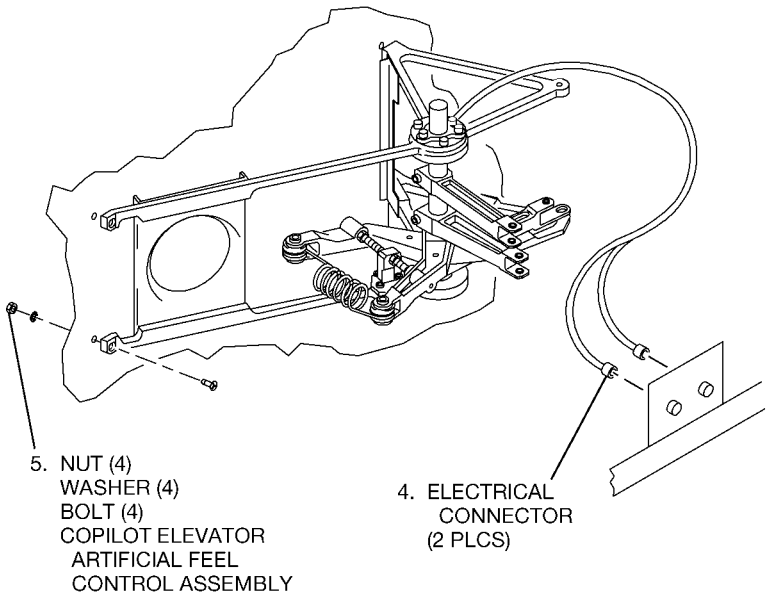


ICN-88277-G2731128-005-01

TO 1300i-2-27JG-30-2

4. Disconnect electrical connectors.
5. Remove nuts, washers, bolts, and copilot elevator artificial feel control assembly.



ICN-88277-G2731129-003-01

**COPILLOT ELEVATOR ARTIFICIAL FEEL
CONTROL ASSEMBLY INSTALLATION
(27-31-11-3)**

FUNCTIONAL INPUT CONDITIONS:

Applicability:	Task
All	All

Additional information:

This procedure consists of the following tasks:

- 3-1. Installation.
- 3-2. Follow-on maintenance.

Additional data:	Task
TO 1300i-2-27JG-30-1	All
TO 1300i-2-53JG-10-1	3-2
TO 1300i-2-53JG-20-1	3-2
TO 1300i-23	3-1

Personnel recommended:	Task
One	All

Safety conditions:

Task

WARNING

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:

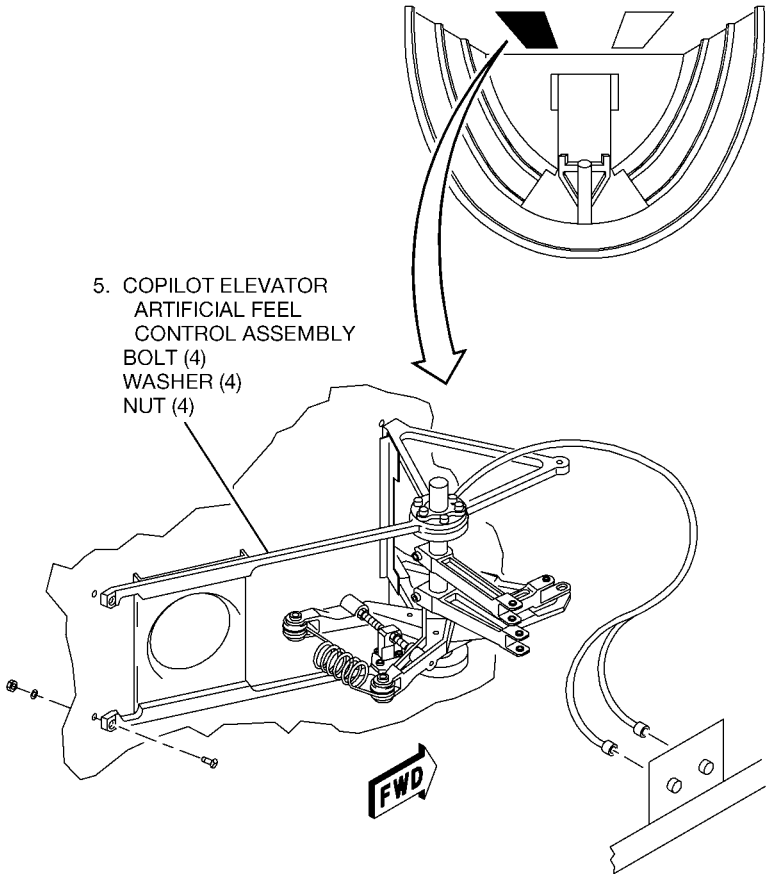
<u>Nomenclature</u>	<u>PN</u>	<u>Specification</u>	<u>Qty</u>	<u>Task</u>
NA	--	--	--	--

Supplies:

<u>Nomenclature</u>	<u>PN</u>	<u>Specification</u>	<u>Qty</u>	<u>Task</u>
Pin, Cotter	MS24665-151	--	3	3-1
Sealant	PR-1436G	AMS 3265	AR	3-1
Sealant	PR-1775	MIL-PRF-81733	AR	3-1

3-1. INSTALLATION.

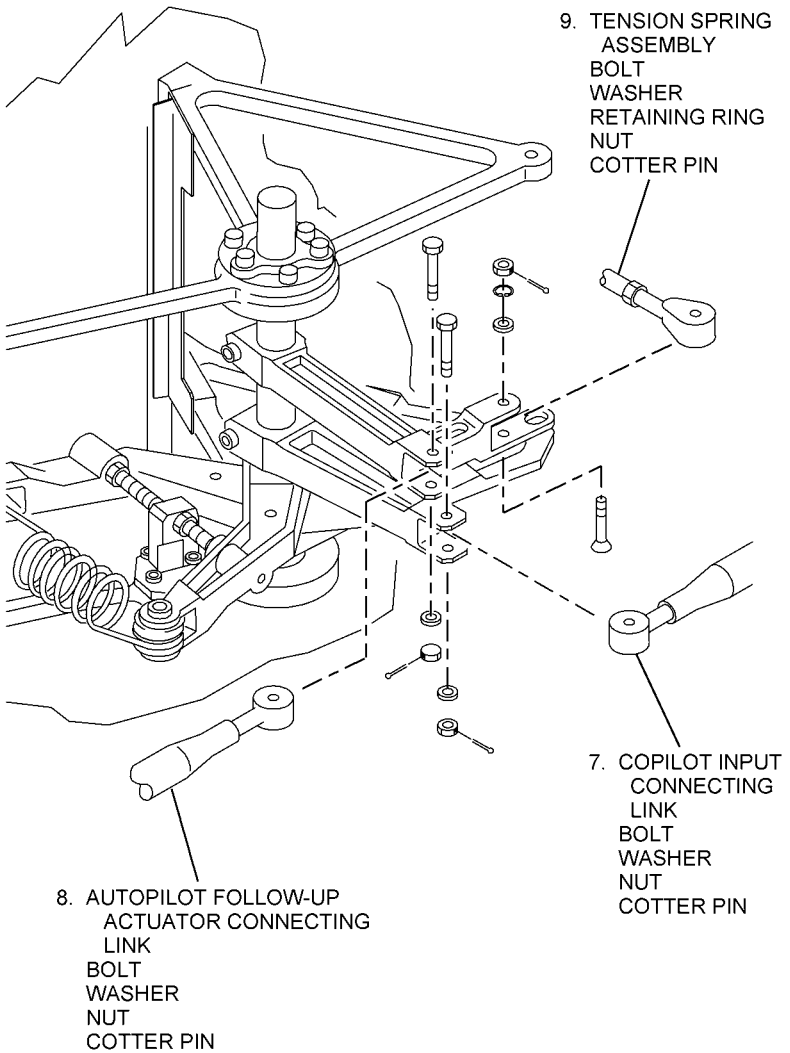
1. Review "Section 1 (General Information)" of this TO for system general warnings, cautions, and notes.
2. Review task "Functional Input Conditions" page for task specific safety conditions.
3. Perform faying surface sealing using MIL-PRF-81733 (TO 1300i-23, Chapter 1, Section III).
4. Perform fastener head sealing using AMS 3265 (TO 1300i-23, Chapter 1, Section III).
5. Position copilot elevator artificial feel control assembly; install bolts, washers, and nuts.



ICN-88277-G2731130-004-01

TO 1300i-2-27JG-30-2

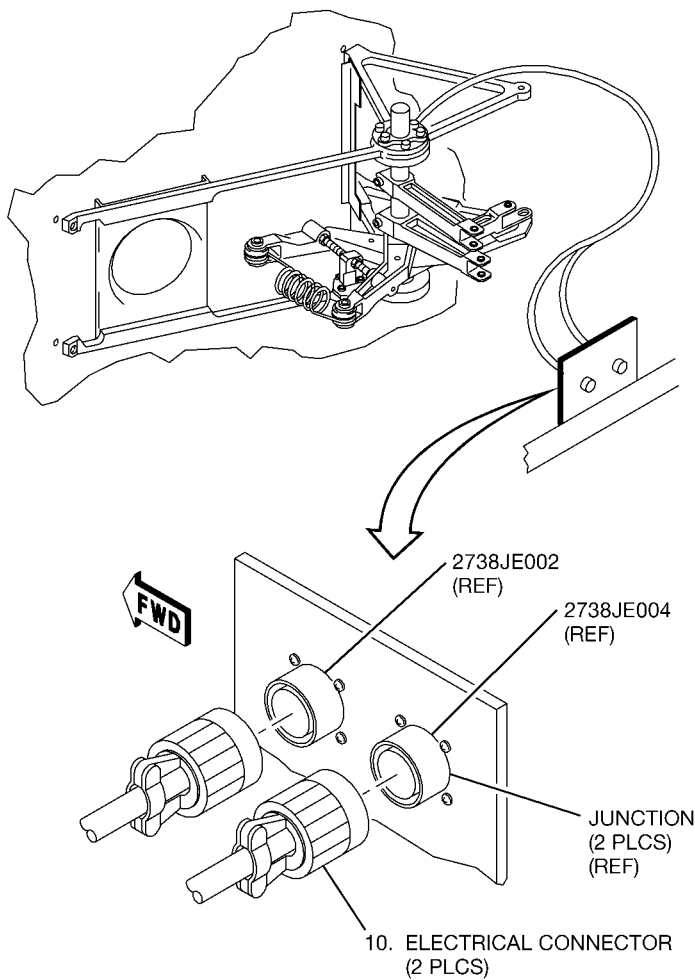
6. Perform mechanical controls and surfaces system adjustment (27-31-02, task 02-2 and 02-3).
7. Position copilot input connecting link; install bolt, washer, nut, and cotter pin.
8. Position autopilot follow-up actuator connecting link; install bolt, washer, nut, and cotter pin.
9. Position tension spring assembly; install bolt, washer, retaining ring, nut, and cotter pin.



