

# TO 1300i-2-27JG-40-1

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## TECHNICAL MANUAL

### JOB GUIDE ORGANIZATIONAL MAINTENANCE

## FLIGHT CONTROLS HORIZONTAL STABILIZER

(27-40-00 THROUGH 27-42-03)

### USAF SERIES **300i** AIRCRAFT

MCDONNELL DOUGLAS CORPORATION  
MILITARY TRANSPORT AIRCRAFT  
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**T-2**

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# INTRODUCTION

## **SCOPE.**

This job guide provides maintenance procedures for the operation, operational checkout, adjustment, and repair of horizontal stabilizer components.

## **MODEL(S) COVERED.**

All

## **ABBREVIATIONS.**

The following is a list of non-standard abbreviations used throughout this manual:

EPC	Electrical Power Center
MFD	Multifunction Display
PLCS	Places

## **CHANGE REQUEST.**

Recommended changes to this manual shall be submitted in accordance with TO 00-5-1.

## **300i TO INFORMATION.**

General 300i TO/eTO, TO Manager, Supplement and finalized Recommended Change (RC) information can be found in the Enhanced Technical Information Management System (ETIMS), System of Record.

## ➤ LIST OF TIME COMPLIANCE TECHNICAL ORDERS (TCTO).

This list of TCTO's contains all current TCTO's that affect the technical content of text or illustrations found in this manual.

TCTO NUMBER	TITLE	TCTO DATE	APPLICABILITY



## SECTION 1

### GENERAL INFORMATION (27-40-00)

#### 1-1. GENERAL INFORMATION.

1-2. This section provides general information that is essential for ensuring complete and safe maintenance procedures contained throughout this job guide manual.

1-3. When operating an auxiliary motor pump below 15 degrees Fahrenheit a 30 seconds on/30 seconds off duty cycle for a maximum 10 cycles may be required to reach full hydraulic pressure of 3800 to 4200 psi. Allow ten minutes for cooling and repeat cycles.

1-4. Hydraulic system No. 2 may require 45 seconds before reaching full hydraulic pressure of 3800 to 4200 psi.

1-5. Flight control surfaces are to be cleared prior to turning off hydraulic auxiliary pumps from the loadmaster control panel. Flight control surface movement may occur.

1-6. To avoid erroneous cable tension readings perform all cable rig load checks at aircraft stable temperature throughout condition.

1-7. To achieve aircraft stable temperature throughout it is necessary to locate aircraft in hangar. Rig load checks to be performed after a time period of at least three hours from initial placement of the aircraft in the hangar (this will allow fuselage external and internal temperatures to equalize as heat or cold soak condition dissipates). For rig load limits, refer to (TO 1300i-2-27JG-40-1, 27-40-00, para 1-9).

1-8. An alternate method is to perform rig load checks between the time period of three hours after sunset and one hour after sunrise (this will allow fuselage external and internal temperatures to equalize as heat or cold soak condition dissipates). For rig load limits, refer to (TO 1300i-2-27JG-40-1, 27-40-00, para 1-9).

#### 1-9. PITCH TRIM RIG LOAD VS. TEMPERATURE CHART.

#### NOTE

- This chart is only valid for aircraft that have reached a uniform temperature throughout.

NOTE - Continued

- Loads at **135°F** represent **limit rig load** for design.
- The cable tension requirement per **Pitch Trim Rig Load vs Temperature Chart, 1/16"-17 lb Rig @ 70°F** shall apply for pitch trim cable runs 29, 30, 31, and 32.
- Minimum Allow Service load is the minimum cable loads acceptable before any tensioning of the cable is required. When tensioning is required, adjust cable tension until the final rig load is between the maximum and minimum initial rig load.

Pitch Trim Rig Load vs Temperature Chart 1/16"-17 lb Rig @ 70°F.			
TEMP (°F)	MIN INITIAL (lbf)	MAX INITIAL (lbf)	MIN ALLOW SERVICE (lbf)
135	28	32	25
130	27	31	24
125	26	30	23
120	25	29	22
115	24	28	21
110	23	27	20
105	23	27	20
100	22	26	19
95	21	25	18
90	20	24	17
85	19	23	16
80	19	23	16
75	18	22	15
70	17	21	14
65	17	21	14
60	16	20	13
55	15	19	12
50	15	19	12
45	14	18	11

**Pitch Trim Rig Load vs Temperature Chart 1/16"-17 lb Rig @ 70°F.**

<b>TEMP (°F)</b>	<b>MIN INITIAL (lbf)</b>	<b>MAX INITIAL (lbf)</b>	<b>MIN ALLOW SERVICE (lbf)</b>
40	14	18	11
35	13	17	10
30	12	16	9
25	12	16	9
20	11	15	8
15	11	15	8
10	10	14	7
5	10	14	7
0	9	13	6
-5	9	13	6
-10	8	12	5
-15	8	12	5
-20	7	11	4
-25	7	11	4
-30	7	11	4
-35	6	10	3
-40	6	10	3
-43	6	10	3
-45	5	9	2
-50	5	9	2
-55	5	9	2
-60	4	8	1

1-10. Rig pins are used extensively during flight control rigging procedures. To ensure accurate alignment of control system and repeatability of the rigging checks, whenever rig pins are used, differentially adjust the applicable turnbuckle so that the rig pin can be freely removed and inserted. Under no circumstances, should the rig pin holes be forced into alignment by stretching the cables. Rig pin hole shall not spring out of alignment when pin is removed. When a rig pin cannot be freely removed or inserted, the applicable turnbuckle shall be adjusted within tolerances to eliminate any required force.

1-11. To complete the rigging procedures, the system shall be cycled 10-20 times, and cable tensions rechecked and adjusted when necessary.

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1-12. For all non regulated cable systems, certified tensiometers shall be used for measuring cable tensions. For initial cable rigging the rig load tolerances for all temperatures are as follows:

<b>70°F RIG LOAD (lbs)</b>	<b>TOLERANCES (lbs)</b>
0 to 19	+4 -0
20 to 49	+5 -0
50 and over	+10 percent -0 percent

1-13. The following tolerances shall be used for all cable tension inspections that are made after the above specified inspection:

<b>70°F RIG LOAD (lbs)</b>	<b>TOLERANCES (lbs)</b>
0 to 19	+4 -3
20 to 49	+5 -4
50 and over	+10 percent -10 percent

1-14. All adhesive sealants, sealants, and compounds used in this manual are listed with a primary part number and/or primary specification number. Any suitable substitutes and/or interchangeable adhesive sealants, sealants, and compounds may be used unless otherwise specified. Suitable substitutes and/or interchangeable adhesive sealants, sealants, and compounds are listed in the system peculiar corrosion control manual (Refer to TO 1300i-23, Chapter 1, Section III).

**1-15. GENERAL WARNINGS, CAUTIONS, AND NOTES.****WARNING**

All flight control surfaces and thrust reversers shall be clear of personnel and equipment prior to applying or removing hydraulic power. Failure to comply may cause injury to personnel and damage to aircraft.

**CAUTION**

Air in a hydraulic system can cause numerous malfunctions, from a total system failure to a minor indication problem. If you suspect air has been induced into the system by removal of a hydraulic component or line, refer to the hydraulic system bleed procedure, (12-29-08). Failure to comply may cause damage to aircraft.



SECTION 2

HORIZONTAL STABILIZER SYSTEM  
OPERATIONAL CHECKOUT  
(27-40-01)

GENERAL MAINTENANCE INPUT CONDITIONS:

Applicability:	Task
All	All

Additional information:

This procedure consists of the following task:

- 01-1. Operational checkout.

Additional data:	Task
TO 1300i-2-12JG-29-1	All
TO 1300i-2-23JG-40-1	All
TO 1300i-2-27FI-00-1	All
TO 1300i-2-27JG-40-6	All
TO 1300i-2-29FI-00-1	All
TO 1300i-2-31JG-60-1	All

Personnel recommended:	Task
Two	All
Person (A) performs task.	
Person (B) assists person (A).	

Safety conditions:	Task
NA	--

Support equipment:

<u>Nomenclature</u>	<u>PN</u>	<u>Specification</u>	<u>Qty</u>	<u>Task</u>
NA	--	--	--	--

Supplies:

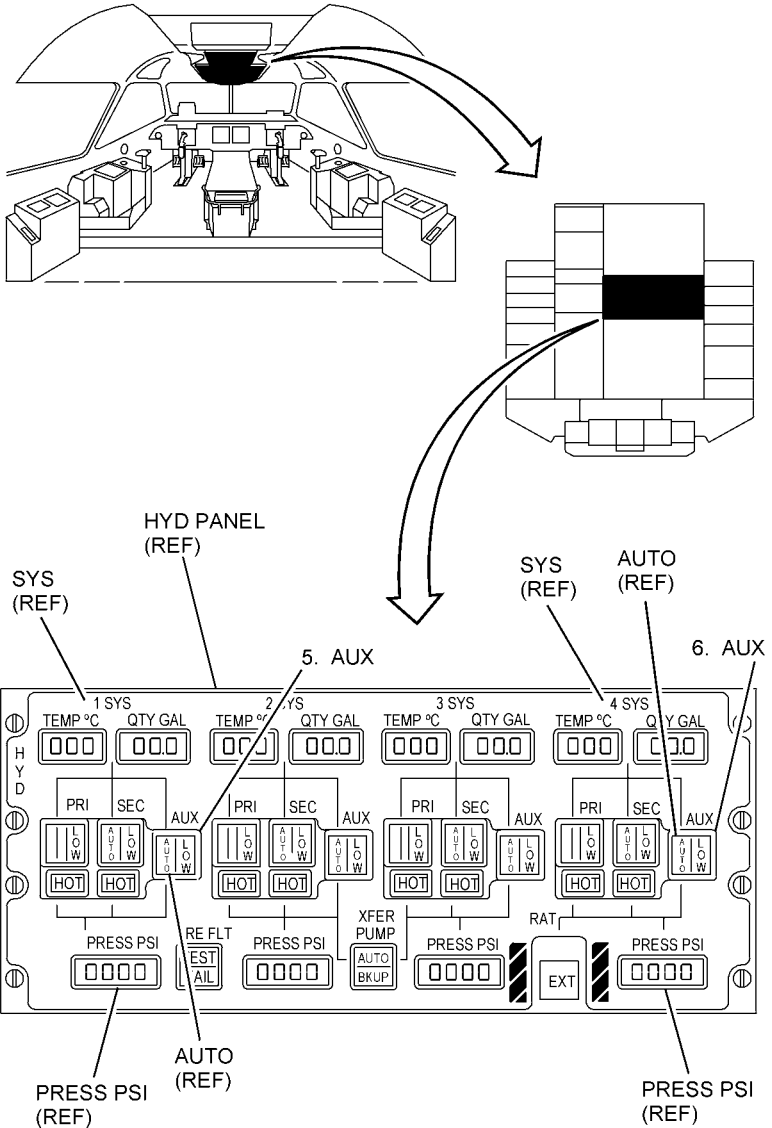
<u>Nomenclature</u>	<u>PN</u>	<u>Specification</u>	<u>Qty</u>	<u>Task</u>
NA	--	--	--	--





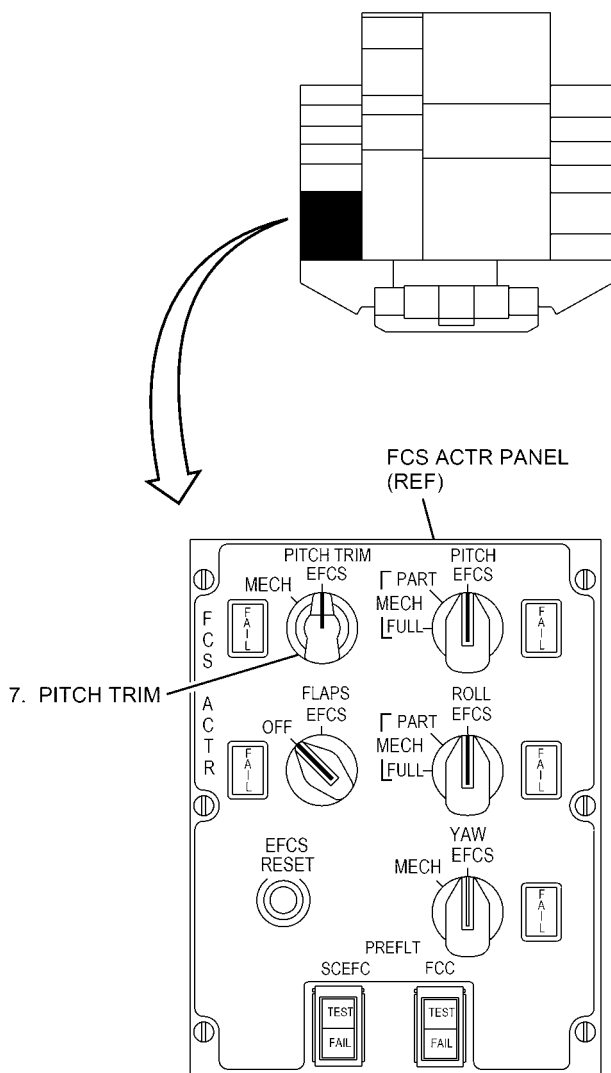
## **01-1. OPERATIONAL CHECKOUT.**

1. Review "Section 1 (General Information)" of this TO for system general warnings, cautions, and notes.
2. Review task "General Maintenance Input Conditions" page for task specific safety conditions.
3. Perform maintenance interphone operation (23-41-02, task 02-3).
4. Observe hydraulic systems 1 and 4 reservoir sight gauge for fluid quantity (TO 1300i-2-12JG-29-1, 12-29-00, para 1-9).
5. (A) Press **1 SYS, AUX** switchlight, on **HYD** panel.
  - **AUTO** light comes on (29-30-AC-\_\_).
  - **PRESS PSI** indicator reads 3800-4200.
6. (A) Press **4 SYS, AUX** switchlight.
  - **AUTO** light comes on (29-30-AC-\_\_).
  - **PRESS PSI** indicator reads 3800-4200.



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7. (A) Set **PITCH TRIM** switch on **FCS ACTR** panel to **EFCS**.



