**ON A/C ALL

TASK 29−20−00−810−801
#3 HYD PUMP (Caution) − Fault Isolation

1. General

A. This fault isolation procedure is for when the Caution and Warning Panel (CAWP) #3 HYD PUMP caution light comes on.

B. The CAWP #3 HYD PUMP caution light comes on for the conditions that follow:

– The system 3 pressure is less than 900 psi.

– The DC Motor Driven Pump (DCMP) has operated for more than 60 seconds on the ground.

C. There are no related Central Diagnostic System (CDS) messages.

2. Job Set−Up Information

Subtask 29−20−00−946−001

A. Reference Information

REFERENCE	DESIGNATION
AMM TASK 12−10−29−614−801	Servicing of the No. 3 Hydraulic System Accumulator with Nitrogen
AMM TASK 24−31−41−000−801	Removal of the Standby Contactor Box Contactors and Relay
AMM TASK 24−31−41−400−801	Installation of the Standby Contactor Box Contactors and Relay
AMM TASK 24−50−60−000−801	Removal of the Relay Junction Box 1, 2, 3
AMM TASK 24−50−60−400−801	Installation of the Relay Junction Box 1, 2, 3
AMM TASK 29−00−00−863−803	Pressurization of the No. 3 Hydraulic System
AMM TASK 29−00−00−863−804	Removal of the Hydraulic Pressure from the No. 3 Hydraulic System
AMM TASK 29−10−00−870−804	Priming of the No. 3 System DCMP and Extended Bleeding of No. 3 Hydraulic System
AMM TASK 29−12−00−720−801	Functional Test of the No. 3 Hydraulic System
AMM TASK 29−12−01−000−801	Removal of the No. 3 Hydraulic System DC Motor Driven Pump
AMM TASK 29−12−01−400−801	Installation of the No. 3 Hydraulic System DC Motor Driven Pump
AMM TASK 29−12−16−780−801	Pressure Check of the No. 3 Hydraulic System Bootstrap Accumulator
AMM TASK 29−30−11−000−801	Removal of the Hydraulic System Pressure Switches

REFERENCE	DESIGNATION
AMM TASK 29−30−11−400−801	Installation of the Hydraulic System Pressure Switches
WM 29−12−00	Main Hydraulic (No. 3) System

3. Fault Confirmation

Subtask 29−20−00−810−002

A. Confirm the fault as follows:

(1) Do the pressurization of the #3 Hydraulic System (Refer to AMM TASK 29−00−00−863−803).

NOTE: If this is a repeat occurrence of the No. 3 Hydraulic Pump (CAUTION) and the fault was not duplicated using the FIM, complete the functional test of the No. 3 hydraulic system (Refer to AMM 29−12−00−720−801) instead of the pressurization of the No. 3 hydraulic system task (Refer to AMM 29−00−00−863−803).

NOTE: During the pressurization of the No. 3 system, listen for the DC motor pump operation when it is selected on.

(a) If the #3 HYD PUMP caution light does not come on, no maintenance procedure is necessary. Do the Close Out.

(b) If the #3 HYD PUMP caution light does come on, do the fault isolation.

4. Fault Isolation

Subtask 29−20−00−810−003

A. Isolate the fault as follows:

(1) If the #3 hydraulic system pressure is less than 900 psi, the DCMP operated and the No. 3 HYD PUMP caution light comes on, do the steps that follow:

(a) Check the bootstrap accumulator pressure.

(b) If the bootstrap accumulator gauge indicates normal pre−charge pressure (1000 ±100 psi) prime the DC motor pump (Refer to AMM 29−10−00−870−804).

(c) If the fault goes away, complete the close out to dispatch the aircraft but schedule maintenance (Refer to AMM TASK 29−12−16−780−801).

NOTE: AMM TASK 29−12−16−780−801 can be deferred until the next convenient maintenance opportunity.

(d) If the bootstrap accumulator gauge indicates below normal pre−charge pressure, service the bootstrap accumulator (Refer to AMM TASK 12−10−29−614−801). Leak check the accumulator gauge and the nitrogen lines to the accumulator and ensure the charging valve and cap are tightened correctly.