ICN-88277-G2731131-004-01

10. Connect electrical connectors as follows:

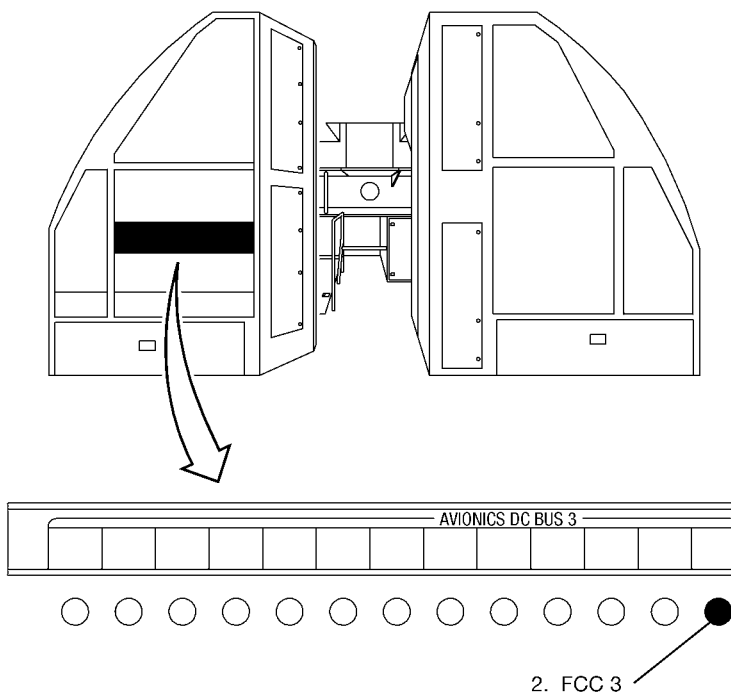
CONNECTOR REF DES	JUNCTION REF DES
2738PP002	2738JE002
2738PP004	2738JE004



ICN-88277-G2731505-005-01

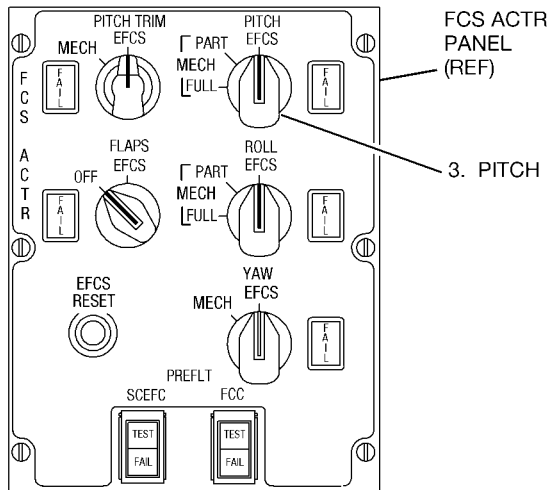
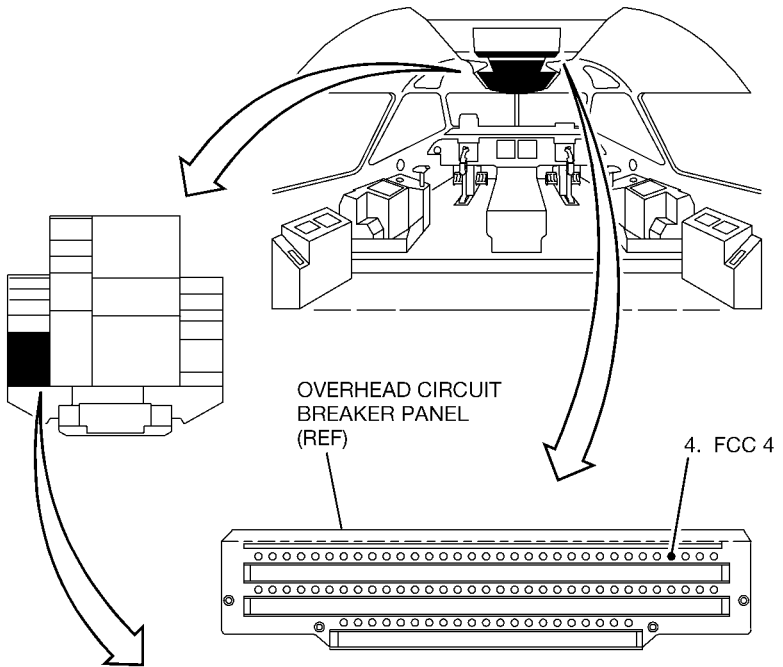
3-2. FOLLOW-ON MAINTENANCE.

1. Perform pitch rotary variable differential transducer position sensor adjustment (27-38-10, tasks 5-1 or 5-2, 5-3, and 5-4 or 5-5).
 - 1A. Perform upper crew compartment floor panel installation (215BZY, 217AZY, and 216BZY) (53-21-10, tasks 3-1 and 3-2).
2. Remove warning tag and close **FCC 3** circuit breaker on Electrical Power Center (EPC), row **T**, column **24**.



TO 1300i-2-27JG-30-2

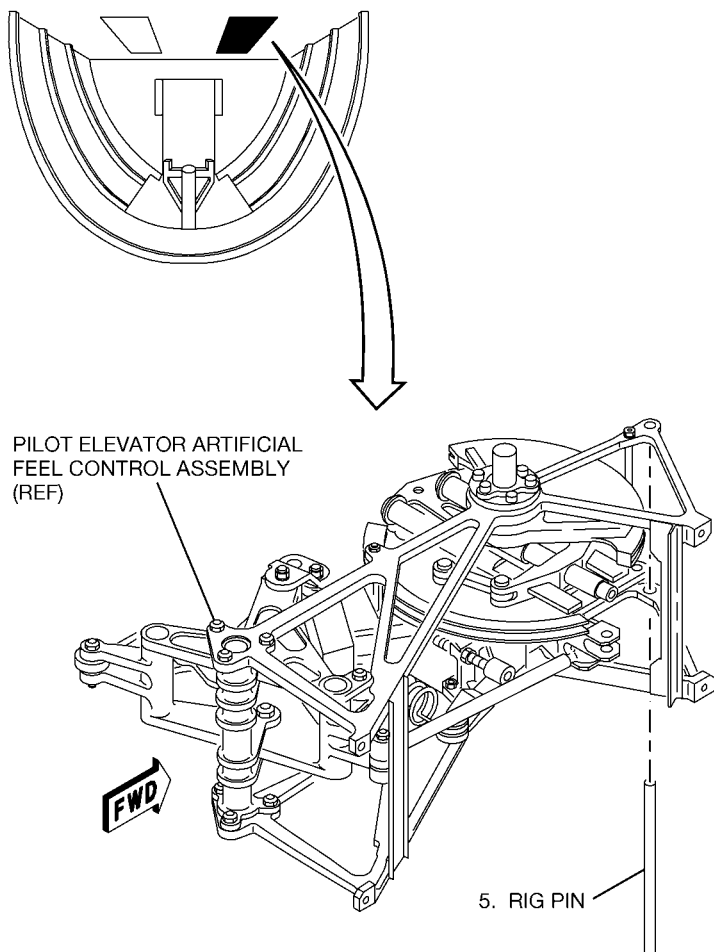
3. Remove warning tag and rotate **PITCH** switch on **FCS ACTR** panel to **EFCS**.
4. Remove warning tag and close **FCC 4** circuit breaker on overhead circuit breaker panel, row **G**, column **30**.



ICN-88277-G2731133-003-01

TO 1300i-2-27JG-30-2

5. Remove rig pin 5-10 from pilot elevator artificial feel control assembly.
6. Perform elevator mechanical controls and surfaces system operational checkout (27-31-01, task 01-1).



ICN-88277-G2731506-003-01

7. Install horizontal pressure panel access cover assemblies (53-12-10).

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

**COPILOT ELEVATOR ARTIFICIAL FEEL
CONTROL ASSEMBLY REPAIR
(27-31-11-4)**

FUNCTIONAL INPUT CONDITIONS:

Applicability:	Task
All	All

Additional information:

This procedure consists of the following task:

- 4-1. Repair copilot elevator artificial feel control assembly by replacing spring.

Additional data:	Task
TO 1300i-2-10JG-60-1	All
TO 1300i-2-27JG-30-1	All
TO 1300i-2-53JG-20-1	All

Personnel recommended:	Task
One	All

Safety conditions:	Task
NA	--

Support equipment:

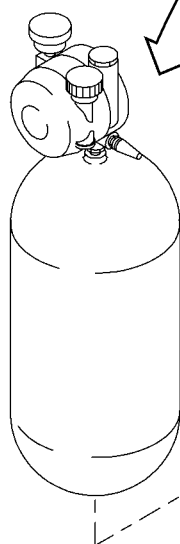
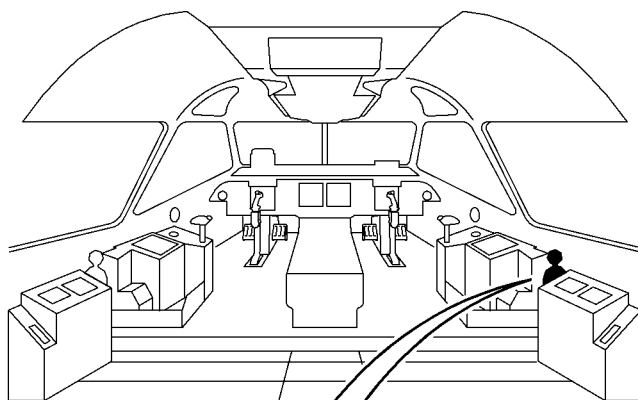
<u>Nomenclature</u>	<u>PN</u>	<u>Specification</u>	<u>Qty</u>	<u>Task</u>
Kit, Rig Pin	17G140015-1	--	--	--
Pin 5-10, Rig	17G140015-17	--	1	All

Supplies:

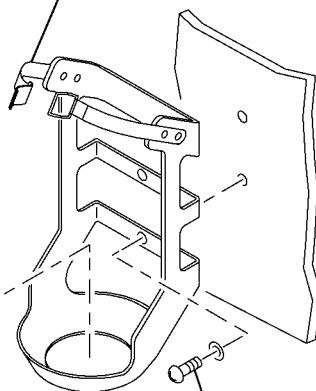
<u>Nomenclature</u>	<u>PN</u>	<u>Specification</u>	<u>Qty</u>	<u>Task</u>
Tag, Warning	--	--	3	All

4-1. REPAIR COPILOT ELEVATOR ARTIFICIAL FEEL CONTROL ASSEMBLY BY REPLACING SPRING.

1. Review "Section 1 (General Information)" of this TO for system general warnings, cautions, and notes.
2. Review task "Functional Input Conditions" page for task specific safety conditions.
3. Release latch and remove crew portable oxygen cylinder and regulator.
4. Remove screws, washers, and bracket.



3. LATCH
CREW PORTABLE OXYGEN
CYLINDER AND REGULATOR



4. SCREW (2)
WASHER (2)
BRACKET

ICN-88277-G2731136-006-01

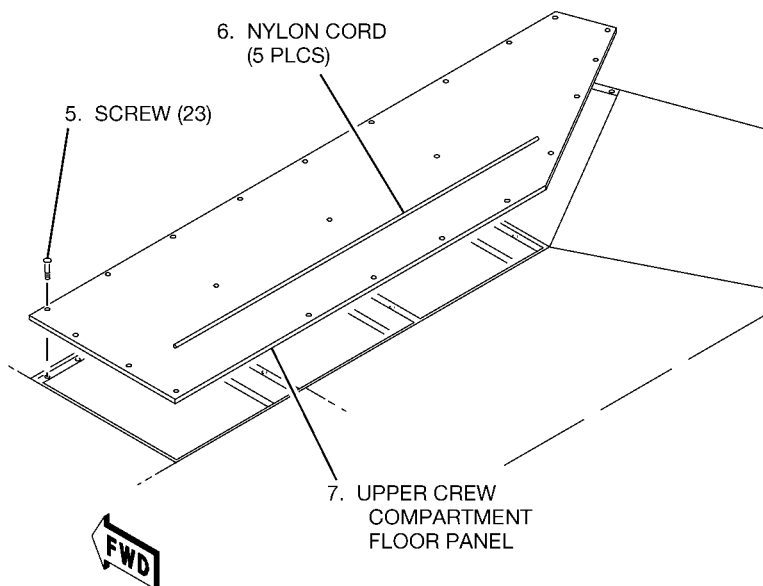
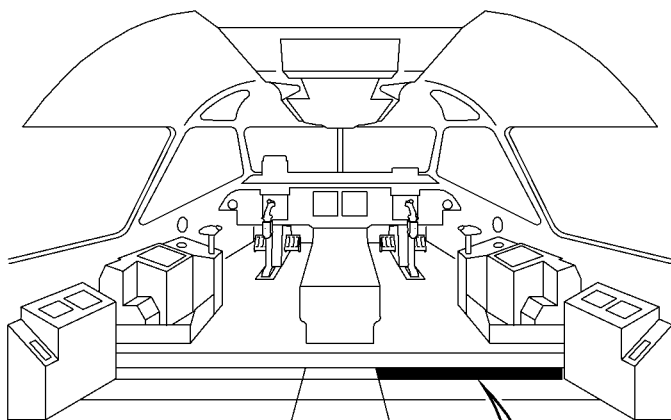
TO 1300i-2-27JG-30-2

5. Remove screws from upper crew compartment floor panel (216BZY).

NOTE

Nylon cords are being eliminated by attrition, not all floor panels will have nylon cords.