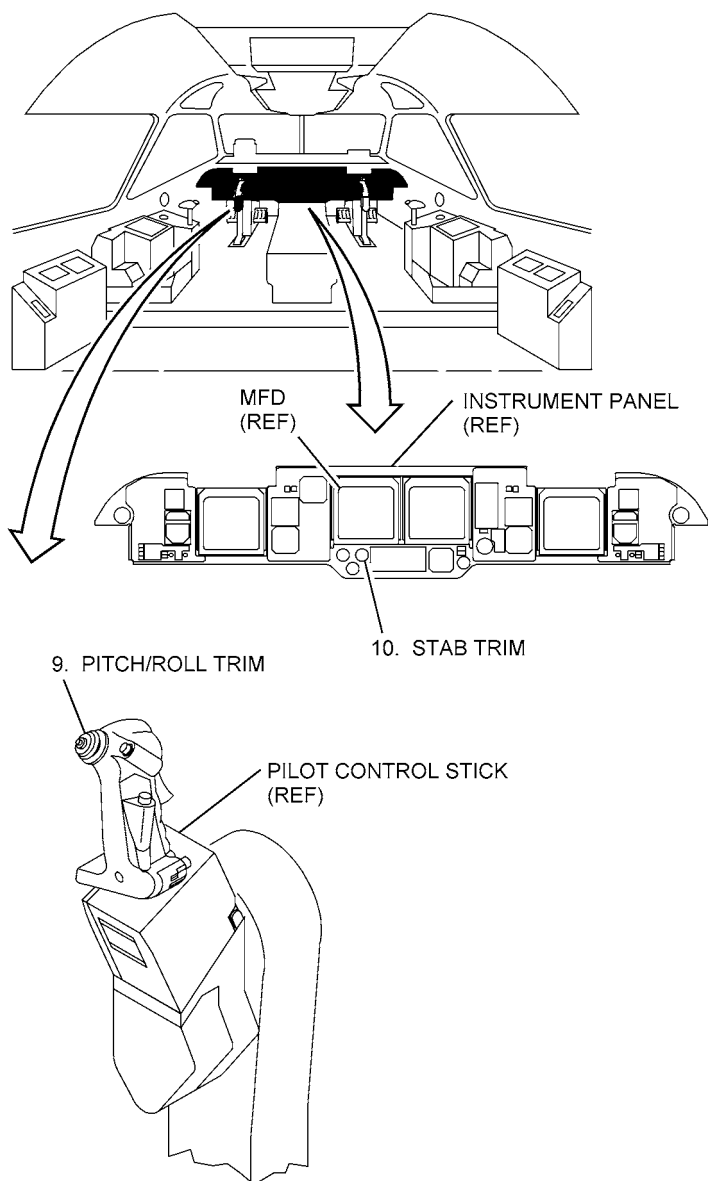
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8. Operate multifunction displays system and select **CFG** format (31-61-02, task 02-1 or 02-2).

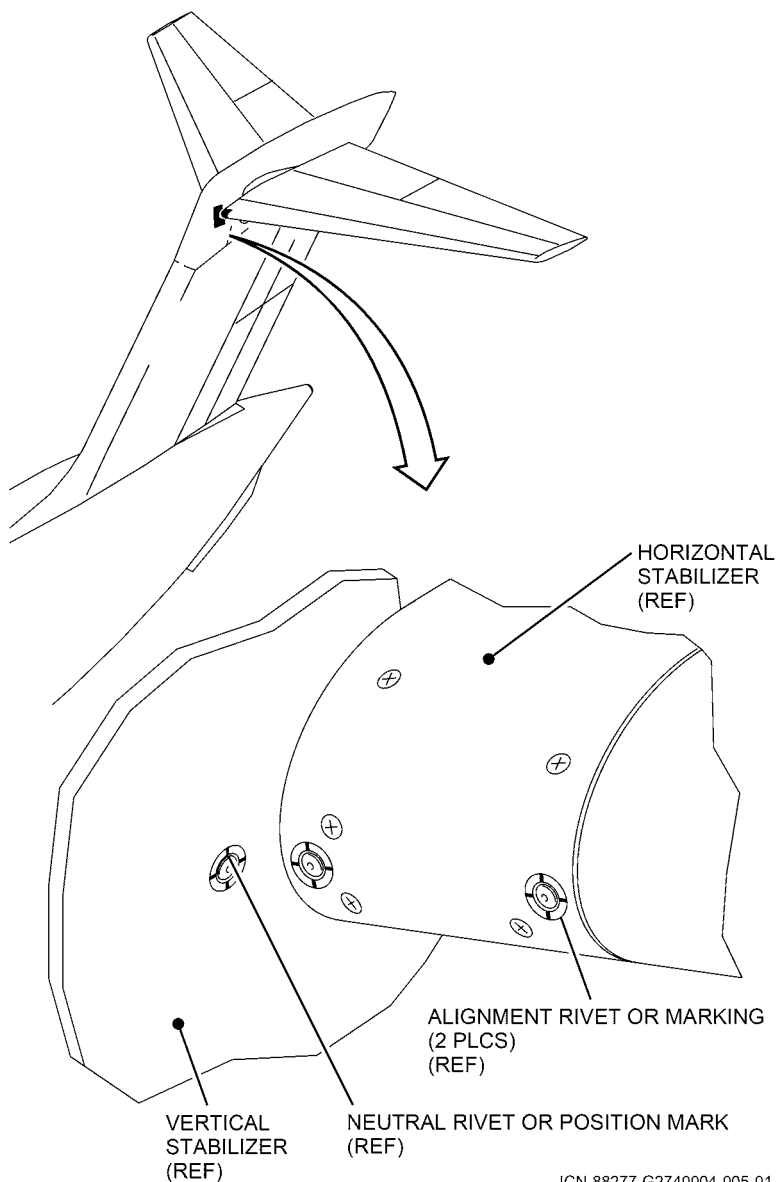
### NOTE

- The aural warning **STABILIZER MOTION** will be heard for every 1 degree of horizontal stabilizer movement.
- The standby **STAB TRIM** indicator on the instrument panel is the primary indicator for this test because the horizontal stabilizer position indication on the Multifunction Display (MFD) lacks sufficient gradation to accurately position the horizontal stabilizer for this test. A tolerance of  $\pm 1$  degree between the **STAB TRIM** indicator and the horizontal stabilizer position displayed on the MFD **CFG** format is acceptable.

9. (A,B) Operate pitch/roll trim switch on pilot control stick until the two protruding head rivets or markings on the horizontal stabilizer align with the protruding head rivet or markings on the vertical stabilizer (TO 1300i-23, Chapter 1, Section III).
10. (A) Observe standby **STAB TRIM** indicator.
  - $0 \pm 1$  degrees is displayed on the standby **STAB TRIM** indicator (27-45-11, task 5-1).
  - Null position of horizontal stabilizer  $\pm 1$  degree is displayed on MFD (27-45-AC-00).



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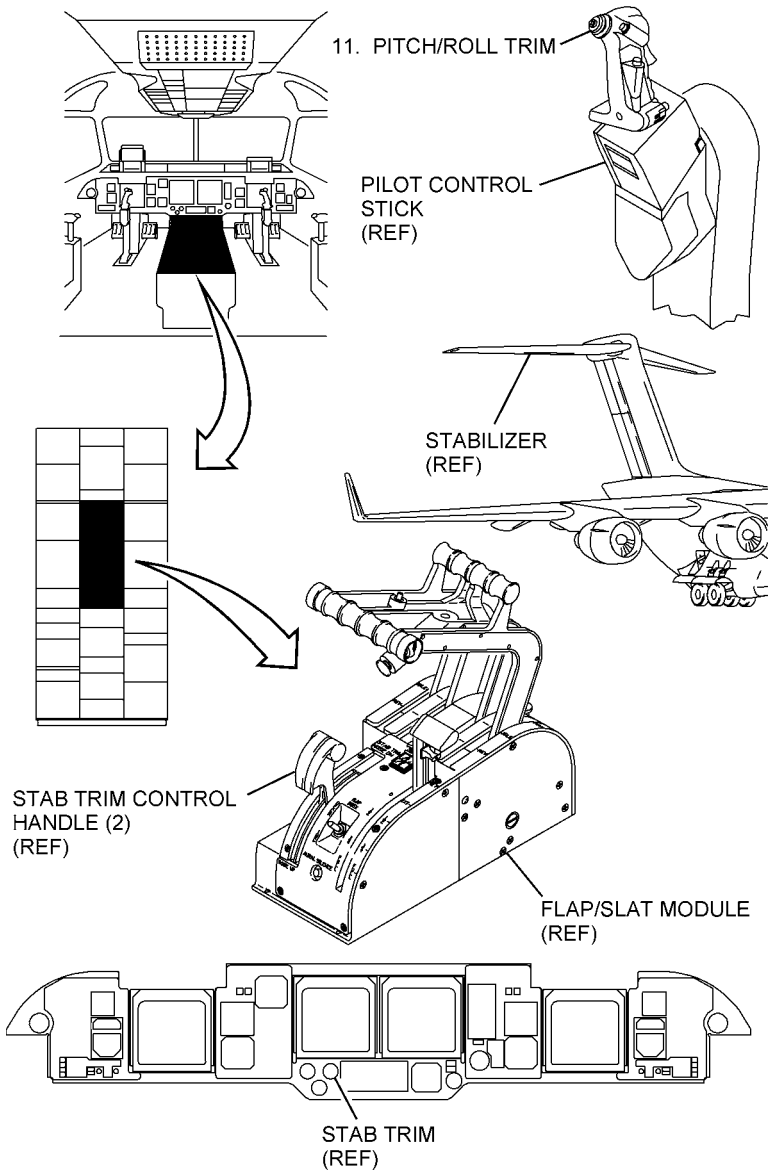


During mechanical mode check to ensure the actuator is not positioned beyond 4.0 degrees **NOSE DN**, and beyond 12.0 degrees **NOSE UP**. Failure to comply may cause damage to actuator stops.

### NOTE

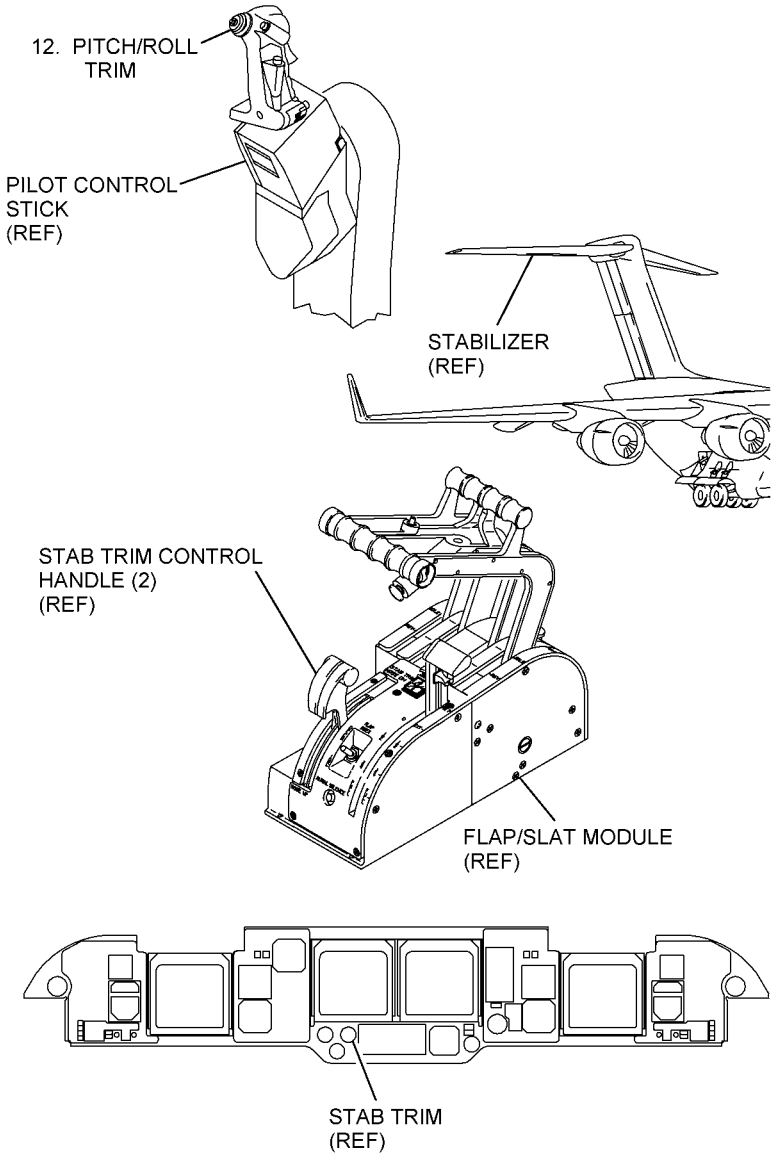
**STAB TRIM** control handles that split during electrical pitch trim operation and/or fail to return to their neutral position or are split while sitting in their center position is an indication of an out-of-rig or excessive control system friction condition and may cause the hydraulic preflight test to fail. Perform mechanical control system inspection. Ensure horizontal stabilizer mechanical controls and surfaces system adjustment (27-42-01) is performed, as necessary, to minimize a split handle condition or prevent a preflight test failure.

11. (A) Operate pitch/roll trim switch on pilot control stick to nose down until stabilizer stops moving.
  - Both **STAB TRIM** control handles move forward to half travel position and then spring back to center position when stabilizer stops (27-42-01).
  - **STABILIZER MOTION** audible warning is heard (27-45-AA-00).
  - **STAB TRIM** indicator reads approximately 4.0 degrees **NOSE DN** (27-45-AC-00).



