STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-R01
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	MLG W/W				012	APR 22/04

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
REPLACE	MAIN GEAR DOOR LATCH ACTUATOR		ALL	ALL

ZONES	ACCESS PANELS
143 144	1004 NOTE

MECH | INSP

MPD ITEM NUMBER

REPLACE THE MAIN LANDING GEAR DOOR LATCH ACTUATOR. 32-32-13-4A

ACCESS NOTE: SPECIAL ACCESS 1004 REQUIRES OPENING OF THE LANDING GEAR WHEEL WELL DOORS AND INSTALLING SAFETY LOCKS IN ACCORDANCE WITH MAINTENANCE MANUAL PROCEDURE 32-00-15.

THIS CARD IS NOT A SCHEDULED MAINTENANCE TASK. IT IS A COMPONENT CHANGE CARD AND IT IS PROVIDED FOR OPERATOR CONVENIENCE DURING UNSCHEDULED MAINTENANCE ACTIVITIES. SEE APPENDIX A OF THE 767 MAINTENANCE PLANNING DATA (MPD) DOCUMENT,D622T001, FOR A DESCRIPTION OF THE COMPONENT CHANGE CARDS.

1. Remove the Door Latch Actuator for the Main Landing Gear (Fig. 401)

A. References

(1) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(2) AMM 32-00-15/201, Landing Gear Door Locks

(3) AMM 32-00-20/201, Landing Gear Downlocks

B. Prepare for Removal

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO INSTALL THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(2) Open the doors for the main landing gear and install the door locks (AMM 32-00-15/201).

(3) Remove the pressure from the center hydraulic system and hydraulic reservoir (AMM 29-11-00/201).

(4) Remove the access panel (10) from the forward side of the uplock mechanism housing.

C. Procedure

(1) Remove the bolts (2, 4) to disconnect the actuator from the aft housing.

(2) Disconnect the hydraulic lines from the actuator (1).

(3) Install plugs in the ports and hoses that were disconnected.

(4) Remove the latch actuator (1).

(5) Remove the union fittings (8) and the flow restrictor (6) from the latch actuator (1) if they are not installed on the replacement actuator.

2. Install the Door Latch Actuator for the Main Landing Gear (Fig. 401)

A. Consumable Materials

(1) D00153 Fluid, Hydraulic - BMS 3-11, Type IV

B. Parts

AMM		NOMENCLATURE	AIPC		
FIG	ITEM		SUBJECT	FIG	ITEM
401	1	Actuator	32-32-13	01	10
	2	Bolt			13
	3	Washer			20
	4	Bolt			16
	5	Washer			22
	6	Flow Restrictor			40
	7	O-ring			50
	8	Union			35

MECH | INSP

C. References

(1) AMM 12-12-01/301, Hydraulic Systems

(2) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(3) AMM 32-00-15/201, Landing Gear Door Locks

(4) AMM 32-00-20/201, Landing Gear Downlocks

D. Procedure to Install the Door Latch Actuator

(1) If the flow restrictor (6) and union fittings (8) are not installed on the replacement latch actuator (1), do the steps that follow:

(a) Flush the restrictor with hydraulic fluid before installation.

(b) Lubricate the new O-rings (7) and threaded fittings with hydraulic fluid.

(c) Install the union fittings (8) and flow restrictor (6) with new O-rings (7) in the valve ports.

(2) Fill the actuator (1) with hydraulic fluid.

(3) Install caps on the ports.

(4) Make sure that pressure is removed from the center hydraulic system and reservoir (AMM 29-11-00/201).

(5) Put the actuator (1) in position in the housing and connect the hydraulic lines.

(6) Install the bolts (2, 4) and washers (3, 5) to connect the actuator (1) to the aft side of the housing.

(7) Tighten the bolts (2, 4) to 115-135 pound-inches.

(8) Install lockwire on the bolt heads (2, 4).

E. Procedure to Make Sure the Actuator is Installed Correctly.

(1) Pressurize the center hydraulic system (AMM 29-11-00/201).

MECH | INSP

WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO REMOVE THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(2) Remove the door locks from the main landing gear doors (AMM 32-00-15/201).

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF THE AREA AROUND THE MAIN LANDING GEAR DOORS AND THE TAIL SKID (IF APPLICABLE). IF THE AREA IS NOT CLEAR INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(3) Move the control lever for the landing gear from DN to UP to DN two or three times. Make sure that the main landing gear doors open and latch closed.

WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO INSTALL THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(4) Open the doors for the main landing gear and install the door locks (AMM 32-00-15/201).

(5) Make sure there are no leaks at the hydraulic connections.

F. Put the Airplane Back to Its Usual Condition.

(1) Remove the pressure from the center hydraulic system if it is not necessary (AMM 29-11-00/201).

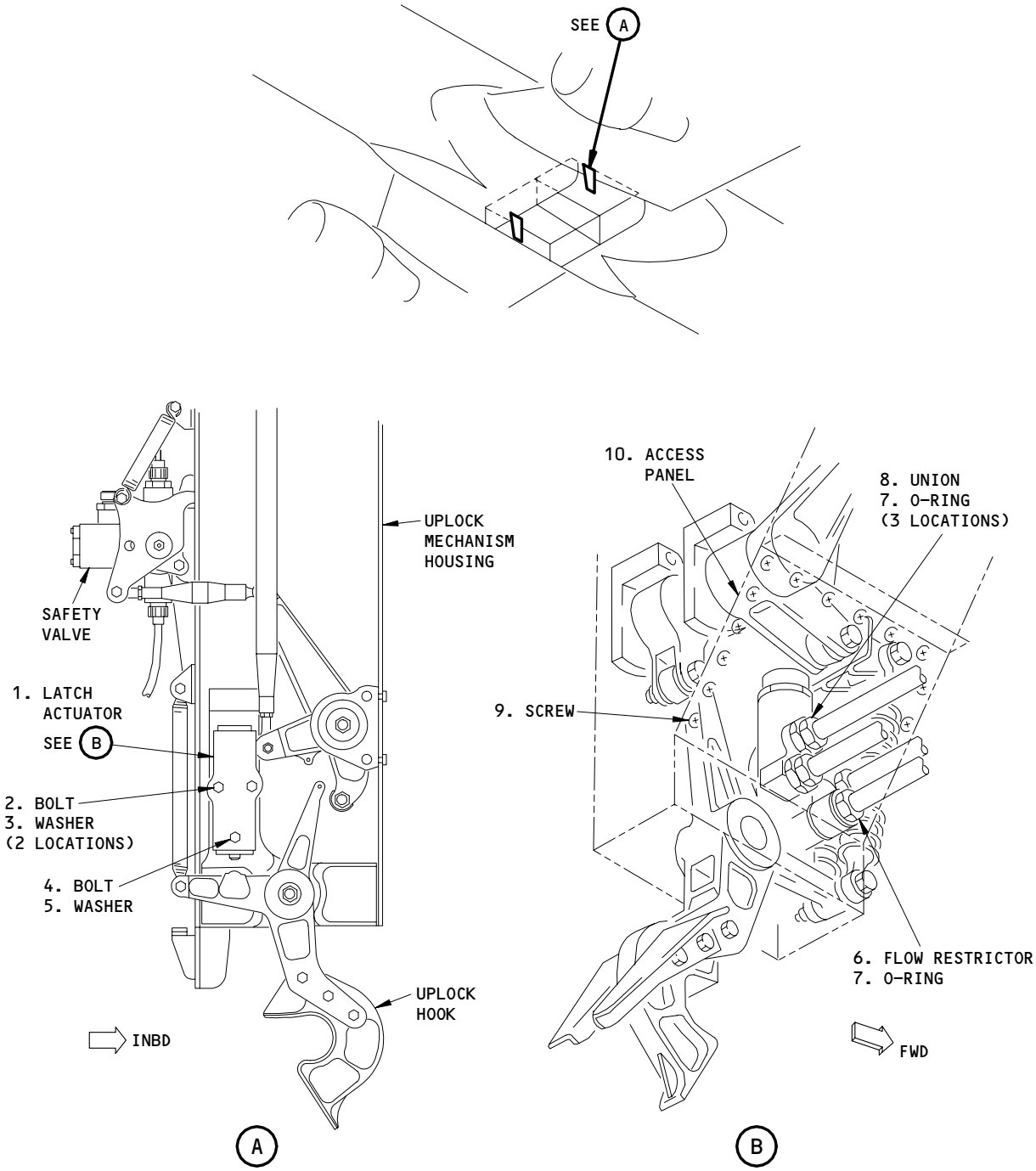
(2) Replace the access panel on the forward side of the mechanism housing.

(3) Make sure the fluid in the hydraulic reservoirs is at the correct level. Fill if it is necessary (AMM 12-12-01/301).

WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO REMOVE THE DOOR LOCKS. THE OPEN DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

MECH	INSP

(4) Remove the door locks from the main landing gear door and close the doors (AMM 32-00-15/201).



Main Landing Gear Door Latch Actuator Installation
Figure 401

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-R02
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	LNDG GEAR				012	DEC 22/07

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
REPLACE	MAIN GEAR TRUCK POSITIONER		NOTE	ALL

ZONES	ACCESS PANELS
731 741	1004 NOTE

MECH	INSP	MPD ITEM NUMBER

REPLACE THE MAIN LANDING GEAR TRUCK POSITIONER. 32-32-18-4A

ACCESS NOTE: SPECIAL ACCESS 1004 REQUIRES OPENING OF THE LANDING GEAR WHEEL WELL DOORS AND INSTALLING SAFETY LOCKS IN ACCORDANCE WITH MAINTENANCE MANUAL PROCEDURE 32-00-15.

AIRPLANE NOTE: THIS TASK IS APPLICABLE TO ALL AIRPLANE MODELS EXCEPT THE 767-400ER.

THIS CARD IS NOT A SCHEDULED MAINTENANCE TASK. IT IS A COMPONENT CHANGE CARD AND IT IS PROVIDED FOR OPERATOR CONVENIENCE DURING UNSCHEDULED MAINTENANCE ACTIVITIES. SEE APPENDIX A OF THE 767 MAINTENANCE PLANNING DATA (MPD) DOCUMENT,D622T001, FOR A DESCRIPTION OF THE COMPONENT CHANGE CARDS.

1. Remove the Truck Positioner for the Main Landing Gear (Fig. 401)

   A. References

      (1) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

      (2) AMM 32-00-15/201, Landing Gear Door Locks

      (3) AMM 32-00-20/201, Landing Gear Downlocks

   B. Prepare for the Removal

      (1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

MECH | INSP

WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO INSTALL THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(2) Open the doors for the landing gear and install the door locks (AMM 32-00-15/201).

(3) Remove the pressure from the center hydrualic system and hydraulic reservoir (AMM 29-11-00/201).

C. Remove the Truck Positioner

(1) Disconnect the hydraulic lines from the truck positioner (6) (Detail A).

(2) Install plugs in the hydraulic lines and fittings.

(3) Remove the pin (2). This disconnects the aft end of the truck positioner (6) from the truck beam for the main landing gear and the hydraulic hose support (View A-A).

(4) Remove the bolt (11). This disconnects the forward end of the truck positioner (6) from the inner cylinder of the shock strut (View B-B).

(5) Remove the truck positioner (6).

2. Install the Truck Positioner for the Main Landing Gear (Fig. 401)

NOTE: The Wear Limits for the component that follows are given in 32-32-18/601.

A. References

(1) AMM 12-12-01/301, Hydraulic Systems

(2) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(3) AMM 32-00-15/201, Landing Gear Door Locks

B. Consumable Materials

(1) A50110 Sealant - BMS 5-45 Class B-2
A50155 Sealant - BMS 5-45 Class C

(2) D00633 Grease - BMS3-33 (Preferred)

(3) D00013 Grease - MIL-PRF-23827 (Supersedes MIL-G-23827) (Alternate)

C. Parts

AMM		NOMENCLATURE	AIPC		
FIG	ITEM		SUBJECT	FIG	ITEM
401	1	Washer	32-32-18	01	30
	2	Pin			19
	3	Washer			25
	4	Bolt			18
	5	Retainer			33
	6	Truck Positioner			65
	7	Washer			20
	8	Bolt			17
	9	Nut			59
	10	Washer			55
	11	Bolt			48
	12	Pin			47

D. Procedure

(1) Apply grease and install the bolt (11), nut (9), washer (10), and cotter pin (12). This connects the forward end of the truck positioner (6) to the inner cylinder of the shock strut (View B-B). Tighten the nut (9) to 1500-3300 pound-inches, with a target value of 2400 pound-inches.

(2) Remove the cap from port AA and open the check valve sufficiently to extend the truck positioner.

(3) Slowly extend the positioner until the aft end of the positioner is aligned with the lug on the truck beam.

NOTE: Do not extend the positioner more than the necessary length.

(4) Apply grease and install the pin (2), washers (1 and 7), and bolt (8). This connects the aft end of the truck positioner (6) to the truck beam for the main landing gear (View A-A). Tighten the bolt (8) to 585-715 pound-inches.

MECH | INSP

(5) Install lockwire on the bolt (8).

(6) Apply wet sealant to the shank of the bolt (4) with BMS 5-45 sealant.

(7) Install the retainer (5), bolt (4), and washer (3) on the hose support.

(8) Tighten the bolt (4) to 180-220 pound-inches (View A-A).

(9) Fill the bolt hole in the hose support with sealant.

(10) Install lockwire between the bolt head (4) and the retainer (5).

(11) Make sure the pressure is removed from the center hydraulic system and reservoir (AMM 29-11-00/201).

CAUTION: MAKE SURE THE HYDRAULIC HOSES ARE NOT TWISTED WHEN THEY ARE INSTALLED. TWISTED HOSES CAN RUB AGAINST THE HOSE SUPPORT AND CAUSE WEAR OF THE HOSES. A BLOCK CLAMP IS ALSO AVAILABLE AND CAN BE INSTALLED ON THE HYDRAULIC LINES (FIG. 402). THIS WILL PREVENT DAMAGE TO THE HOSES FROM THE HOSE SUPPORT.

(12) Connect the hydraulic lines to the truck positioner (6).

(13) Lubricate the points where the truck positioner is attached to the truck beam and the shock strut. Use the grease fittings at those locations.

(14) Pressurize the center hydraulic system (AMM 29-11-00/201).

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE CLEAR OF THE AREA AROUND THE TAIL SKID (IF APPLICABLE). IF THE AREA IS NOT CLEAR INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(15) Move the control lever for the landing gear from DN to UP to DN. Stay in each position for 3 or 4 minutes.

(16) Examine the positioner for hydraulic leaks.