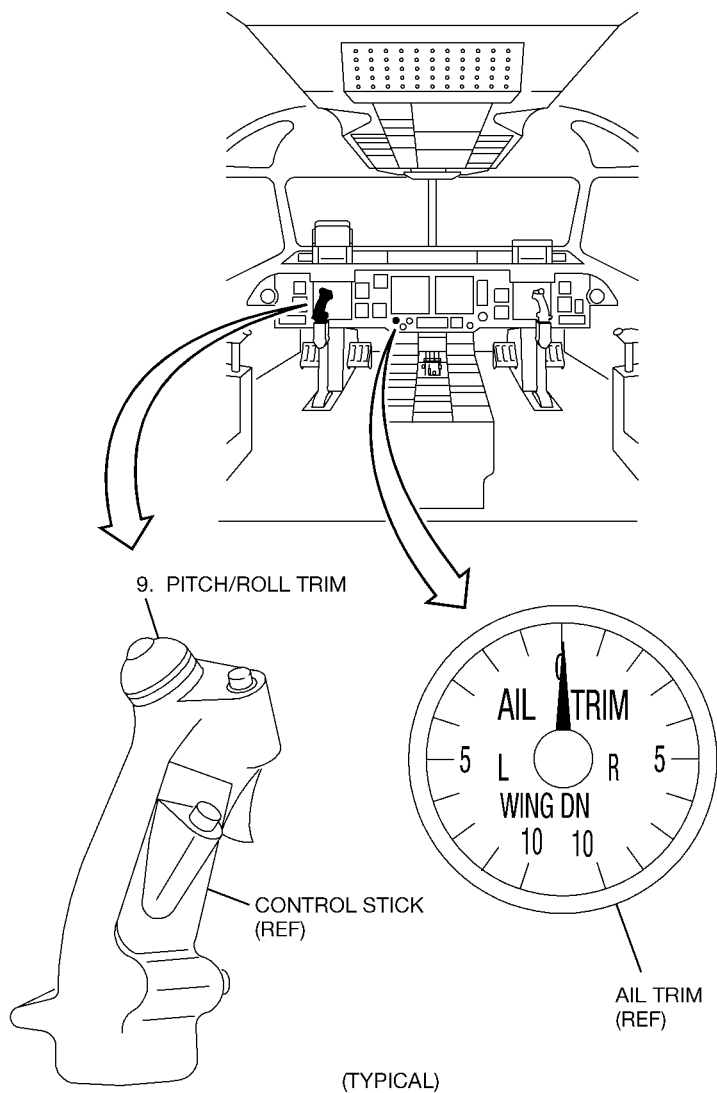
6. Remove and discard nylon cords.
7. Remove upper crew compartment floor panel (216BZY).



ICN-88277-G2731137-004-01

TO 1300i-2-27JG-30-2

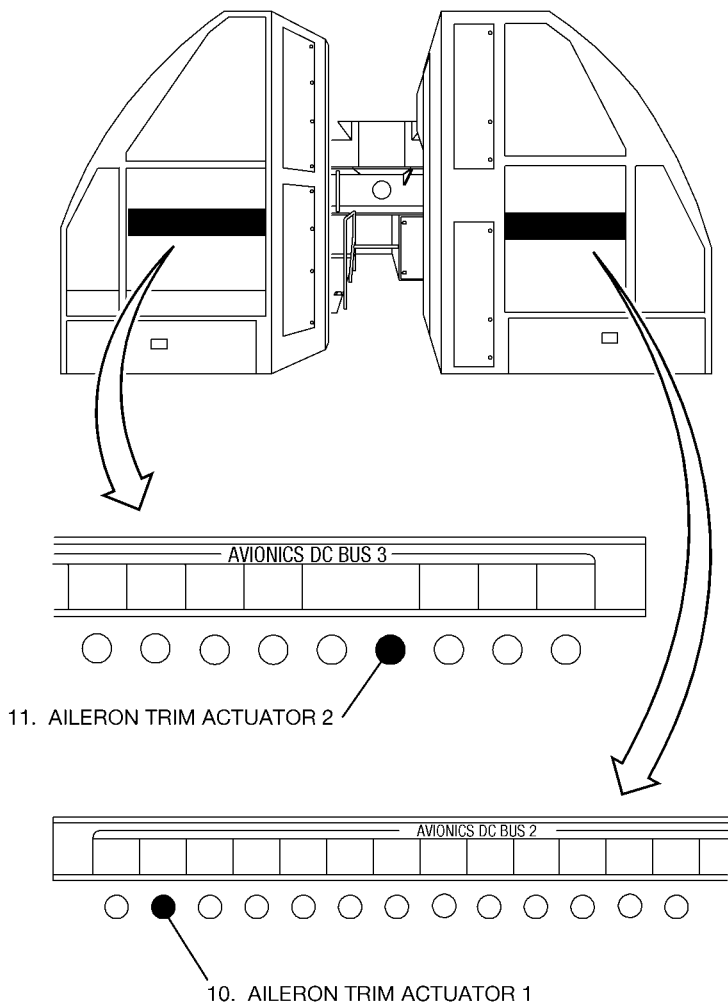
8. Connect external electrical power (10-61-01, task 01-1).
9. Press pitch/roll trim switch on control stick to **LWD** or **RWD** until **AIL TRIM** indicator reads **0**.



ICN-88277-G2731590-001-01

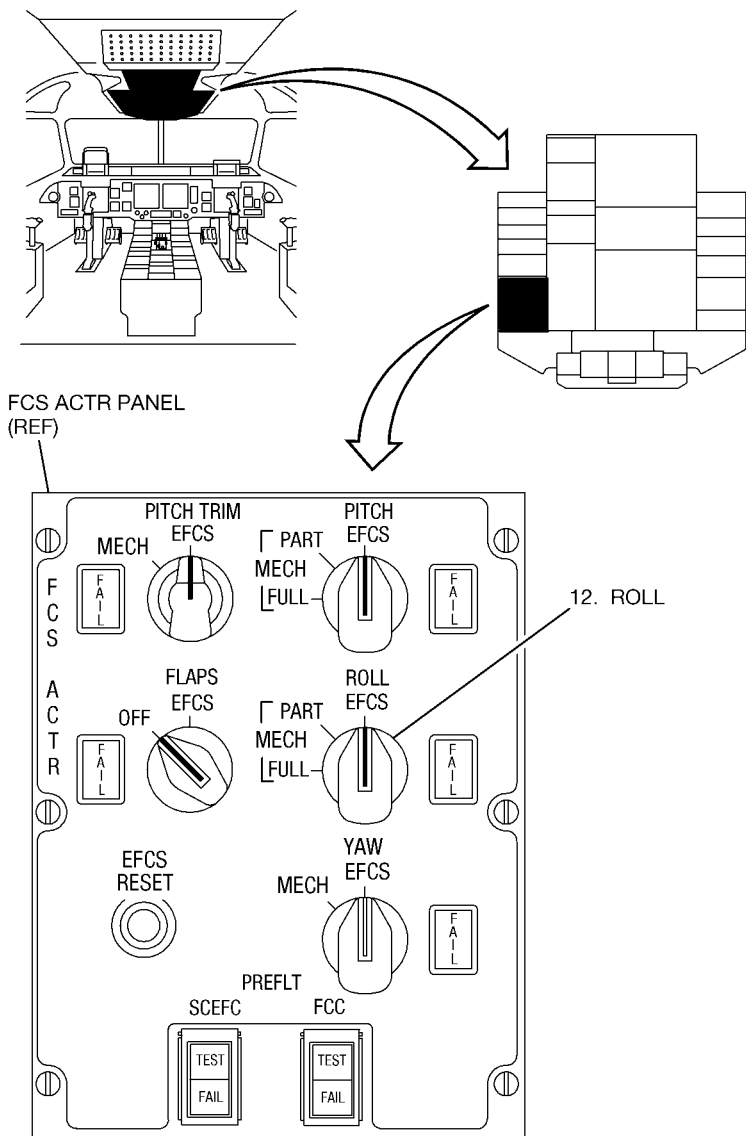
TO 1300i-2-27JG-30-2

10. Open **AILERON TRIM ACTUATOR 1** circuit breaker on Electrical Power Center (EPC), row **U**, column **41**, and attach warning tag.
11. Open **AILERON TRIM ACTUATOR 2** circuit breaker on EPC, row **U**, column **36**, and attach warning tag.



ICN-88277-G2731591-001-01

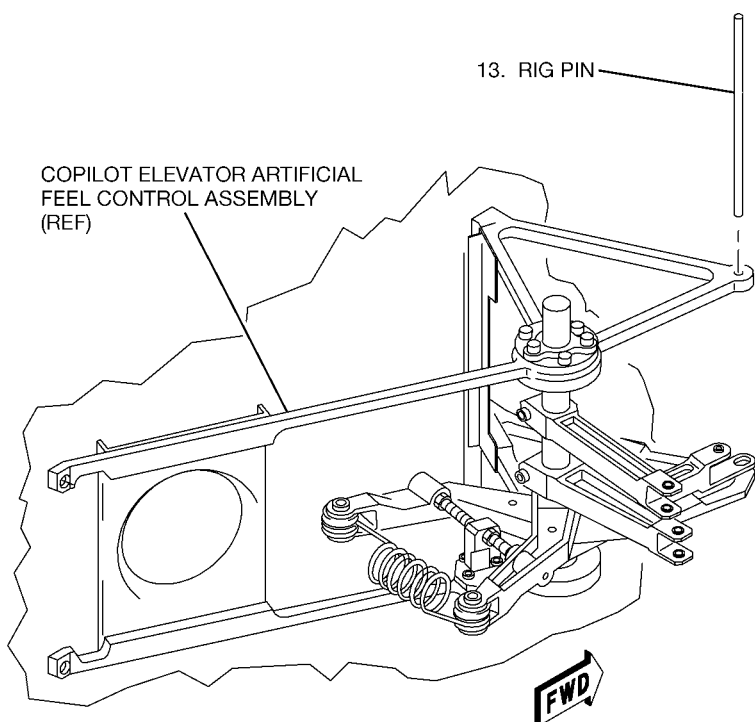
12. Ensure **ROLL** switch on **FCS ACTR** panel is set to **PART MECH** and attach warning tag.



ICN-88277-G2731592-001-01

TO 1300i-2-27JG-30-2

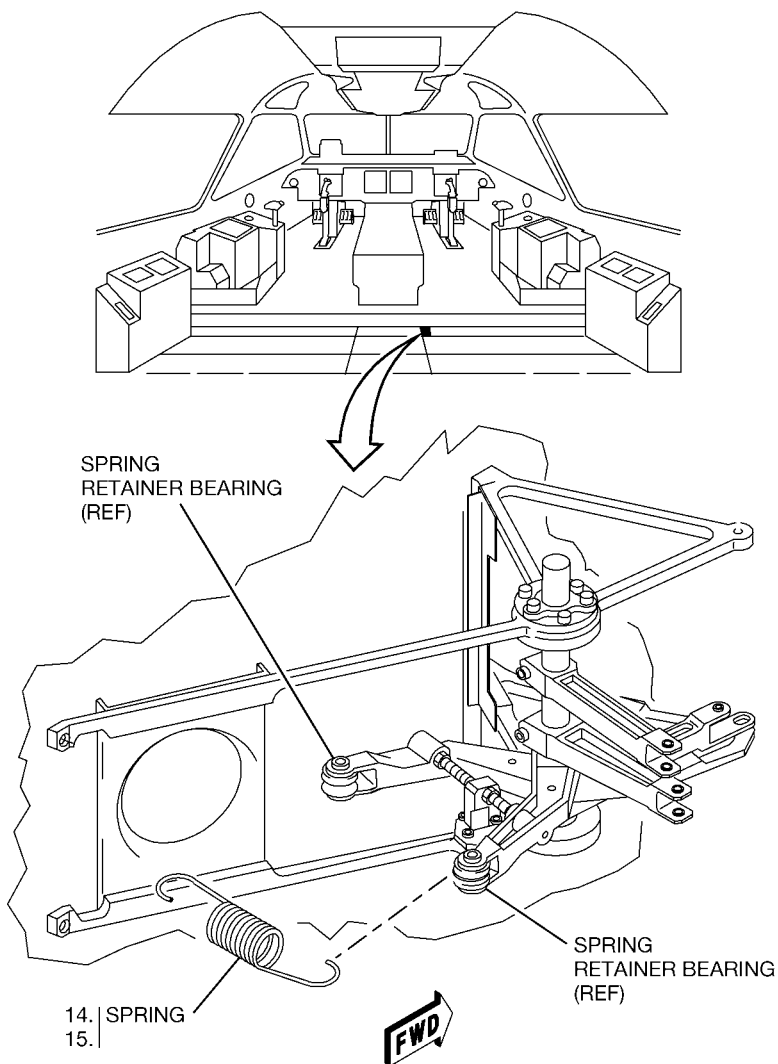
13. Install rig pin 5-10 in copilot elevator artificial feel control assembly.