(e) If the fault still continues, do the leakdown check (Refer to AMM TASK 29−12−16−780−801).

(f) If the fault still continues and the DCMP still operates, again prime the DCMP (Refer to AMM TASK 29−10−00−870−804) but pump fluid into the reservoir until the increase of the reservoir quantity is 15 percent.

(g) If the fault still continues and the DCMP still operates, remove and replace the DCMP (Refer to AMM TASK 29−12−01−000−801 and AMM TASK 29−12−01−400−801).

(2) If the #3 hydraulic system pressure is less than 900 psi, the DCMP did not operate and the No. 3 HYD PUMP caution light comes on, do the steps that follow:

(a) Do the pressurization of the No. 3 Hydraulic system (Refer to AMM TASK 29−00−00−863−803). If there is 28 Volts at the DCMP, remove and replace the DCMP (Refer to AMM TASK 29−12−01−000−801 and AMM TASK 29−12−01−400−801).

(b) If the fault still continues, check the No. 3 hydraulic system pressure switch. Remove connector P5 from the No. 3 hydraulic system pressure switch and jumper pin B to Pin C of the connector. Do the pressurization of the No. 3 Hydraulic System Task (Refer to AMM TASK 29−00−00−863−803). Check for 28 Volts at the DCMP when the HYD No. 3 Isolation Valve switch is pushed in. If there is 28 Volts at the DCMP, remove and replace the No. 3 hydraulic system pressure switch (Refer to AMM TASK 29−30−11−000−801 and AMM TASK 29−30−11−400−801).

(c) If the fault still continues, remove connector P5 from the No. 3 hydraulic pressure switch and provide a ground for Pin B. Do the pressurization of the No. 3 Hydraulic System (Refer to AMM TASK 29−00−00−863−803). If the system operates, replace relay 3−K1 in Relay Junction Box 3 (Refer to

AMM TASK 24−50−60−000−801 and AMM TASK 24−50−60−400−801).

(d) If the fault continues and there is NOT 28 Volts at the DCMP, remove and replace the standby contactor box contactor 2431−K23 or relay RL4 (Honeywell designated K1PB) (Refer to AMM TASK 24−31−41−000−801 and AMM TASK 24−31−41−400−801). If the fault continues and you have not replaced both parts replace the other part.

(e) If the fault continues, do a check of the wiring between the No. 3 hydraulic system pressure switch and relay junction box No. 3 (Refer to WM 29−12−00).

2921−P5 (#3 Hydraulic System Pressure Switch)	RJB3−P1B (Relay Junction Box #3)
B	31

(f) If the wiring is unserviceable, repair the wiring. Do a functional test of the No. 3 hydraulic system (Refer to AMM TASK 29−12−00−720−801).

(3) If the #3 hydraulic system has operated for more than 60 seconds on the ground, the system No. 3 pressure is above 3000 psi and the elevators are not being cycled, do the steps that follow:

(a) Remove connector P5 from the No. 3 hydraulic pressure switch. If the DCMP stops, remove and replace the No. 3 hydraulic system pressure switch (Refer to AMM TASK 29−30−11−000−801 and AMM TASK 29−30−11−400−801).

(b) If the fault still continues, remove the standby contactor box contactor control relay RL4 (Honeywell designated K1PB) (Refer to AMM TASK 24−31−41−000−801). If the motor continues to run, replace the RL4 relay (Refer to AMM TASK 24−31−41−400−801 and remove and replace contactor 2431−K23 (Refer to AMM TASK 24−31−41−000−801 and AMM TASK 24−31−41−400−801).

(c) If the fault still continues, do a check of the wiring between the No. 3 hydraulic system pressure switch and relay junction box No. 3.

2921−P5 (#3 Hydraulic System Pressure Switch)	RJB3−P1B (Relay Junction Box #3)
B	31

(d) If the wiring is unserviceable, repair the wiring. Do a functional test of the No. 3 hydraulic system (Refer to AMM TASK 29−12−00−720−801). Do the Close Out.

5. Close Out

Subtask 29−20−00−941−001

A. Make sure that the #3 HYD PUMP caution light is not on.

B. If necessary, depressurize system No. 3 (Refer to AMM TASK 29−00−00−863−804).

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