



FAULT ISOLATION MANUAL

**ON A/C ALL

TASK 27-60-00-810-805

SPLR OUTBD (Caution) – Fault Isolation

1. General

- A. This fault isolation procedure is for when the SPLR OUTBD caution light on the Caution and Warning Panel (CAWP) is on.
- B. The SPLR OUTBD caution light on the CAWP comes on for the conditions that follow:
 - The Flight Control Electronic Control Unit (FCECU) does not prevent outboard spoilers operation when the airspeed is more than 185 kt (342.62 km/h).
 - The FCECU prevents outboard spoilers operation when the airspeed is less than 150 kt (277.8 km/h).
 - The airspeed is invalid.
- C. The Central Diagnostic System (CDS) can show the related messages that follow:
 - ADU1
 - ADU2
 - 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



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- FCECU FAILURE F5
- FCECU FAILURE F6
- FCECU FAILURE F7
- FCECU FAILURE F8
- FCECU FAILURE F9
- FCECU FAILURE FA
- FCECU FAILURE FB
- FCECU FAILURE FC
- FCECU FAILURE FD
- FCECU FAILURE FE
- FCECU FAILURE FF.

2. Job Set-Up Information

Subtask 27-60-00-946-003

A. Reference Information

REFERENCE	DESIGNATION
AMM TASK 20-30-11-760-801	Electrical Test of the Aircraft Wiring
AMM TASK 27-00-01-000-802	Removal of the Flight Control Electronic Control Unit (FCECU)
AMM TASK 27-00-01-400-802	Installation of the Flight Control Electronic Control Unit (FCECU)
AMM TASK 27-61-00-720-801	Functional Test of the Roll Spoilers System
AMM TASK 27-61-26-000-801	Removal of the Unload Valves
AMM TASK 27-61-26-400-801	Installation of the Unload Valves
AMM TASK 27-61-28-000-801	Removal of the Pressure Switch
AMM TASK 27-61-28-400-801	Installation of the Pressure Switch
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 ## (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 34-11-00-810-816	ADU1 (Status) – Fault Isolation
FIM TASK 34-11-00-810-817	ADU2 (Status) – Fault Isolation
WM 27-61-00	Roll Spoilers System

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3. Fault Confirmation

Subtask 27-60-00-810-005

A. Confirm the fault as follows:

- (1) Do the CDS fault indication retrieval (Refer to AMM TASK 45-00-27-742-801).
 - (2) Erase the data from the CDS (Refer to AMM TASK 45-00-27-743-801).
- B. Do the functional test of the roll spoiler system (Refer to AMM TASK 27-61-00-720-801).
- (1) If the SPLR OUTBD caution light on the CAWP does not stay on, no maintenance procedure is necessary. Do the Close Out.
 - (2) If the SPLR OUTBD caution light on the CAWP does stay on, do the CDS fault indication retrieval again (Refer to AMM TASK 45-00-27-742-801). Do the Fault Isolation.

4. Fault Isolation

Subtask 27-60-00-810-006

A. Isolate the fault as follows:

- (1) If no CDS messages were recorded and the SPLR OUTBD caution light is on, do the steps that follow:

- (a) Do a check of the wiring between the pins E and F of the electrical connector 2700-J34 (Refer to AMM TASK 20-30-11-760-801 and WM 27-61-00).

- 1 If there is no continuity, remove and replace the pressure switch for the outboard roll spoiler (Refer to AMM TASK 27-61-28-000-801 and AMM TASK 27-61-28-400-801). Do the Close Out.

- 2 If there is continuity, continue with the fault isolation.

- (b) Measure the resistance between the pins A and B of the electrical connector 2700-J32 (Refer to AMM TASK 20-30-11-760-801 and WM 27-61-00).

NOTE: The solenoid has a reverse biased diode. The resistance measurement can be approximately 45Ω or 0Ω as per the ohmmeter polarity.

- 1 If the resistance is more than 70Ω, remove and replace the spoiler outboard unload valve (Refer to AMM TASK 27-61-26-000-801 and AMM TASK 27-61-26-400-801). Do the Close Out.

- 2 If the resistance is less than 70Ω, continue with the fault isolation.

- (c) If the fault continues, remove and replace the FCECU (Refer to AMM TASK 27-00-01-000-802 and AMM TASK 27-00-01-400-802). Do the Close Out.

- (d) If the fault continues, do a check of the wiring between the pin E of the electrical connector 2700-P34 and the aircraft ground (Refer to AMM TASK 20-30-11-760-801 and WM 27-61-00).