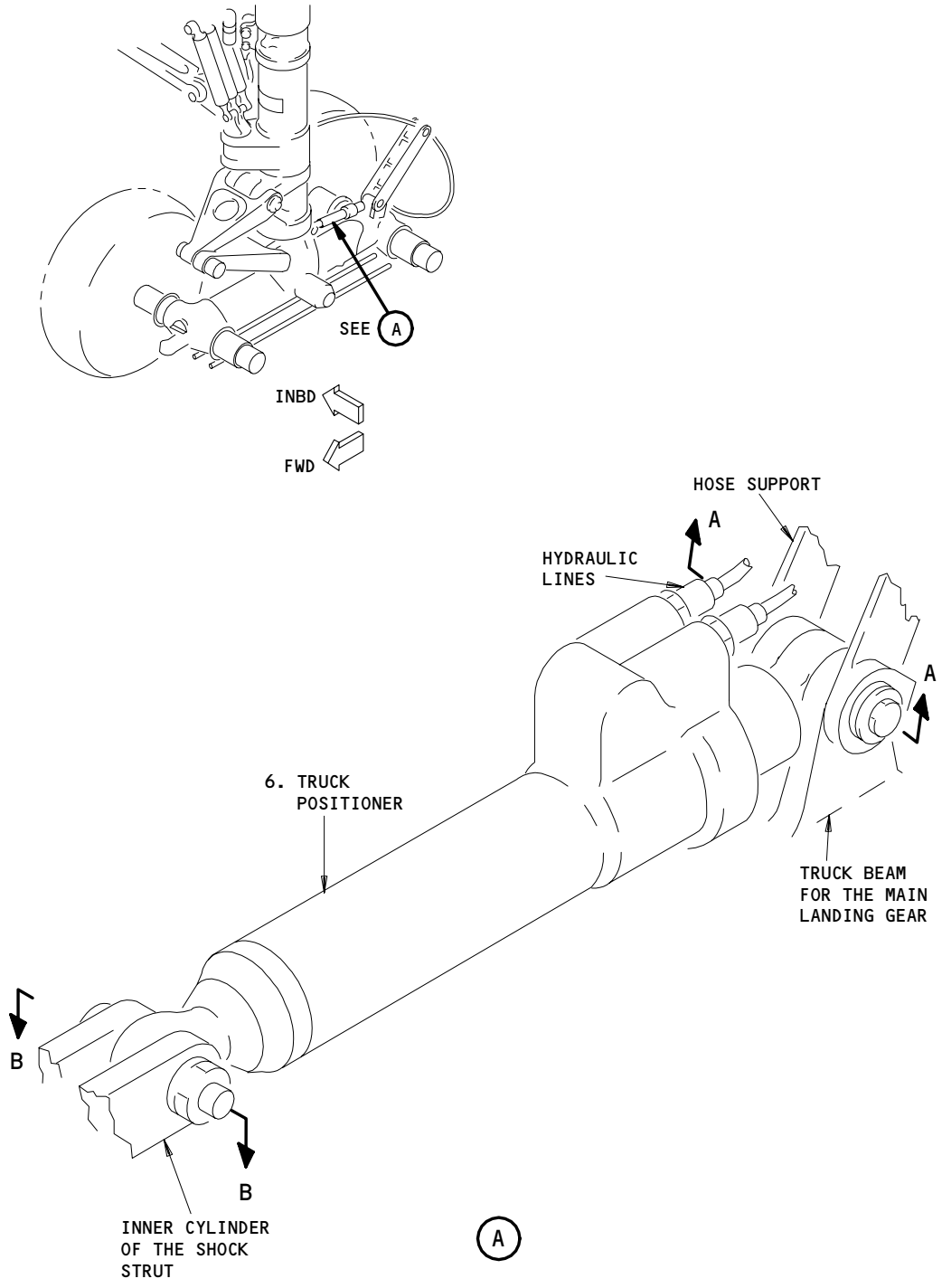
(17) Make sure the fluid in the hydraulic reservoirs is at the correct level. Fill if it is necessary (AMM 12-12-01/301).

MECH	INSP

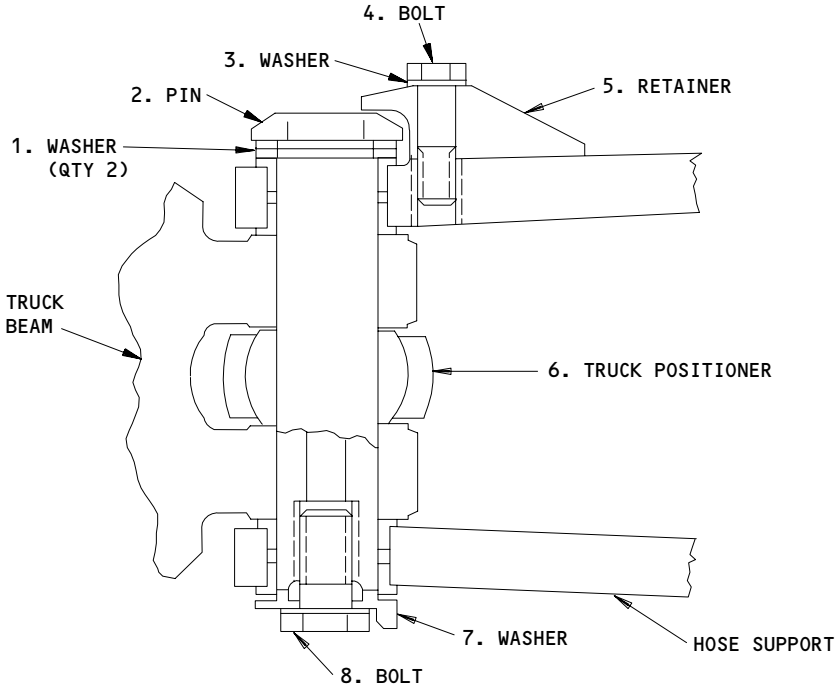
WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO REMOVE THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(18) Remove the door locks from the landing gear doors and close the doors (AMM 32-00-15/201).

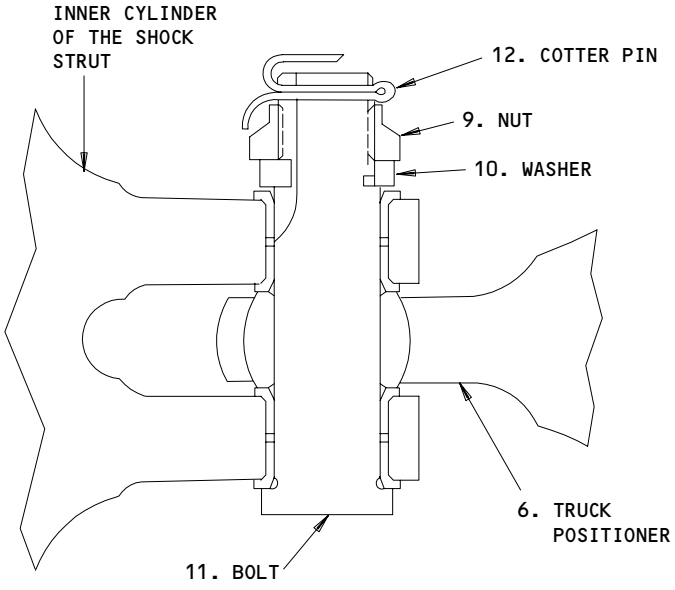
(19) Remove the hydraulic power from the hydraulic system if it is not necessary (AMM 29-11-00/201).



Main Landing Gear Truck Positioner Installation
Figure 401 (Sheet 1)

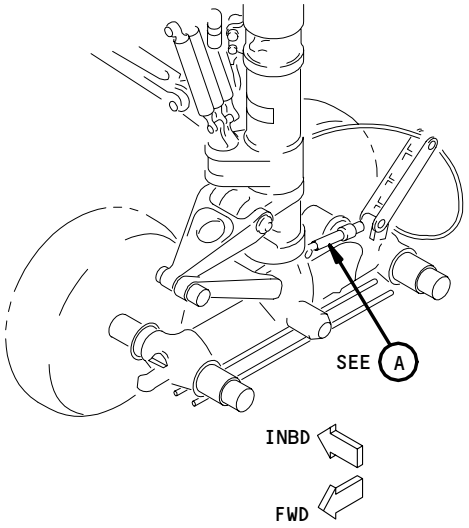


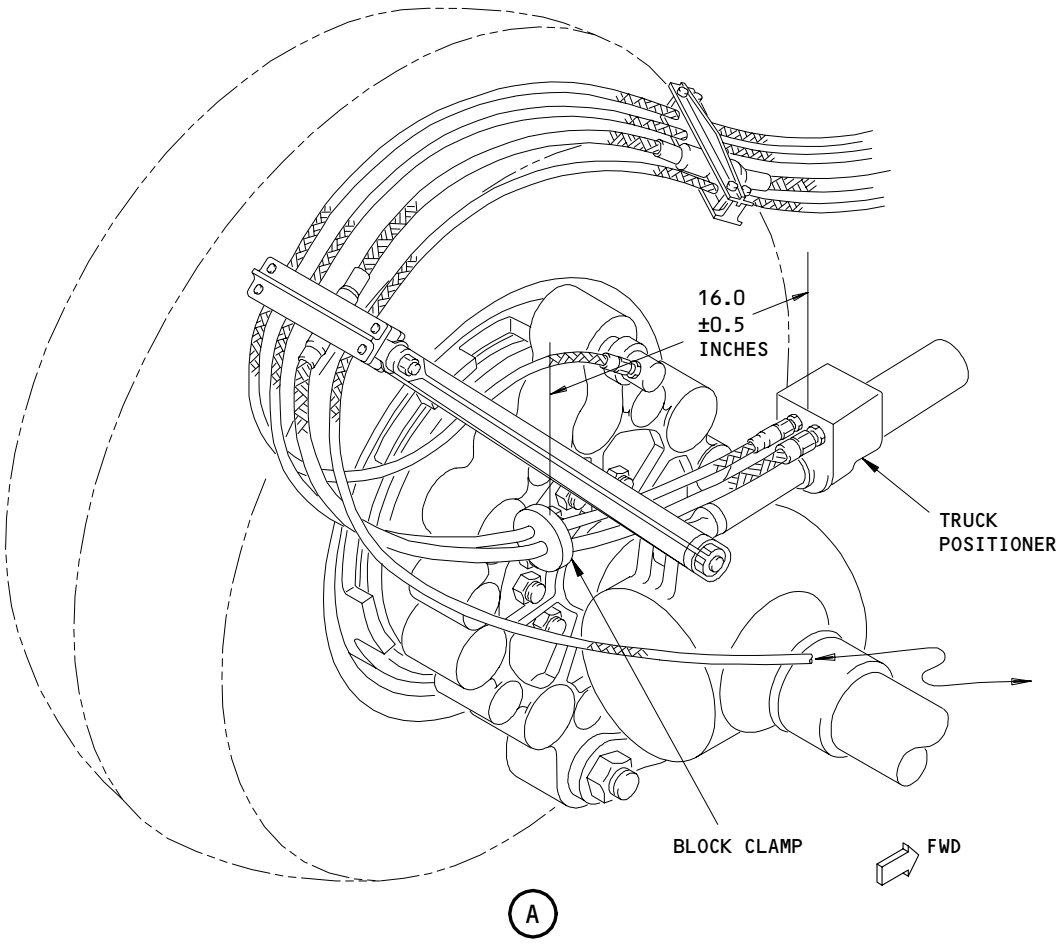
A-A



B-B

Main Landing Gear Truck Positioner Installation
Figure 401 (Sheet 2)





Installation of Block Clamp on Hydraulic Lines for Truck Positioner
Figure 402

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-R04
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
ELECT	MAIN EE CTR				017	APR 22/05

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
REPLACE	ANTISKID/AUTOBRAKE CONTROL UNIT		ALL	ALL

ZONES	ACCESS PANELS
119	119AL

MECH	INSP	MPD ITEM NUMBER

REPLACE THE ANTISKID/AUTOBRAKE CONTROL UNIT. 32-42-01-4A

THIS CARD IS NOT A SCHEDULED MAINTENANCE TASK. IT IS A COMPONENT CHANGE CARD AND IT IS PROVIDED FOR OPERATOR CONVENIENCE DURING UNSCHEDULED MAINTENANCE ACTIVITIES. SEE APPENDIX A OF THE 767 MAINTENANCE PLANNING DATA (MPD) DOCUMENT,D622T001, FOR A DESCRIPTION OF THE COMPONENT CHANGE CARDS.

ANTISKID/AUTOBRAKE CONTROL UNIT AND CIRCUIT CARD - REMOVAL/INSTALLATION

1. General

A. This subject contains five tasks. The first task removes the antiskid/autobrake control unit. The second task installs the antiskid/autobrake control unit. The third task does a BITE test of the antiskid/autobrake control unit. The fourth task is a removal procedure for circuit cards in the antiskid/autobrake control unit. The fifth task is an installation procedure for circuit cards in the antiskid/autobrake control unit.

B. The antiskid/autobrake control unit (M102) is installed on a tray and held by two hold down extractors (self-locking mechanism). No tools are necessary for the removal or the installation of the unit (AMM 20-10-01/401).

C. The unit contains static sensitive devices. Use the procedure in AMM 20-41-01/201 for the applicable instructions.

2. Remove the Antiskid/Autobrake Control Unit (Fig. 401)

A. References

(1) AMM 06-41-00/201, Fuselage (Major Zones 100 and 200) Access Doors and Panels

(2) AMM 20-10-01/401, E/E Rack-Mounted Components

(3) AMM 20-41-01/201, Static Sensitive Devices

B. Procedure

(1) Open these circuit breakers on the overhead circuit breaker panel P11 and attach DO-NOT-CLOSE tags:

(a) 11U18, ANTISKID 1-5

(b) 11C31, ANTISKID 2-6

(c) 11C32, ANTISKID 3-7

(d) 11U27, ANTISKID 4-8

(e) 11U12, AUTOBRKS/ANTISKID TEST/IND 1

(f) 11U21, AUTOBRKS/ANTISKID TEST/IND 2

(2) Get access to the main equipment center through the electronics access door 119AL (AMM 06-41-00/201).

CAUTION: DO NOT TOUCH THE ANTISKID/AUTOBRAKE CONTROL UNIT BEFORE YOU DO THE PROCEDURE FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE ANTISKID/AUTOBRAKE CONTROL UNIT.

(3) Do the procedure for devices that are sensitive to electrostatic discharge (AMM 20-41-01/201).

(4) Remove the unit (AMM 20-10-01/401) from the E1-1 shelf.

3. Install the Antiskid/Autobrake Control Unit (Fig. 401)

A. References

(1) AMM 20-10-01/401, E/E Rack-Mounted Components

(2) AMM 20-41-01/201, Static Sensitive Devices

B. Access

(1) Location Zone
119 Main Equipment Center (Right)

(2) Access Panel
119AL Main Equipment Center

C. Procedure

CAUTION: DO NOT TOUCH THE ANTISKID/AUTOBRAKE CONTROL UNIT BEFORE YOU DO THE PROCEDURE FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE ANTISKID/AUTOBRAKE CONTROL UNIT.