ICN-88277-G2731593-001-01

TO 1300i-2-27JG-30-2

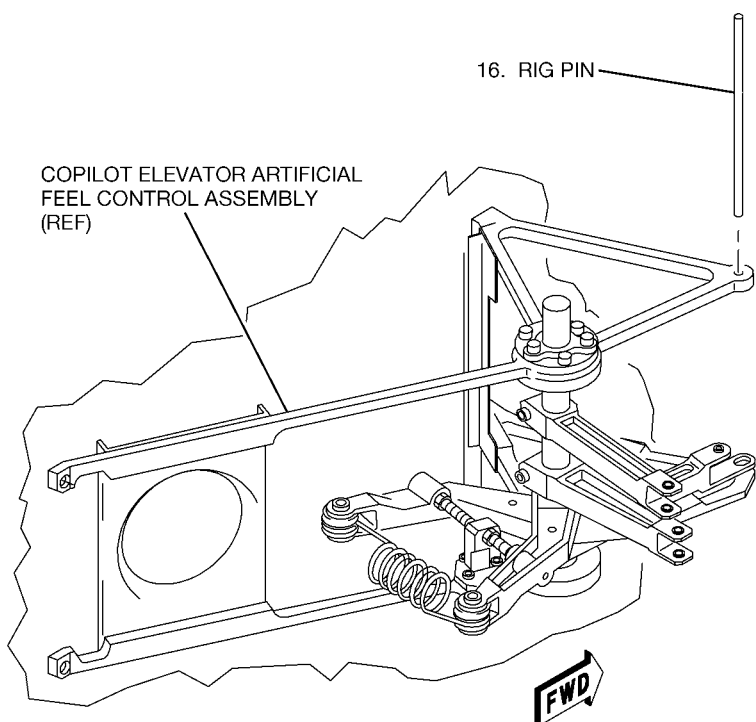
14. Remove spring from spring retainer bearings.
15. Install spring on retainer bearings.



ICN-88277-G2731138-004-01

TO 1300i-2-27JG-30-2

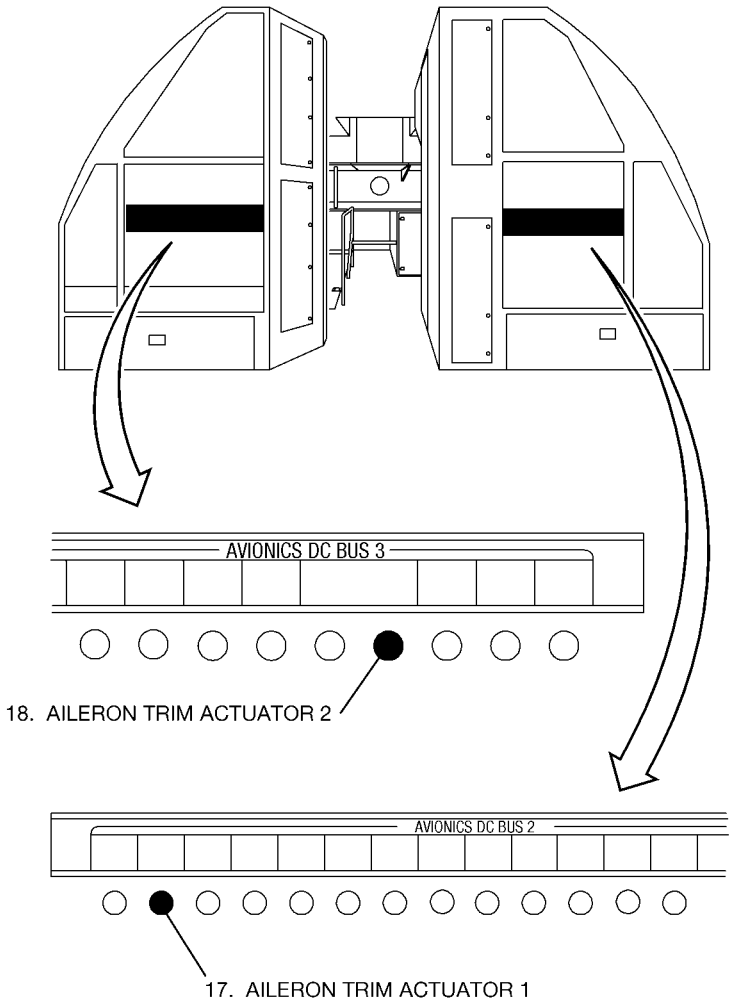
16. Remove rig pin 5-10 from copilot elevator artificial feel control assembly.



ICN-88277-G2731594-001-01

TO 1300i-2-27JG-30-2

17. Remove warning tag and close **AILERON TRIM ACTUATOR 1** circuit breaker on EPC, row **U**, column **41**.
18. Remove warning tag and close **AILERON TRIM ACTUATOR 2** circuit breaker on EPC, row **U**, column **36**.

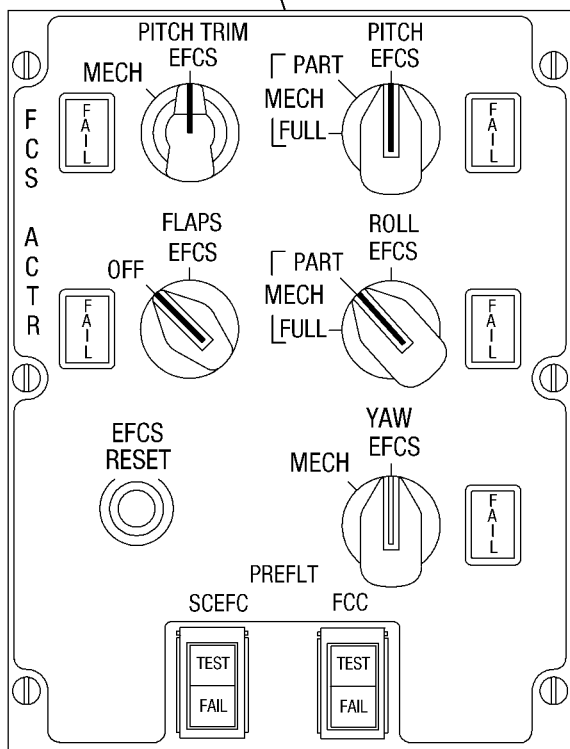


ICN-88277-G2731595-001-01

TO 1300i-2-27JG-30-2

19. Remove warning tag from **FCS ACTR** panel.
20. Perform mechanical controls and surfaces system breakout force operational checkout (27-31-01, task 01-2).
21. Install upper crew compartment floor panel (216BZY) (53-21-10, tasks 3-1 and 3-2).

19. FCS ACTR PANEL



ICN-88277-G2731596-001-01

LINEAR-RATIO CHANGER ELECTRO-MECHANICAL ACTUATOR (27-31-12)

MASTER INPUT CONDITIONS:

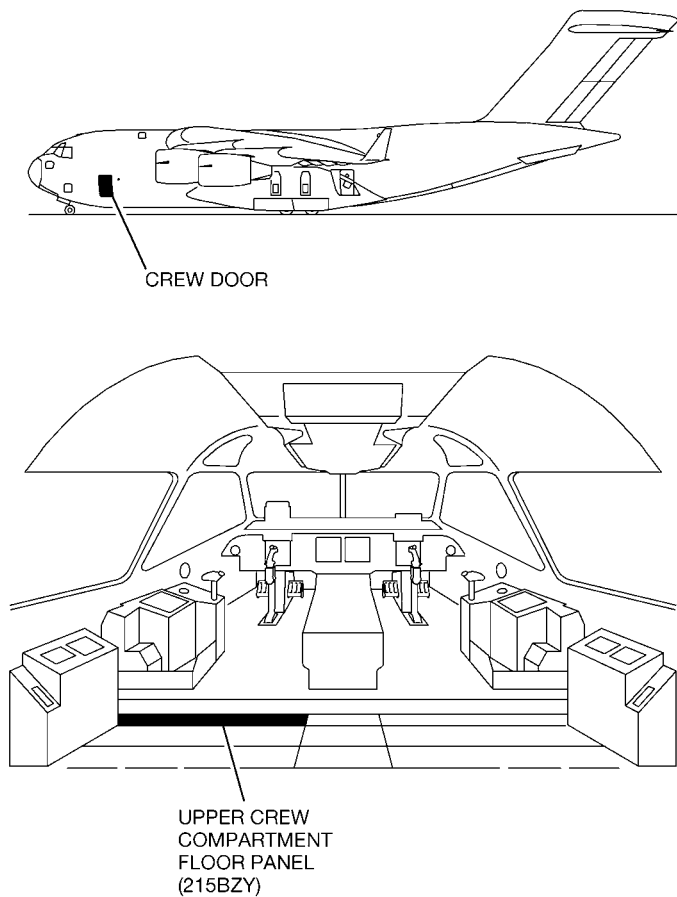
Reference designators:

2731AA010	Linear-Ratio Changer Electro-Mechanical Actuator
-----------	---

Applicable functions:

- 2 Removal.
- 3 Installation.

Access data:



ICN-88277-G2731151-002-01

**LINEAR-RATIO CHANGER
ELECTRO-MECHANICAL ACTUATOR
REMOVAL
(27-31-12-2)**

FUNCTIONAL INPUT CONDITIONS:

Applicability:	Task
All	All

Additional information:

This procedure consists of the following tasks:

- 2-1. Preparation.
- 2-2. Removal.

Additional data:	Task
TO 1300i-2-00GV-00-1	2-1
TO 1300i-2-05JG-10-1	2-1

Personnel recommended:	Task
One	All

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	--	--	--	--

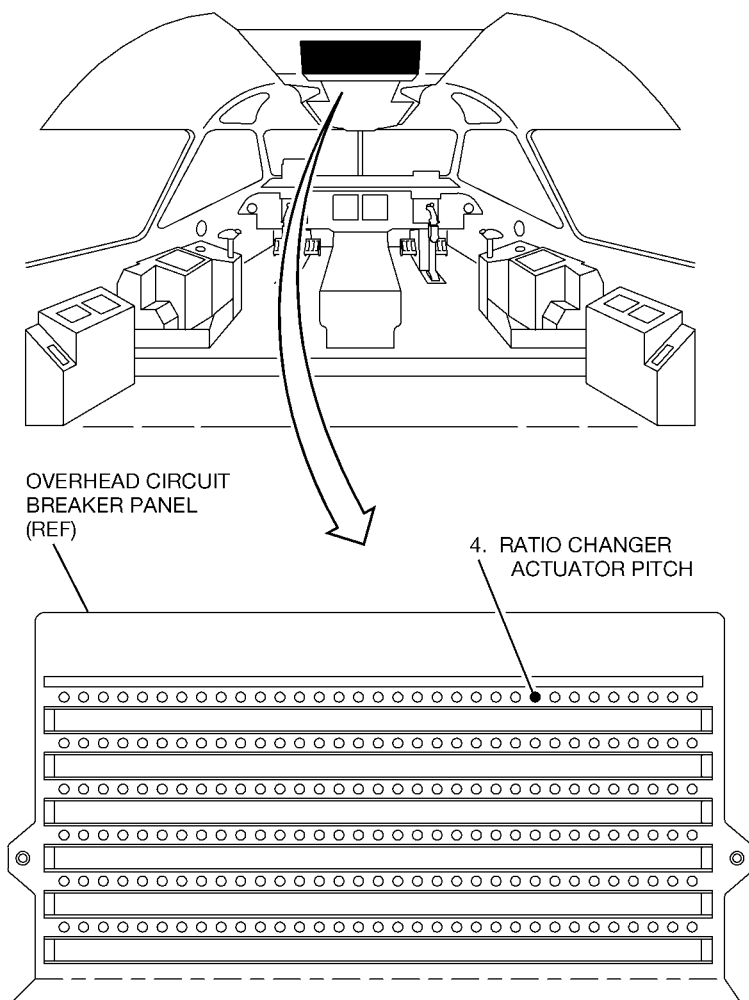
2-1. PREPARATION.

1. Review "Section 1 (General Information)" of this TO for system general warnings, cautions, and notes.
2. Review task "Functional Input Conditions" page for task specific safety conditions.
3. Install elevator aircraft ground safety lock (05-10-01, task 01-5).

WARNING

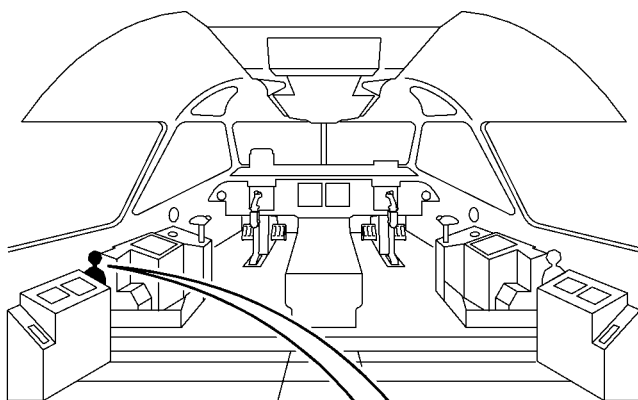
Warning tags shall be attached to all opened circuit breakers as directed by the technical order and an applicable warning statement shall be entered in the AFTO Form/IMT 781A, IAW TO 00-20-1, AFI 21-101 and TO 1300i-2-00GV-00-1, Chapter 5 anytime exiting cockpit circuit breaker area before task completion or there is a delay in maintenance where task cannot be fully accomplished. Failure to comply may cause injury to personnel or damage to aircraft.