- (e) If the wiring is unserviceable, repair the wiring. Do the Close Out.

- (f) If the fault continues, do a check of the wiring between the FCECU and the No. 2 FLT spoiler low pressure switch (Refer to AMM TASK 20-30-11-760-801 and WM



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27-61-00):

2700-P2 (FCECU)	2700-P34 (No. 2 FLT Spoiler Low Pressure Switch)
70	F

- (g) If the wiring is unserviceable, repair the wiring. Do the Close Out.
- (h) If the fault still continues, do a check of the wiring for the SPLR 2 PUSH OFF switch (Refer to AMM TASK 20-30-11-760-801 and WM 27-61-00):

9811-J176 (Glareshield Disconnect RH)	9811-J176 (Glareshield Disconnect RH)
V	W

- (i) If the wiring is unserviceable, repair the wiring. Do the Close Out.
- (j) If the fault still continues, do a check of the wiring between the glareshield disconnect RH and the FCECU (Refer to AMM TASK 20-30-11-760-801 and WM 27-61-00):

9811-P176 (Glareshield Disconnect RH)	2700-P2 (FCECU)
W	53

- (k) If the wiring is unserviceable, repair the wiring. Do the Close Out.
- (l) If the fault still continues, do a check of the wiring between the spoiler outboard unload valve and the 28VDC R ESS BUS (Refer to AMM TASK 20-30-11-760-801 and WM 27-61-00):

2700-P32 (Spoiler Outboard Unload Valve)	28 VDC R ESS BUS (ROLL SPLRS ARM OUTBD)
A	G6

- (m) If the wiring is unserviceable, repair the wiring. Do the Close Out.
- (n) If the fault still continues, do a check of the wiring between the spoiler outboard unload valve and the spoiler cable sensor switch (Refer to AMM TASK 20-30-11-760-801 and WM 27-61-00):

2700-P32 (Spoiler Outboard Unload Valve)	2700-S10 (Spoiler Cable Sensor Switch)
B	Normally Open Contact

- (o) If the wiring is unserviceable, repair the wiring. Do the Close Out.
- (p) If the fault still continues, do a check of the wiring between outboard spoiler unload valve and the center glareshield disconnect RH (Refer to AMM TASK 20-30-11-760-801 and WM 27-61-00):

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2700-P32 (Spoiler Outboard Unload Valve)	9811-P176 (Centre Glareshield Disconnect RH)
B	D

- (q) If the wiring is unserviceable, repair the wiring. Do the Close Out.
- (r) If the fault still continues, do a check of the wiring for the SPLR 2 PUSH OFF switch (Refer to AMM TASK 20-30-11-760-801 and WM 27-61-00):

9811-J176 (Centre Glareshield Disconnect RH)	9811-J176 (Centre Glareshield Disconnect RH)
D	S

- (s) If the wiring is unserviceable, repair the wiring. Do the Close Out.
- (t) If the fault still continues, do a check of the wiring between the center glareshield disconnect RH and the FCECU (Refer to AMM TASK 20-30-11-760-801 and WM 27-61-00):

9811-P176 (Centre Glareshield Disconnect RH)	2700-P2 (FCECU)
S	69

- (u) If the wiring is unserviceable, repair the wiring. Do the Close Out.
- (2) If the message is ADU1, do the fault isolation for ADU1 (Refer to FIM TASK 34-11-00-810-816). Do the Close Out.
- (3) If the message is ADU2, do the fault isolation for ADU2 (Refer to FIM TASK 34-11-00-810-817). Do the Close Out.
- (4) If the message is one or more of the messages that follow:
- FCECU FAILURE 68
 - FCECU FAILURE 72
 - FCECU FAILURE 73
 - FCECU FAILURE 74
 - FCECU FAILURE 75
 - FCECU FAILURE 76
 - FCECU FAILURE 78
 - FCECU FAILURE 79
 - FCECU FAILURE 6B
 - FCECU FAILURE 7A
 - FCECU FAILURE 7B
 - FCECU FAILURE 7C



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- 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 F8
- FCECU FAILURE F9
- FCECU FAILURE FA
- FCECU FAILURE FB
- FCECU FAILURE FC
- FCECU FAILURE FD
- FCECU FAILURE FE
- FCECU FAILURE FF,

do the fault isolation for FCECU FAILURE ## (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.
- (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.

5. Close Out

Subtask 27-60-00-941-003

- A. Make sure that the SPLR OUTBD caution light on the CAWP is not on.
- B. Remove all tools, equipment, and unwanted materials from the work area.