**ON A/C ALL

TASK 21−60−00−810−878
CABIN PACK HOT and FLT COMPT DUCT HOT (Caution) − Fault Isolation

1. General

A. This fault isolation procedure is for when the CABIN PACK HOT and the FLT COMP DUCT HOT caution lights on the caution and warning panel (CAWP) are on. It is also for when the CABIN PACK HOT and FLT COMP DUCT HOT caution lights have come on or came on more than one time. This is a dual hot caution.

NOTE: The acronym CAB is interchangeable with the term CABIN. Also, the acronyms FD (flight deck) and FLT COMPT (flight compartment) are interchangeable.

B. The caution lights come on when the FD turbine shutoff valve (TSOV) was closed to shut down the air cycle machine (ACM) and the over temperature condition was not cleared in 20 seconds or less. When this occurs, the pack flow control and shutoff valve (PFCSOV) is commanded closed. The Fault Code 7114 will cause the CABIN PACK HOT caution light to come on if the CABIN DUCT HOT caution light is not commanded on by the electronic control unti (ECU). This is an indication that the FD over temperature condition caused the loss of the two ACMs. The loss of the two ACMs is also shown when the FLT COMPT DUCT HOT and the CABIN DUCT HOT caution lights come on at the same time.

C. The audio and radio control display unit (ARCDU) can show one or more of the related central diagnostic system (CDS) messages that follow:

– 7114 − FD OVR TMP4
– 7113 − FD OVR TMP3
– 7112 − FD OVR TMP2
– 7111 − FD OVR TMP1

D. The fault logic definitions for the system monitor faults and the related component faults are as follows:

(1) The system fault code 7114 FD OVT TMP4 is set when the conditions that follow occur together for more than 20 seconds:

– A minimum of one more FD duct over temperature condition was sensed by any of the other system fault monitors 7111, 7112 or 7113
– The FD turbine shutoff valve (TSOV) was closed by the other system fault monitor(s) (7111, 7112 or 7113) to shutdown the air cycle machine (ACM)
– The fault monitor(s) (7111, 7112 or 7113) remain active
– The temperature of the FD zone duct is hotter than 190°F (87.8°C) or the FD over−temperature switch stays open.

When this system fault set, the pack flow control and shutoff valve (PFCSOV) is commanded closed. The fault code 7114 will cause the CABIN PACK HOT caution light to come on if the CABIN DUCT HOT caution light is not commanded on by the electronic control unit (ECU). This is an indication that the FD over temperature event caused the loss of the two ACMs. The loss of the two ACMs is also shown when the FLT COMPT DUCT HOT and the CABIN DUCT HOT caution lights come on at the same time.

(2) The system fault code 7113 FD OVT TMP3 is set when the condition that follows occurs for more than 5 seconds:

– A temperature that is hotter than 210°F (98.9°C) is sensed by one of the two sensing elements of the FD zone duct temperature−sensor.

This system monitor shuts down the ACM to try to clear the over temperature condition. This system monitor is inhibited if the two sensing elements of the FD zone duct temperature−sensor have failed out of range (fault code 3D01 or 3D0B).

(3) The system fault code 7112 FD OVT TMP2 is set when the condition that follows occurs for more than 5 seconds:

– A temperature that is from 190°F (87.8°C) to 210°F (98.9°C) is sensed by each of the two sensing elements of the FD zone duct temperature−sensor.

This system monitor shuts down the ACM to try to clear the over temperature condition. This system monitor is inhibited if the two sensing elements of the FD zone duct temperature−sensor have failed out of range (fault code 3D01 or 3D0B). This system monitor is also inhibited if any of the two fault codes 7111 or 7113 are active.

(4) The system fault code 7111 FD OVT TMP1 is set when one of the two conditions that follow occurs for more than 15 seconds:

– A temperature that is hotter than 170°F (76.7°C) is sensed by one of the two sensing elements of the FD zone duct temperature−sensor and the FD duct over−temperature switch is open

– The FD duct over−temperature switch is open and the two sensing elements of the FD zone duct temperature−sensor have failed out of range (fault code 3D01 or 3D0B).

This system monitor shuts down the ACM to try to clear the over temperature condition.

2. Job Set−Up Information

Subtask 21−60−00−946−094

REFERENCE	DESIGNATION
AMM TASK 21−61−00−710−803	Operational Test of the ECS Temperature Control
AMM TASK 45−00−21−742−801	Retrieval of Data from the Central Diagnostic System − Environmental Control System (ECS) Air Conditioning
AMM TASK 45−00−21−743−801	Erase the Data from the Central Diagnostic System − Environmental Control System (ECS) Air Conditioning
FIM TASK 21−60−00−810−801	CABIN PACK HOT (Caution) − Fault Isolation
FIM TASK 21−60−00−810−803	FLT COMPT DUCT HOT (Caution) − Fault Isolation
FIM TASK 21−60−00−810−873	FD OVR TMP4, 7114 (Status) − Fault Isolation

3. Fault Confirmation

Subtask 21−60−00−810−178

A. Confirm the fault as follows:

(1) Do the retrieval of the CDS fault indications for the environmental control system (ECS) (Refer to AMM TASK 45−00−21−742−801).