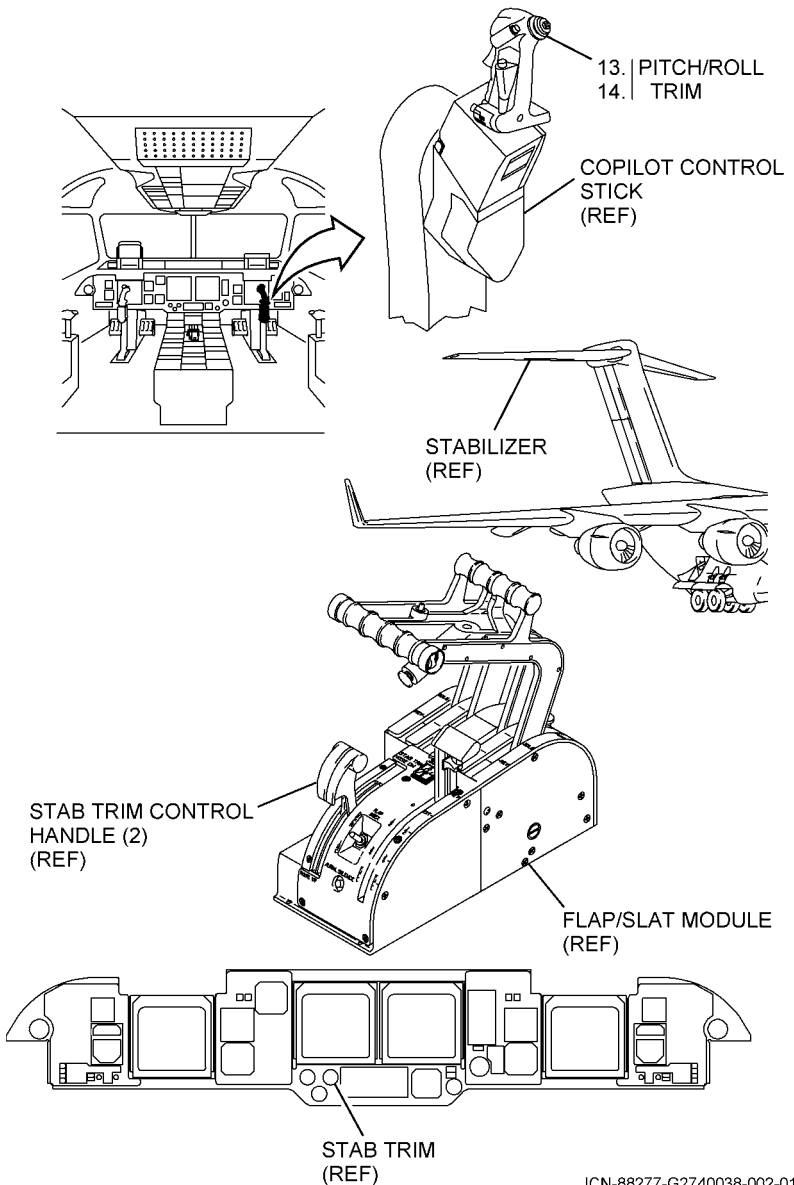
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12. (A) Operate pitch/roll trim switch on pilot control stick to nose up until stabilizer stops moving.
- Both **STAB TRIM** control handles move aft to half travel position and then spring back to center position when stabilizer stops (27-42-01).
  - **STABILIZER MOTION** audible warning is heard (27-45-AA-00).
  - Stabilizer moves full travel within 40-70 seconds (27-44-AA-00).
  - **STAB TRIM** indicator reads approximately 12.0 degrees **NOSE UP** (27-45-AC-00).



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13. (A) Operate pitch/roll trim switch on copilot control stick to nose down until stabilizer stops moving.
- Both **STAB TRIM** control handles move forward to half travel position and then spring back to center position when stabilizer stops (27-42-01).
  - **STABILIZER MOTION** audible warning is heard (27-45-AA-00).
  - Stabilizer moves full travel within 40-70 seconds (27-44-AA-00).
  - **STAB TRIM** indicator reads approximately 4.0 degrees **NOSE DN** (27-45-AC-00).
14. (A) Operate pitch/roll trim switch on copilot control stick to nose up until **STAB TRIM** indicator reads 3.0 degrees **NOSE DN**.
- Both **STAB TRIM** control handles move aft to half travel position and then spring back to center position when stabilizer stops (27-42-01).
  - **STABILIZER MOTION** audible warning is heard (27-45-AA-00).
  - **STAB TRIM** indicator reads 3.0 degrees **NOSE DN** (27-45-AC-00).

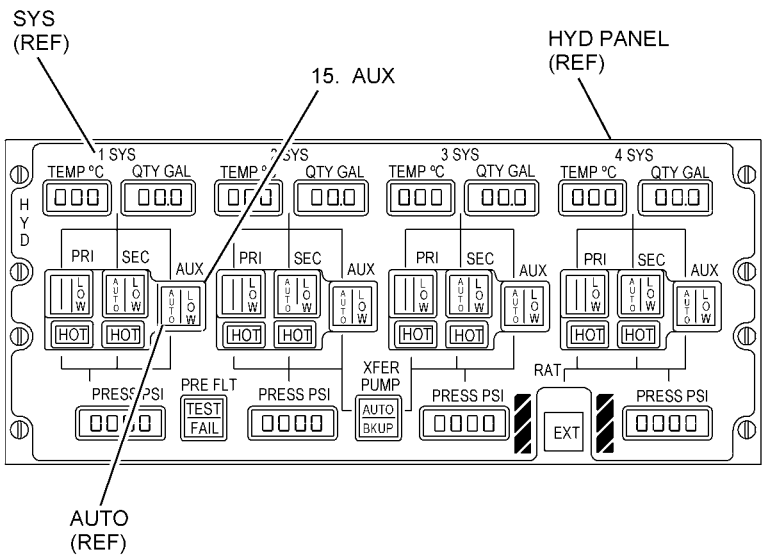


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## TO 1300i-2-27JG-40-1

15. (A) Press **1 SYS, AUX** switchlight, on **HYD** panel.
- **AUTO** light goes off (29-30-AC-\_).





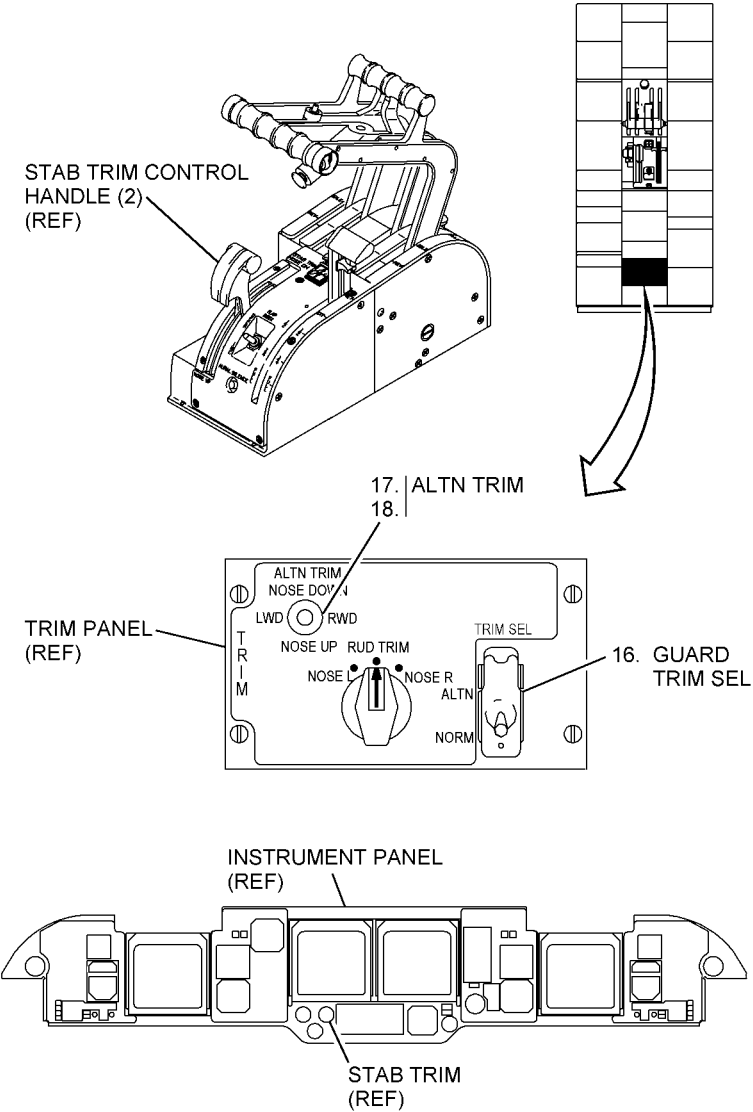
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16. (A) Lift guard and set **TRIM SEL** switch on **TRIM** panel to **ALTN**.

**NOTE**

Compare stabilizer trim travel time between electrical and manual operation on a single aux pump in next four steps.

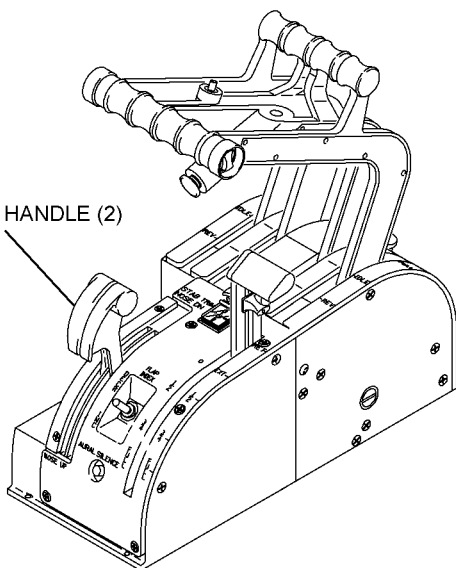
17. (A) Operate **ALTN TRIM** switch on **TRIM** panel to **NOSE UP** until **STAB TRIM** indicator on instrument panel reads 3.0 degrees **NOSE UP** and record travel time.
- Both **STAB TRIM** control handles move aft to half travel position and spring back to center position when stabilizer stops (27-42-01).
  - **STABILIZER MOTION** audible warning is heard (27-45-AA-00).
  - **STAB TRIM** indicator reads 3.0 degrees **NOSE UP** (27-45-AC-00).
18. (A) Operate **ALTN TRIM** switch on **TRIM** panel to **NOSE DOWN** until **STAB TRIM** indicator reads 3.0 degrees **NOSE DN** and record travel time.
- Both **STAB TRIM** control handles move forward to half travel position and spring back to center position when stabilizer stops (27-42-01).
  - **STABILIZER MOTION** audible warning is heard (27-45-AA-00).
  - **STAB TRIM** indicator reads 3.0 degrees **NOSE DN** (27-45-AC-00).



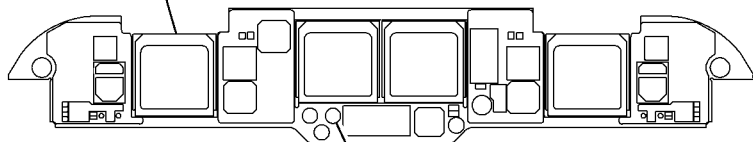
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19. (A) Operate **STAB TRIM** control handles aft to full travel position, **NOSE UP**, until **STAB TRIM** indicator reads 3.0 degrees **NOSE UP** and record travel time.
- **STABILIZER MOTION** audible warning is heard (27-45-AA-00).
  - **STAB TRIM** indicator reads 3.0 degrees **NOSE UP** (27-45-AC-00).
20. (A) Operate **STAB TRIM** control handles forward to full travel position, **NOSE DN**, until **STAB TRIM** indicator reads 3.0 degrees **NOSE DN** and record travel time.
- **STABILIZER MOTION** audible warning is heard (27-45-AA-00).
  - **STAB TRIM** indicator reads 3.0 degrees **NOSE DN** (27-45-AC-00).
  - Recorded travel times do not exceed 3 seconds between the minimum and maximum recorded times (27-44-AB-00).

- 19. STAB TRIM
- 20. CONTROL HANDLE (2)



INSTRUMENT PANEL  
(REF)

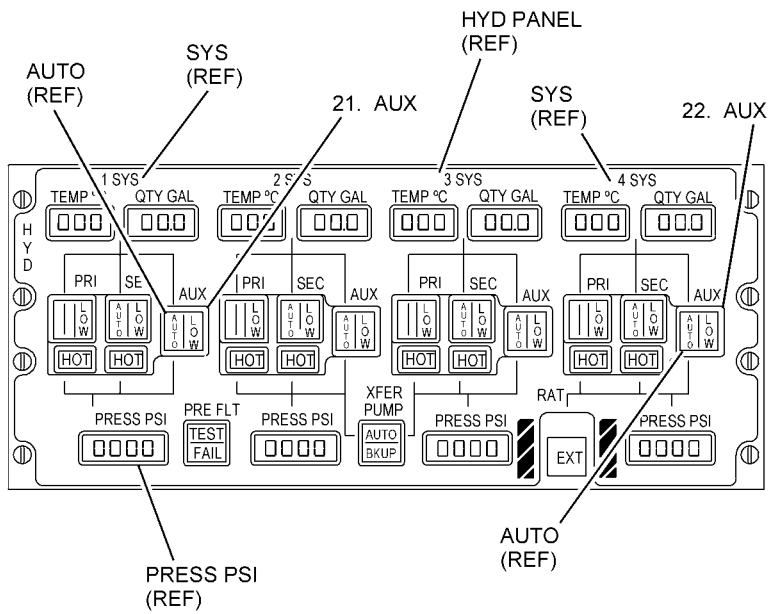


STAB TRIM  
(REF)

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## TO 1300i-2-27JG-40-1

21. (A) Press **1 SYS, AUX** switchlight on **HYD** panel.
  - **AUTO** light comes on (29-30-AC-  ).
  - **PRESS PSI** indicator reads 3800-4200.
22. (A) Press **4 SYS, AUX** switchlight.
  - **AUTO** light goes off (29-30-AC-  ).



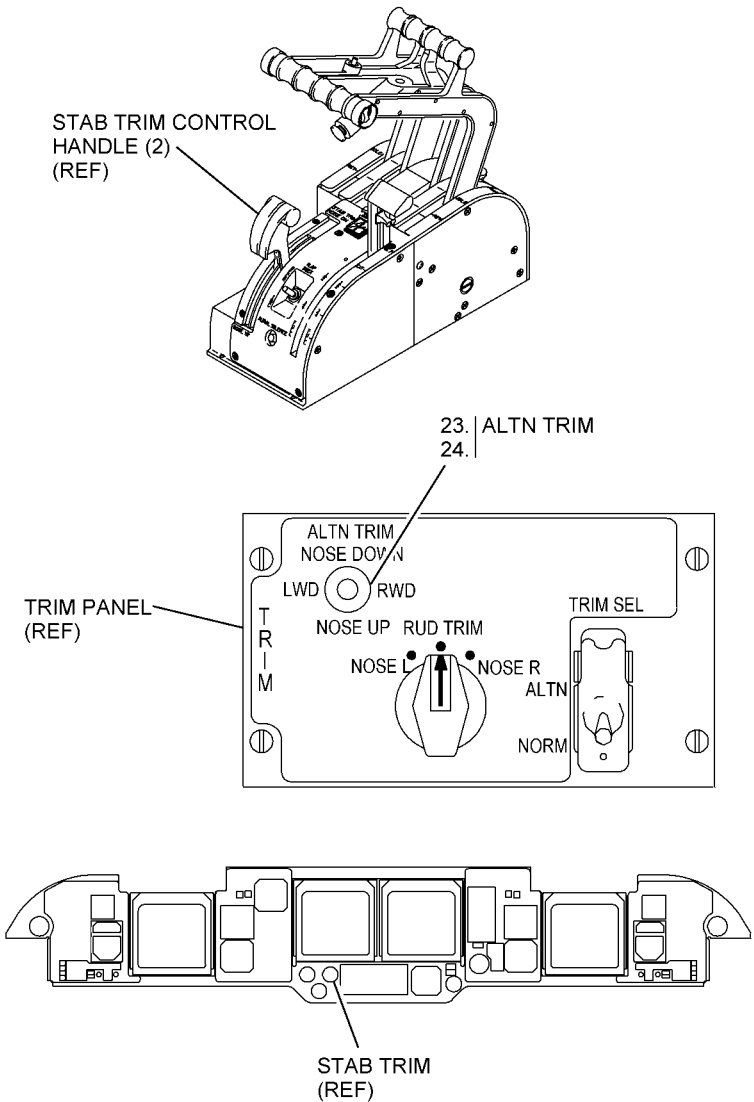
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**NOTE**

Compare stabilizer trim travel time between electrical and manual operation on a single aux pump in next four steps.