4. Open **RATIO CHANGER ACTUATOR PITCH** circuit breaker on overhead circuit breaker panel, row **A**, column **25**.

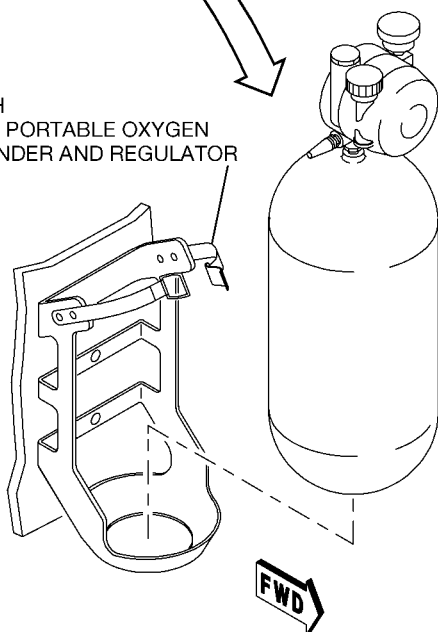


ICN-88277-G2731152-004-01

5. Release latch and remove crew portable oxygen cylinder and regulator.



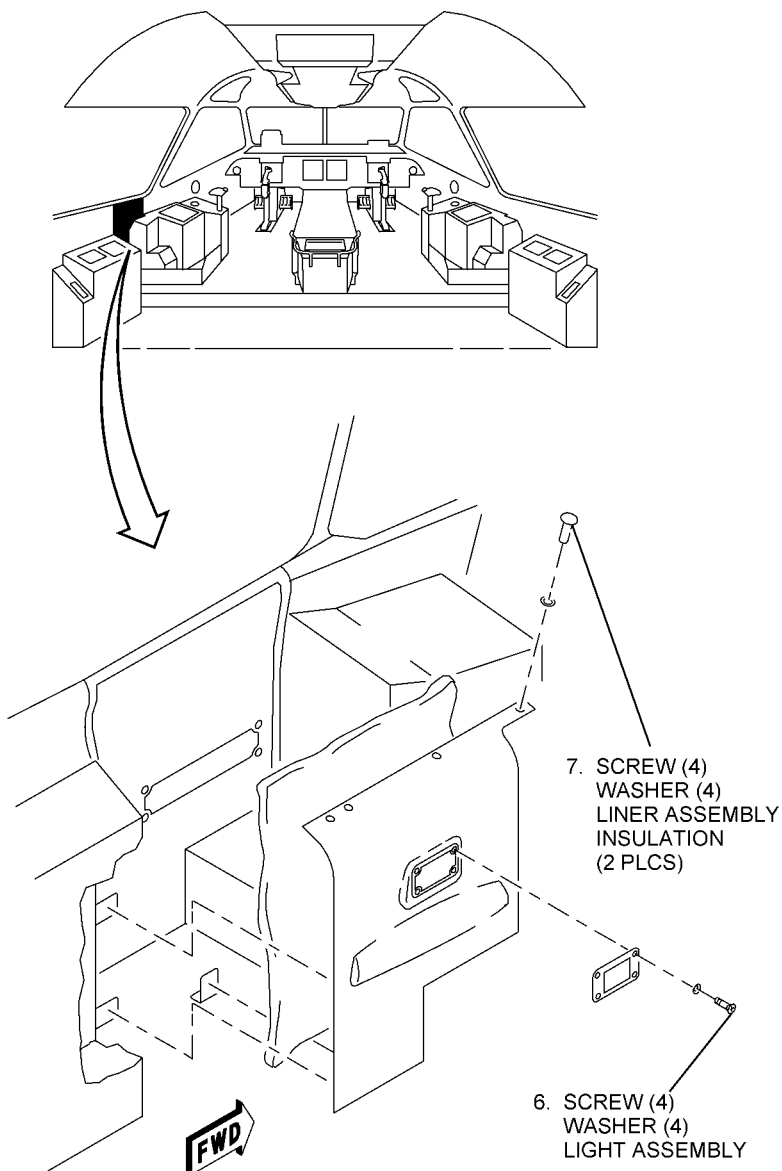
5. LATCH
CREW PORTABLE OXYGEN
CYLINDER AND REGULATOR



ICN-88277-G2731154-003-01

TO 1300i-2-27JG-30-2

6. Remove screws, washers, and light assembly.
7. Remove screws, washers, liner assembly (213FZM), and insulation.



ICN-88277-G2731200-005-01

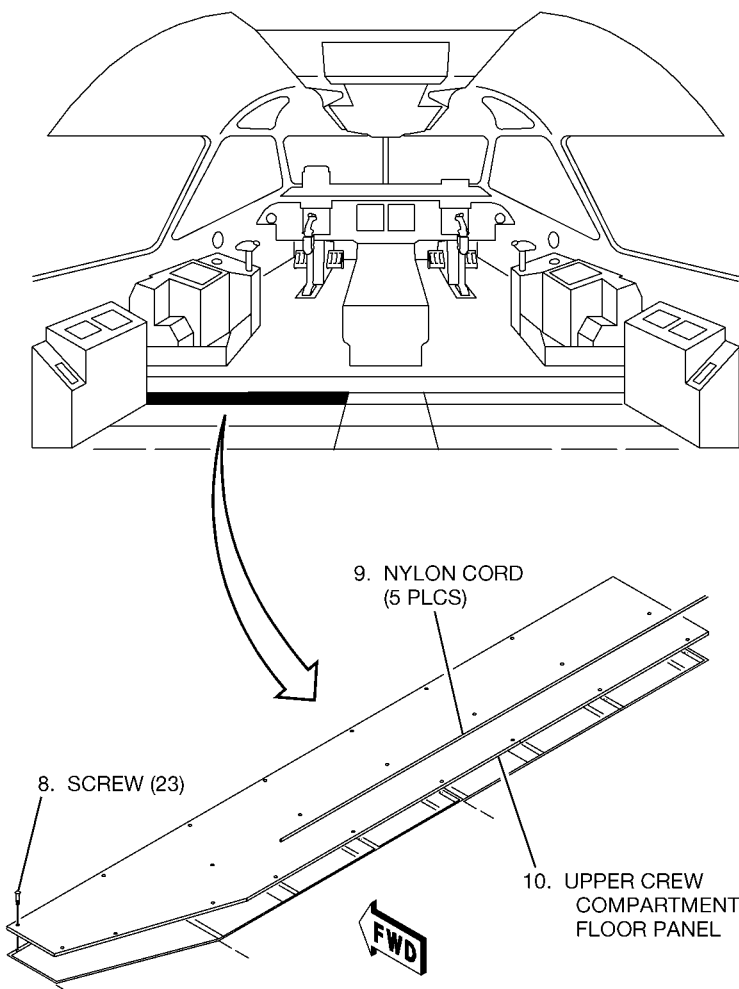
TO 1300i-2-27JG-30-2

8. Remove screws from upper crew compartment floor panel (215BZY).

NOTE

Nylon cords are being eliminated by attrition, not all floor panels will have nylon cords.

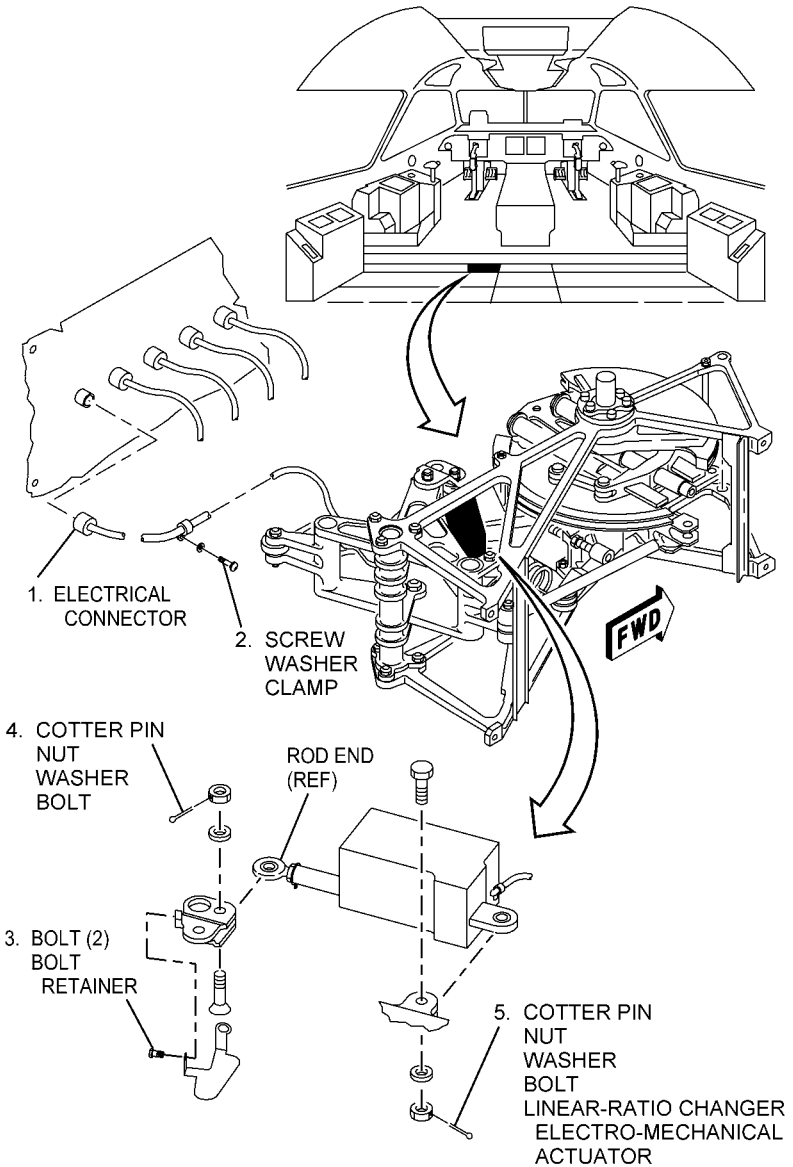
9. Remove and discard nylon cords.
10. Remove upper crew compartment floor panel (215BZY).



ICN-88277-G2731155-003-01

2-2. REMOVAL.

1. Disconnect electrical connector.
2. Remove screw, washer, and clamp.
3. Remove bolts and bolt retainer.
4. Remove cotter pin, nut, washer, and bolt from linear-ratio changer electro-mechanical actuator rod end.
5. Remove cotter pin, nut, washer, bolt, and actuator.



ICN-88277-G2731156-006-01

**LINEAR-RATIO CHANGER
ELECTRO-MECHANICAL ACTUATOR
INSTALLATION
(27-31-12-3)**

FUNCTIONAL INPUT CONDITIONS:

Applicability:	Task
All	All

Additional information:

This procedure consists of the following tasks:

- 3-1. Installation.
- 3-2. Follow-on maintenance.