(1) Do the procedure for devices that are sensitive to electrostatic discharge (AMM 20-41-01/201).

(2) Install the unit on the E1-1 shelf (AMM 20-10-01/401).

(3) Remove DO-NOT-CLOSE tags and close these circuit breakers on panel P11:

(a) 11U18, ANTISKID 1-5

(b) 11C31, ANTISKID 2-6

(c) 11C32, ANTISKID 3-7

(d) 11U27, ANTISKID 4-8

(e) 11U12, AUTOBRKS/ANTISKID TEST/IND 1

(f) 11U21, AUTOBRKS/ANTISKID TEST/IND 2

(4) Do a BITE test of the antiskid/autobrake control unit (Ref Par. 4).

4. Antiskid/Autobrake Control Unit BITE Test (Fig. 401)

A. References

(1) AMM 24-22-00/201, Electrical Power - Control

(2) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic Systems.

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(3) AMM 32-00-15/201, Landing Gear Door Locks

(4) AMM 32-00-20/201, Landing Gear Downlocks

(5) AMM 34-21-00/501, Inertial Reference System

B. Prepare for the Test

(1) Make sure the downlocks are installed on the main and nose landing gear (AMM 32-00-20/201).

WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO INSTALL THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(2) Open the doors for the landing gear and install the door locks (AMM 32-00-15/201).

(3) Supply electrical power (AMM 24-22-00/201).

(4) Make sure that chocks are installed on the airplane wheels.

(5) Release the parking brake.

(6) Move the thrust levers to the idle position.

(7) Pressurize the right and center hydraulic systems and reservoirs (AMM 29-11-00/201).

(8) Make sure that the landing gear lever is in the DN position.

(9) Make sure that the BRAKE TEST switch on the unit (M102) is in the NORM position.

(10) Put the L, R and C IRU's in the NAV mode (AMM 34-21-00/501).

NOTE: The IRU's must be aligned.

(11) Push in the RESET button on the control unit. Make sure that the display shows MEM CLR for approximately five seconds.

C. Procedure to Do an Antiskid/Autobrake Control Unit BITE Test

(1) Do a unit display test.

(a) Put the PRESS/TEST-BIT switch on the unit to the PRESS/TEST position and release.

(b) Make sure that all the unit display segments, the ANTISKID annunciator light on P5, and the AUTOBRAKES indicator light on the P1-3 panel come on for approximately five seconds.

(2) Do a BIT (memory recall) test.

(a) Put the PRESS/TEST-BIT switch to the BIT position and then release the switch.

(b) Make sure that the TEST END or a stored fault is shown on the display. If a stored fault is shown, set BIT to continue until TEST END shows on the display.

(c) Push in the RESET button on the unit to clear faults that are stored in the memory.

NOTE: The unit display will show MEM CLR for approximately five seconds.

(3) Do an antiskid/autobrake control test.

(a) Put the AUTOBRAKES selector switch on the P1-3 panel to the 1 position.

(b) Push in the ENABLE/VERIFY switch on the unit and hold, then push in the VERIFY switch. Release the ENABLE/VERIFY and the VERIFY switches.

NOTE: The display will flash WAIT until the test is complete.

(c) Make sure that the message TEST END or a fault shows on the display. If a fault shows, push in the VERIFY switch to continue the test until the message TEST END shows.

(d) Make sure that the autobrake selector switch moves to the DISARM position at the end of the test.

(e) Push in the RESET button.

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WARNING: MAKE SURE THAT THE AREA AROUND THE BRAKES IS CLEAR AND THAT THE CHOCKS ARE INSTALLED ON THE AIRPLANE WHEELS. THIS TEST APPLIES AND RELEASES THE BRAKES. MOVEMENT OF THE WHEELS CAN CAUSE POSSIBLE DAMAGE TO EQUIPMENT OR INJURY TO PERSONS.

(4) Do a normal antiskid brake test.

(a) Release the parking brake.

(b) Open this circuit breaker on panel P6:

1) 6F4, Parking Brake Valve

(c) Set the parking brake.

(d) Put the BRAKE TEST switch in the position shown for the test steps in Table 1.

(e) For each test step in Table 1, do the test that follows:

1) Push in the ENABLE/VERIFY switch and hold, and then push in the VERIFY switch. Release both the ENABLE/VERIFY and the VERIFY switches.

2) Make sure that the brake (column A) releases for five seconds and then applies again.

NOTE: Brake cycles can be seen if you look for brake wear indicator pin movement in the brake assembly. The wear pin moves about 0.1 inch when the brake on the wheel that you test releases and then applies again.

3) Make sure that the message display for each brake and the message shown in Table 1 are the same while you operate that brake through a cycle.

Table 401

Step	Brake Test Switch Position	Message Display During Brake Cycle	A	B
1	BRAKE TEST 1	BRK 1	1	1-2
2	BRAKE TEST 5	BRK 5	5	5-6
3	BRAKE TEST 2	BRK 2	2	1-2
4	BRAKE TEST 6	BRK 6	6	5-6
5	BRAKE TEST 3	BRK 3	3	3-4
6	BRAKE TEST 7	BRK 7	7	7-8
7	BRAKE TEST 4	BRK 4	4	3-4
8	BRAKE TEST 8	BRK 8	8	7-8

(5) Do an alternate antiskid brake test.

(a) Remove the hydraulic pressure from the right hydraulic system and reservoir (AMM 29-11-00/201).

(b) Make sure that the parking brake is set.

(c) Put the BRAKE TEST switch in the position shown for each test step in Table 401.

(d) For each test step, do the test that follows:

1) Push in the ENABLE/VERIFY switch and hold, then push in the VERIFY switch. Release both the ENABLE/VERIFY the VERIFY switches.

2) Make sure that the brake pairs on the same axle shown in column B release for 5 ±2 seconds and then apply again.

3) Operate each brake through a complete cycle and make sure that the message that shows is the message in Table 401.

(e) Release the parking brake.

(f) Close this circuit breaker on panel P6:

1) 6F4, PARKING BRAKE VALVE

(g) Put the BRAKE TEST switch back to the NORM position.

MECH	INSP

(6) Do an autobrake application test.

(a) Pressurize the right hydraulic system and reservoir (AMM 29-11-00/201).

(b) Put the AUTOBRAKES selector switch in position 1 and make sure that it arms.

(c) Put the BRAKE TEST switch in the A/B position.

(d) Push in the ENABLE/VERIFY switch and hold, then push in the VERIFY switch. Release the ENABLE/VERIFY and the VERIFY switches.

(e) Make sure that the unit display shows BRK A/B 1, the EICAS shows the message AUTOBRAKES, and the AUTOBRAKES light

(f) Make sure that all the brakes apply for appproximately 15 seconds and then release.

(g) Make sure that the AUTOBRAKES selector switch moves to the DISARM position.

NOTE: The switch moves to the OFF position if RTO is set.

(h) Do steps (b) thru (g) again for the AUTOBRAKES selector switch positions 2, 3, 4, MAX AUTO and RTO.

NOTE: You will have these unit displays:
BRK A/B 2 for the 2 position ,
BRK A/B 3 for the 3 position ,
BRK A/B 4 for the 4 position ,
BRK A/B 5 for the MAX AUTO position.
BRK RTO for the RTO position

D. Put the Antiskid/Autobrake Control Unit Back to Its Usual Condition

(1) Put the AUTOBRAKES selector switch to the OFF position.

(2) Turn the BRAKE TEST switch to the NORM position.

(3) Push in the RESET button on the unit.

(4) Put the L, R, and C IRU's in the OFF position.

MECH | INSP

(5) Put the airplane back to its usual condition unless it is necessary to replace a component (Ref Par. 6).

(6) Put the airplane back to its usual condition unless it is necessary to replace a component (Ref. Par. 6)

5. Put the Airplane Back to Its Usual Condition

(1) AMM 24-22-00/201, Electrical Power - Control

(2) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic Systems.

(3) AMM 32-00-15/201, Landing Gear Door Locks

A. Procedure

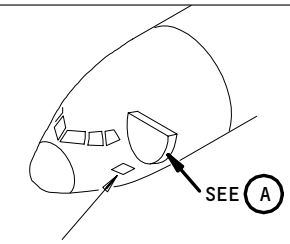
(1) Set the parking brake.

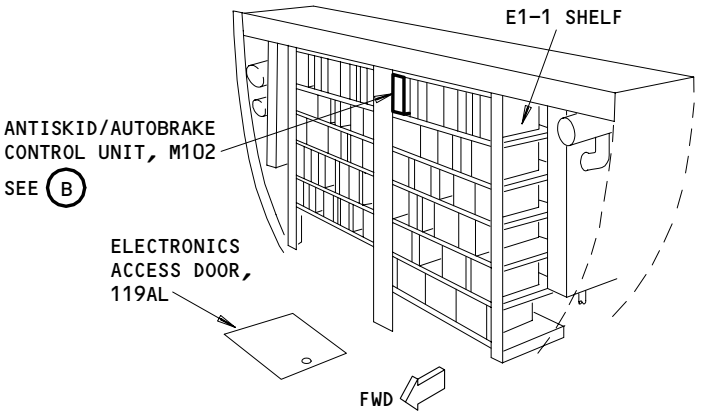
WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO REMOVE THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) Remove the door locks from the landing gear doors and close the doors (AMM 32-00-15/201).

(3) Remove the power from the right and center hydraulic systems if it is not necessary (AMM 29-11-00/201).

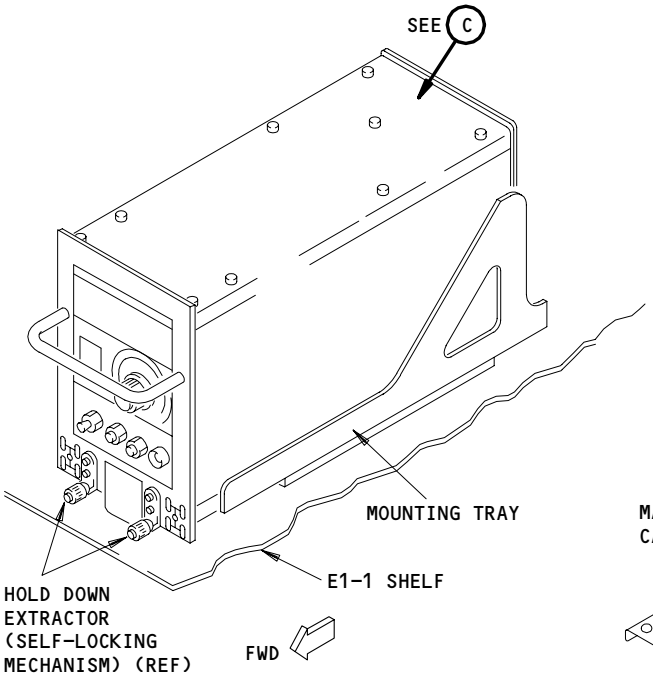
(4) Remove electrical power if it is not necessary (AMM 24-22-00/201).





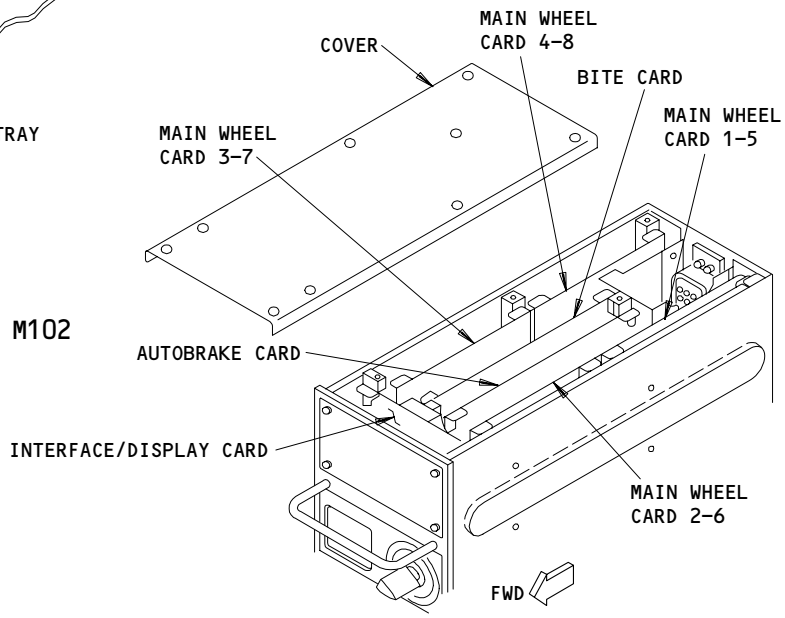
MAIN EQUIPMENT CENTER

A



ANTISKID/AUTOBRAKE CONTROL UNIT, M102

B



ANTISKID/AUTOBRAKE CONTROL UNIT, M102
(COVER REMOVED)

C

Antiskid/Autobrake Control Unit and Circuit Card Installation
Figure 401

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-R09
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	LNDG GEAR				006	APR 22/09

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
REPLACE	MAIN GEAR WHEEL AND TIRE		ALL	ALL

ZONES	ACCESS PANELS
731 741	1004 NOTE

MECH	INSP	MPD ITEM NUMBER

REPLACE THE MAIN GEAR WHEEL AND TIRE. 32-45-01-4A

ACCESS NOTE: SPECIAL ACCESS 1004 REQUIRES OPENING OF THE LANDING GEAR WHEEL WELL DOORS AND INSTALLING SAFETY LOCKS IN ACCORDANCE WITH MAINTENANCE MANUAL PROCEDURE 32-00-15.

THIS CARD IS NOT A SCHEDULED MAINTENANCE TASK. IT IS A COMPONENT CHANGE CARD AND IT IS PROVIDED FOR OPERATOR CONVENIENCE DURING UNSCHEDULED MAINTENANCE ACTIVITIES. SEE APPENDIX A OF THE 767 MAINTENANCE PLANNING DATA (MPD) DOCUMENT,D622T001, FOR A DESCRIPTION OF THE COMPONENT CHANGE CARDS.

MAIN GEAR WHEEL AND TIRE - REMOVAL/INSTALLATION

1. Remove the Main Gear Wheel And Tire Assembly (Fig. 401)

A. Equipment

(1) Wheel Change Dolly - (MALABAR 175) - commercially available

(2) MLG Axle and Axle Thread Protector Equipment A32098-1 (Preferred)
Includes:
- Protector - Axle, MLG - A32098-3
- Protector - Axle Threads, MLG - A32098-2

A32007-17 (Optional) or A32007-16 (Optional) Includes:
- Protector - Axle, MLG - A32007-6 - (2)
- Protector - Axle Threads, MLG - A32007-9

(3) MLG Wheel Retaining Nut Wrench - A32012-13 (Preferred)

MECH | INSP

(4) MLG Wheel Retaining Nut Wrench - A32012-6,-9,-12 (Optional)

(5) Tire Deflation Tool - 968RB (Safe-Cor Tools, Fairview, PA 16415)

(6) Tire Inflation Tool - A12007-11

(7) Protective Cover - Inner Wheel Surface - BTA-72028-A, Bill Thomas Assoc. Inc., 7405 Woodley Ave, Van Nuys, Calif.