23. (A) Operate **ALTN TRIM** switch on **TRIM** panel to **NOSE UP** until **STAB TRIM** indicator reads 3.0 degrees **NOSE UP** and record travel time.
- Both **STAB TRIM** control handles do not move from their center position (27-42-01).
  - **STABILIZER MOTION** audible warning is heard (27-45-AA-00).
  - **STAB TRIM** indicator reads 3.0 degrees **NOSE UP** (27-45-AC-00).
24. (A) Operate **ALTN TRIM** switch on **NOSE DOWN** until **STAB TRIM** indicator reads 3.0 degrees **NOSE DN** and record travel time.
- Both **STAB TRIM** control handles do not move from their center position (27-42-01).
  - **STABILIZER MOTION** audible warning is heard (27-45-AA-00).
  - **STAB TRIM** indicator reads 3.0 degrees **NOSE DN** (27-45-AC-00).

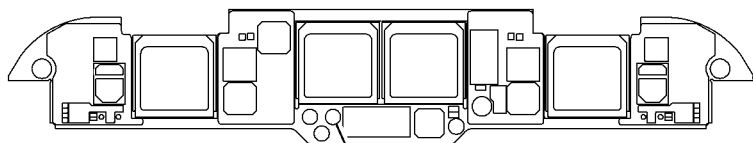
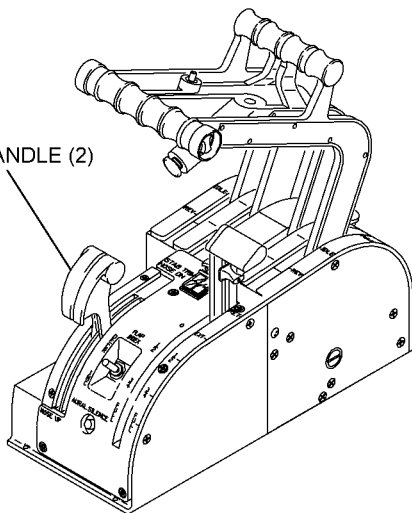




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25. (A) Operate **STAB TRIM** control handles to aft full travel position, **NOSE UP**, until **STAB TRIM** indicator reads 3.0 degrees **NOSE UP** and record travel time.
- **STABILIZER MOTION** audible warning is heard (27-45-AA-00).
  - **STAB TRIM** indicator reads 3.0 degrees **NOSE UP** (27-45-AC-00).
26. (A) Operate **STAB TRIM** control handles to forward full travel position, **NOSE DN**, until **STAB TRIM** indicator reads 3.0 degrees **NOSE DN** and record travel time.
- **STABILIZER MOTION** audible warning is heard (27-45-AA-00).
  - **STAB TRIM** indicator reads 3.0 degrees **NOSE DN** (27-45-AC-00).
  - Recorded travel times do not exceed 3 seconds between the minimum and maximum recorded times (27-44-AB-00).

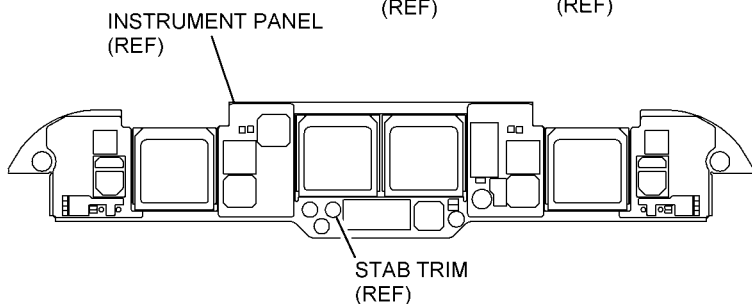
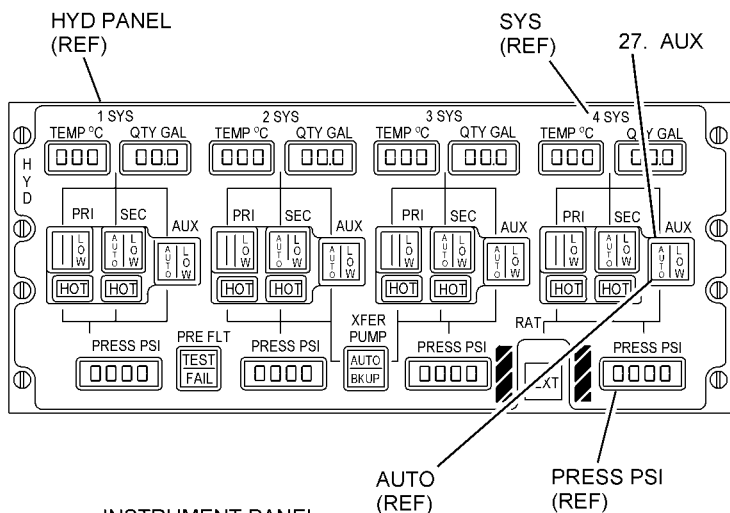
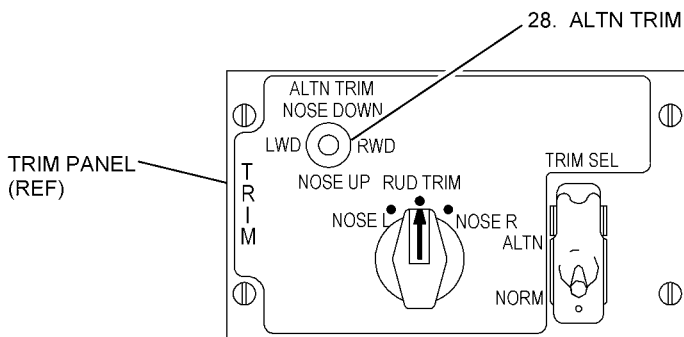
- 25. STAB TRIM
- 26. CONTROL HANDLE (2)



ICN-88277-G2740040-002-01

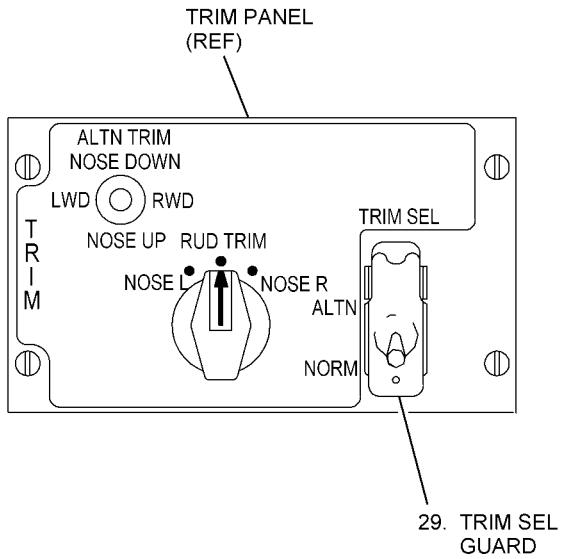
## TO 1300i-2-27JG-40-1

27. (A) Press **4 SYS, AUX** switchlight on **HYD** panel.
- **AUTO** light comes on (29-30-AC-\_\_).
  - **PRESS PSI** indicator reads 3800-4200 (29-21-AB-\_\_).
28. (A) Operate **ALTN TRIM** switch on trim panel to **NOSE UP** until **STAB TRIM** indicator reads 0 degrees.
- **STAB TRIM** indication reads 0 degrees on instrument panel.



ICN-88277-G2740037-002-01

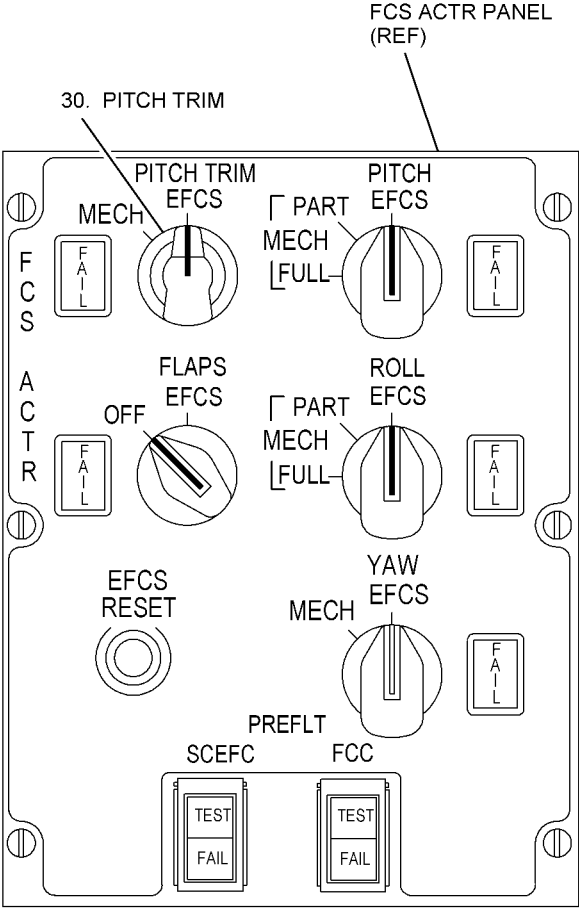
29. (A) Set **TRIM SEL** switch on **TRIM** panel to **NORM** and lower guard.



ICN-88277-G2740010-005-01

30. (A) Set **PITCH TRIM** switch on **FCS ACTR** panel to **MECH**.



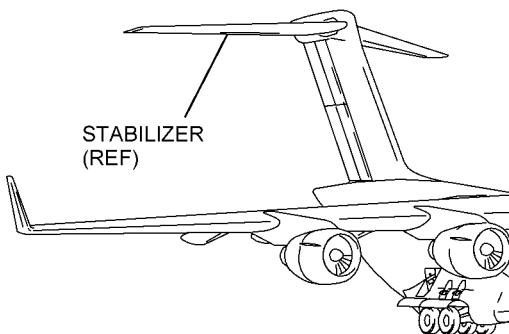


ICN-88277-G2740011-004-01

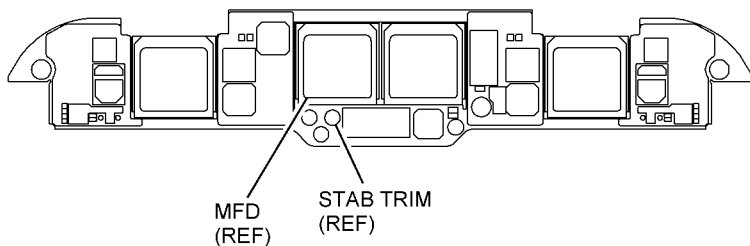
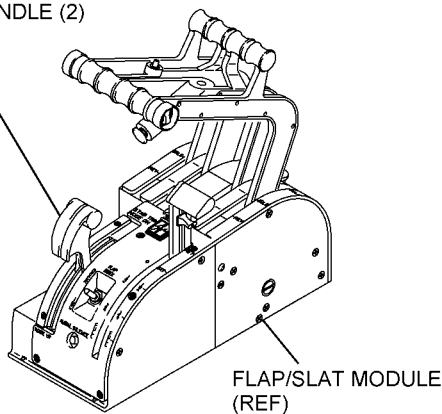
**NOTE**

Stabilizer trim control handles return to the neutral position when released.

31. (A,B) Operate left **STAB TRIM** control handle on flap/slat module full **NOSE DN** and full **NOSE UP**.
  - No stabilizer movement (27-42-AC-00).
32. (A,B) Operate right **STAB TRIM** control handle full **NOSE DN** and full **NOSE UP**.
  - No stabilizer movement (27-42-AC-00).



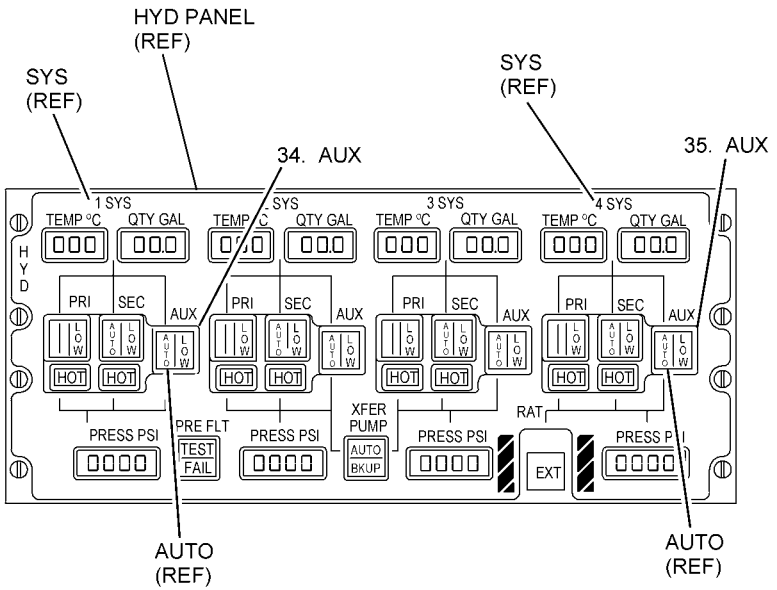
- 31. STAB TRIM
- 32. CONTROL HANDLE (2)



ICN-88277-G2740012-007-01

## TO 1300i-2-27JG-40-1

33. Perform maintenance interphone shutdown (23-41-02, task 02-4).
34. (A) Press **1 SYS, AUX** switchlight on **HYD** panel.
  - **AUTO** light goes off (29-30-AC-\_\_).
35. (A) Press **4 SYS, AUX** switchlight
  - **AUTO** light goes off (29-30-AC-\_\_).
36. Shutdown multifunction displays system (31-61-02, task 02-3 or 02-4).



