



FAULT ISOLATION MANUAL

MAINTENANCE PRACTICES

****ON A/C ALL**

TASK 27-30-00-810-801

ELEVATOR ASYMMETRY (Caution) – Fault Isolation

****ON A/C 4001, 4003-4004, 4006, 4008-4029, 4033-4036, 4038-4045, 4052, 4054, 4056-4058, 4062-4063 Pre SB84-27-14**

1. General

- A. This fault isolation procedure is for when the Caution and Warning Panel (CAWP) ELEVATOR ASYMMETRY caution light is on.
- B. The CAWP ELEVATOR ASYMMETRY caution light comes on for the conditions that follow:
 - When the Flight Control Electronic Control Unit (FCECU) senses that the left and right elevator control surface positions are more than 6° different from each other when airspeed is less than 185 knots (342.62 km/hr).
 - The FCECU senses that the left and right elevator control surface positions are more than 4° different from each other when airspeed is more than 185 knots (342.62 km/hr).
 - The FCECU senses the elevator surface position Linear Variable Differential Transformer (LVDT) has malfunctioned.
- C. The Central Diagnostic System (CDS) can show the related messages that follow:
 - ELEV ASYM FAIL
 - LT ELEV LVDT FAIL
 - RT ELEV LVDT FAIL
 - 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



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

**ON A/C 4064–4140, 4142–4199, 4201–4999 and ON A/C 4001, 4003–4004, 4006, 4008–4063 Post SB84–27–14

2. General

- A. This fault isolation procedure is for when the CAWP ELEVATOR ASYMMETRY caution light is on.
- B. The CAWP ELEVATOR ASYMMETRY caution light comes on for the conditions that follow:
 - When the FCECU senses that the left and right elevator control surface positions are more than $6.0 \pm 1^\circ$ different from each other when airspeeds is less than 215 knots (398 km/hr) for 2 seconds.
 - The FCECU senses that the left and right elevator control surface positions are more than $4.5 \pm 1^\circ$ different from each other when airspeed is more than 215 knots (398 km/hr) for 2 seconds.
 - The FCECU senses the elevator surface position LVDT has malfunctioned.
- C. The CDS can show the related messages that follow:
 - ELEV ASYM FAIL
 - LT ELEV LVDT FAIL
 - RT ELEV LVDT FAIL
 - FCECU FAILURE 68



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



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3. Job Set-Up Information

**ON A/C ALL

Subtask 27-30-00-946-006

A. Reference Information

REFERENCE	DESIGNATION
AMM TASK 27-30-00-710-801	Operational Test of the Elevator Control System
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 27-30-00-810-808	ELEV ASYM FAILURE (status) – Fault Isolation
FIM TASK 27-31-61-810-801	LT ELEV LVDT FAIL (Status) – Fault Isolation
FIM TASK 27-31-61-810-802	RT ELEV LVDT FAIL (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

4. Fault Confirmation

Subtask 27-30-00-810-001

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).
- (3) Do the operational test of the elevator control system (Refer to AMM TASK 27-30-00-710-801).
 - (a) If the ELEVATOR ASYMMETRY caution light does not come on, no maintenance procedure is necessary. Do the Close Out.
 - (b) If the ELEVATOR ASYMMETRY caution light does come on, do the CDS fault indication retrieval again (Refer to AMM TASK 45-00-27-742-801). Do the Fault Isolation.



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5. Fault Isolation

Subtask 27-30-00-810-002

A. Isolate the fault as follows:

- (1) If the message is ELEV ASYM FAIL, do the fault isolation for ELEV ASYM FAIL (Refer to FIM TASK 27-30-00-810-808). Do the Close Out.
- (2) If the message is LT ELEV LVDT FAIL, do the fault isolation for LT ELEV LVDT FAIL (Refer to FIM TASK 27-31-61-810-801). Do the Close Out.
- (3) If the message is RT ELEV LVDT FAIL, do the fault isolation for RT ELEV LVDT FAIL (Refer to FIM TASK 27-31-61-810-802). 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
 - 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



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- 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.

6. Close Out

Subtask 27-30-00-941-006

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