B. References

(1) 07-11-03/201, Jacking Airplane Axles

(2) 12-15-03/301, Landing Gear Tire

(3) 24-22-00/201, Electrical Power - Control

(4) 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(5) 32-00-20/201, Landing Gear Downlocks

(6) 32-11-26/601, Main Gear Axle

(7) 32-45-03/601, Wheels

(8) 32-45-04/601, Tires

C. Procedure

(1) Supply electrical power (Ref 24-22-00).

(2) Make sure that the landing gear downlocks are installed (Ref 32-00-20).

(3) Pressurize the right hydraulic system and reservoir (Ref 29-11-00).

(4) Make sure that this circuit breaker on the main power distribution panel, P6, is closed:.

(a) PARKING BRAKE VALVE, 6F4

(5) Raise the axle with a jack until the tire does not touch the ground (Ref 07-11-03).

MECH | INSP

(6) Set the parking brake to the hold the brake in the engaged position.

(7) Make sure that the PARK BRAKE indicator light on the quadrant stand panel, P10, is on.

WARNING: BEFORE YOU REMOVE THE WHEEL AND TIRE ASSEMBLY YOU MUST DEFLATE THE TIRE OR INSPECT THE WHEEL AND TIRE TO MAKE SURE THEY ARE SAFE. INSPECT THE WHEEL AND TIRE FOR THE CONDITIONS LISTED BELOW. A DEFECTIVE WHEEL AND TIRE ASSEMBLY CAN EXPLODE DURING OR AFTER REMOVAL IF YOU DO NOT DEFLATE THE TIRE. THIS CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(8) Do one of the steps that follow:

NOTE: If you plan to install the same wheel and tire assembly and the assembly is safe it is not always necessary to deflate the tire. However, if you will not install the same wheel and tire assembly deflate the tire to prevent transporting an inflated tire.

(a) Inspect the wheel and tire assembly for the conditions that follow:

1) The tire is worn too much (AMM 32-45-04/601)

2) The tire has damage

3) The tire is unusually hot

4) The wheel has damage

5) One or more of the tie bolts have damage or are missing.

6) If you find one or more of these conditions you must deflate the tire.

(b) Deflate the tire with the tire deflation tool.

1) If you think that the valve core is damaged so that you can not use the normal procedure to deflate the tire, do these steps:

a) Turn the valve assembly slowly in a counterclockwise direction until air begins to leak through the boss.

b) Push lightly on the valve assembly at the same time.

c) Remove the valve assembly from the tire after all the pressure in the tire has been released.

(9) Hold the hubcap (5) while you remove the clamp (4).

(10) Remove the assembly of the hubcap (5) and the antiskid transducer drive.

(11) Remove the lockbolts (2), the wheel retaining nut (6), the washer (3), the retaining ring (7) and the grease seal (8).

NOTE: Do not remove the transducer from the axle.

(12) Install the axle thread protector on the axle.

(13) Put the wheel change dolly under the wheel and tire assembly (1).

(14) Remove the wheel and tire assembly (1).

(15) Install a protective cover on the inner side of the wheel to protect the wheel from damage.

(16) Mark the reason for the tire removal on the tire to aid the inspectors when they examine the tire.

2. Install the Main Gear Wheel and Tire Assembly (Fig. 401)

A. Equipment

(1) Wheel Change Dolly - (MALABAR 175) - commercially available

(2) MLG Axle and Axle Thread Protector Equipment A32098-1 (Preferred) Includes:
- Protector - Axle, MLG - A32098-3
- Protector - Axle Threads, MLG - A32098-2

A32007-17 (Optional) or A32007-16 (Optional) Includes:
- Protector - Axle, MLG - A32007-6 - (2)
- Protector - Axle Threads, MLG - A32007-9

(3) MLG Wheel Retaining Nut Wrench - A32012-13 (Preferred)

(4) MLG Wheel Retaining Nut Wrench - A32012-6,-9,-12 (Optional)

(5) Tire Deflation Tool - 968RB (Safe-Cor Tools, Fairview, PA 16415)

(6) Tire Inflation Tool - A12007-11

(7) Protective Cover - Inner Wheel Surface - BTA-72028-A, Bill Thomas Assoc. Inc., 7405 Woodley Ave, Van Nuys, Calif.

B. Consumable Materials

(1) Wheel bearing grease - Aircraft, General Purpose, Wide Temperature:

(a) D00378 - Aeroshell 22

(b) D00233 - Mobilgrease 28

(c) D50005 - Mobil Aviation Grease SHC 100

(d) D00258 - Aeroshell 5 (Alternative)

C. Parts

AMM			AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
401	1	Wheel and Tire	32-45-01	01	45
	2	Lockbolt			20
	3	Washer			40
	4	Clamp			10
	5	Hubcap			15
	6	Retainer Nut			35
	7	Retaining Ring			80
	8	Grease Seal			85

D. References

(1) 07-11-03/201, Jacking Airplane Axles

MECH | INSP

(2) 12-15-03/301, Landing Gear Tire

(3) 24-22-00/201, Electrical Power - Control

(4) 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(5) 32-11-26/601, Main Gear Axle

(6) 32-41-08/601, Main Gear Wheel Brakes

(7) 32-45-03/601, Wheels

(8) 32-45-04/601, Tires

E. Procedure

(1) Examine the wheel assembly and the exposed area of the axle assembly for damage and wear before you install it on the airplane (AMM 32-45-03).

NOTE: Wear Limits for the main gear axles are given in 32-11-26.

(2) Examine the tires for wear (AMM 32-45-04/601).

(3) Examine the antiskid transducer drive in the hubcap and axle for damage.

(4) Make sure the antiskid transducer drive is not loose.

(5) Examine the heat shield on the inside diameter of the brake torque tube to make sure that there are no projections that may touch the wheel hub.

(6) Do an inspection of the brake (AMM 32-41-08/601).

(7) Make sure that the axle thread protector is installed.

CAUTION: MAKE SURE THAT THE WHEEL SPACER IS INSTALLED ON THE AXLE. IF THE WHEEL SPACER IS NOT INSTALLED, THE WHEEL AND BRAKE WILL BIND AND CAUSE DAMAGE.

CAUTION: INSTALL THE WHEEL SPACER CORRECTLY,IMPROPER ORIENTATION WILL CAUSE DAMAGE TO THE INNER WHEEL HALF HUB.

MECH | INSP

(8) Make sure that the wheel spacer is installed on the axle.

(9) Apply a thin layer of wheel bearing grease to the surface of the axle where it will contact the inner and outer wheel bearings.

NOTE: Do not lubricate the surface of the axle between the wheel bearings.

(10) Lubricate the wheel bearings and fill the cavity outside of the bearings with wheel bearing grease.

(11) Install the grease seal (8) and the retaining ring (7).

(12) Remove the protective cover from the wheel assembly (1).

CAUTION: DO NOT HIT ANY OF THE CARBON DISCS WITH THE WHEEL WHEN YOU INSTALL THE WHEEL AND TIRE ASSEMBLY BECAUSE YOU CAN DAMAGE THE CARBON. IF YOU THINK THE WHEEL COULD HAVE HIT THE CARBON, YOU SHOULD PULL OUT THE WHEEL FAR ENOUGH TO EXAMINE THE CARBON DISCS.

(13) Put the wheel and tire assembly (1) on the dolly.

(14) Align the lugs on the wheel (1) with the brake rotor slots and slide the wheel (1) in position on the brake and the axle.

(15) Remove the axle thread protector.

(16) Lubricate the axle washer with grease.

(17) Align the washer tang with the groove in the axle and slide the washer (3) on the axle.

(18) Apply grease to the threads of the axle nut (6).

(19) Put the axle nut (6) on the axle and tighten it by hand.

(20) Release the parking brake.

(21) Use the procedure that follows to tighten the axle nut (6) to the necessary torque.

(a) While you turn the wheel, tighten the nut to 500-600 pound-feet to seat the axle sleeve against the truck beam.

MECH | INSP

(b) Fully loosen the nut.

(c) AIRPLANES WITH GREASE DAMS;
While you turn the wheel again, tighten the nut to 150 pound-feet.

NOTE: The end of the axle nut may extend beyond the axle up to 0.113 inches (2.87 mm).

(d) AIRPLANES WITHOUT GREASE DAMS;
While you turn the wheel again, tighten the nut to 150 pound-feet.

NOTE: The end of the axle nut may extend beyond the axle up to 0.056 inches (1.42mm).

(e) Install the lockbolt (2), two locations, as follows:

1) Make sure that the bolt holes in the axle nut align with the bolt holes in the axle.

2) If the holes do not align, continue to turn the axle nut to the first location where the holes align, but do not turn the nut more than fifteen degrees.

3) Install the lockbolt (2), two locations.

(22) Install the lockbolts (2) through the transducer flange, the axle, and the wheel retainer nut. The heads of the bolts must be inside the axle.

(23) Tighten the lockbolts (2) to 75-85 pound-inches, above run-on torque.

NOTE: Check the self locking nut (AMM 20-11-01/201).

(24) Make sure the tire is at the correct pressure. Inflate the tire with nitrogen if it is necessary (Ref 12-15-03/301).

(25) Lower the main gear with the jack (Ref 07-11-03).

(26) Remove the jack (Ref 07-11-03).

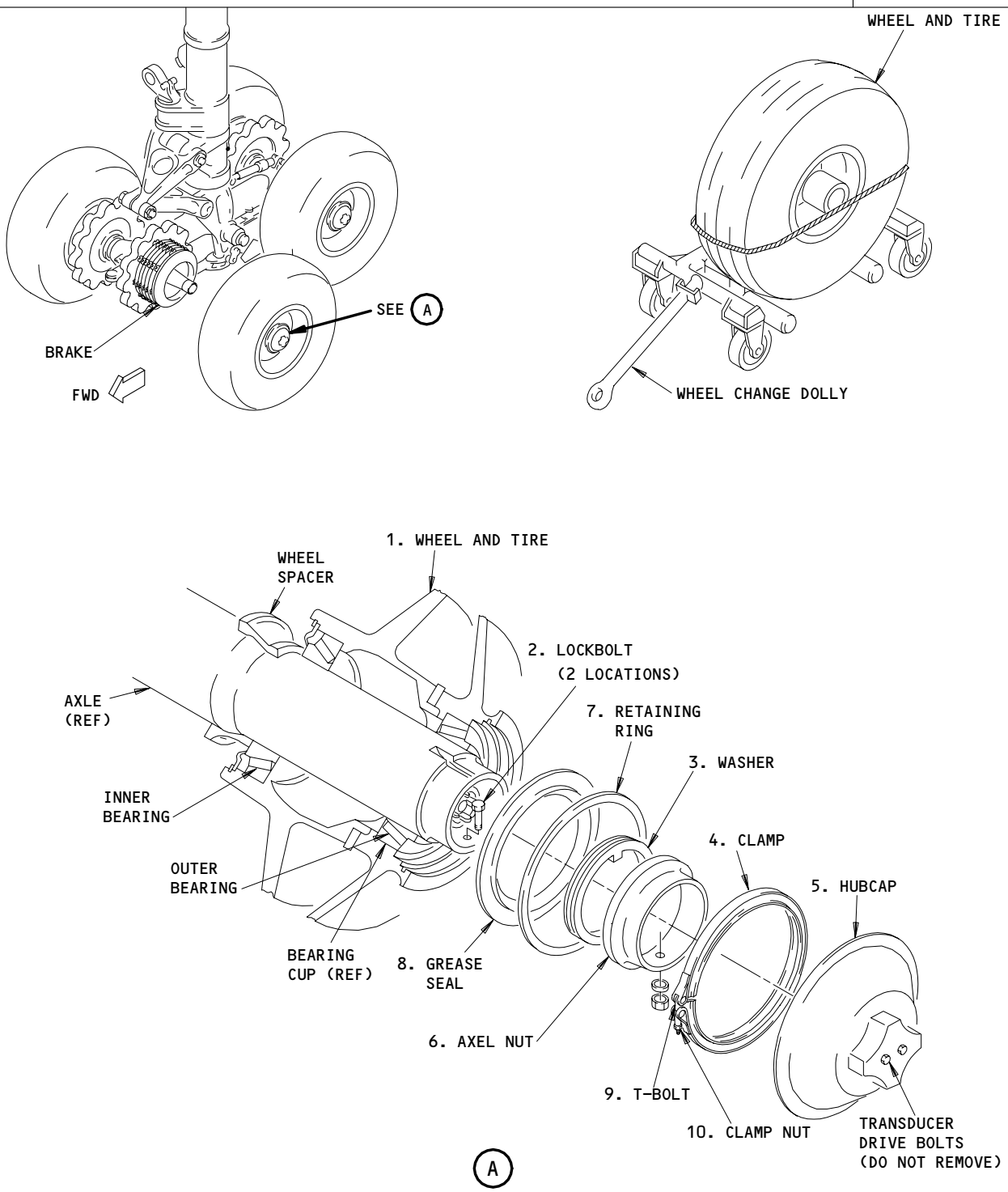
(27) Install the hubcap (5) with the antiskid transducer drive attached.

MECH	INSP

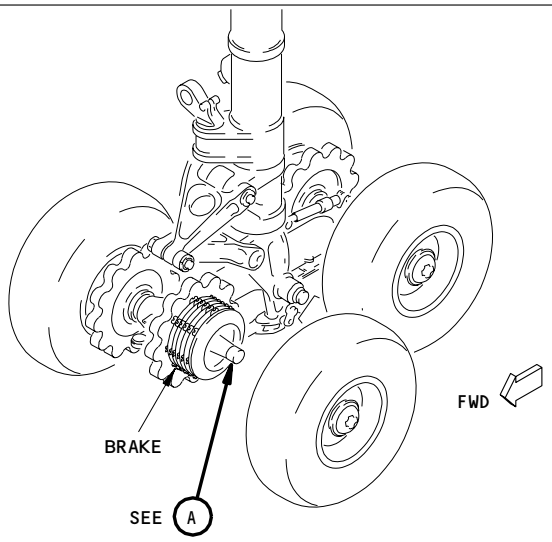
(28) Fasten the clamp (4) and tighten the nut (10) on the T-bolt to 35-40 pound-inches torque.