ICN-88277-G2740015-005-01



**HORIZONTAL STABILIZER SYSTEM  
OPERATION  
(27-40-02)**

**GENERAL MAINTENANCE INPUT CONDITIONS:**

<b>Applicability:</b>	<b>Task</b>
All	All

**Additional information:**

This procedure consists of the following task:

02-1. Operation.

<b>Additional data:</b>	<b>Task</b>
TO 1300i-2-10JG-60-1	All
TO 1300i-2-12JG-29-1	All

<b>Personnel recommended:</b>	<b>Task</b>
One	All

<b>Safety conditions:</b>	<b>Task</b>
NA	--

Support equipment:

<u>Nomenclature</u>	<u>PN</u>	<u>Specification</u>	<u>Qty</u>	<u>Task</u>
NA	--	--	--	--

Supplies:

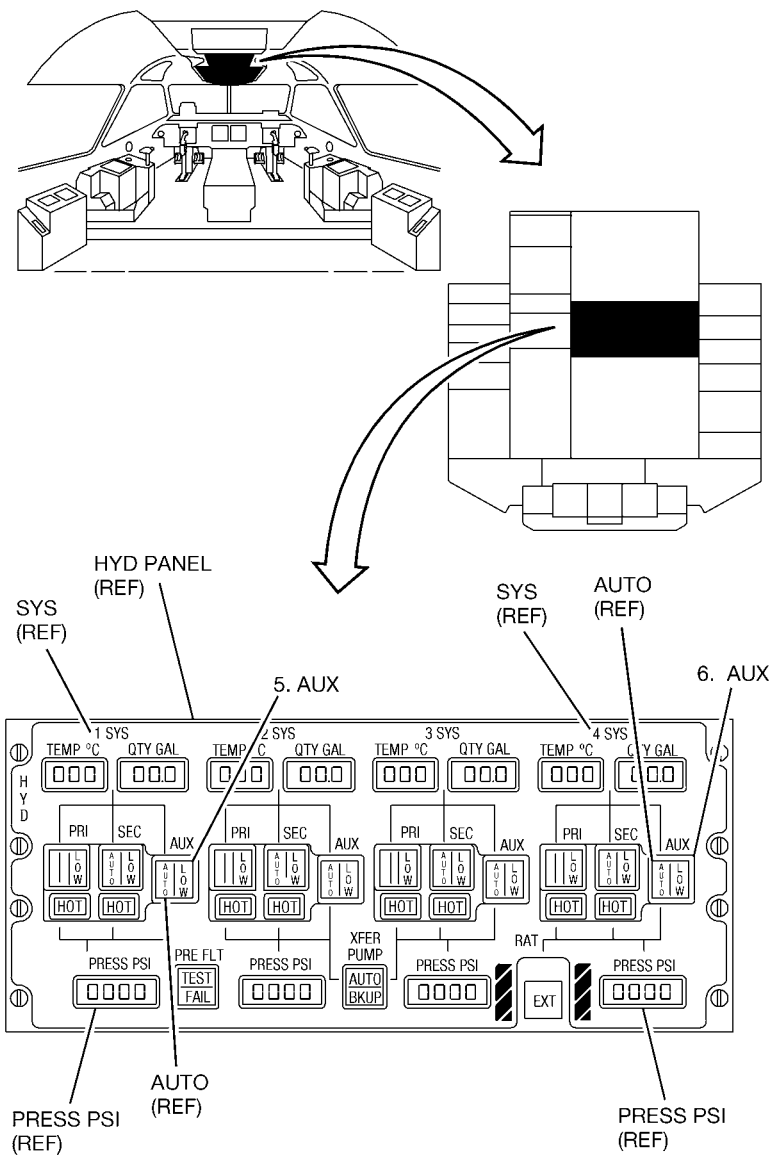
<u>Nomenclature</u>	<u>PN</u>	<u>Specification</u>	<u>Qty</u>	<u>Task</u>
NA	--	--	--	--





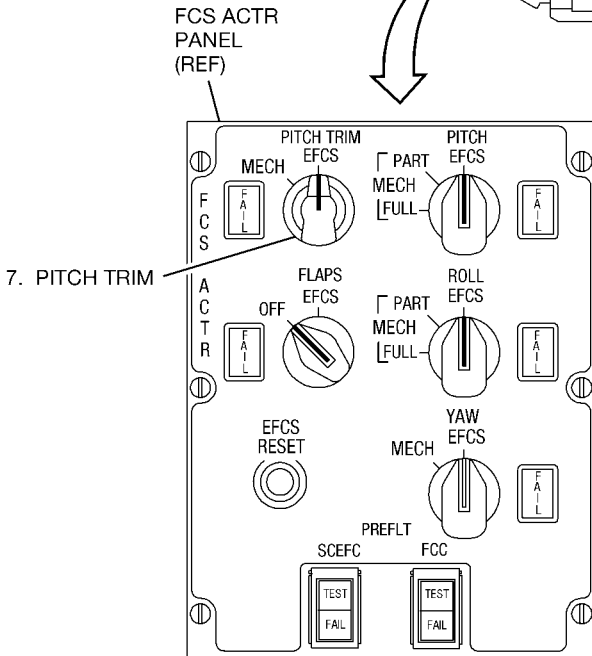
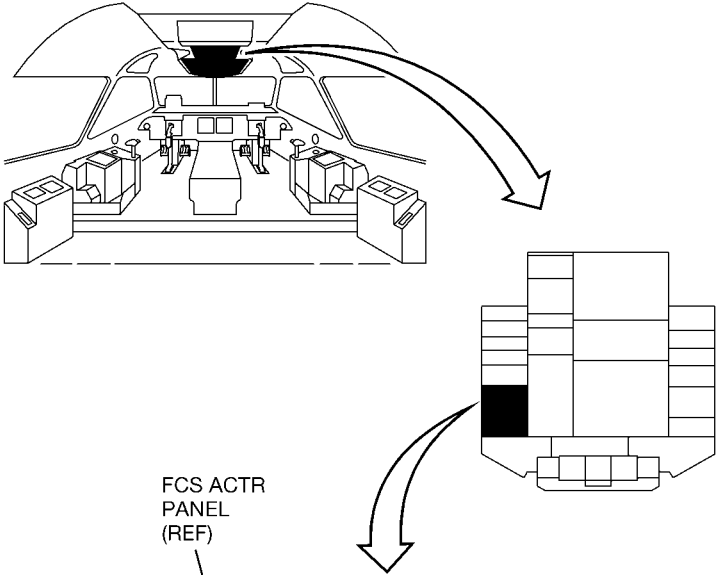
## **02-1. OPERATION.**

1. Review "Section 1 (General Information)" of this TO for system general warnings, cautions, and notes.
2. Review task "General Maintenance Input Conditions" page for task specific safety conditions.
3. Connect external electrical power (10-61-01, task 01-1).
4. Observe hydraulic systems 1 and 4 reservoir sight gauge for fluid quantity (TO 1300i-2-12JG-29-1, 12-29-00, para 1-9).
5. Press **1 SYS, AUX** switchlight on **HYD** panel.
  - **AUTO** light comes on.
  - **PRESS PSI** indicator reads 3800-4200.
6. Press **4 SYS, AUX** switchlight.
  - **AUTO** light comes on.
  - **PRESS PSI** indicator reads 3800-4200.



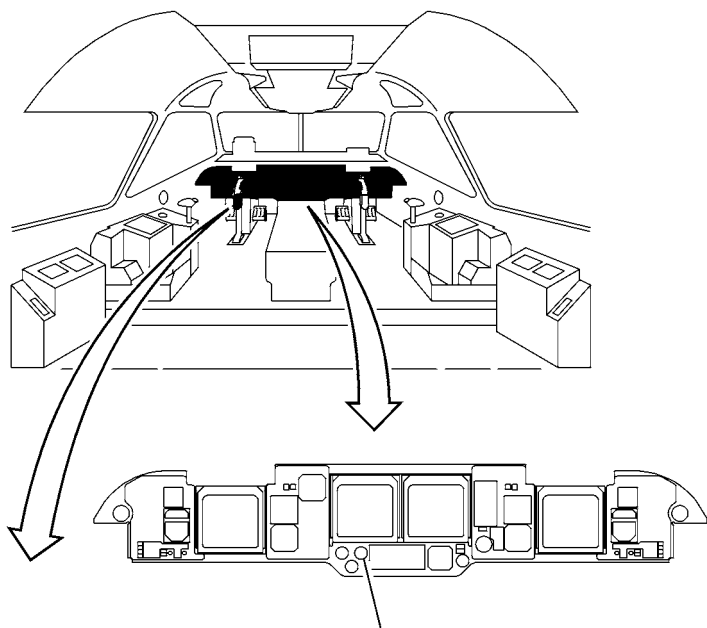
ICN-88277-G2740022-003-01

7. Set **PITCH TRIM** switch on **FCS ACTR** panel to **EFCS**.



ICN-88277-G2740026-002-01

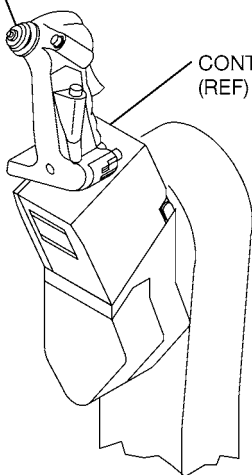
8. Operate pitch/roll trim switch on control stick until **STAB TRIM** indicator reads desired position.



8. PITCH/ROLL TRIM

STAB TRIM  
(REF)

CONTROL STICK  
(REF)



ICN-88277-G2740023-003-01

## **TO 1300i-2-27JG-40-1**

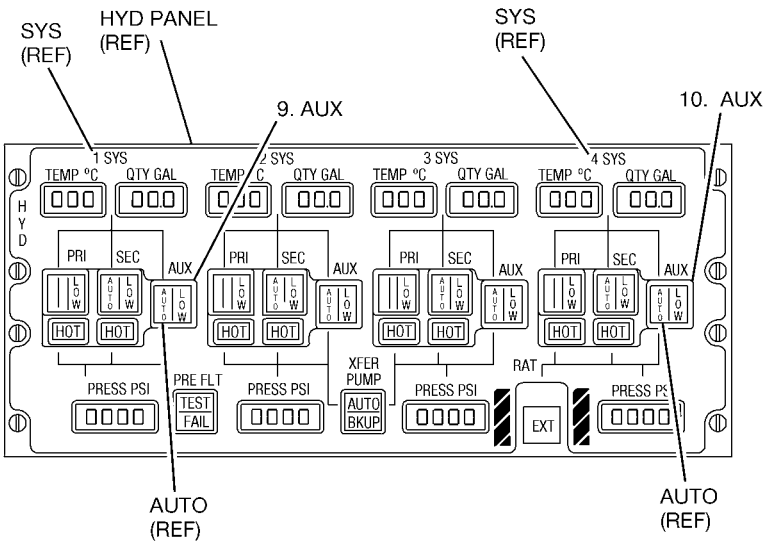
9. Press **1 SYS, AUX** switchlight on **HYD** panel.

- **AUTO** light goes off.

10. Press **4 SYS, AUX** switchlight.

- **AUTO** light goes off.

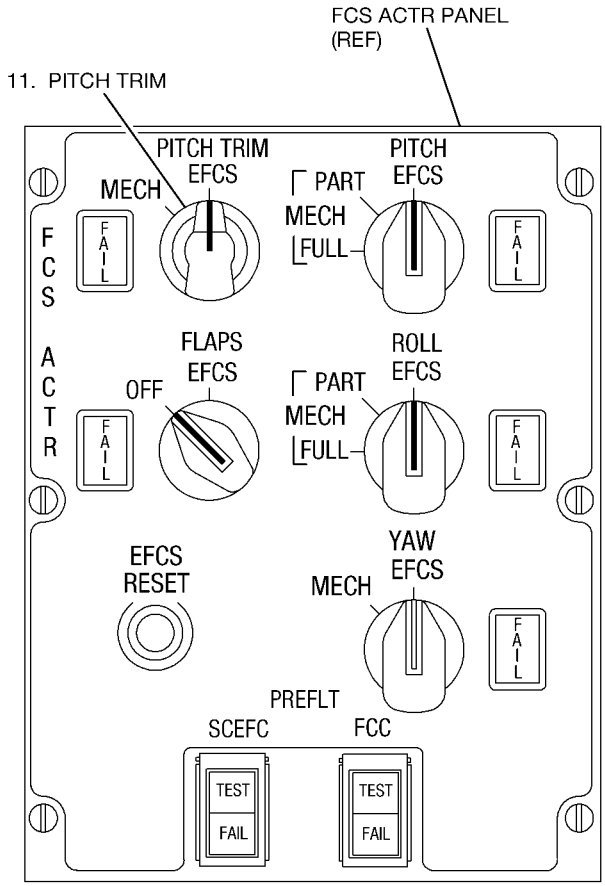




ICN-88277-G2740024-003-01

## **TO 1300i-2-27JG-40-1**

11. Rotate **PITCH TRIM** switch on **FCS ACTR** panel to **MECH**.
12. Disconnect external electrical power (10-61-01, task 01-2).



ICN-88277-G2740027-002-01



# MECHANICAL CONTROLS AND SURFACES SYSTEM ADJUSTMENT (27-42-01)

## GENERAL MAINTENANCE INPUT CONDITIONS:

### Applicability:

All

### Task

All

### Additional information:

This procedure consists of the following tasks:

- 01-1. Preparation.
- 01-2. Lower pedestal control assembly adjustment.
- 01-3. Cable adjustment for cable runs 29, 30, 31, and 32.
- 01-4. Pitch trim vertical stabilizer crank assemblies to stabilizer control valve crank assemblies adjustment.
- 01-5. Follow-on maintenance.

### Additional data:

TO 1300i-2-00JG-00-1

### Task

01-1,  
01-5

TO 1300i-2-23JG-40-1

01-2

TO 1300i-2-53JG-10-1

01-1,  
01-5

### Personnel recommended:

One

### Task

01-1,  
01-3,  
01-4,  
01-5

Two

01-2

Person (A) performs task.

Task

Person (B) assists person (A).

Safety conditions:

Task



The horizontal pressure panel access cover(s) are removed in these tasks to gain access to the cavity above. When rudder, aileron, and elevator aircraft ground safety locks are not installed, care shall be taken working around rudder, aileron, and elevator cables, pulleys, and linkage due to possible moving parts. Failure to comply may cause injury to personnel.

