**ON A/C ALL

TASK 24−30−00−810−809
DC BUS (Caution) − Fault Isolation

1. General

A. This fault isolation procedure is for when the DC BUS caution light on the Caution and Warning Panel (CAWP) is on.

B. The DC BUS caution light on the CAWP comes on when the DC generator overcurrent (700A) condition is sensed by the #1 DC Generator Control Unit (GCU) or #2 DC GCU or #3 DC GCU [Auxiliary Power Unit (APU)] for more than seven seconds.

NOTE: When this occurs, the GCU will send a signal to the EPCU, which opens (or inhibits closing of) the bus tie. If the fault is not cleared, the EPCU will send a command to the GCU to open the applicable channel. But, if the GCU does not receive a trip signal in five seconds and still senses the overcurrent in its related generator, it will disconnect the generator from the bus. All this occurs in less than seven seconds.

C. There are no related Central Diagnostic System (CDS) or EPCU fault status messages.

NOTE: Other related caution lights can also come on as follows:

– #1 DC GEN
– #2 DC GEN
– APU
– STBY BATTERY
– MAIN BATTERY
– AUX BATTERY.

D. Refer to the Fault Tree for the overview of the task (Refer to Refer to Figure 209).

2. Job Set−Up Information

Subtask 24−30−00−946−009

A. Reference Information

REFERENCE	DESIGNATION
AMM20−30−11−760−801	Electrical Test of the Aircraft Wiring
AMM24−00−00−861−802	De−energize the Electrical System
AMM24−00−00−910−801	Electrical/Electronic Safety Precautions
AMM24−31−00−710−802	Operational test of the Main 28V DC Generation system
AMM24−31−11−000−801	Removal of the Electrical Power Control Unit
AMM24−31−11−400−801	Installation of the Electrical Power Control Unit
AMM31−51−01−000−801	Removal of the Caution and Warning Panel
AMM31−51−01−400−801	Installation of the Caution and Warning Panel

REFERENCE	DESIGNATION
WM24−31−00	DC Power Generation System
WM24−32−00	Battery System

3. Job Set−Up

Subtask 24−30−00−910−028

WARNING: OBEY ALL THE SAFETY PRECAUTIONS WHEN YOU DO MAINTENANCE ON OR NEAR ELECTRICAL/ELECTRONIC EQUIPMENT. IF YOU DO NOT DO THIS, YOU CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO THE EQUIPMENT.

A. Obey all the electrical/electronic safety precautions (Refer to AMM24−00−00−910−801).

Subtask 24−30−00−810−081

B. Before you carry out the Fault Isolation procedure inspect all the related connectors and contactors for the recessed pins, signs of pitting or arcing, corrosion, discoloration (heat damage), fluid contamination or presence of foreign materials and physical damage. If damage is found, repair the damage.

4. Fault Confirmation

Subtask 24−30−00−810−009

A. Confirm the fault as follows:

(1) Do an operational test of the main 28 V DC generation system (Refer to AMM24−31−00−710−802).

(2) If the DC BUS caution light does not come on, no maintenance procedure is necessary. Do the Close Out.

(3) If the DC BUS caution light comes on, do the Fault Isolation.

NOTE: If the pilot reported the #1 or #2 DC GEN caution lights with the DC BUS caution light, download the data from the Flight Data Recorder (FDR) to determine the time sequence.

5. Fault Isolation

Subtask 24−30−00−810−010

NOTE: When you do a check for the ground faults, you must do the check with the airframe ground and the connector backshell shield ground points.

NOTE: Check the single, double and triple shielded wires for the short to aircraft ground, pin to pin and connector backshell shield ground points.

A. If the DC BUS caution light comes without the #1 or #2 DC GEN caution lights, do the steps that follow:

(1) Do the visual inspection of the feeder cables for the possible damage from the DC contactor box terminals T1 and T2 to the positive terminal of the #1 DC generator and #2 DC generator respectively.

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

B. If the DC BUS caution light comes with the #1 or #2 DC GEN caution lights, do the steps that follow:

(1) De−energize the aircraft electrical system (Refer to AMM24−00−00−861−802).

(2) Disconnect the aircraft batteries.

(3) Do the visual inspection of the feeder cables for the possible damage from the positive terminal of the main battery, auxiliary battery and standby battery to the DC contactor box terminals T6, T5 and T7 respectively.

(4) Do the visual inspection of the feeder cables for the possible damage from the DC contactor box terminals T1 and T2 to the positive terminal of the #1 DC generator and #2 DC generator respectively.

(5) Do the detailed visual inspection of the DC contactor box for the possible damage.

(6) Check the feeder cables for the ground faults and isolation resistance from the positive terminal of the main battery, auxiliary battery and standby battery to the DC contactor box terminals T6, T5 and T7 respectively (Refer to WM24−31−00, WM24−32−00 and AMM20−30−11−760−801).

