applicable To: AS907 (HTF7000) Engine

Subject: **AS907 FAILED THRUST REVERSER STOWING**

There have been six field reports where either the left or right Thrust Reverser (T/R) failed to stow, either during roll-out just after landing or when the T/R was being used to reduce aircraft speed during taxi. In each event the T/R properly deployed, but failed to stow when commanded and the 'L(R) REVERSER FAILED' CAS message also appeared. The reverser remained in a partially deployed (or partially stowed) position as shown below:



In all cases the engine power lever was approximately midway between the forward and reverse idle detents when the 'L(R) REVERSER FAILED' CAS message appeared. This power lever position coincides with the trip point of two T/R micro-switches located inside the throttle quadrant. Each switch provides an independent T/R command signal to each of the two ECUs.

If there is a disagreement between these two micro-switches (i.e. ECU A sees a command to stow and ECU B sees a command to deploy), the T/R will fail in its current position and the FADEC will prohibit any further movement. To prevent this from occurring during normal transition between forward and reverse idle, the FADEC software incorporates a timer so that it will only fail the T/R if there is a disagreement between the switches for more than 2 seconds.

If the power lever is left for more than 2 seconds in a position between forward and reverse idle and only one of the two micro-switches is closed, the T/R will fail and remain in its failed position. The presence of MCID 1463 indicates that a disagreement between these two micro-switches has been detected between the ECUs. Bombardier has issued Advisory Wire 300-78-0004 to address this issue.

If the T/R is failed in a partially deployed (or partially stowed) position, a variation of the LMM task 72-00-00-770-801 is recommended to allow the T/R to be stowed. The recommended procedure is described below:

Recommended Procedure for Stowing a Partially Deployed (or Partially Stowed) T/R

A partially deployed (or partially stowed) T/R should first be fully deployed, then stowed as follows:

- (a) Make sure the affected engine is stopped.
- (b) Make sure there is electrical and hydraulic power available to the aircraft.
- (c) Pull (open) the two ECU circuit breakers on the affected engine.
- (d) Pull (open) the two thrust reverser circuit breakers on the affected engine.
- (e) Place the maintenance switch on the aircraft forward maintenance panel in the 'Maintenance' position (unguarded and UP).
- (f) Place the power lever on the affected engine in the reverse idle ('REV IDLE') position.
- (g) Open the engine oil tank access panel to access the thrust reverser maintenance switch.
- (h) Press and hold the button on the thrust reverser maintenance switch.
- (i) Simultaneously reset (close) the two thrust reverser circuit breakers on the affected engine.
- (j) Simultaneously reset (close) the two ECU circuit breakers on the affected engine.
- (k) If the T/R does not fully deploy, pull (open) the two thrust reverser and two ECU circuit breakers on the affected engine, wait five (5) seconds, and repeat Steps (i) and (j).
- (l) If the T/R fully deploys as it should, make sure the button on the thrust reverser maintenance switch is still pressed.
- (m) Place the power lever on the affected engine in the forward idle ('FWD IDLE') position to stow the T/R.
- (n) If the T/R fully stows as it should, release the button on the thrust reverser maintenance switch and place the maintenance switch on the aircraft forward maintenance panel in the 'Normal' position (guarded and DOWN).
- (o) Perform a normal engine start and perform a functional test of the thrust reverser in accordance with the applicable aircraft instructions.