All

## Support equipment:

<u>Nomenclature</u>	<u>PN</u>	<u>Specification</u>	<u>Qty</u>	<u>Task</u>
Kit, Rig Pin	17G140015-1	--	--	--
Pin 5-3, Rig	17G140015-31	--	2	01-1
Pin 5-8, Rig	17G140015-15	--	1	01-1
Tensiometer (Primary)	T5-2004-113-00	(0-100 lb)	1	01-3
Tensiometer (Alternate)	ACX-100	(5-100 lb)	1	01-3
Tool, Adjusting, Turnbuckle	17G140019-1	--	1	01-3

## Supplies:

<u>Nomenclature</u>	<u>PN</u>	<u>Specification</u>	<u>Qty</u>	<u>Task</u>
Clip, Safety	MS21256-2	--	AR	01-3

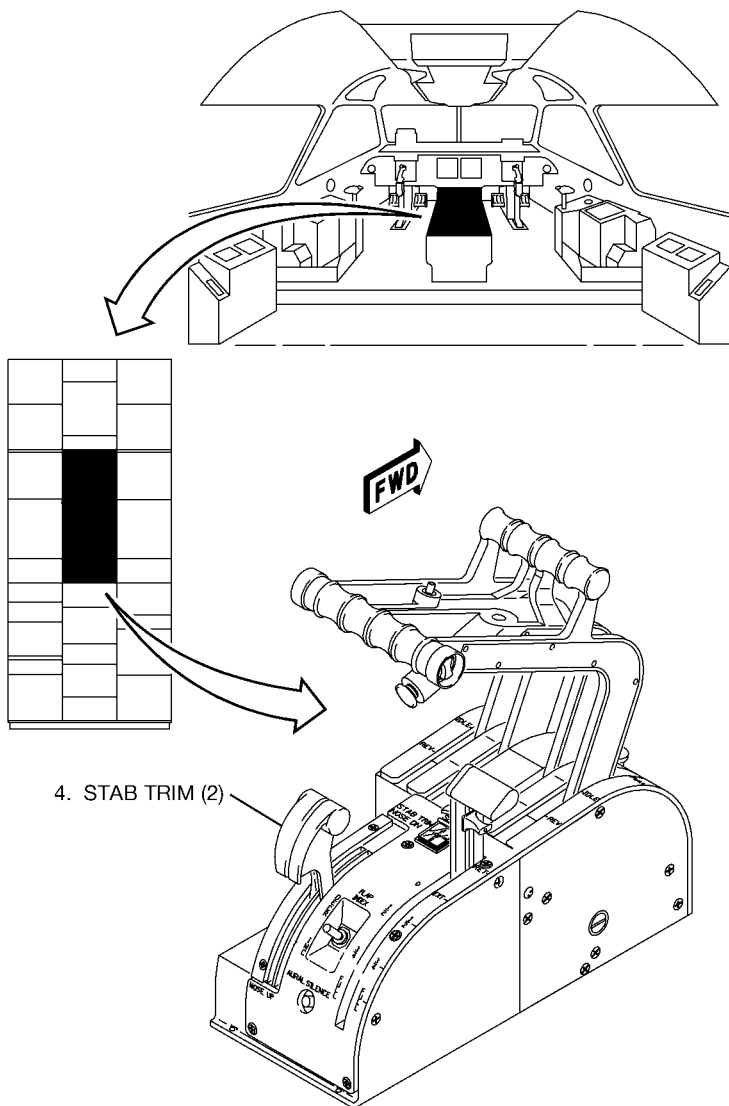
<u>Nomenclature</u>	<u>PN</u>	<u>Specification</u>	<u>Qty</u>	<u>Task</u>
Pin, Cotter	MS24665-151	--	2	01-2
Pin, Cotter	MS24665-151	--	4	01-4
Tag, Warning	--	--	1	01-1
Wire, Safety	900010-32C	--	AR	01-2, 01-4





## **01-1. PREPARATION.**

1. Review "Section 1 (General Information)" of this TO for system general warnings, cautions, and notes.
2. Review task "General Maintenance Input Conditions" page for task specific safety conditions.
3. Enter vertical stabilizer (00-00-02, task 02-1).
4. Attach warning tag to **STAB TRIM** handles.

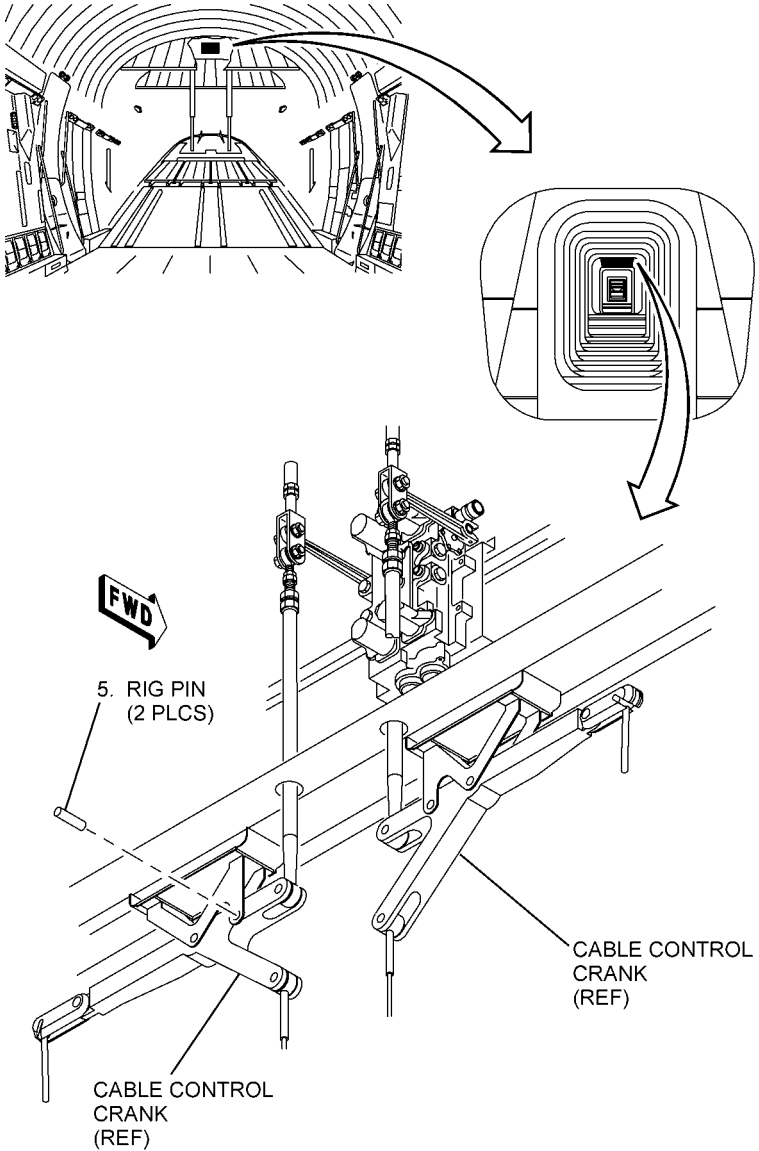


ICN-88277-G2742241-004-01

**TO 1300i-2-27JG-40-1**







- 5. Install rig pins 5-3 in cable control cranks.
- 6. Remove horizontal pressure panel access cover assemblies (53-12-10).

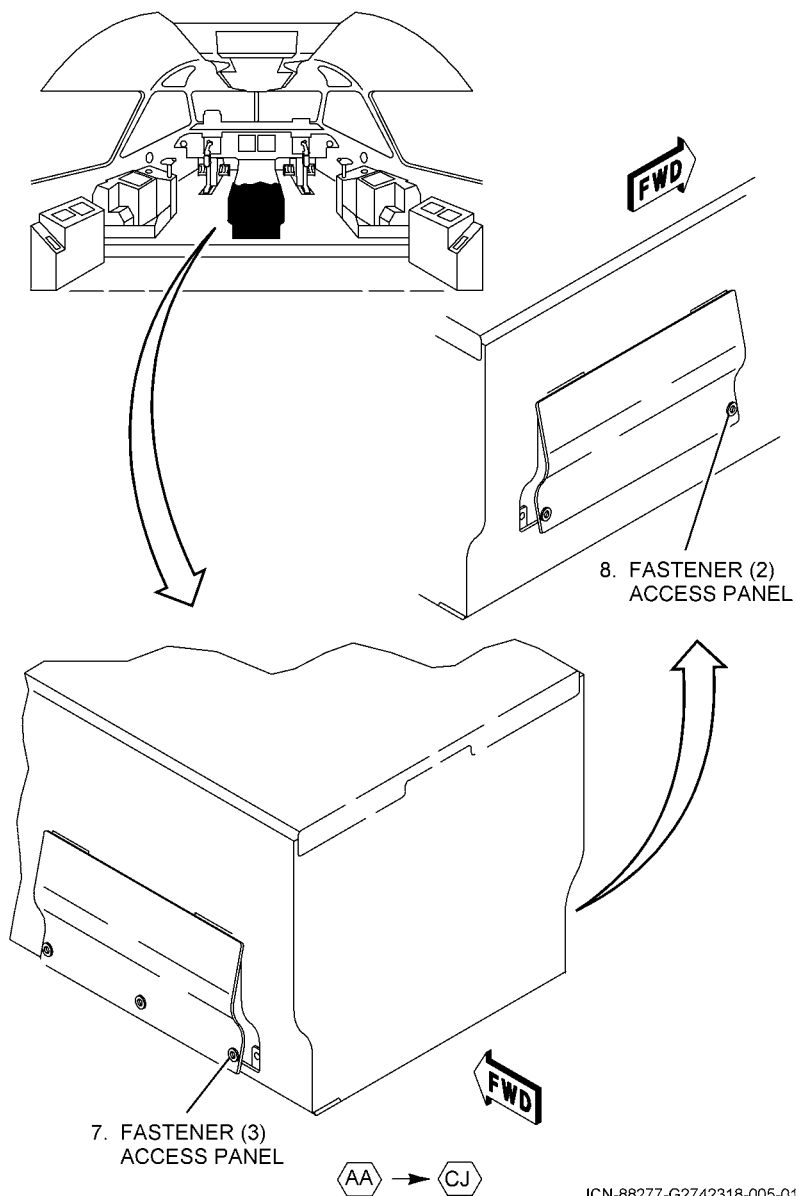
PANEL NO.	PANEL REF DES
112AZP	5312CA001
112BZP	5312CA002



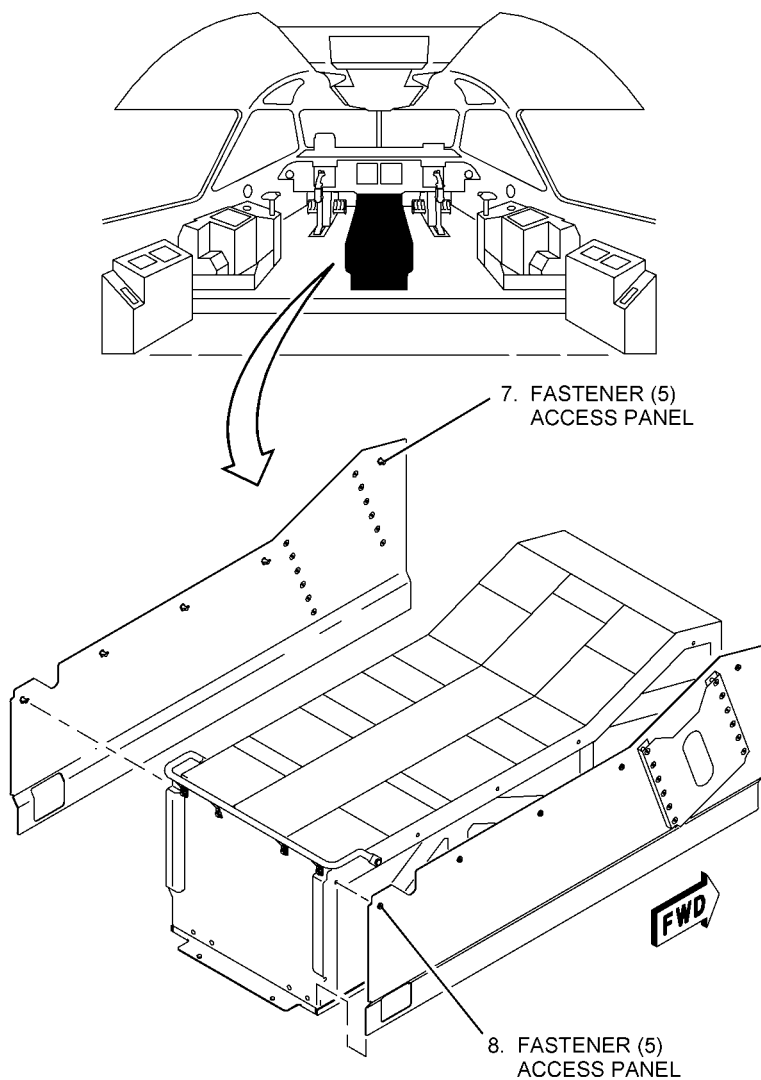
ICN-88277-G2742242-003-01

## TO 1300i-2-27JG-40-1

7.  →  Loosen fasteners and open access panel (212AZC).
7.  → Loosen fasteners and remove access panel (212AZP).
8.  →  Loosen fasteners and open access panel (212BZC).
8.  → Loosen fasteners and remove access panel (212BZP).