Additional data:	Task
TO 1300i-2-05JG-10-1	3-2
TO 1300i-2-10JG-60-1	3-2
TO 1300i-2-27FI-00-1	3-2
TO 1300i-2-27JG-30-1	3-2
TO 1300i-2-53JG-20-1	3-2

Personnel recommended:	Task
One	All

Safety conditions:	Task
NA	--

Support equipment:

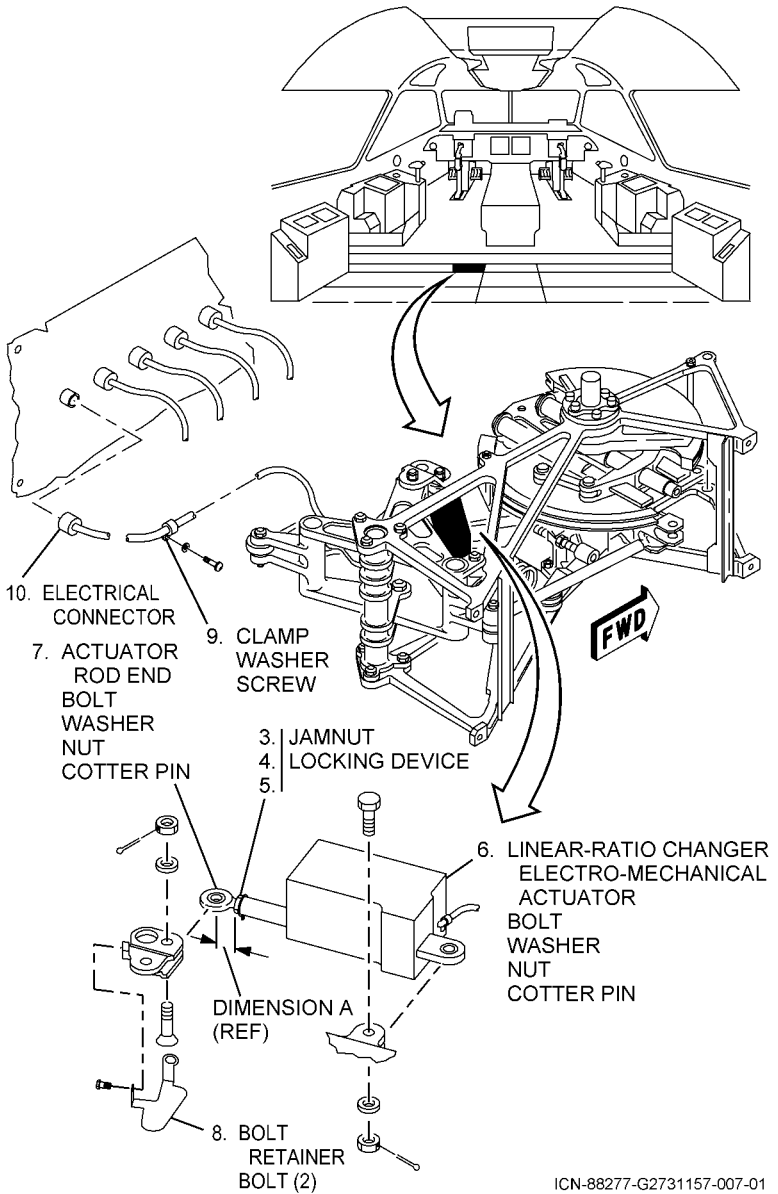
<u>Nomenclature</u>	<u>PN</u>	<u>Specification</u>	<u>Qty</u>	<u>Task</u>
NA	--	--	--	--

Supplies:

<u>Nomenclature</u>	<u>PN</u>	<u>Specification</u>	<u>Qty</u>	<u>Task</u>
Pin, Cotter	MS24665-151	--	2	3-1
Wire, Safety	MS20995NC20	--	AR	3-1

3-1. INSTALLATION.

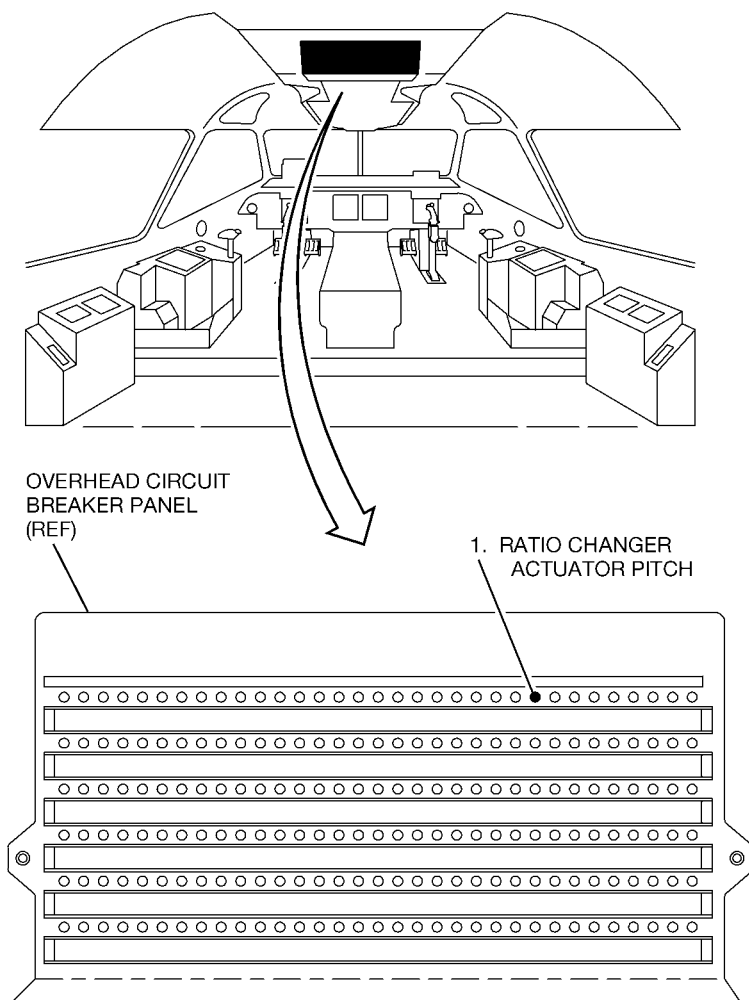
1. Review "Section 1 (General Information)" of this TO for system general warnings, cautions, and notes.
2. Review task "Functional Input Conditions" page for task specific safety conditions.
3. Remove safety wire from jamnut and locking device; loosen jamnut and disengage locking device.
4. Adjust actuator rod end length; engage locking device, and tighten jamnut. Measure dimension A from the center of the bearing to the face of jamnut.
 - Dimension A measures 0.500 inch minimum.
5. Safety wire jamnut and locking device.
6. Position linear-ratio changer electro-mechanical actuator; install bolt, washer, nut, and cotter pin.
7. Position actuator rod end; install bolt, washer, nut, and cotter pin.
8. Position bolt retainer; install bolts.
9. Position clamp; install washer and screw.
10. Connect electrical connector (2731PP001).



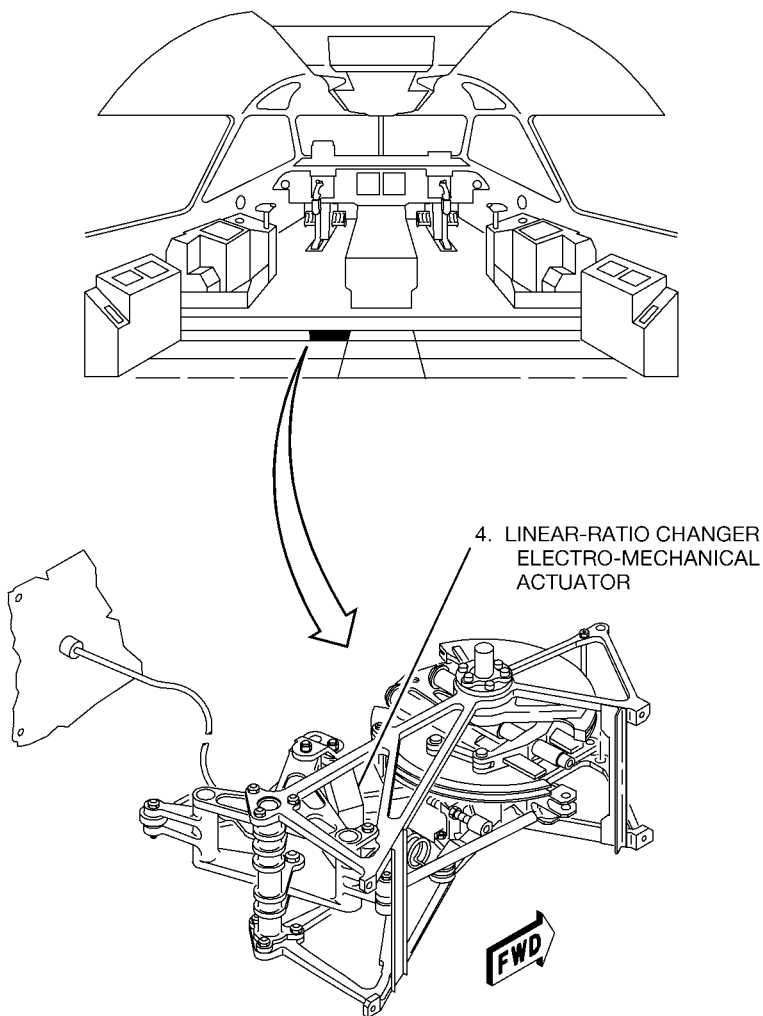
ICN-88277-G2731157-007-01

3-2. FOLLOW-ON MAINTENANCE.

1. Close **RATIO CHANGER ACTUATOR PITCH** circuit breaker on overhead circuit breaker panel, row **A**, column **25**.
2. Remove elevator aircraft ground safety lock (05-10-01, task 01-6).
3. Connect external electrical power (10-61-01, task 01-1).

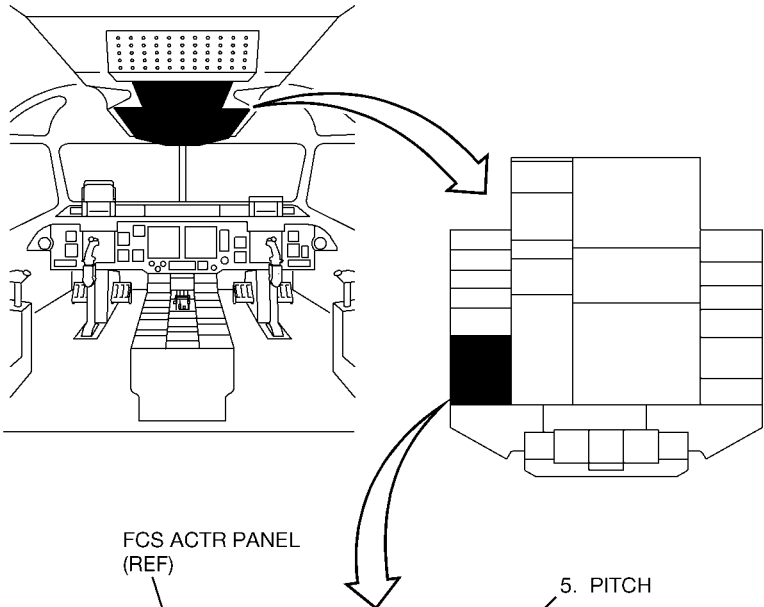


4. Observe linear-ratio changer electro-mechanical actuator.
 - Actuator is retracted (27-31-AD-00).



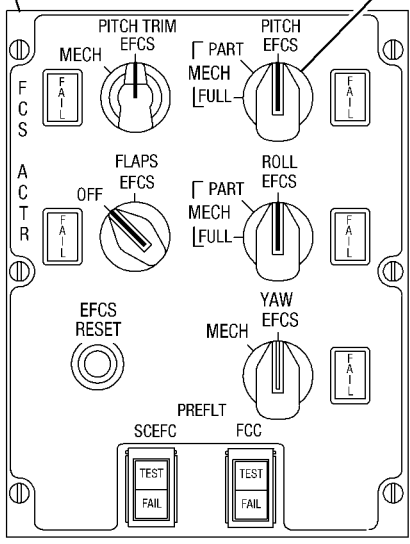
ICN-88277-G2731160-003-01

5. Rotate **PITCH** switch on **FCS ACTR** panel to **PART MECH**.



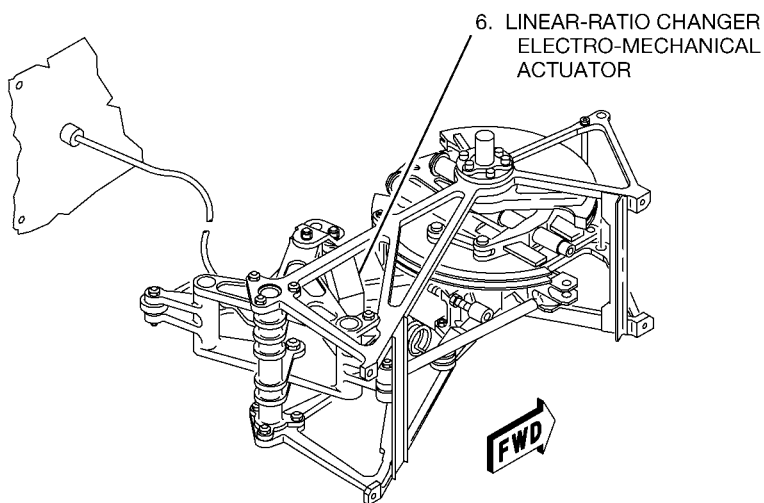
FCS ACTR PANEL
(REF)