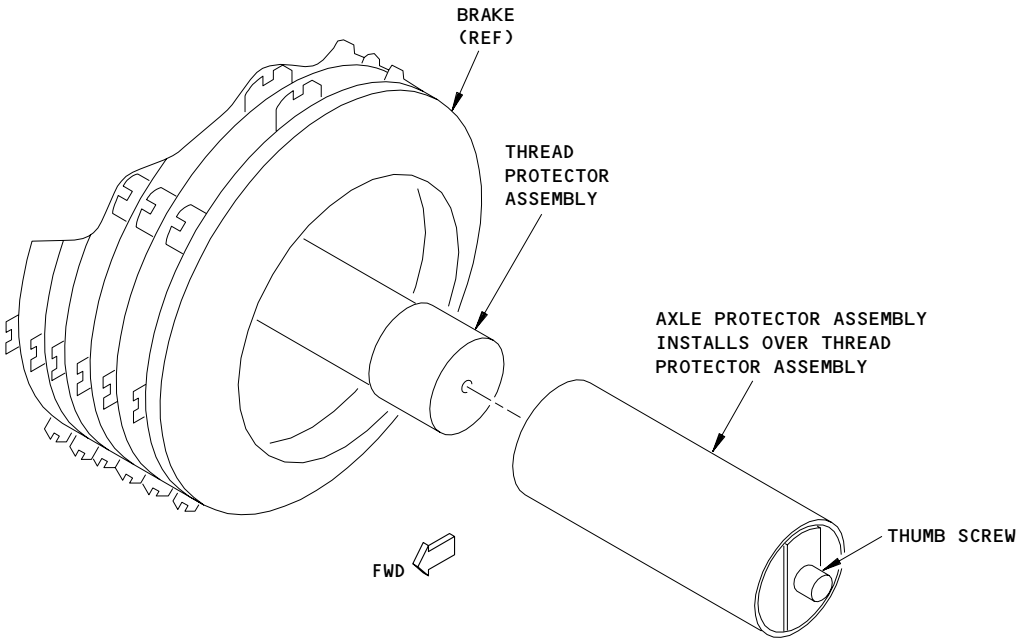
(29) Remove hydraulic power from the right hydraulic system (Ref 29-11-00).

(30) Remove electrical power if it is not necessary (Ref 24-22-00).



Main Gear Wheel and Tire Installation
Figure 401





AXLE PROTECTOR ASSEMBLY

A

Main Gear Wheel and Tire Installation
Figure 401A

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-R10
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	LNDG GEAR				006	APR 22/09

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
REPLACE	MAIN GEAR WHEEL AND TIRE		ALL	ALL

ZONES	ACCESS PANELS
731 741	1004 NOTE

MECH	INSP	MPD ITEM NUMBER

REPLACE THE MAIN GEAR WHEEL AND TIRE. 32-45-01-4A

ACCESS NOTE: SPECIAL ACCESS 1004 REQUIRES OPENING OF THE LANDING GEAR WHEEL WELL DOORS AND INSTALLING SAFETY LOCKS IN ACCORDANCE WITH MAINTENANCE MANUAL PROCEDURE 32-00-15.

THIS CARD IS NOT A SCHEDULED MAINTENANCE TASK. IT IS A COMPONENT CHANGE CARD AND IT IS PROVIDED FOR OPERATOR CONVENIENCE DURING UNSCHEDULED MAINTENANCE ACTIVITIES. SEE APPENDIX A OF THE 767 MAINTENANCE PLANNING DATA (MPD) DOCUMENT,D622T001, FOR A DESCRIPTION OF THE COMPONENT CHANGE CARDS.

1. Remove the Main Gear Wheel And Tire Assembly (Fig. 401)

A. Equipment

(1) Wheel Change Dolly - (MALABAR 175) - commercially available

(2) MLG Axle and Axle Thread Protector Equipment - A32098-1. Includes:
- Protector - Axle, MLG - A32098-3
- Protector - Axle Threads, MLG - A32098-2

(3) MLG Wheel Retaining Nut Wrench - A32012-13

(4) Tire Deflation Tool - 968RB (Safe-Cor Tools, Fairview, PA 16415)

(5) Tire Inflation Tool - A12007-11

(6) Protective Cover - Inner Wheel Surface - BTA-72028-A, Bill Thomas Assoc. Inc., 7405 Woodley Ave, Van Nuys, Calif.

MECH | INSP

B. References

(1) AMM 07-11-03/201, Jacking Airplane Axles

(2) AMM 12-15-03/301, Landing Gear Tire

(3) AMM 24-22-00/201, Electrical Power - Control

(4) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(5) AMM 32-00-20/201, Landing Gear Downlocks

(6) AMM 32-45-00/501, Tires and Wheels

(7) AMM 32-45-00/501, Tire Valve

C. Prepare for Removal

(1) Supply electrical power (AMM 24-22-00/201).

(2) Make sure that the landing gear downlocks are installed (AMM 32-00-20/201).

(3) Pressurize the right hydraulic system and reservoir (AMM 29-11-00/201).

(4) Make sure that this circuit breaker on the main power distribution panel, P6, is closed:

(a) 6F4, LANDING GEAR PARKING BRAKE VLV

(5) Open this circuit breaker on the overhead panel P11 and attach a DO-NOT-CLOSE tag:

(a) 11U17, TIRE PRESS IND 1

(6) Open this circuit breaker on the external power panel P34 and attach a DO-NOT-CLOSE tag:

(a) 34M11, TIRE PRESS IND 2

(7) Raise the axle with a jack until the wheels do not touch the ground (AMM 07-11-03/201).

(8) Set the parking brake.

MECH | INSP

(9) Make sure that PARK BRAKE indicator light on quadrant stand panel, P10, is on.

WARNING: YOU MUST DEFLATE THE TIRE BEFORE YOU REMOVE THE WHEEL AND TIRE ASSEMBLY. A DEFECTIVE WHEEL AND TIRE CAN EXPLODE IF YOU DO NOT DEFLATE THE TIRE BEFORE YOU REMOVE THE ASSEMBLY. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.

(10) Deflate the tire with the tire deflation tool.

WARNING: DO NOT USE TOO MUCH FORCE ON THE VALVE CORE. THE CORE PARTS CAN MOVE APART AND LET THE SLEEVE AND THE LOWER END OF THE POPPET STAY IN THE VALVE STEM.

MAKE SURE THAT ALL PERSONS ARE CLEAR OF THE VALVE PATH. IF THE VALVE BLOWS OFF WHILE YOU REMOVE IT, INJURY TO PERSONS CAN OCCUR.

(11) If you think that the valve core is damaged so that you can not use the normal procedure to deflate the tire, do this task (AMM 32-45-08/401) Tire Valve Removal.

D. Procedure to Remove the Wheel and Tire Assembly

(1) Do the steps that follow to remove the hubcap (8):

(a) Remove the clamp (4) from the hubcap (8).

(b) Hold the grommet (9) and the spacer (10) in position.

(c) Pull the hubcap (8) away from the hub, but be careful not to bend the conduit.

(d) Remove the clamp (4) and pull the hubcap (8) off the wheel (1).

(e) Remove clamp (4) and remove hubcap with antiskid transducer drive attached.

(2) Remove the tire pressure sensor (2).

(a) Remove the nut (5).

MECH | INSP

(b) Pull the sensor (2) from the pressure sensor holder on the wheel (1).

(c) Install a seal cap on the inflation valve/pressure-sensor holder (3) on the wheel.

NOTE: Ten seal caps (one for each wheel and tire) are part of the airplane fly-away equipment. Use the seal cap to prevent pressure loss through the inflation valve/pressure-sensor holder (3) if the tire is inflated. Without a sensor or cap over the holder the tire will loose pressure at approximately 1 psi per minute.

(d) Install the nut (5).

(e) Disconnect the tire pressure sensor (2) electrical connector from the wheel interface unit (12) and remove the sensor.

NOTE: If this sensor will be used in this wheel position keep the grommet on the conduit. If a new sensor will be installed remove the grommet and keep it with the hubcap.

(3) Remove the wheel and tire assembly.

(a) Remove the lockbolts (11), the wheel retaining nut (7), the washer (16), the retaining ring (15) and the grease seal (17).

NOTE: Do not remove the wheel interface unit (12) from axle cavity.

(b) Install axle thread protector on axle (20).

(c) Position wheel change dolly under wheel (1), and remove wheel and tire (1).

(d) Install protective cover over inner wheel surface to protect against damage.

(e) Mark the reason for the tire removal on the tire to aid the inspectors when they examine the tire.

2. Install the Main Gear Wheel and Tire Assembly (Fig. 401)

MECH | INSP

A. Equipment

(1) Wheel Change Dolly - (MALABAR 175) - commercially available

(2) MLG Axle and Axle Thread Protector Equipment - A32098-1. Includes:
- Protector - Axle, MLG - A32098-3
- Protector - Axle Threads, MLG - A32098-2

(3) MLG Wheel Retaining Nut Wrench - A32012-13

(4) Tire Deflation Tool - 968RB (Safe-Cor Tools, Fairview, PA 16415)

(5) Tire Inflation Tool - A12007-11

(6) Protective Cover - Inner Wheel Surface - BTA-72028-A, Bill Thomas Assoc. Inc., 7405 Woodley Ave, Van Nuys, Calif.

B. References

(1) AMM 07-11-03/201, Jacking Airplane Axles

(2) AMM 12-15-03/301, Landing Gear Tire

(3) AMM 24-22-00/201, Electrical Power - Control

(4) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(5) AMM 32-00-20/201, Landing Gear Downlocks

(6) AMM 32-11-26/601, Main Gear Axle

(7) AMM 32-41-08/601, Main Gear Wheel Brakes

(8) AMM 32-45-00/501, Tires and Wheels

(9) AMM 32-45-03/601, Wheels

(10) AMM 32-45-04/601, Tires

(11) AMM 32-45-11/601, Tire Pressure Sensor

C. Parts

AMM		NOMENCLATURE	AIPC		
FIG	ITEM		SUBJECT	FIG	ITEM
401	1	Wheel and Tire	To Be Furnished		
	2	Tire Pressure Sensor			
	3	Tire Pressure Sensor Holder			
	4	Clamp			
	5	Mounting Ring Assembly Nut			
	6	Fan and Drive Assembly Valve Cap			
	7	Wheel Retention Nut			
	8	Hubcap			
	9	Grommet			
	10	Spacer			
	11	Lockbolt			
	12	Wheel Interface Unit			
	13	Washer			
	14	Nut			
	15	Retaining Ring			
	16	Washer			
	17	Grease Seal			
	21	Wheel Spacer			

D. Consumable Materials

(1) Wheel bearing grease - Aircraft, General Purpose, Wide Temperature:

(a) D00378 - Aeroshell 22

(b) D00233 - Mobilgrease 28

(c) D50005 - Mobil Aviation Grease SHC 100

(d) D00258 - Aeroshell 5 (Alternative)

E. Prepare for Installation

NOTE: Before you install the main landing gear wheel(s), and tire assembly, check all installation components for contaminants and/or foreign material and clean as required.

MECH | INSP

(1) Examine the wheel assembly and the exposed area of the axle assembly for damage and wear before you install it on the airplane (AMM 32-45-03/601).

NOTE: Wear Limits for the main gear axles are given in 32-11-26.

(2) Examine the tires for wear (AMM 32-45-04/601).

(3) Examine the antiskid transducer drive in the hubcap and axle for damage.

(4) Make sure the antiskid transducer drive is not loose.

(5) Examine the heat shield on the inside diameter of the brake torque tube to make sure that there are no projections that may touch the wheel hub.

(6) Do an inspection of the brake (AMM 32-41-08/601).

(7) Make sure that an axle thread protector is installed on axle.

F. Procedure

CAUTION: IF THE WHEEL SPACER IS NOT INSTALLED ON THE AXLE, THE WHEEL AND BRAKE WILL BIND AND CAUSE DAMAGE.

CAUTION: INSTALL THE WHEEL SPACER CORRECTLY,IMPROPER ORIENTATION WILL CAUSE DAMAGE TO THE INNER WHEEL HALF HUB.

(1) Make sure that the wheel spacer (21) is on the axle (20).

(a) Apply a thin layer of wheel bearing grease to the surface of the axle where it will contact the inner and outer wheel bearings.

NOTE: Do not lubricate surface of axle (20) between wheel bearings (18, 19).

(2) Lubricate wheel bearings (22 and 23) and fill the cavity outside of the bearings with wheel bearing grease.

(3) Install the grease seal (17) and the retaining ring (15).

MECH | INSP

(4) Remove the protective cover if it is installed on the inner surface of the wheel assembly (1).

(5) Put the wheel and tire (1) assembly on the dolly and use the dolly to move the wheel and tire assembly into position on the axle.

CAUTION: DO NOT HIT ANY OF THE CARBON DISCS WITH THE WHEEL WHEN YOU INSTALL THE WHEEL AND TIRE ASSEMBLY BECAUSE YOU CAN DAMAGE THE CARBON. IF YOU THINK THE WHEEL COULD HAVE HIT THE CARBON, YOU SHOULD PULL OUT THE WHEEL FAR ENOUGH TO EXAMINE THE CARBON DISCS.

(6) Align brake rotor slots with lugs in wheel and slide wheel/tire assembly into position on brake and axle.

(7) Remove axle thread protector.

(8) Lubricate axle washer (16) with grease.

(9) Align the washer (16) tang with the groove in the axle and slide the washer (16) on the axle.

(10) Apply grease to the threads of the axle nut (7).

(11) Hand tighten the nut (7) on the axle (20).

(12) Use the procedure that follows to tighten the axle nut (7) to the necessary torque:

(a) While you turn the wheel, tighten the nut to 500-600 pound-feet to seat the axle sleeve against the truck beam.

(b) Stop the wheel.

(c) Fully loosen the nut.

(d) AIRPLANES WITH GREASE DAMS;
While you turn the wheel again, tighten the nut to 150 pound-feet.

NOTE: The end of the axle nut may extend beyond the axle up to 0.113 inches (2.87 mm).

MECH | INSP

(e) AIRPLANES WITHOUT GREASE DAMS;
While you turn the wheel again, tighten the nut to 150 pound-feet.

NOTE: The end of the axle nut may extend beyond the axle up to 0.056 inches (1.42mm).

(13) Install two lockbolts (11) through the wheel interface unit (12), the axle (20), and the slot in the axle nut (7) as follows:

(a) Make sure that the lockbolt slots in the axle nut (7) align with the lockbolt holes in the axle (20) and the wheel interface unit (12).

(b) If the lockbolt holes do not align, continue to turn the axle nut (7) to the first location where the holes align, but do not turn the nut more than fifteen degrees.

(c) Install the lockbolts (11) with the head inside the axle (20).

NOTE: Turn the rotor on the wheel interface unit (12) as necessary to get access to install the lockbolts (11).