ICN-88277-G2742318-005-01

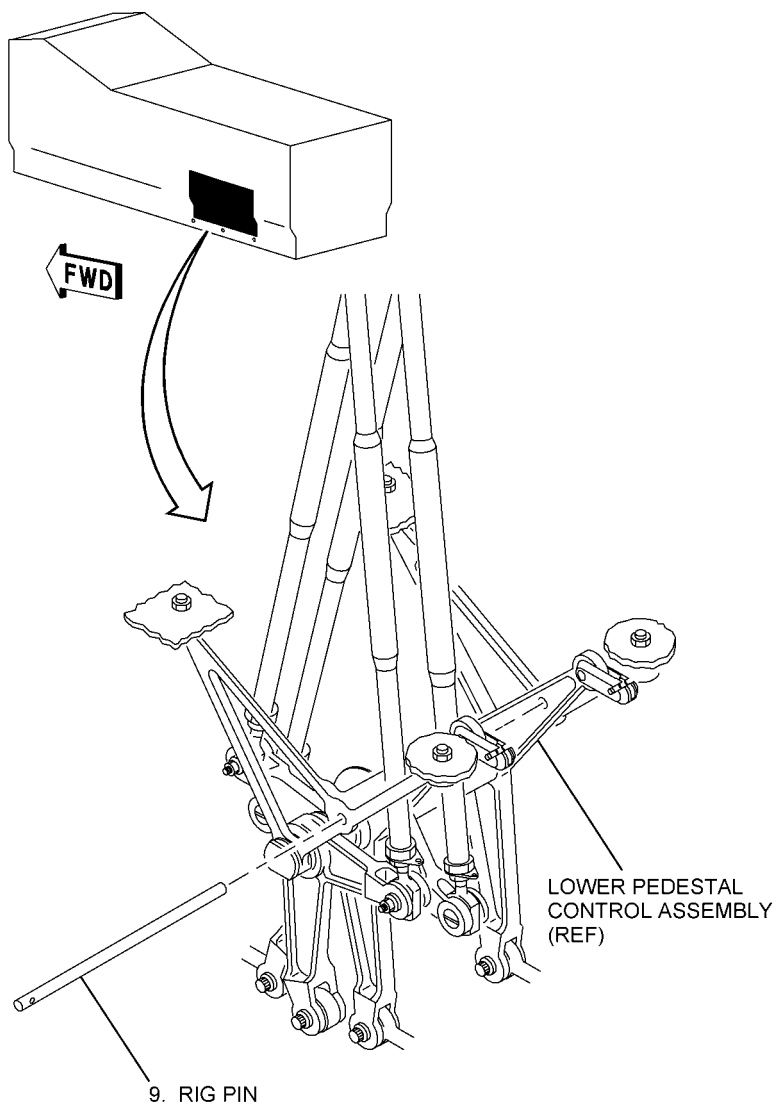


ICN-88277-G2742434-002-01





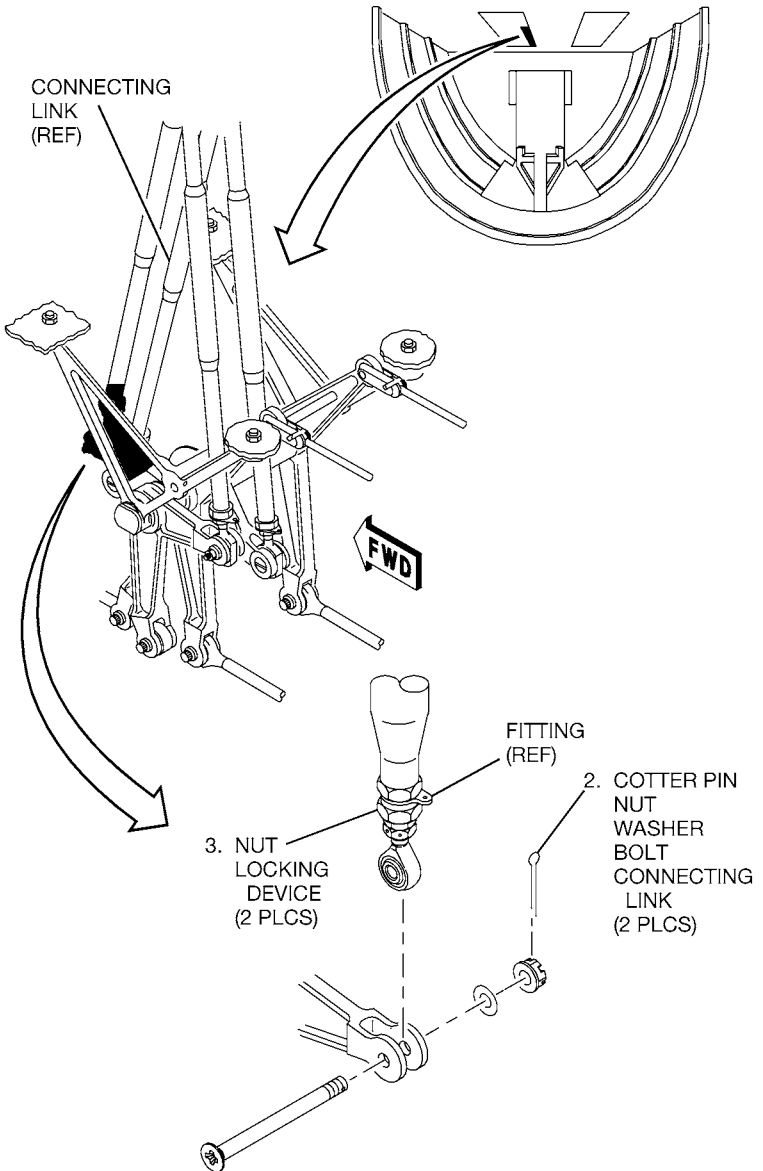
9. Install rig pin 5-8 in lower pedestal control assembly.



ICN-88277-G2742081-004-01

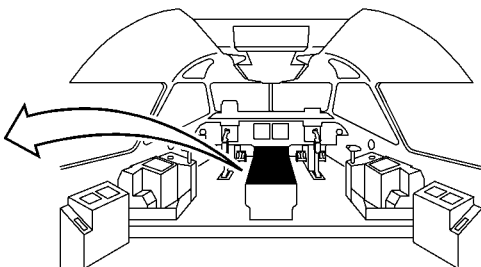
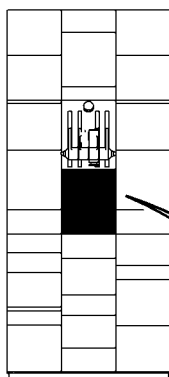
**01-2. LOWER PEDESTAL CONTROL ASSEMBLY  
ADJUSTMENT.**

1. Perform maintenance interphone operation (23-41-02, task 02-3).
2. (A) Remove cotter pins, nuts, washers, and bolts; disconnect connecting links.
3. (A) Remove safety wire; loosen nuts on fitting and disconnect locking devices.

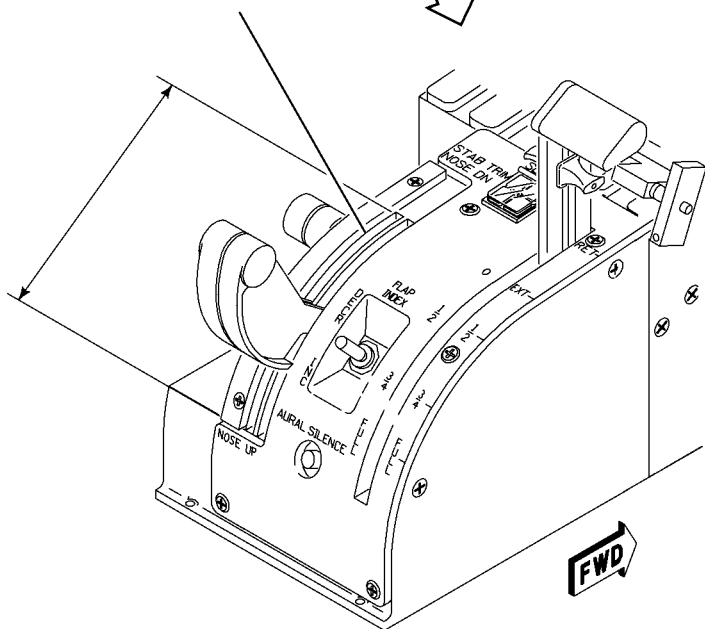


ICN-88277-G2742246-003-01

4. (A,B) Measure and mark center of stab trim handle track.



4. STAB TRIM HANDLE TRACK

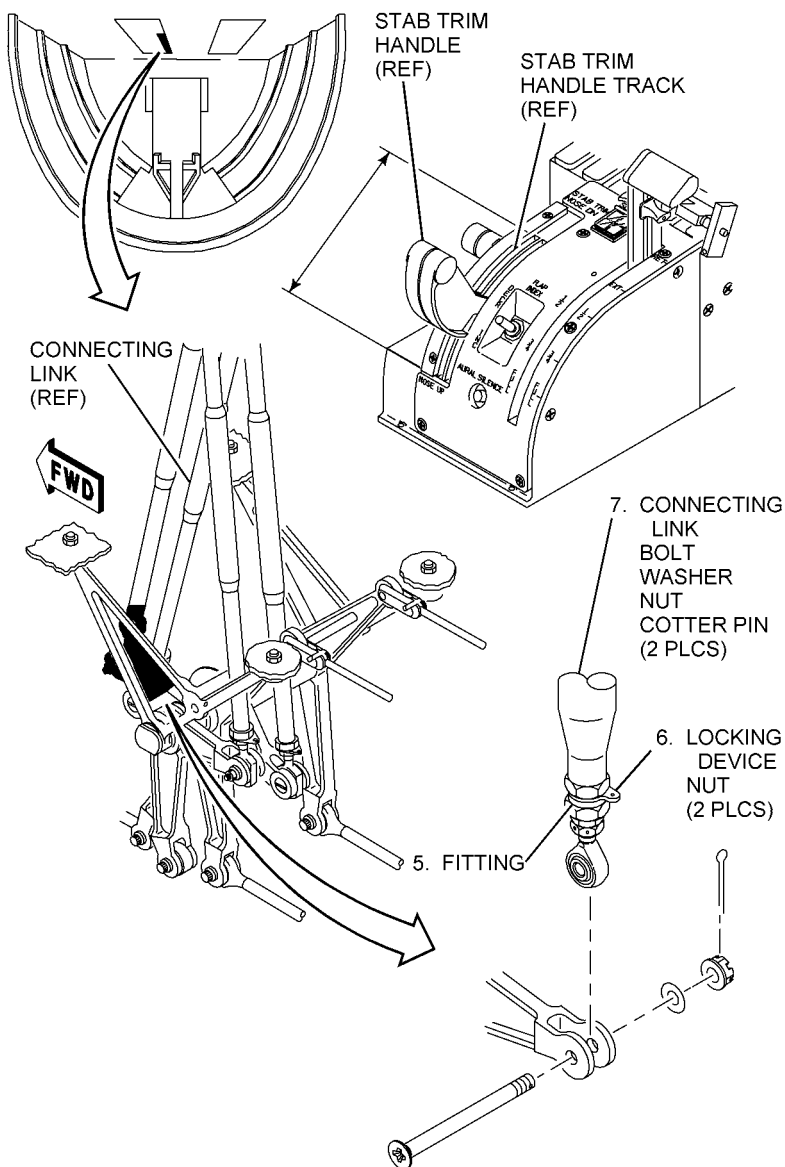


ICN-88277-G2742247-004-01

## TO 1300i-2-27JG-40-1

5. (A) Adjust fitting on connecting links until left and right **STAB TRIM** handles are 0.03 inch above or below center mark on stab trim handle track.
6. (A) Position locking devices and tighten nuts; secure with safety wire.
7. (A) Position connecting links; install bolts, washers, nuts, and cotter pins.
8. Perform maintenance interphone shutdown (23-41-02, task 02-4).





ICN-88277-G2742325-003-01

### 01-3. CABLE ADJUSTMENT FOR CABLE RUNS 29, 30, 31, AND 32.

#### NOTE

This is a typical cable adjustment task for all cable assemblies.

1. Remove and discard safety clips and loosen turnbuckle on cable run 29.
2. Remove and discard safety clips and loosen turnbuckle on cable run 30.

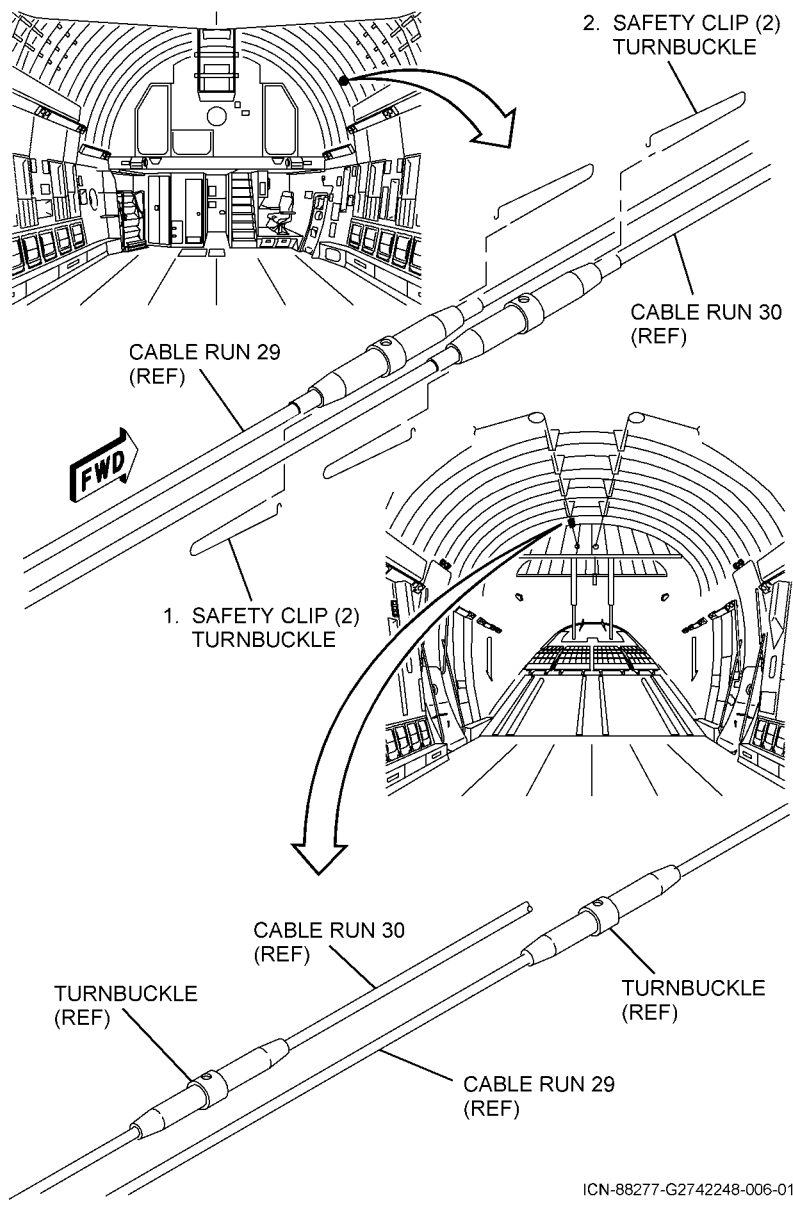


A maximum of three cable terminal threads are allowed to be exposed at each end of turnbuckle barrel after adjusting cable tension. Failure to comply may cause damage to aircraft or equipment.