5. PITCH



ICN-88277-G2731161-002-01

6. Observe linear-ratio changer electro-mechanical actuator.
 - Actuator extends (27-31-AD-00).

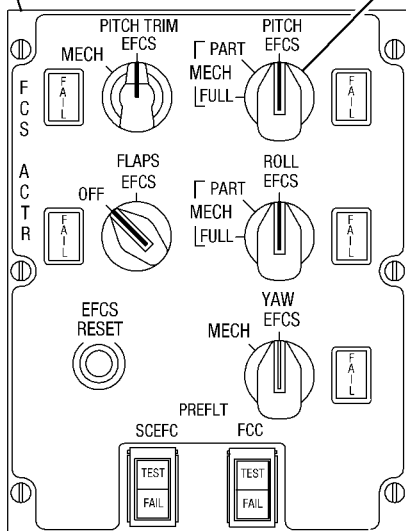


ICN-88277-G2731162-003-01

7. Rotate **PITCH** switch on **FCS ACTR** panel to **FULL MECH.**

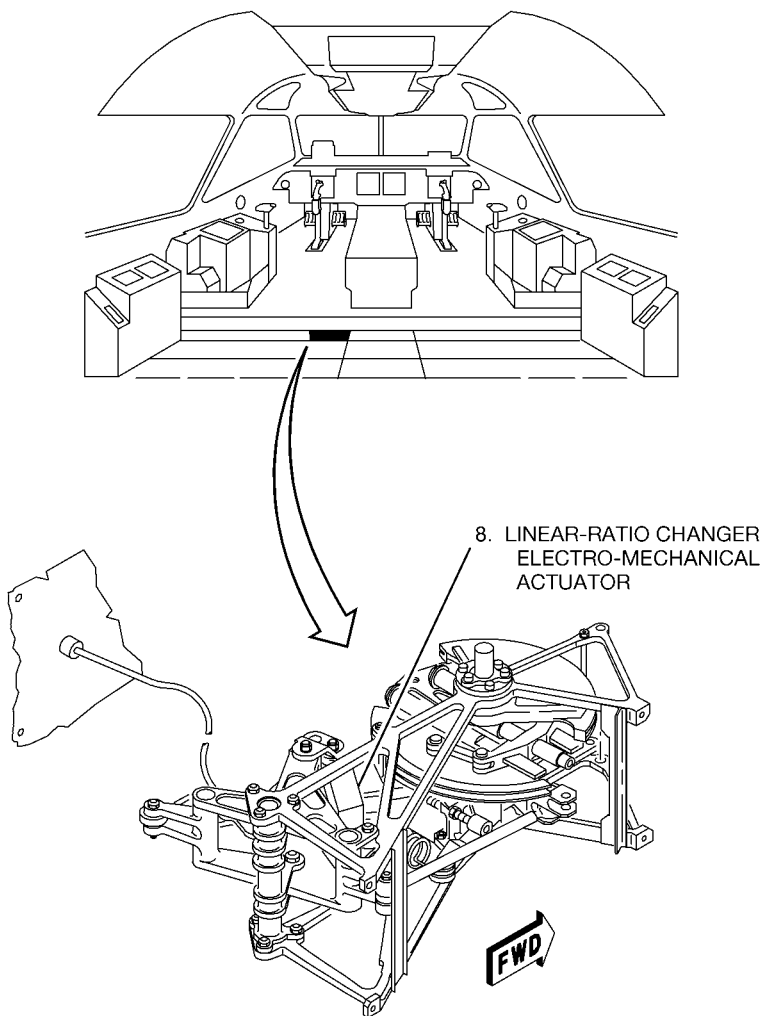
FCS ACTR PANEL
(REF)

7. PITCH



ICN-88277-G2731163-002-01

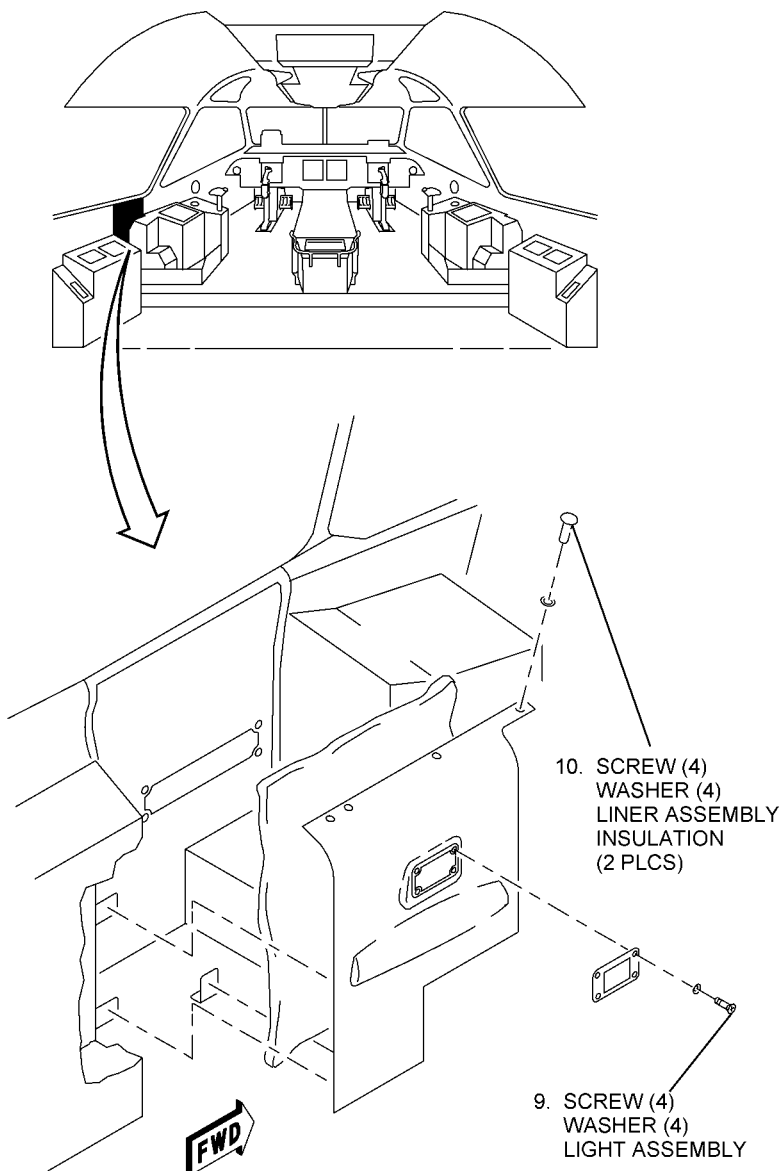
8. Observe linear-ratio changer electro-mechanical actuator.
 - Actuator is retracted (27-31-AD-00).



ICN-88277-G2731164-003-01

TO 1300i-2-27JG-30-2

9. Position light assembly; install washers and screws.
10. Position insulation and liner assembly (213FZM); install washers and screws.
11. Perform mechanical test-pitch maintenance built-in test (27-30-01).
12. Perform upper crew compartment floor panel installation (215BZY) (53-21-10, tasks 3-1 and 3-2).



ICN-88277-G2731165-006-01

ELEVATOR CONTROL MECHANISM ASSEMBLY (27-31-13)

MASTER INPUT CONDITIONS:

Reference designators:

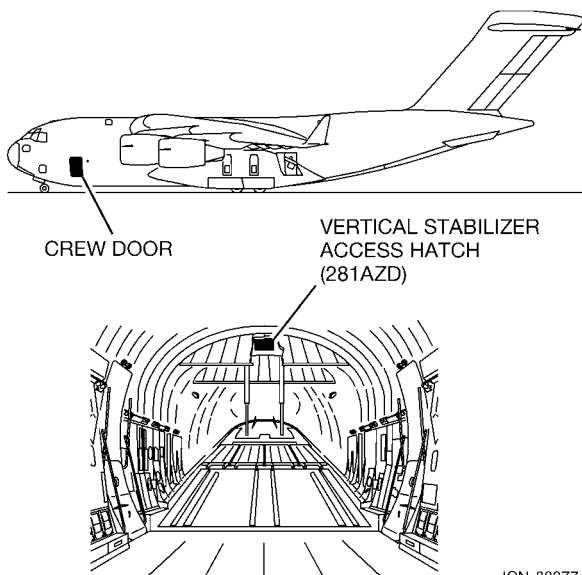
2731AA005

Elevator Control Mechanism Assembly

Applicable functions:

- 2 Removal.
- 3 Installation.

Access data:



ICN-88277-G2731171-004-01

ELEVATOR CONTROL MECHANISM ASSEMBLY REMOVAL (27-31-13-2)

FUNCTIONAL INPUT CONDITIONS:

Applicability:

All

Task

All

Additional information:

This procedure consists of the following tasks:

- 2-1. Preparation.
- 2-2. Removal.

Additional data:

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

Task

2-1

TO 1300i-2-05JG-10-1

2-1

Personnel recommended:

Two

Task

All

Person (A) performs task.

Person (B) assists person (A).

Safety conditions:

NA

Task

--

Support equipment:

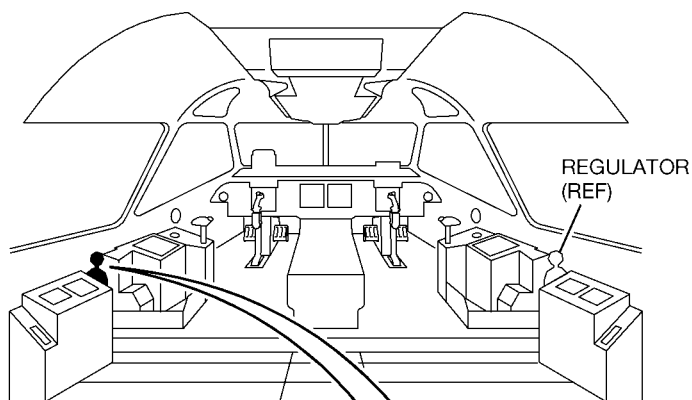
<u>Nomenclature</u>	<u>PN</u>	<u>Specification</u>	<u>Qty</u>	<u>Task</u>
Kit, Rig Pin	17G140015-1	--	--	--
Pin 5-5, Rig	17G140015-13	--	1	2-1
Lock, Control Mechanism	17G140030-1	--	1	2-1

Supplies:

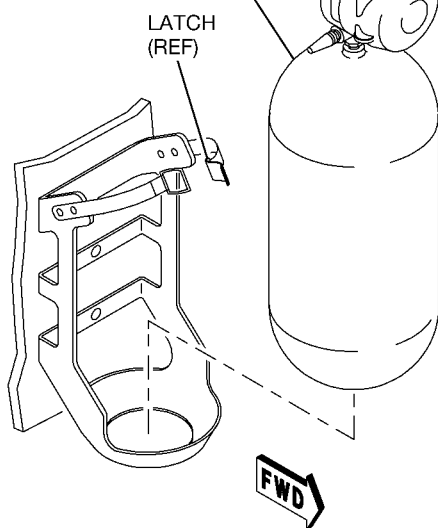
<u>Nomenclature</u>	<u>PN</u>	<u>Specification</u>	<u>Qty</u>	<u>Task</u>
NA	--	--	--	--

2-1. PREPARATION.

1. Review "Section 1 (General Information)" of this TO for system general warnings, cautions, and notes.
2. Review task "Functional Input Conditions" page for task specific safety conditions.
3. (A) Release latch and remove crew portable oxygen cylinder and regulator.



3. CREW PORTABLE OXYGEN
CYLINDER AND REGULATOR
(2 PLCS)



ICN-88277-G2731172-003-01

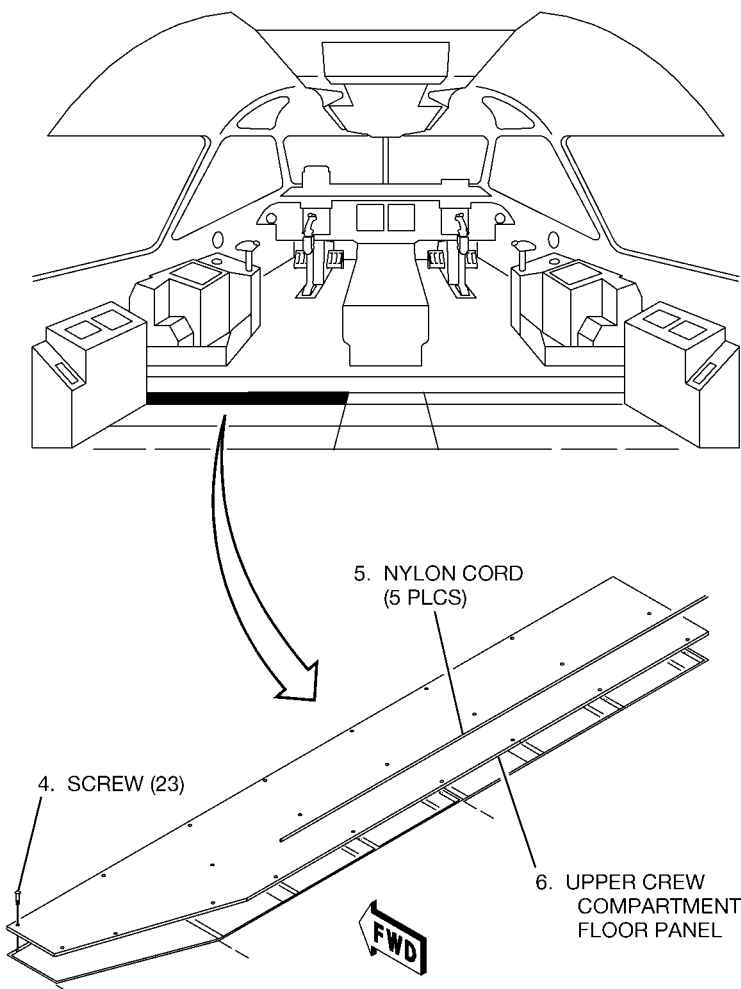
TO 1300i-2-27JG-30-2

4. (A) Remove screws from upper crew compartment floor panel (215BZY).