(2) Record present and historical faults linked to the event in the appropriate maintenance logbook. Include the operational hours for historical faults.

(3) Erase the data from the CDS (Refer to AMM TASK 45−00−21−743−801).

(4) Do the operational test of the environmental control system (ECS) temperature control (Refer to AMM TASK 21−61−00−710−803).

(a) If the CABIN PACK HOT and the FLT COMPT DUCT HOT caution lights do not come on, no maintenance procedure is necessary. Do the Close Out.

(b) If the CABIN PACK HOT and the FLT COMPT DUCT HOT caution lights do come on, or came on more than one time, do the CDS fault indication retrieval again (Refer to AMM TASK 45−00−21−742−801. Do the fault isolation.

4. Fault Isolation

Subtask 21−60−00−810−179

A. Isolate the fault as follows:

(1) Refer to the fault isolation procedures given in the fault isolation flowchart (Refer to FIM21−60−00−997−807).

(2) If the Fault Code 7114 − FD OVR TMP4 shows, do the fault isolation for this message (Refer to FIM TASK 21−60−00−810−873).

(3) If the Fault Code 7114 − FD OVR TMP4 does not show, do the steps that follow:

(a) Do the CABIN PACK HOT (Caution) − Fault Isolation (Refer to FIM TASK 21−60−00−810−801).

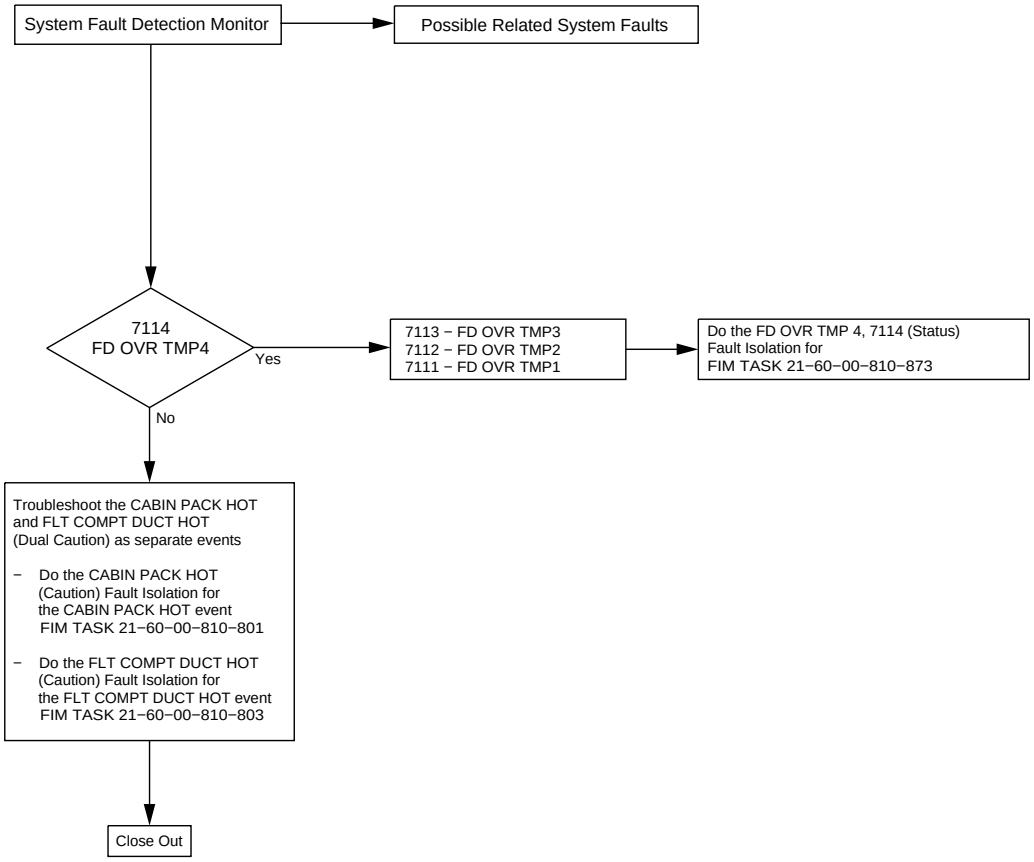
(b) Do the FLT COMPT DUCT HOT (Caution) − Fault Isolation (Refer to FIM TASK 21−60−00−810−803).

5. Close Out

Subtask 21−60−00−941−094

A. Make sure that the CAWP CABIN PACK HOT and FLT COMP DUCT HOT caution lights are not on.

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



NOTES

1. Examine the ECS PRESENT FLT and ECS FLT HISTORY pages for the system monitor and the related component faults listed above. If the FLT COMPT DUCT HOTand the CABIN PACK HOT caution lights are not ON, the applicable CDS faults for this event will be on the ECS FLT HISTORY pages.

hs146a01.dg, nl, oct25/2013

CABIN PACK HOT and FLT COMPT DUCT HOT (Caution) − Fault Isolation
Figure 206