#### NOTE

Proper and equal control cable tension loads cannot be achieved with a pre-existing rig pin binding condition. Prior to cable rigging and with sufficiently loose turnbuckle, binding free rig pin installation in the lower pedestal and aft cable crank control assembly shall be verified. If rig pin binding occurs, it shall be necessary to adjust the applicable control assembly for free rig pin installation prior to control cable tensioning.

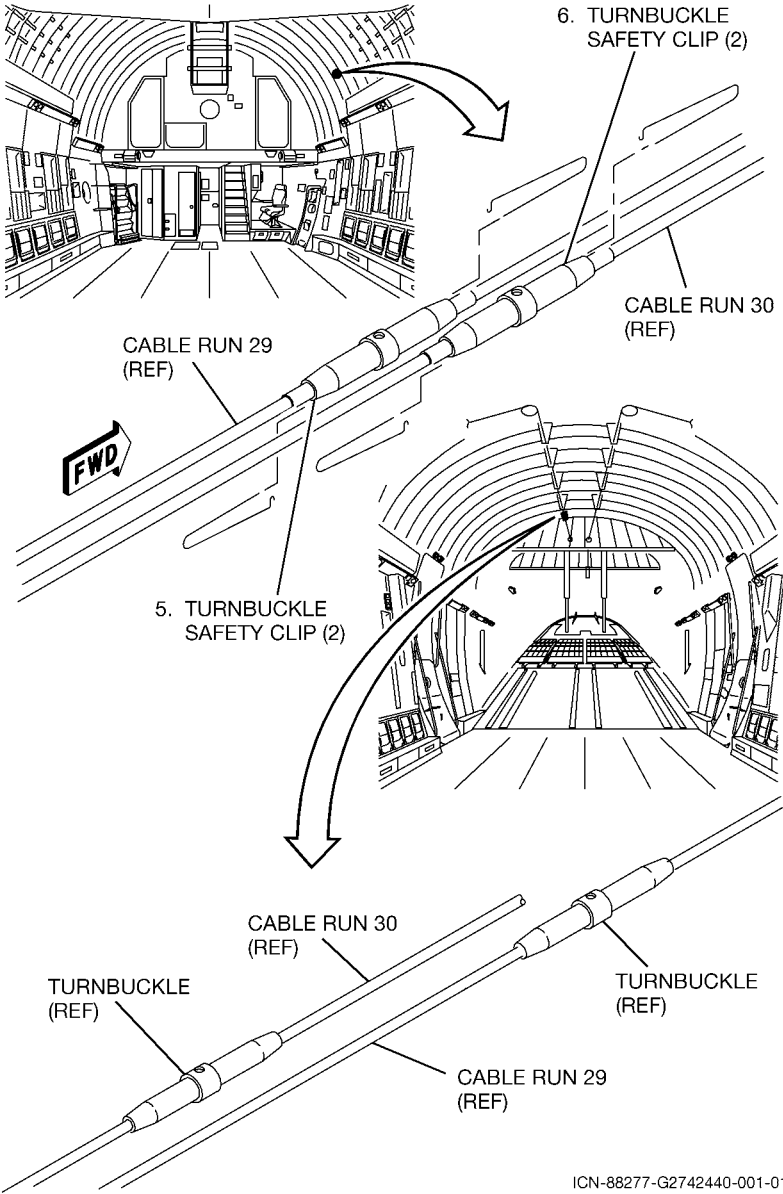
3. Perform cable tension adjustment (TO 1300i-2-27JG-40-1, 27- 40-00, para 1-9) on cable run 29.  
28- 1/16"-17 lb rig@70° F.



ICN-88277-G2742248-006-01

## **TO 1300i-2-27JG-40-1**

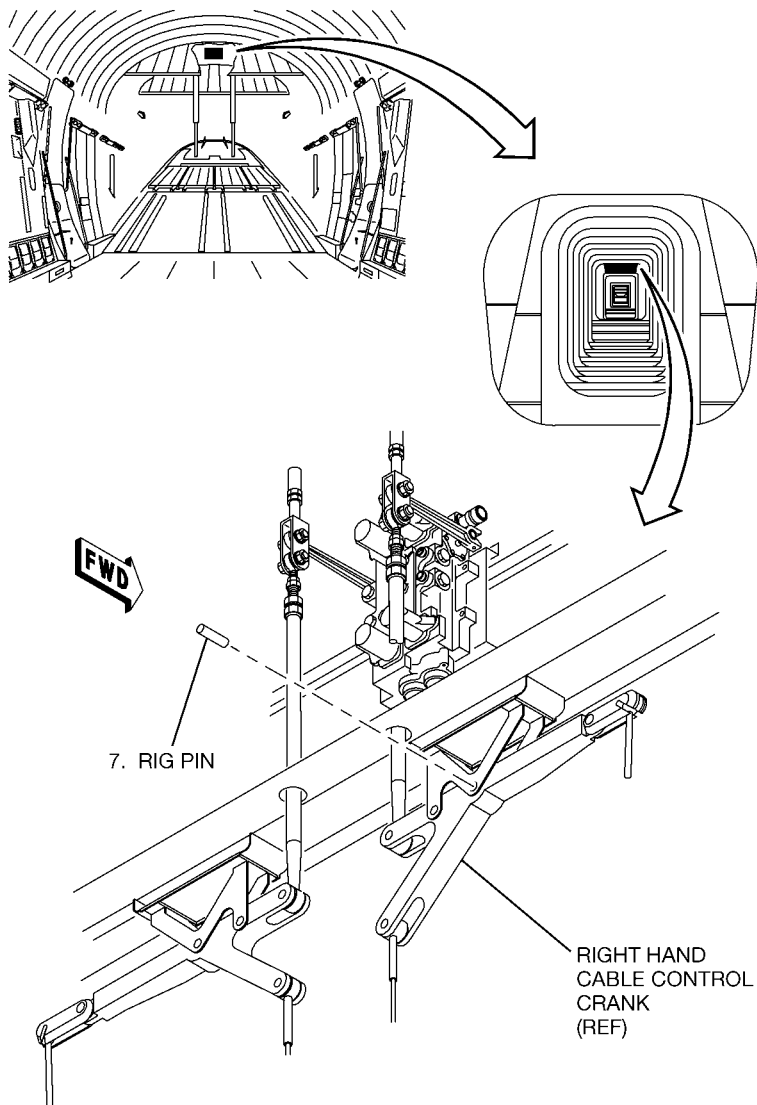
4. Perform cable tension adjustment (TO 1300i-2-27JG-40-1, 27- 40-00, para 1-9) on cable run 30.  
  
28- 1/16"-17 lb rig@70° F.
5. Align turnbuckle and install safety clips on cable run 29.
6. Align turnbuckle and install safety clips on cable run 30.



ICN-88277-G2742440-001-01

## **TO 1300i-2-27JG-40-1**

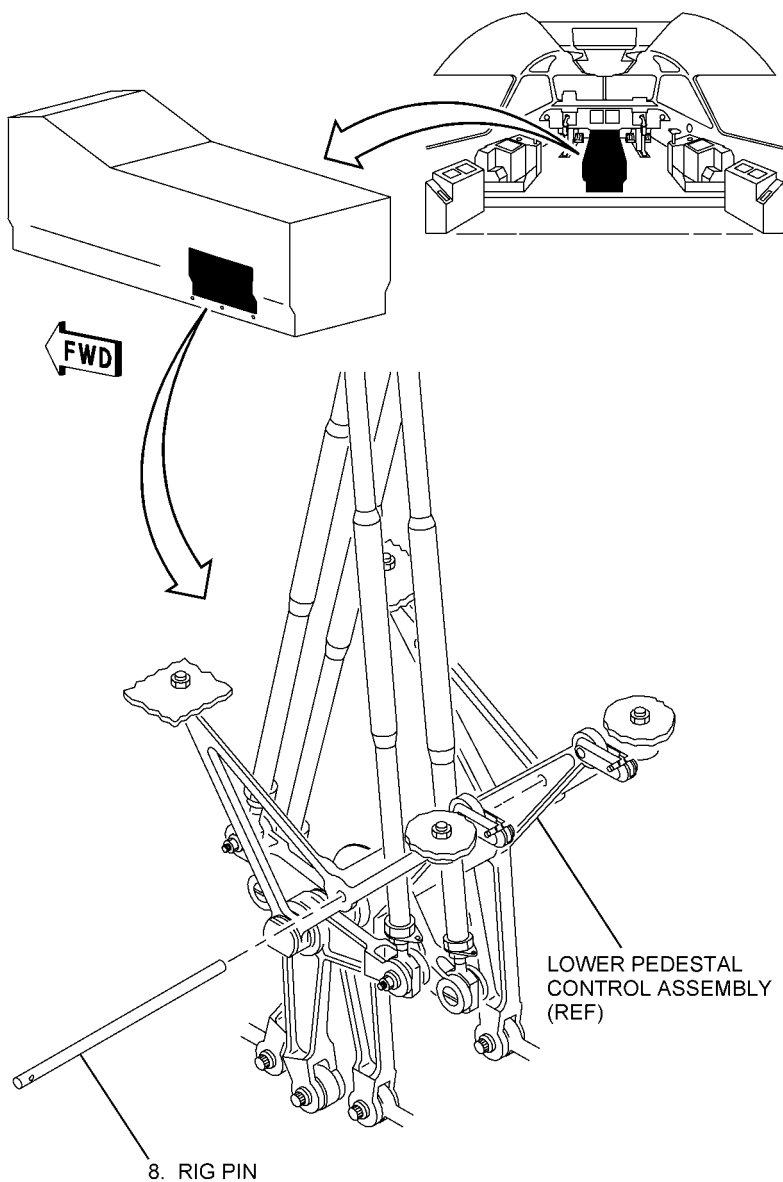
7. Verify rig pin 5-3 in right hand cable control crank can be freely installed and removed.



ICN-88277-G2742430-002-01

8. Verify rig pin 5-8 in lower pedestal control assembly can be freely installed and removed.





ICN-88277-G2742431-002-01

## TO 1300i-2-27JG-40-1

9. Remove and discard safety clips and loosen turnbuckle on cable run 31.
10. Remove and discard safety clips and loosen turnbuckle on cable run 32.

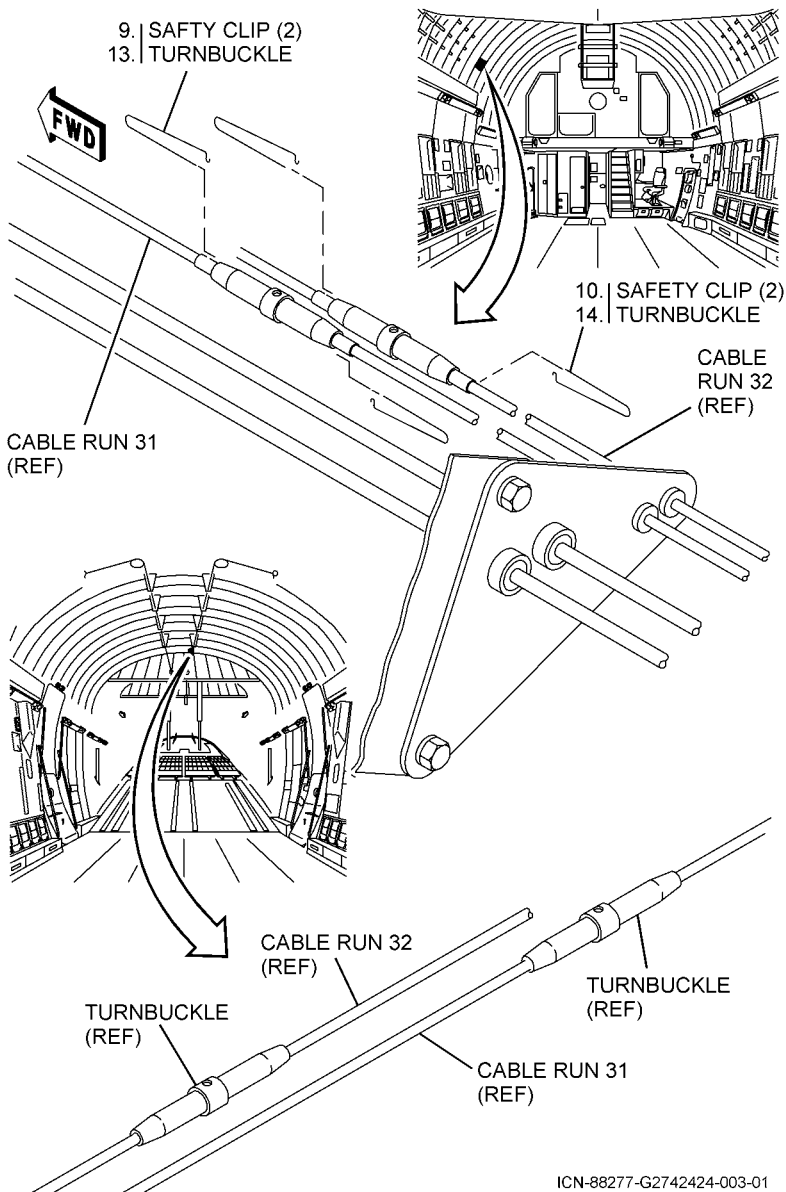


A maximum of three cable terminal threads are allowed to be exposed at each end of turnbuckle barrel after adjusting cable tension. Failure to comply may cause damage to aircraft or equipment.

### NOTE

Proper and equal control cable tension loads cannot be achieved with a pre-existing rig pin binding condition. Prior to cable rigging and with sufficiently loose turnbuckle, binding free rig pin installation in the lower pedestal and aft cable crank control assembly shall be verified. If rig pin binding occurs, it shall be necessary to adjust the applicable control assembly for free rig pin installation prior to control cable tensioning.

11. Perform cable tension adjustment (TO 1300i-2-27JG-40-1, 27- 40-00, para 1-9) on cable run 31.  
  
28- 1/16"-17 lb rig@70° F.
12. Perform cable tension adjustment (TO 1300i-2-27JG-40-1, 27- 40-00, para 1-9) on cable run 32.  
  
28- 1/16"-17 lb rig@70° F.
13. Align turnbuckle and install safety clips on cable run 31.
14. Align turnbuckle and install safety clips on cable run 32.



ICN-88277-G2742424-003-01

## **TO 1300i-2-27JG-40-1**

15. Verify rig pin 5-3 in left hand cable control crank can be freely installed and removed.
16. Verify rig pin 5-8 in lower pedestal control assembly can be freely installed and removed.