(d) Install the washer (13) and nut (14) and tighten to 75-85 pound-inches, above run-on torque.

NOTE: Check the self locking nut (AMM 20-11-01/201).

(14) Install the tire pressure sensor (2) (AMM 32-45-11/401)

(15) Make sure the tire is at the correct pressure. Inflate with nitrogen if it is necessary (AMM 12-15-03/301).

(16) Lower the main landing gear and remove the jack (AMM 07-11-03/201).

(17) Install the hubcap (8) with the antiskid transducer drive attached. Fasten the clamp (4) and tighten the nut (19) on the T-bolt (18) to 35-40 pound-inches torque.

(a) 11U17, TIRE PRESS IND 1

(18) Close this circuit breaker on the external pwer panel P34 and remove the DO-NOT-CLOSE tag:

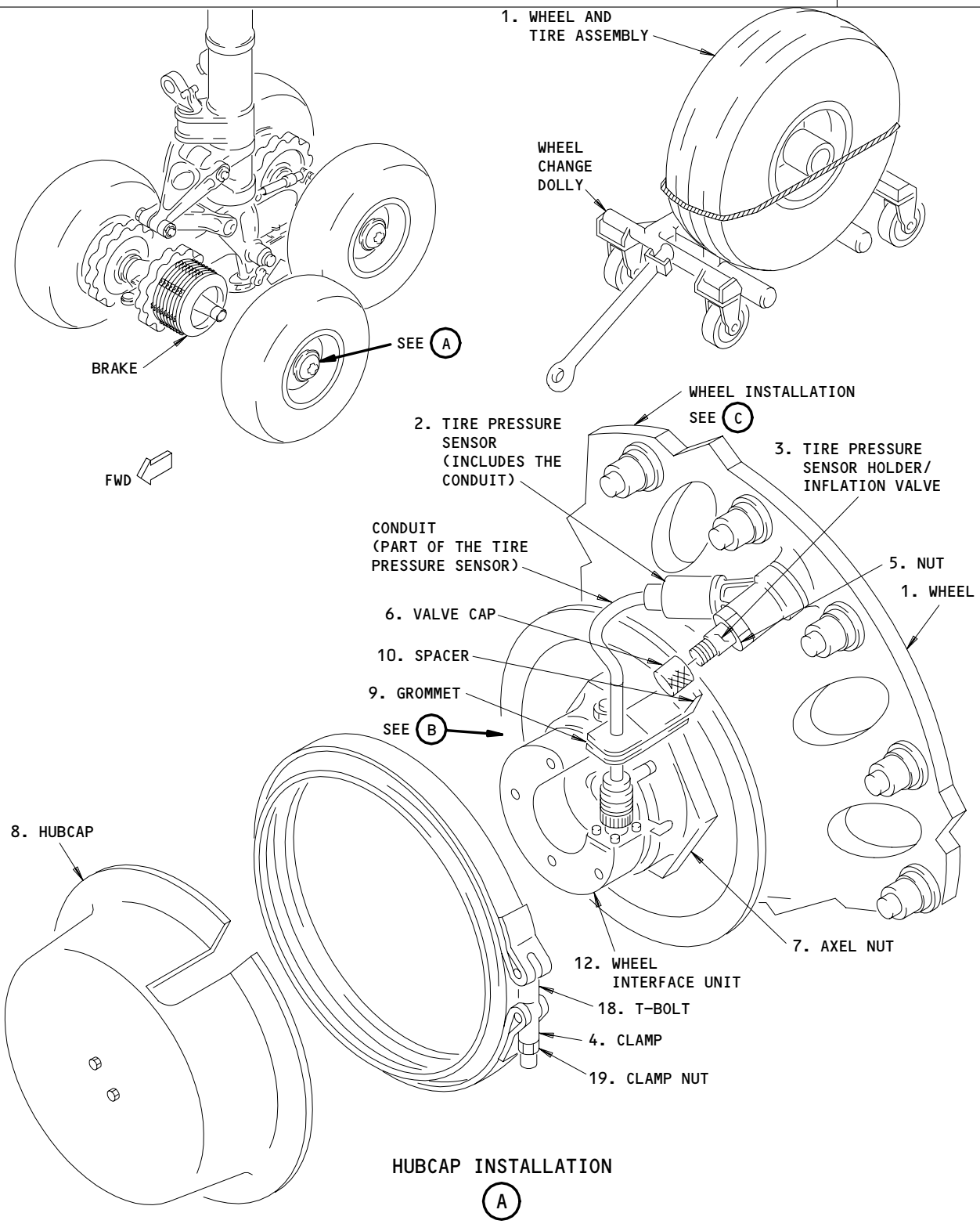
MECH	INSP

(a) 34M11, TIRE PRESS IND 2

(19) Do a tire pressure indicating system operational test (AMM 32-45-00/501).

(20) Depressurize the right hydraulic system (AMM 29-11-00/201).

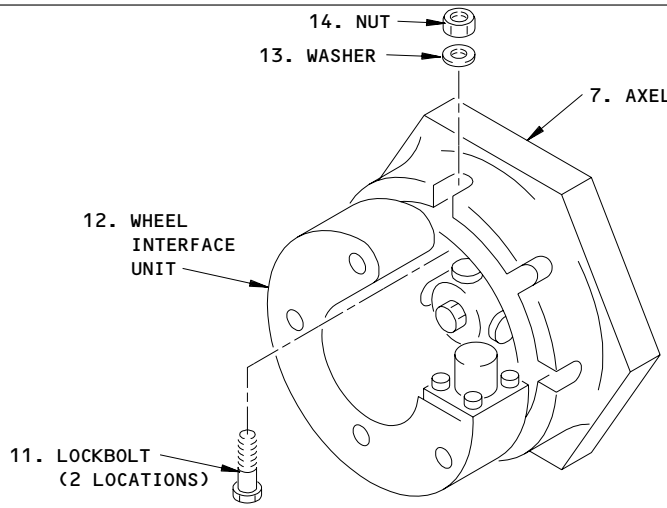
(21) Remove electrical power if it is not necessary (AMM 24-22-00/201).



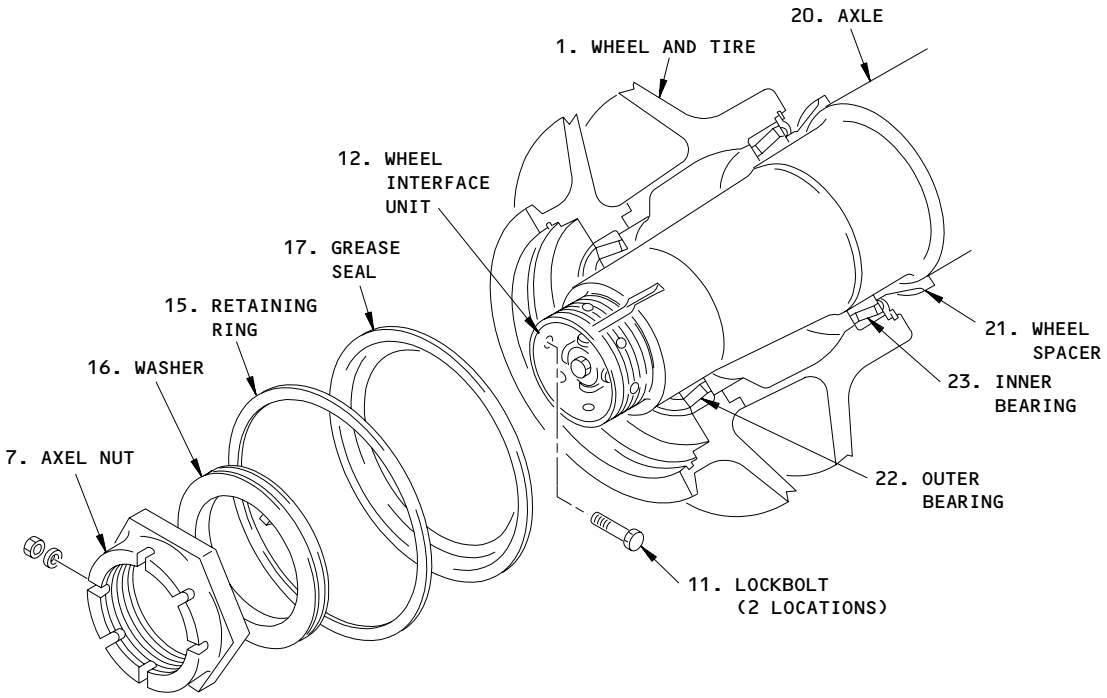
HUBCAP INSTALLATION

(A)

Main Gear Wheel and Tire Installation
Figure 401 (Sheet 1)



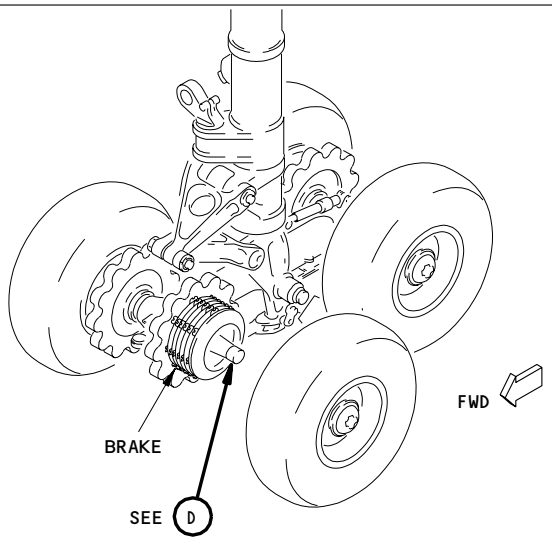
B

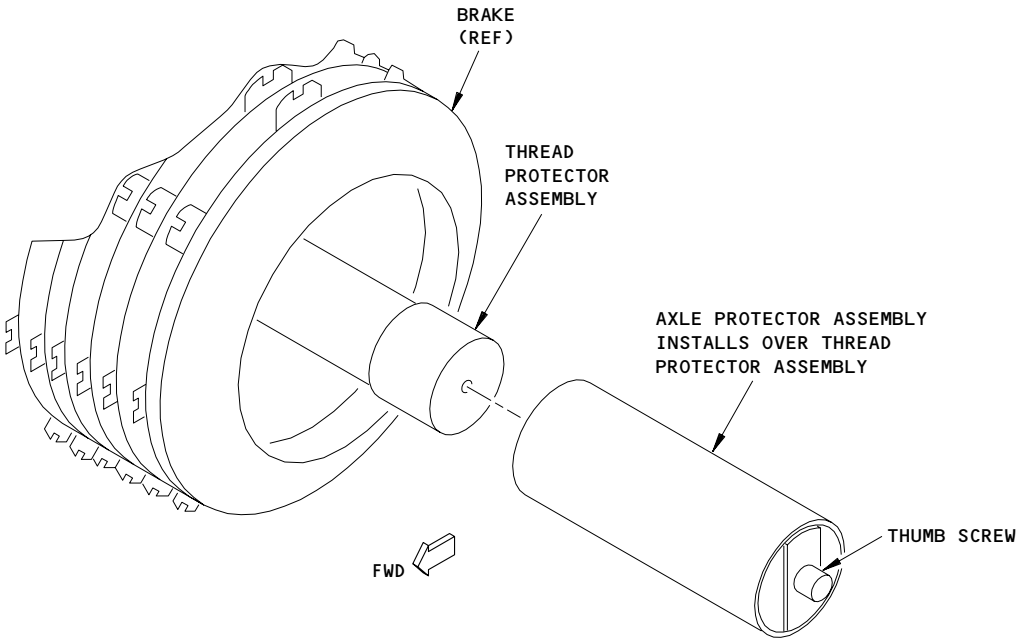


WHEEL INSTALLATION

C

Main Gear Wheel and Tire Installation
Figure 401 (Sheet 2)





AXLE PROTECTOR ASSEMBLY

D

Main Gear Wheel and Tire Installation
Figure 401 (Sheet 3)

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-R11
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	NOSE GEAR				006	AUG 22/08

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
REPLACE	NOSE GEAR WHEEL AND TIRE		ALL	ALL

ZONES	ACCESS PANELS
711	1004 NOTE

MECH	INSP	MPD ITEM NUMBER

REPLACE THE NOSE GEAR WHEEL AND TIRE. 32-45-02-4A

ACCESS NOTE: SPECIAL ACCESS 1004 REQUIRES OPENING OF THE LANDING GEAR WHEEL WELL DOORS AND INSTALLING SAFETY LOCKS IN ACCORDANCE WITH MAINTENANCE MANUAL PROCEDURE 32-00-15.

THIS CARD IS NOT A SCHEDULED MAINTENANCE TASK. IT IS A COMPONENT CHANGE CARD AND IT IS PROVIDED FOR OPERATOR CONVENIENCE DURING UNSCHEDULED MAINTENANCE ACTIVITIES. SEE APPENDIX A OF THE 767 MAINTENANCE PLANNING DATA (MPD) DOCUMENT,D622T001, FOR A DESCRIPTION OF THE COMPONENT CHANGE CARDS.

1. Remove the Nose Gear Wheel and Tire Assembly (Fig. 401)

A. Equipment

(1) Wheel Change Dolly - Malabar 175 or equivalent

(2) NLG Wheel Retaining Nut Wrench - A32025-1

(3) Tire Deflation Tool - 968RB (Safe-Cor Tools, Fairview, PA 16415)

(4) Tire Inflation Tool - A12007-11

B. References

(1) 07-11-03/201, Jacking Airplane Axles

(2) 12-15-03/301, Landing Gear Tire

(3) 32-00-20/201, Landing Gear Downlocks

C. Procedure

MECH | INSP

(1) Make sure that the landing gear downlocks are installed (Ref 32-00-20).

WARNING: IT IS RECOMMENDED THAT YOU REMOVE ONLY ONE WHEEL/TIRE ASSEMBLY FROM THE NOSE GEAR AT A TIME. IF YOU REMOVE THE TWO WHEEL/TIRE ASSEMBLIES FROM THE NOSE GEAR AT THE SAME TIME, STRUCTURAL DAMAGE AND INJURY TO PERSONS CAN OCCUR IF THE AIRPLANE FALLS.

(2) Raise the axle with a jack sufficiently so that there is clearance between the tire and the ground (Ref 07-11-03).

WARNING: BEFORE YOU REMOVE THE WHEEL AND ASSEMBLY YOU MUST DEFLATE THE TIRE OR INSPECT THE WHEEL AND TIRE TO MAKE SURE THEY ARE SAFE. INSPECT THE WHEEL AND TIRE FOR THE CONDITIONS LISTED BELOW. A DEFECTIVE WHEEL AND TIRE ASSEMBLY CAN EXPLODE DURING OR AFTER REMOVAL IF YOU DO NOT DEFLATE THE TIRE. THIS CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(3) Do one of the steps that follows:.

