



FAULT ISOLATION MANUAL

**ON A/C ALL

TASK 27-60-00-810-802

ROLL SPLR OUTBD GND (Caution) – Fault Isolation

1. General

- A. The fault isolation procedure is for when the Caution and Warning Panel (CAWP) ROLL SPLR OUTBD GND caution light is on.
- B. The CAWP ROLL SPLR OUTBD GND caution light comes on when the Flight Control Electronic Control Unit (FCECU) senses a condition that follows:
 - The outboard spoiler panels do not extend after landing
 - The outboard spoiler panels extend during an Event Built-In Test (EBIT)
 - One engine Power Lever Angle (PLA) is set more than 47 degrees (12 degrees forward of the FLIGHT IDLE position) and the other is set less than 47 degrees
 - Main Gear Weight on Wheels 1 (MGWOW1) and MGWOW2 are different.

NOTE: The roll spoilers system has a glareshield panel SPOILERS FLIGHT TAXI toggle switch to give manual override of the spoilers lift dump function (spoilers extend) after the aircraft lands. After the aircraft lands and the spoilers extend, the SPOILERS FLIGHT TAXI toggle switch is set to the TAXI position to retract the spoilers.

Also, after the spoilers are retracted for more than 6.5 seconds, the FCECU does an EBIT. This makes sure that a spoiler lift-dump valve does not stay in the open position.

NOTE: The roll spoilers system operates in the modes that follow:

- Flight mode (the spoilers give roll control)
- Ground mode (spoiler panels are fully extended)
- Taxi mode (spoiler panels retract and operate like flight mode).

NOTE: The flight mode is set when conditions are as follows:

- SPOILERS FLIGHT TAXI toggle switch is in the FLIGHT position
- PLA1 and PLA2 are at more than 47 degrees.

NOTE: The ground mode is set when the conditions are as follows:

- SPOILERS FLIGHT TAXI toggle switch is in the FLIGHT position
- PLA1 and PLA2 are at less than 47 degrees
- The aircraft is on the ground.

NOTE: The taxi mode is a sub-mode of the ground mode and is set when conditions are as follows:

- The aircraft is on the ground
- PLA1 and PLA2 are at less than 47 degrees
- SPOILERS FLIGHT TAXI toggle switch is in the TAXI position.



FAULT ISOLATION MANUAL

NOTE: The SPOILERS FLIGHT TAXI toggle switch has a magnetic coil that will hold the switch in the TAXI position when the two PLAs are set at less than 47 degrees. If PLA1 or PLA2 is set to more than 47 degrees, the switch automatically goes back to the FLIGHT position.

C. The Central Diagnostic System (CDS) can show the related messages that follow:

- LT OB SPLR LVDT FAIL
- RT OB SPLR LVDT FAIL
- OB GRD SPLR VLV
- FCECU FAILURE 68
- FCECU FAILURE 72
- FCECU FAILURE 73
- FCECU FAILURE 74
- FCECU FAILURE 75
- FCECU FAILURE 76
- FCECU FAILURE 77
- FCECU FAILURE 78
- FCECU FAILURE 79
- FCECU FAILURE 6B
- FCECU FAILURE 7A
- FCECU FAILURE 7B
- FCECU FAILURE 7C
- FCECU FAILURE 7D
- FCECU FAILURE 7E
- FCECU FAILURE E8
- FCECU FAILURE EB
- FCECU FAILURE F2
- FCECU FAILURE F3
- FCECU FAILURE F4
- FCECU FAILURE F5
- FCECU FAILURE F6
- FCECU FAILURE F7
- FCECU FAILURE F8
- FCECU FAILURE F9
- FCECU FAILURE FA
- FCECU FAILURE FB



FAULT ISOLATION MANUAL

- FCECU FAILURE FC
- FCECU FAILURE FD
- FCECU FAILURE FE
- FCECU FAILURE FF.

D. The Proximity Sensor Electronic Unit (PSEU) can show the related messages that follow:

- DOT 15A LOAD FAULT
- DOT 15A OVERCURRENT FAULT
- DOT 15E LOAD FAULT
- DOT 15E OVERCURRENT FAULT
- PSEU CHAN A FAIL DOT 15A FAIL
- PSEU CHAN E FAIL DOT 15E FAIL.

2. Job Set-Up Information

Subtask 27-60-00-946-062

A. Reference Information

REFERENCE	DESIGNATION
AMM TASK 27-62-00-710-801	Operational Test of the Ground Spoiler System
AMM TASK 32-61-00-742-801	Retrieval of Data from the Proximity Sensor Electronic Unit (PSEU)
AMM TASK 32-61-00-743-801	Erase the Data from the Proximity Sensor Electronic Unit (PSEU)
AMM TASK 45-00-27-742-801	Retrieval of Data from the Central Diagnostic System (CDS) – Flight Control System (FCS)
AMM TASK 45-00-27-743-801	Erase the Data from the Central Diagnostic System (CDS) – Flight Control System (FCS)
FIM TASK 27-00-00-810-804	FCECU FAILURE XX (Status) – Fault Isolation
FIM TASK 27-32-06-810-807	FCECU FAILURE 6A (Status) – Fault Isolation
FIM TASK 27-32-06-810-812	FCECU FAILURE EA (Status) – Fault Isolation
FIM TASK 27-61-31-810-803	LT OB SPLR LVDT FAIL (Status) – Fault Isolation
FIM TASK 27-61-31-810-804	RT OB SPLR LVDT FAIL (Status) – Fault Isolation
FIM TASK 27-62-01-810-802	OB GND SPLR VLV (Status) – Fault Isolation
FIM TASK 32-61-27-810-801	PSEU CHAN E FAIL DOT 15E FAIL (Status) – Fault Isolation
FIM TASK 32-61-27-810-802	DOT 15E LOAD FAULT (Status) – Fault Isolation
FIM TASK 32-61-27-810-805	DOT 15E OVERCURRENT (Status) – Fault Isolation