(7) Check the feeder cables for the ground faults and isolation resistance from the DC contactor box terminals T1 and T2 to the positive terminal of the #1 DC generator and #2 DC generator respectively (Refer to WM24−31−00 and AMM20−30−11−760−801).

(8) If the wiring is unserviceable or DC contactor box is damaged, repair the wiring or the DC contactor box.

(9) Do a detailed visual inspection of the feeder cables from the DC contactor box to the circuit breaker panel on the affected side. Check the cables for the ground faults and the isolation resistance.

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

C. Check the wiring for the ground faults and isolation resistance between the CAWP and EPCU (Refer to WM24−31−00 and AMM20−30−11−760−801):

3312−P1 (CAWP)	2431−P12 (EPCU)
20	15

D. If the wiring is unserviceable, repair the wiring. Do the Close Out.

E. If the fault still continues, remove and replace the EPCU (Refer to AMM24−31−11−000−801 and AMM24−31−11−400−801).

F. If the fault still continues, remove and replace the CAWP (Refer to AMM31−51−01−000−801 and AMM31−51−01−400−801).

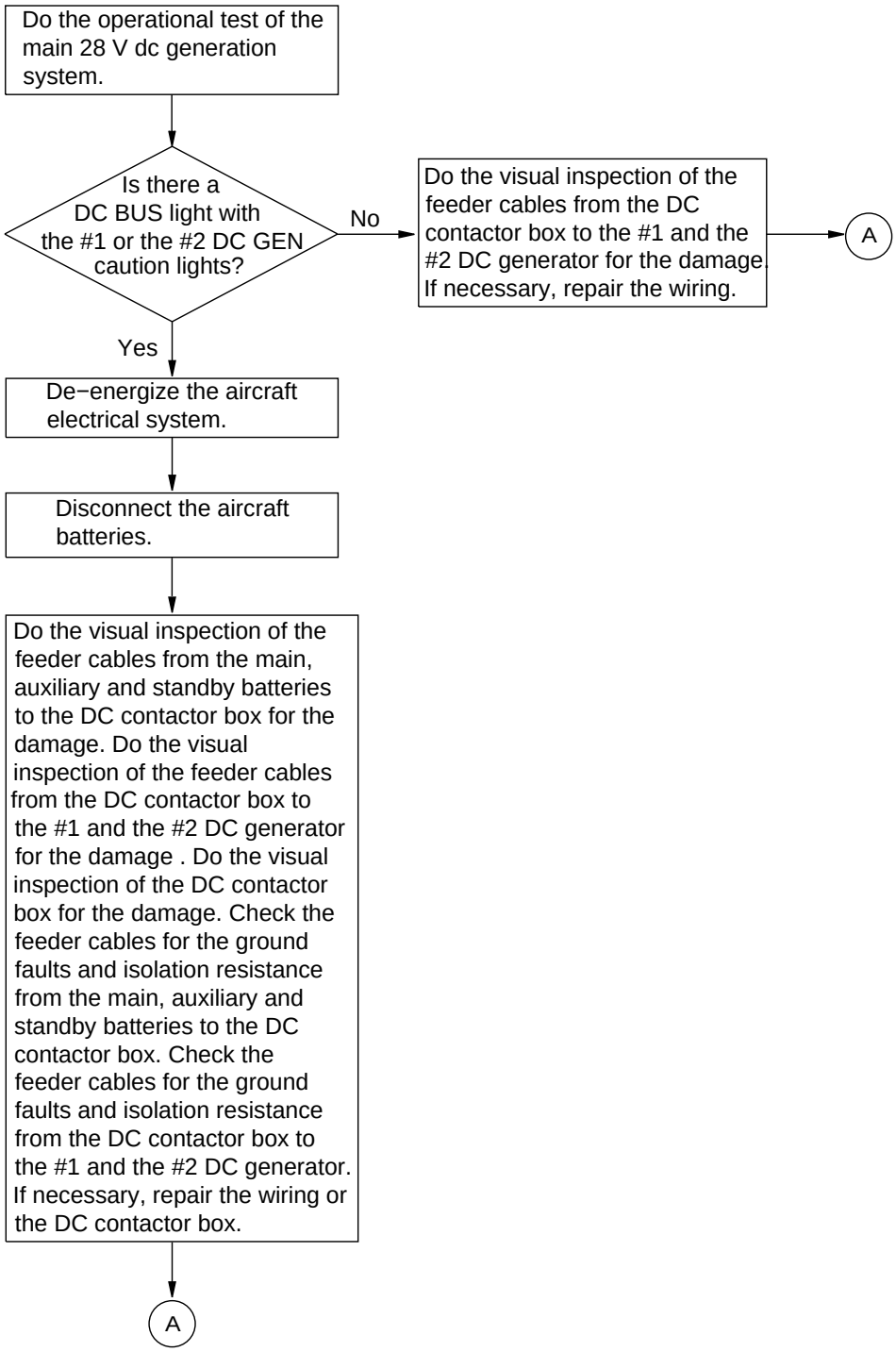
6. Close Out

Subtask 24−30−00−941−009

A. Do an operational test of the main 28 V DC generation system.

B. Make sure that the DC BUS caution light is not on.

C. Remove all the tools, equipment and unwanted materials from the work area.



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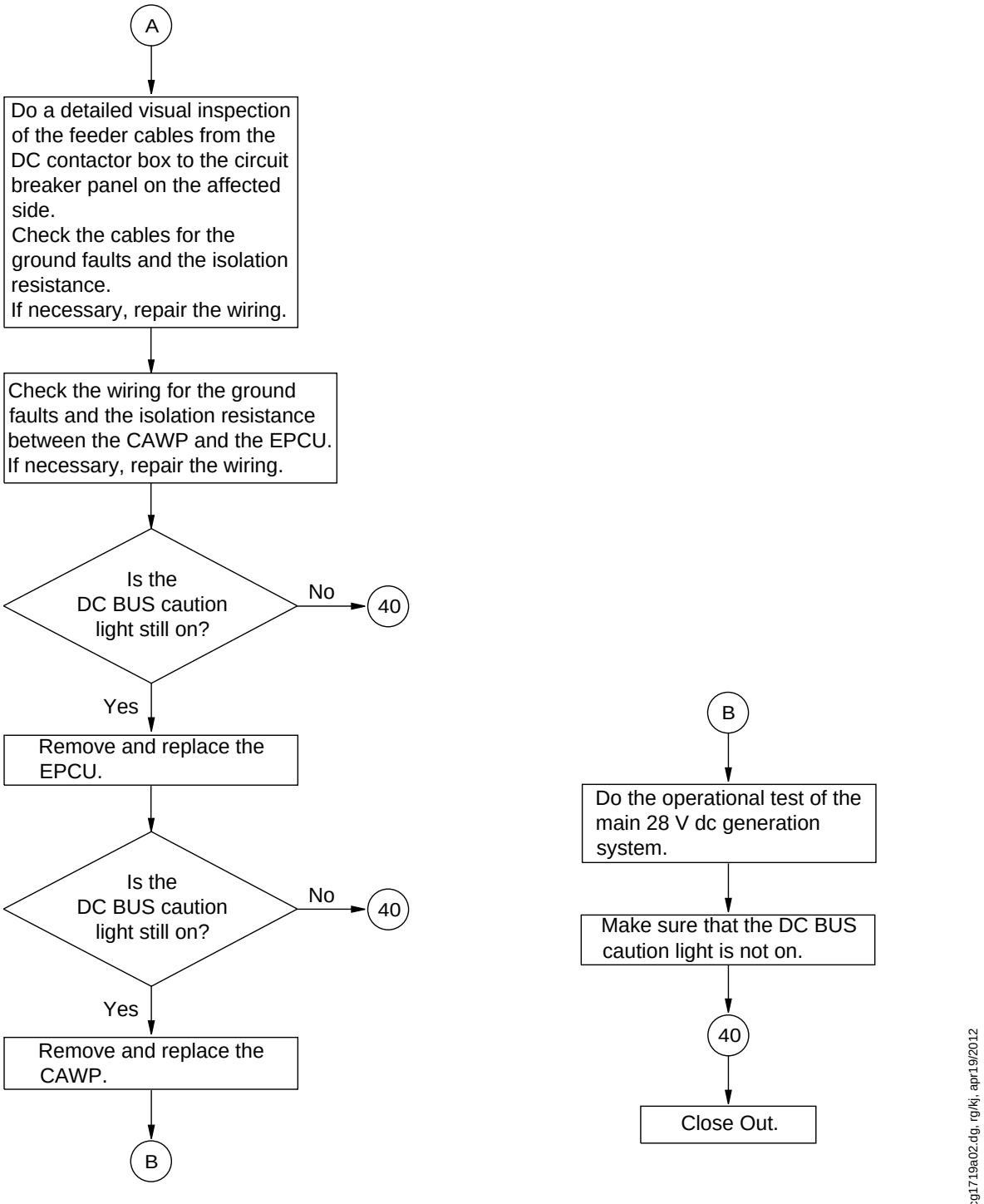
DC BUS (Caution) − Fault Isolation
Figure 209 (Sheet 1 of 2)



DC BUS (Caution) − Fault Isolation
Figure 209 (Sheet 2 of 2)