NOTE: If you plan to install the same wheel and tire assembly and the assembly is safe it is not always necessary to deflate the tire. However, if you will not install the same wheel and tire assembly deflate the tire to prevent transporting an inflated tire.

(a) Inspect the wheel and tire assembly for the conditions that follow:

1) The tire is worn too much (AMM 32-45-04/601).

2) The tire has damage.

3) The tire is unusually hot.

4) The wheel has damage.

5) One or more of the tie bolts have damage or are missing.

(b) If you find one or more of these conditions, you must deflate the tire.

MECH | INSP

(c) Deflate the tire as follows:

WARNING: MAKE SURE THAT ALL PERSONS ARE CLEAR OF THE VALVE PATH. IF THE VALVE BLOWS OFF WHILE YOU REMOVE IT, INJURY TO PERSONS CAN OCCUR.

CAUTION: DO NOT USE TOO MUCH FORCE ON THE VALVE CORE. THE CORE PARTS CAN MOVE APART AND LET THE SLEEVE AND THE LOWER END OF THE POPPET STAY IN THE VALVE STEM.

(d) If the valve core has damage and you can not deflate the tire with the tire deflation tool, do the steps that follow to deflate the tire:

1) Turn the valve assembly slowly in a counterclockwise direction until there is gas leakage through the boss.

2) At the same time, push lightly on the valve assembly.

3) Remove the valve assembly from the tire after all the pressure in the tire has been released.

(e) Deflate the tire with the tire deflation tool.

(4) Remove the axle nut (7) as follows:

(a) Remove the lockbolt (6), the nut (3), and the two washers (4), at two locations.

(b) Remove the axle nut (7).

(c) Remove the axle washer (5).

(5) Remove the axle washer (5).

(6) Put the wheel change dolly under the wheel and tire assembly (1).

(7) Remove the wheel and tire assembly (1).

(8) Install the axle protector.

(9) Mark the reason for the tire removal on the tire to aid the inspectors when they examine the tire.

2. Install the Nose Gear Wheel and Tire Assembly (Fig. 401)

MECH | INSP

A. Equipment

(1) Wheel Change Dolly - Malabar 175 or equivalent

(2) NLG Wheel Retaining Nut Wrench - A32025-1

(3) Tire Inflation Tool - A12007-11

B. Consumable Materials

(1) D00378 Grease - Aeroshell No. 22 (Preferred)
Aeroshell No. 5 (Optional)

C. Parts

AMM			AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
401	1	Wheel and Tire Assembly	32-45-02	01	35
	3	Nut			20
	4	Washer			15
	5	Axle Washer			30
	6	Lockbolt			10
	7	Axle Nut			25

D. References

(1) 07-11-03/201, Jacking Airplane Axles

(2) 12-15-03/301, Landing Gear Tire

(3) 32-00-20/201, Landing Gear Downlocks

E. Procedure

(1) Remove the axle protector.

(2) Examine the wheel and tire assembly before you install it on the airplane (Ref 32-45-03, 32-45-04).

(3) Examine the part of the axle that you can see for evidence of scoring, galling, or corrosion.

MECH | INSP

CAUTION: MAKE SURE THAT THE WHEEL SPACER IS INSTALLED. IF THE SPACER IS NOT INSTALLED, THE WHEEL BEARING CAN BECOME LOOSE AND CAUSE SUBSEQUENT WHEEL FAILURE.

(4) Make sure that the spacer is installed on the axle.

(5) Make sure that the wheel spacer (7) is installed on the nose gear axle (8).

(6) Apply a thin layer of grease to the axle in the area where the wheel bearings touch the axle.

NOTE: Do not lubricate the axle surfaces between the wheel bearings.

(7) Lubricate the axle threads and the wheel bearings with grease.

(8) Put the wheel and tire (1) on the dolly and slide it on the axle (Fig. 401).

(9) Use the procedure that follows to tighten the axle nut (7).

(a) While you turn the wheel, tighten the axle nut to 76-92 pound-feet.

(b) Stop the wheel.

(c) Loosen the nut to zero torque.

(d) While you turn the wheel again, tighten the nut to 34 pound-feet.

(e) Continue to tighten the nut if it is necessary to align the lockbolt holes, but do not exceed 75 pound-feet.

1) Do not loosen the nut to align the lockbolt holes.

2) If you can not get alignment of the lockbolt holes at the maximum allowable torque, fully loosen the nut and do the procedure to tighten the nut again.

(10) Install the axle nut (7) as follows:

MECH	INSP

(a) Align the tang on the axle washer (5) and install the axle washer (5) on the axle.

(b) Apply grease to the threads of the axle nut (7).

(11) Engage the threads of the axle nut (7) with the threads on the axle (8) and tighten the axle nut (7) as follows:

(a) While you turn the wheel, tighten the axle nut to 76-92 pound-feet.

(b) Stop the wheel.

(c) Loosen the nut to zero torque.

(d) While you turn the wheel again, tighten the nut to 34 pound-feet.

(e) Continue to tighten the nut if it is necessary to align the lockbolt holes, but do not exceed 75 pound-feet.

1) Do not loosen the nut to align the lockbolt holes.

2) If you can not get alignment of the lockbolt holes at the maximum allowable torque, fully loosen the nut and do the procedure to tighten the nut again.

(12) Install the lockbolt (6), the nut (3), two washers (4), two locations, to lock the axle nut (7) to the axle.

(a) Do not loosen the nut to align the lockbolt holes.

(b) If you can not get alignment of the lockbolt holes at the maximum allowable torque, fully loosen the nut and do the procedure to tighten the nut again.

(13) Install the nut (3), the washer (4), and the lockbolt (6), two locations, to lock the axle nut (5) to the axle (8).

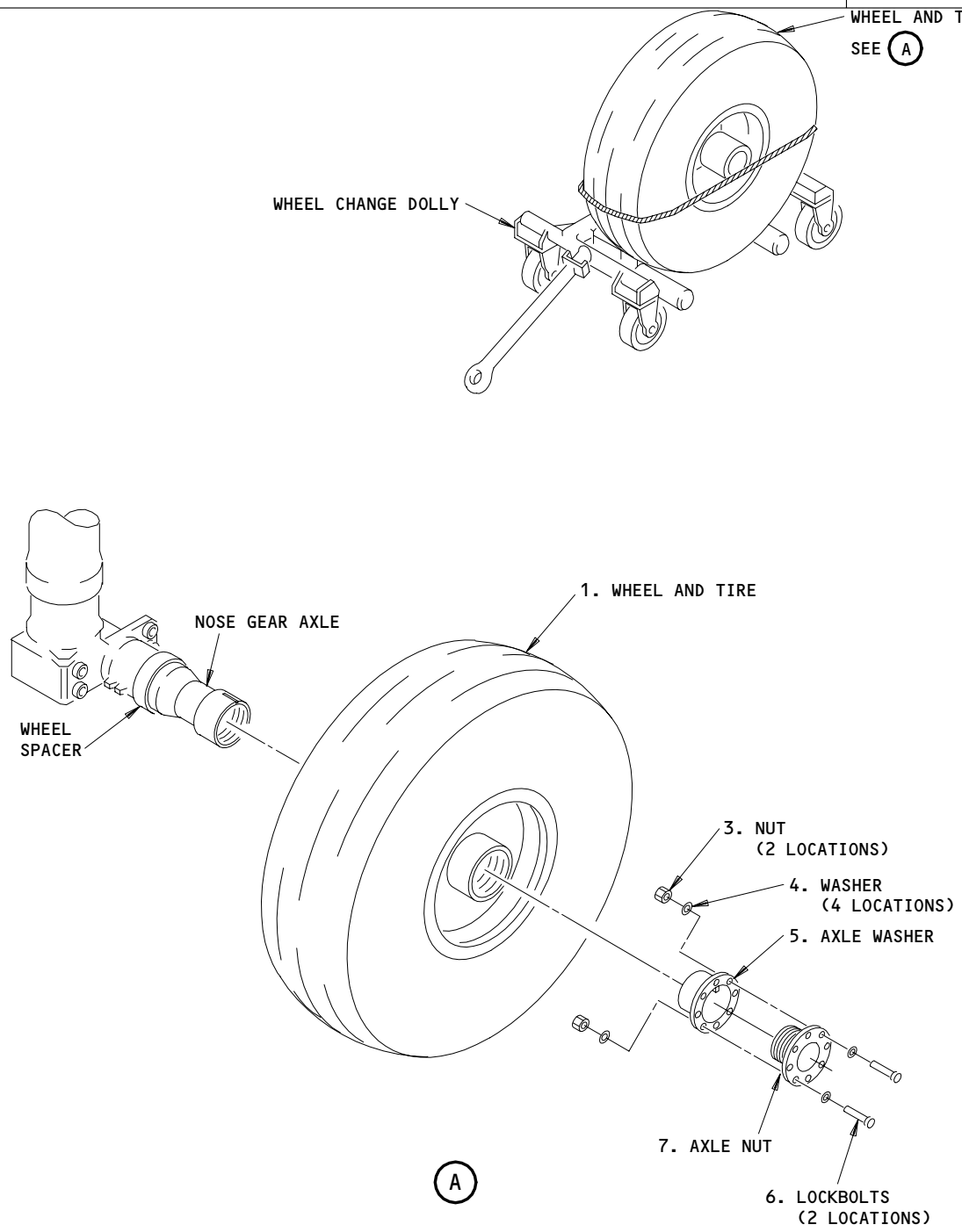
(14) Tighten the lockbolts (6) to 100-150 pound-inches, above run-on torque.

NOTE: Check the self locking nut (AMM 20-11-01/201).

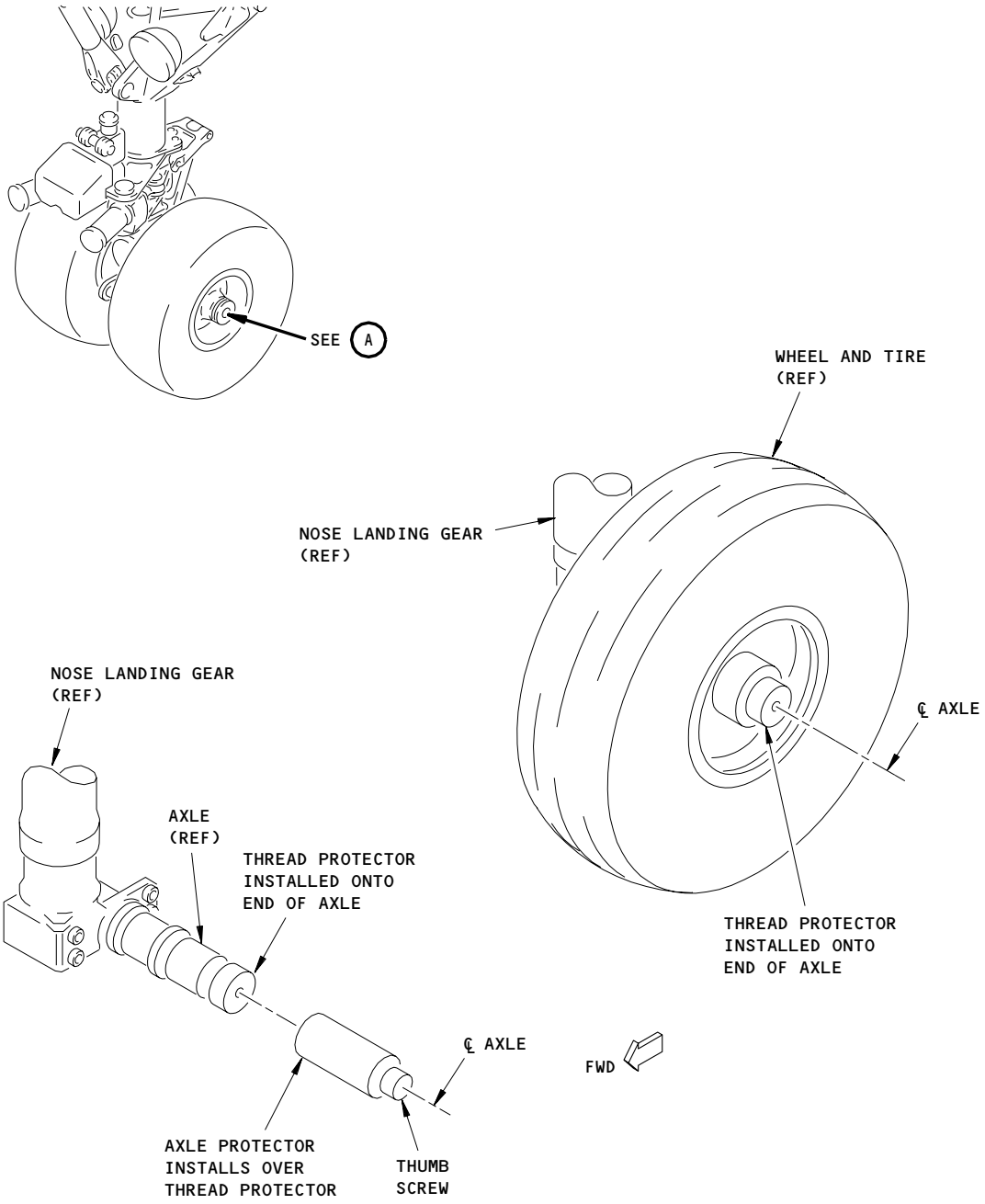
MECH	INSP

(15) Make sure that the tire is inflated with nitrogen to the correct pressure (Ref 12-15-03).

(16) Lower the nose gear and remove the jack (Ref 07-11-02).



Nose Gear Wheel and Tire Installation
Figure 401



Nose Gear Wheel and Tire Installation
Figure 401A

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	NOSE GEAR				006	AUG 22/08

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
REPLACE	NOSE GEAR WHEEL AND TIRE		ALL	ALL

ZONES	ACCESS PANELS
711	1004 NOTE

MECH | INSP

MPD ITEM NUMBER

REPLACE THE NOSE GEAR WHEEL AND TIRE. 32-45-02-4A

ACCESS NOTE: SPECIAL ACCESS 1004 REQUIRES OPENING OF THE LANDING GEAR WHEEL WELL DOORS AND INSTALLING SAFETY LOCKS IN ACCORDANCE WITH MAINTENANCE MANUAL PROCEDURE 32-00-15.

THIS CARD IS NOT A SCHEDULED MAINTENANCE TASK. IT IS A COMPONENT CHANGE CARD AND IT IS PROVIDED FOR OPERATOR CONVENIENCE DURING UNSCHEDULED MAINTENANCE ACTIVITIES. SEE APPENDIX A OF THE 767 MAINTENANCE PLANNING DATA (MPD) DOCUMENT,D622T001, FOR A DESCRIPTION OF THE COMPONENT CHANGE CARDS.