NOTE

Nylon cords are being eliminated by attrition, not all floor panels will have nylon cords.

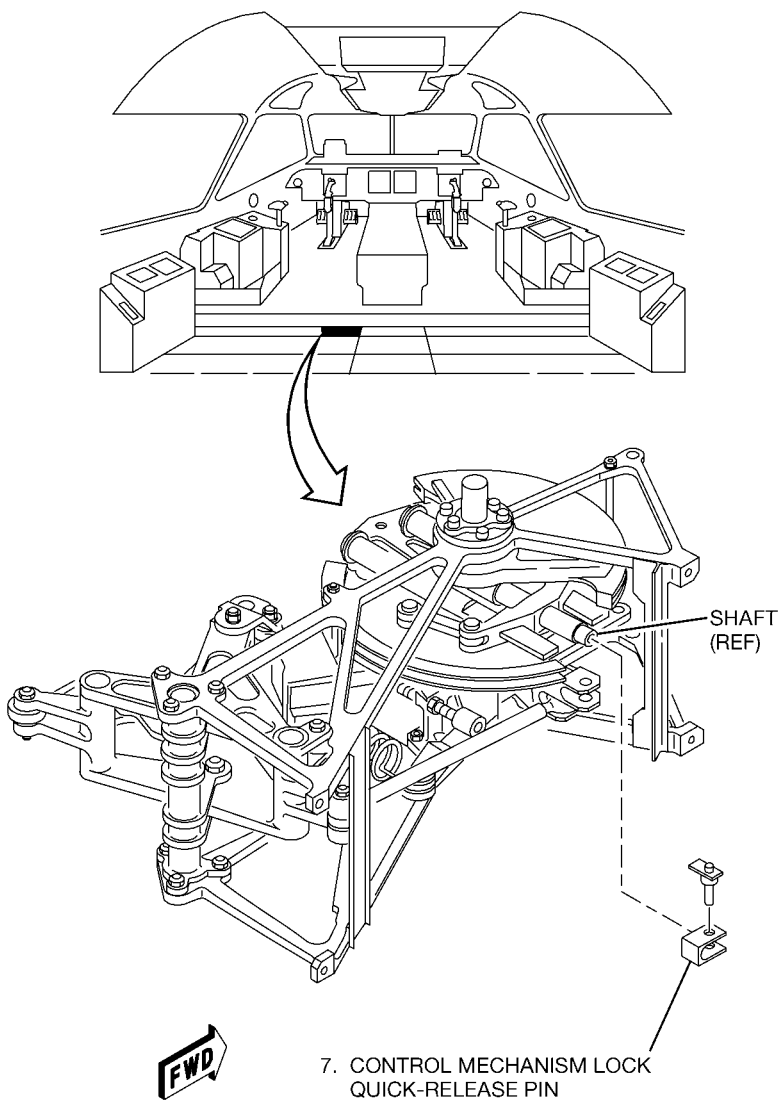
5. (A) Remove and discard nylon cords.
6. (A) Remove upper crew compartment floor panel (215BZY).



ICN-88277-G2731173-002-01

TO 1300i-2-27JG-30-2

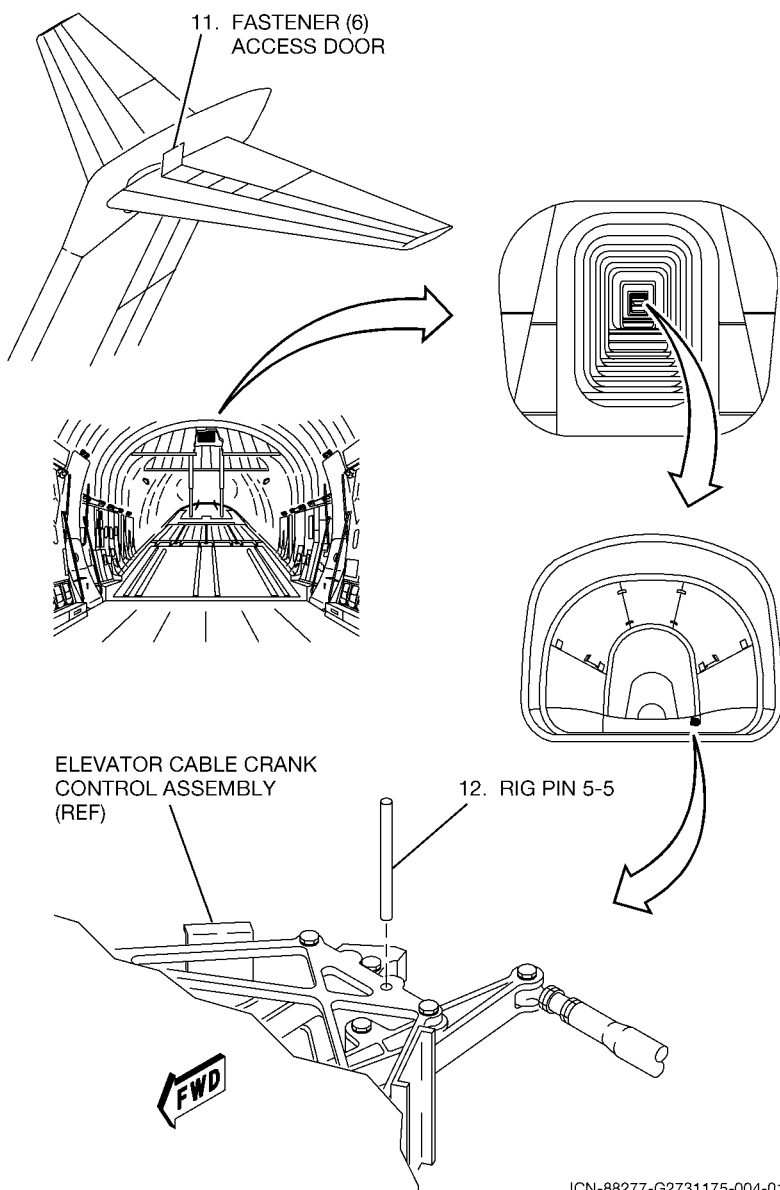
7. (A,B) Compress and hold non-intersecting halves of tension regulator and slide control mechanism lock over shaft and install quick-release pin.
8. Install elevator aircraft ground safety lock (05-10-01, task 01-5).
9. Install rudder aircraft ground safety lock (05-10-01, task 01-1).



ICN-88277-G2731174-002-01

TO 1300i-2-27JG-30-2

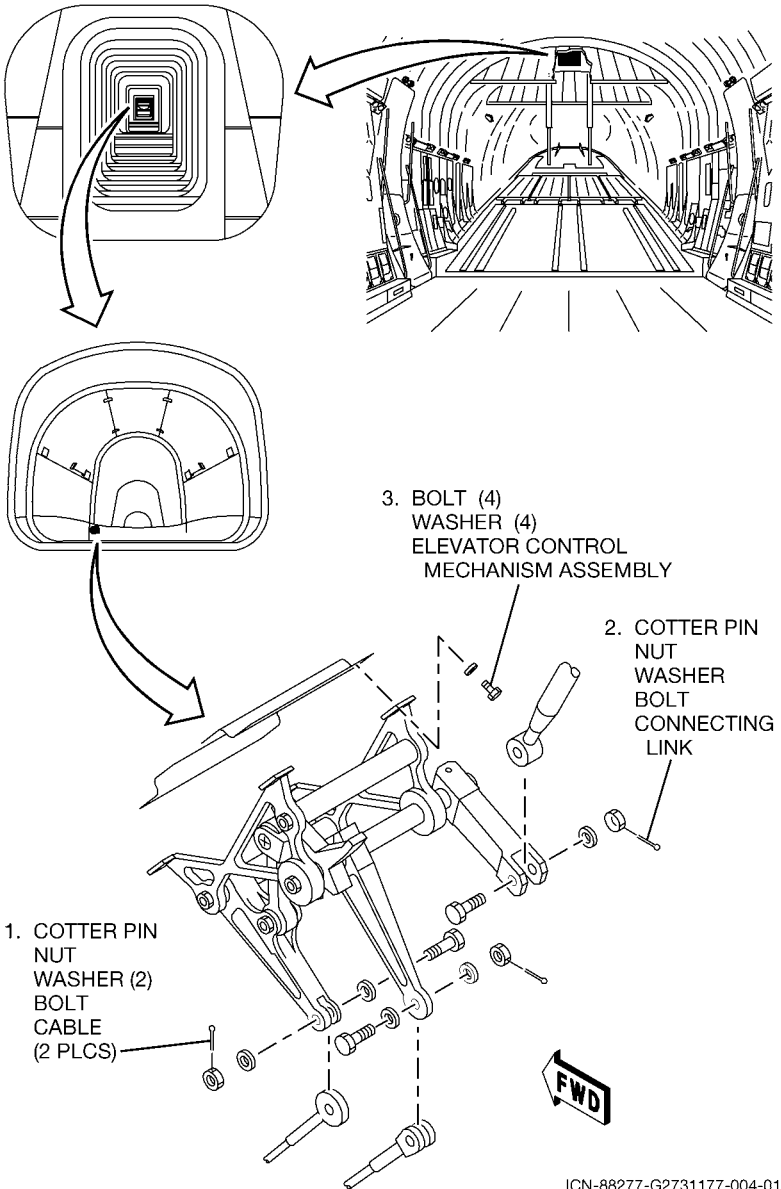
10. Enter horizontal stabilizer (00-00-02).
11. (A) Loosen fasteners and open access door (313ATD).
12. (A) Install rig pin 5-5 in elevator cable crank control assembly.



ICN-88277-G2731175-004-01

2-2. REMOVAL.

1. (A,B) Remove cotter pins, nuts, washers, bolts; disconnect and secure cables.
2. (A,B) Remove cotter pin, nut, washer, bolt, and disconnect connecting link.
3. (A,B) Remove bolts, washers, and elevator control mechanism assembly.



ICN-88277-G2731177-004-01

**ELEVATOR CONTROL MECHANISM
ASSEMBLY INSTALLATION
(27-31-13-3)**

FUNCTIONAL INPUT CONDITIONS:

Applicability:	Task
All	All

Additional information:

This procedure consists of the following tasks:

- 3-1. Installation.
- 3-2. Follow-on maintenance.

Additional data:	Task
TO 1300i-2-00JG-00-1	3-2
TO 1300i-2-05JG-10-1	3-2
TO 1300i-2-27JG-30-1	3-2
TO 1300i-2-53JG-20-1	3-2
TO 1300i-23	3-1

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>
Pin, Cotter	MS24665-151	--	3	3-1
Sealant	PR-1436G	AMS 3265	AR	3-1
Sealant	PR-1775	MIL-PRF-81733	AR	3-1

3-1. INSTALLATION.

1. Review "Section 1 (General Information)" of this TO for system general warnings, cautions, and notes.
2. Review task "Functional Input Conditions" page for task specific safety conditions.
3. Perform faying surface sealing using MIL-PRF-81733 (TO 1300i-23, Chapter 1, Section III).
4. Perform wet fastener installation using AMS 3265 (TO 1300i-23, Chapter 1, Section III).
5. (A,B) Position elevator control mechanism assembly; install washers and bolts.
6. (A,B) Position connecting link; install bolt, washer, nut, and cotter pin.
7. (A,B) Position cables; install bolts, washers, nuts, and cotter pins.