FAULT ISOLATION MANUAL

REFERENCE	DESIGNATION
FIM TASK 32-61-27-810-815	PSEU CHAN A FAIL DOT 15A FAIL (Status) – Fault Isolation
FIM TASK 32-61-27-810-816	DOT 15A LOAD FAULT (Status) – Fault Isolation
FIM TASK 32-61-27-810-817	DOT 15A OVERCURRENT (Status) – Fault Isolation

3. Fault Confirmation

Subtask 27-60-00-810-063

A. Confirm the fault as follows:

- (1) Do the CDS fault indication retrieval (Refer to AMM TASK 45-00-27-742-801).
- (2) Do the PSEU BITE indication retrieval (Refer to AMM TASK 32-61-00-742-801).
- (3) Erase the data from the CDS (Refer to AMM TASK 45-00-27-743-801).
- (4) Erase the data from the PSEU (Refer to AMM TASK 32-61-00-743-801).
- (5) Do the operational test of the ground spoiler system (Refer to AMM TASK 27-62-00-710-801).
 - (a) If the ROLL SPLR OUTBD GRD caution light does not come on no maintenance procedure is necessary. Do the Close Out.
 - (b) If the ROLL SPLR OUTBD GRD caution light does come on:
 - 1 Do the CDS fault indication retrieval again (Refer to AMM TASK 45-00-27-742-801)
 - 2 Do the PSEU BITE indication retrieval again (Refer to AMM TASK 32-61-00-742-801). Do the Fault Isolation.

4. Fault Isolation

Subtask 27-60-00-810-064

A. Isolate CDS fault messages as follows:

- (1) If the message is LT OB SPLR LVDT FAIL, do the fault isolation for LT OB SPLR LVDT FAIL (Refer to FIM TASK 27-61-31-810-803). Do the Close Out.
- (2) If the message is RT OB SPLR LVDT FAIL, do the fault isolation for RT OB SPLR LVDT FAIL Refer to FIM TASK 27-61-31-810-804). Do the Close Out.
- (3) If the message is OB GRD SPLR VLV, do the fault isolation for OB GRD SPLR VLV (Refer to FIM TASK 27-62-01-810-802). Do the Close Out.
- (4) If the message is one or more of the FCECU FAILURE XX messages, do the fault isolation for FCECU FAILURE XX (Refer to FIM TASK 27-00-00-810-804). Do the Close Out.
- (5) If the message is FCECU FAILURE 77, do the fault isolation for FCECU FAILURE 6A (Refer to FIM TASK 27-32-06-810-807). Do the Close Out.



FAULT ISOLATION MANUAL

- (6) If the message is FCECU FAILURE F7, do the fault isolation for FCECU FAILURE EA (Refer to FIM TASK 27-32-06-810-812). Do the Close Out.

B. Isolate PSEU fault messages as follows:

- (1) If the message is DOT 15A LOAD FAULT, do the fault isolation for DOT 15A LOAD FAULT (Refer to FIM TASK 32-61-27-810-816). Do the Close Out.
- (2) If the message is DOT 15A OVERCURRENT FAULT, do the fault isolation for DOT 15A OVERCURRENT FAULT (Refer to FIM TASK 32-61-27-810-817). Do the Close Out.
- (3) If the message is DOT 15E LOAD FAULT, do the fault isolation for DOT 15E LOAD FAULT (Refer to FIM TASK 32-61-27-810-802). Do the Close Out.
- (4) If the message is DOT 15E OVERCURRENT FAULT, do the fault isolation for DOT 15E OVERCURRENT FAULT (Refer to FIM TASK 32-61-27-810-802). Do the Close Out.
- (5) If the message is PSEU CHAN A FAIL DOT 15A FAIL, do the fault isolation for PSEU CHAN A FAIL DOT 15A FAIL (Refer to FIM TASK 32-61-27-810-815). Do the Close Out.
- (6) If the message is PSEU CHAN E FAIL DOT 15E FAIL, do the fault isolation for PSEU CHAN E FAIL DOT 15E FAIL (Refer to FIM TASK 32-61-27-810-801). Do the Close Out.

5. Close Out

Subtask 27-60-00-941-062

- A. Make sure that the CAWP ROLL SPLR OUTBD GND caution light does not come on when the operational test of the ground spoiler system (Refer to AMM TASK 27-62-00-710-801) is done.
- B. Remove all tools, equipment, and unwanted materials from the work area.