NOSE GEAR WHEEL AND TIRE - REMOVAL/INSTALLATION

1. Remove the Wheel and Tire for the Nose Landing Gear

A. Equipment

(1) Nose Gear Axle Jack - Commercially Available

(2) Wheel Change Dolly - Malabar 175 or Equivalent

(3) Nose Landing Gear Axle Protector - A32097-1

(4) NLG Wheel Retaining Nut Wrench - A32025-1

(5) Tire Deflation Tool - 968RB (Safe-Cor Tools, Fairview, PA 16415)

B. References

(1) 07-11-03/201, Jacking Airplane Axles

(2) 32-00-20/201, Landing Gear Downlocks

MECH | INSP

C. Prepare for the Removal

(1) Open this circuit breaker on the overhead panel, P11, and attach a DO-NOT-CLOSE tag:

(a) 11U17, TIRE PRESS IND 1

(2) Open this circuit breaker on the APU external power panel, P34, and attach a DO-NOT-CLOSE tag:

(a) 34M11, TIRE PRESS IND 2

(3) Make sure the landing gear downlocks are installed (Ref 32-00-20/201).

WARNING: IT IS RECOMMENDED THAT YOU REMOVE ONLY ONE WHEEL/TIRE ASSEMBLY FROM THE NOSE GEAR AT A TIME. IF YOU REMOVE THE TWO WHEEL/TIRE ASSEMBIES FROM THE NOSE GEAR AT THE SAME TIME, STRUCTURAL DAMAGE AND INJURY TO PERSONS CAN OCCUR IF THE AIRPLANE FALLS.

(4) Lift the axle (6) with a jack until there is clearance between the tire (1) and the ground (Ref 07-11-03/201).

WARNING: BEFORE YOU REMOVE THE WHEEL AND TIRE ASSEMBLY, YOU MUST DEFLATE THE TIRE OR INSPECT THE WHEEL AND TIRE TO MAKE SURE THEY ARE SAFE. A DEFECTIVE WHEEL AND TIRE CAN EXPLODE DURING OR AFTER REMOVAL IF YOU DO NOT DEFLATE THE TIRE. THIS CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(5) Do one of the steps that follows:.

NOTE: If you plan to install the same wheel and tire assembly and the assembly is safe it is not always necessary to deflate the tire. However, if you will not install the same wheel and tire assembly deflate the tire to prevent transporting an inflated tire.

(a) Inspect the wheel and tire assembly for the conditions that follow:

1) The tire is worn too much (Ref 32-45-04/601)

2) The tire has damage.

3) The tire is unusually hot.

4) The wheel has damage.

5) One or more of the tie bolts have damage or are missing.

6) If you find one or more of these conditions, you must deflate the tire.

(b) Deflate the tire as follows:

1) Deflate the tire with the tire deflation tool.

2) If the valve core has damage and you can not remove pressure from the tire with the tire deflation tool, do the steps that follow:

NOTE: The valve core is in the pressure sensor holder/inflation valve (13).

3) Disconnect the tire pressure sensor (12) from the pressure sensor holder/inflation valve (13).

a) Remove the lockwire and the nut (14), and pull the sensor (12) from the pressure sensor holder (13) on the wheel.

4) Slowly turn the pressure sensor holder/inflation valve (13) in a counterclockwise direction until there is gas leakage through the boss.

5) At the same time, push lightly on the valve stem of the pressure sensor holder/inflation valve (13).

6) Remove the pressure sensor holder/inflation valve (13) after all the pressure in the tire has been released.

D. Remove the Wheel and Tire (Fig. 401)

(1) Do the steps that follow to remove the hubcap (4):

(a) Remove the three bolts (20) from the hubcap assembly (4) along with the washers (17) and nuts (16).

MECH | INSP

(b) Hold the grommet (18) and the spacer (19) in their positions.

(c) Pull the hubcap (4) away from the hub.

NOTE: Be careful not to bend the pressure sensor conduit when you remove the hubcap.

(2) Do the steps that follow to remove the spider assembly (11):

(a) Remove the nuts (21) and the balance weights (24).

(b) Pull the spider assembly (11) from the shank end of the special tie bolts (23).

(c) Remove the countersunk washers (22) that are between the flange of the spider assembly (11) and the attach nut for the special tie bolt (23).

(3) Remove the tire pressure sensor (12).

(a) Remove the lockwire and the nut, then pull the tire pressure sensor (12) from the pressure sensor holder/inflation valve (13).

(b) Install a seal cap on the pressure sensor holder/inflation valve (13).

NOTE: Ten seal caps, one for each wheel and tire, are located with the airplanes fly-away equipment.

The seal caps will prevent a release of pressure through the pressure sensor holder/inflation valve (13) if the tire is inflated. Without a tire pressure sensor (12) or a seal cap installed, the tire pressure will decrease approximately 1 psi per minute.

(c) Disconnect the tire pressure sensor (12) from the wheel interface unit (7) and remove the sensor (12).

NOTE: If you will install the used tire pressure sensor (12) in this wheel position, keep the grommet (18) on the pressure sensor conduit. If you will install a new sensor (12), remove the grommet (18) and keep it with the hubcap (4).

MECH | INSP

(4) Do the steps that follow to remove the wheel and tire (1):

(a) Remove the nuts (10), washers (9) and bolts (8).

NOTE: Turn the rotor on the wheel interface unit (7), if it is necessary, for access to remove the bolts.

(b) Remove the axle nut (3) with the wrench adapter.

(c) Remove the axle washer (2).

(d) Install an axle protector.

(e) Use a wheel change dolly to remove the wheel and tire (1).

NOTE: Make sure the axle washer (2) is not attached to the wheel and tire assembly when you remove the assembly.

(f) Mark the reason for the tire removal on the tire to aid the inspectors when they examine the tire.

2. Install the Wheel and Tire for the Nose Landing Gear

A. Equipment

(1) Wheel Change Dolly - Malabar 175 or Equivalent

(2) Tire Inflation Tool - A12007-11

B. Consumable Materials

(1) D00378 Grease - Aeroshell No. 22 (Preferred) or Aeroshell No. 5 (Optional)

C. Parts

AMM			AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
401	1	Wheel and Tire Assembly	32-45-02	01	36
	2	Axle Washer			32
	3	Axle Nut			37
	4	Hubcap			305
	5	Wheel Spacer			205
	7	Wheel Interface Unit			330
	8	Bolt			235
	9	Washer			240
	10	Nut			245
	11	Spider Assembly			325
	12	Tire Pressure Sensor(S283T024-3)			TBD
	13	Pressure Sensor Holder/ Inflation Valve			287
	14	-Nut (subassembly of item 13)			
	15	-Valve Cap (subassembly of item 13)			
	16	Nut			270
	17	Washer			265
	18	Grommet			275
	19	Spacer			280
	20	Bolt			260
	21	Nut			315
	22	Countersunk Washer			310
	24	Balance Weight			320

D. References

(1) 07-11-03/201, Jacking Airplane Axles

(2) 12-15-03/301, Landing Gear Tire

(3) 32-45-00/501, Tires and Wheels

E. Install the Wheel and Tire (Fig. 401)

(1) Remove the axle protector.

(2) Examine the wheel and tire assembly before you install it on the airplane (Ref 32-45-03, 32-45-04).

MECH | INSP

(3) Examine the part of the axle that you can see for scoring, galling, or corrosion.

CAUTION: MAKE SURE THE WHEEL SPACER IS INSTALLED. IF THE SPACER IS NOT INSTALLED, THE WHEEL BEARING CAN BECOME LOOSE AND CAUSE SUBSEQUENT WHEEL FAILURE.

(4) Make sure the wheel spacer (5) is installed on the axle (6).

(5) Do the steps that follow to install the wheel and tire (1):

(a) Apply a thin layer of grease on the axle (6) in the area where the wheel bearings touch the axle.

NOTE: Do not lubricate the axle (6) surfaces between the wheel bearings.

(b) Lubricate the axle (6) threads and the wheel bearings with grease.

(c) Use a wheel dolly to move the wheel and tire assembly (1) into its position on the axle (6).

CAUTION: MAKE SURE THAT THE AXLE WASHER IS INSTALLED. IF THE WASHER IS NOT INSTALLED, THE WHEEL BEARING CAN FAIL.

(d) Install the axle washer (2).

(e) Apply grease to the axle nut (3) threads.

(f) Tighten the axle nut (3) as follows:

1) While you turn the wheel, tighten the axle nut to 76-92 pound-feet.

2) Stop the wheel and loosen the nut to be at zero torque.

3) While you turn the wheel again, tighten the nut to 34 pound-feet.

4) If the holes in the axle nut and washer do not align, do the step that follows:

MECH | INSP

a) Turn the nut to align the holes, do not torque to more than 75 pound-feet.

NOTE: Do not only loosen the nut to align the bolt holes. If the bolt holes do not align at the maximum permitted torque, loosen the nut fully and do the tighten procedure again for the wheel axle nut.

(g) Install the bolts (8), washers (9) and nuts (10) (2 locations).

NOTE: The bolt heads must be on the inner side of the axle (6).

(h) Tighten the nuts (10) to 75-85 pound-inches, above run-on torque.

NOTE: Check the self locking nut (AMM 20-11-01/201).

(6) Do the steps that follow to install the pressure sensor conduit (12):

(a) Install the grommet (18) on the pressure sensor conduit.

(b) Connect the tire pressure sensor (12) to the wheel interface unit (7).

NOTE: Do not connect the sensor (12) to the pressure sensor holder/inflation valve (13) on the wheel until you install the hubcap (4). This will let you turn the hubcap to engage the transducer coupling and the driver for the wheel interface unit and not pull the pressure sensor conduit.

(7) Make sure the tire is inflated to the correct pressure (Ref 12-15-03/301).

(8) Use the jack to lower the axle (6) until the weight of the airplane is on the wheels (Ref 07-11-03/201).

(9) Do the steps that follow to install the spider assembly (11):

MECH | INSP

(a) Install the countersunk washers (22) on the shank ends of the special tie bolts (23) that have the long shanks.

NOTE: Install the washers with the countersunk side to the special tie bolt.

(b) Hold the spider assembly (11) on the shank end of the special tie bolts (23).

NOTE: Install the concave side of the spider adjacent to the tire pressure sensor. This is the side of the spider that gives the most clearance between the spider and the tire pressure sensor.

(c) Install the balance weights (24) on the shank end of the two special tie bolts (23) that are on the opposite side of the wheel from the tire pressure sensor (12).

(d) Install the countersunk washers (22) on the shank end of the two special tie bolts (23) on the side of the wheel with the tire pressure sensor (12).

(e) Install the nuts (21).

(f) Tighten the nuts (21) to 50-60 pound-inches.

(10) Do the steps that follow to install the hubcap (4):

(a) Put the hubcap (4) in its position.

(b) Move the hubcap (4) until you can put the grommet (18), on the pressure sensor conduit, in the slot in the hubcap.

(c) Put the spacer (19) below the grommet (18) and push it in the slot in the hubcap (4) when the hubcap is installed.

(d) Turn the hubcap (4) lightly back and forth until the driver in the hubcap engages with the rotor in the wheel interface unit.

(e) Turn the hubcap (4) until the bolt holes in the hubcap align with the mating holes in the wheel.

(f) Install the bolts (20), washers (17), and nuts (16) and install a lockwire.

MECH | INSP

(11) Do the steps that follow to connect the tire pressure sensor (12) to the pressure sensor holder/inflation valve (13):

(a) Remove the valve cap (15) from the pressure sensor holder/inflation valve (13).

CAUTION: CONNECT THE TIRE PRESSURE SENSOR IMMEDIATELY AFTER YOU REMOVE THE SEAL CAP. THIS PREVENTS GAS LEAKAGE THROUGH THE PRESSURE SENSOR HOLDER ON THE INFLATION VALVE. WITHOUT THE TIRE PRESSURE SENSOR OR THE SEAL CAP INSTALLED, THE TIRE PRESSURE WILL DECREASE APPROXIMATELY 1 PSI PER MINUTE. THIS CAN CAUSE DAMAGE TO THE TIRE IF IT IS OPERATED WITHOUT SUFFICIENT PRESSURE.

(b) Remove the nut (14) and the seal cap from the pressure sensor holder/inflation valve (13).

(c) Connect the tire pressure sensor (12) to the pressure sensor holder/inflation valve (13) on the wheel.

NOTE: The tire pressure sensor (12) can be installed at one of 12 possible angles in 30 degree increments around the holder. When you install the tire pressure sensor, make sure the pressure sensor conduit is not loose or pulled.

(d) Install and tighten the nut (14) and install a lockwire.

(e) Install the valve cap (15) on the end of the pressure sensor holder/inflation valve (13).

(12) Make sure the tire pressure is correct and inflate the tire with nitrogen if it is necessary (Ref 12-15-03/301).

(13) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the overhead panel, P11:

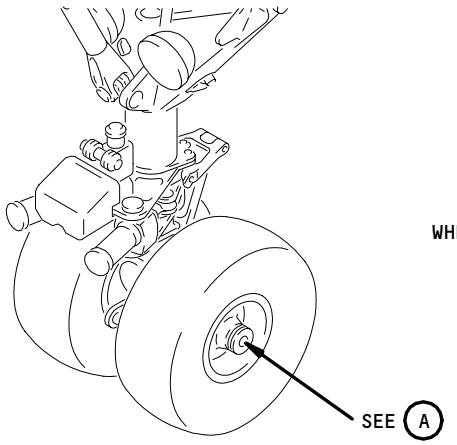
(a) 11U17, TIRE PRESS IND 1

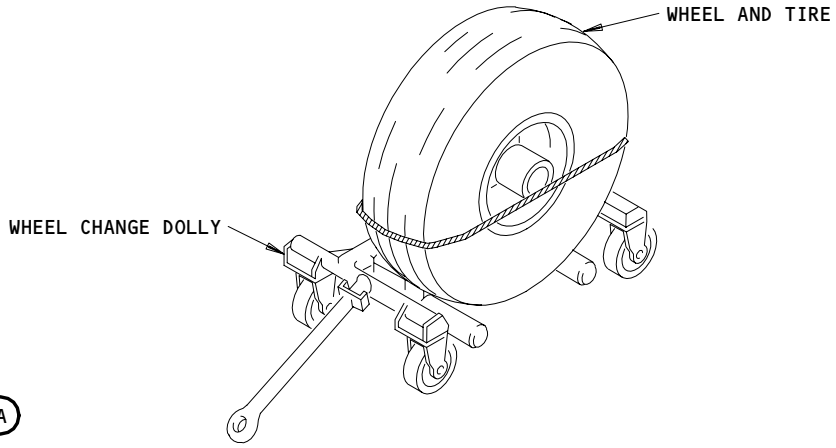
(14) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the APU external power panel, P34:

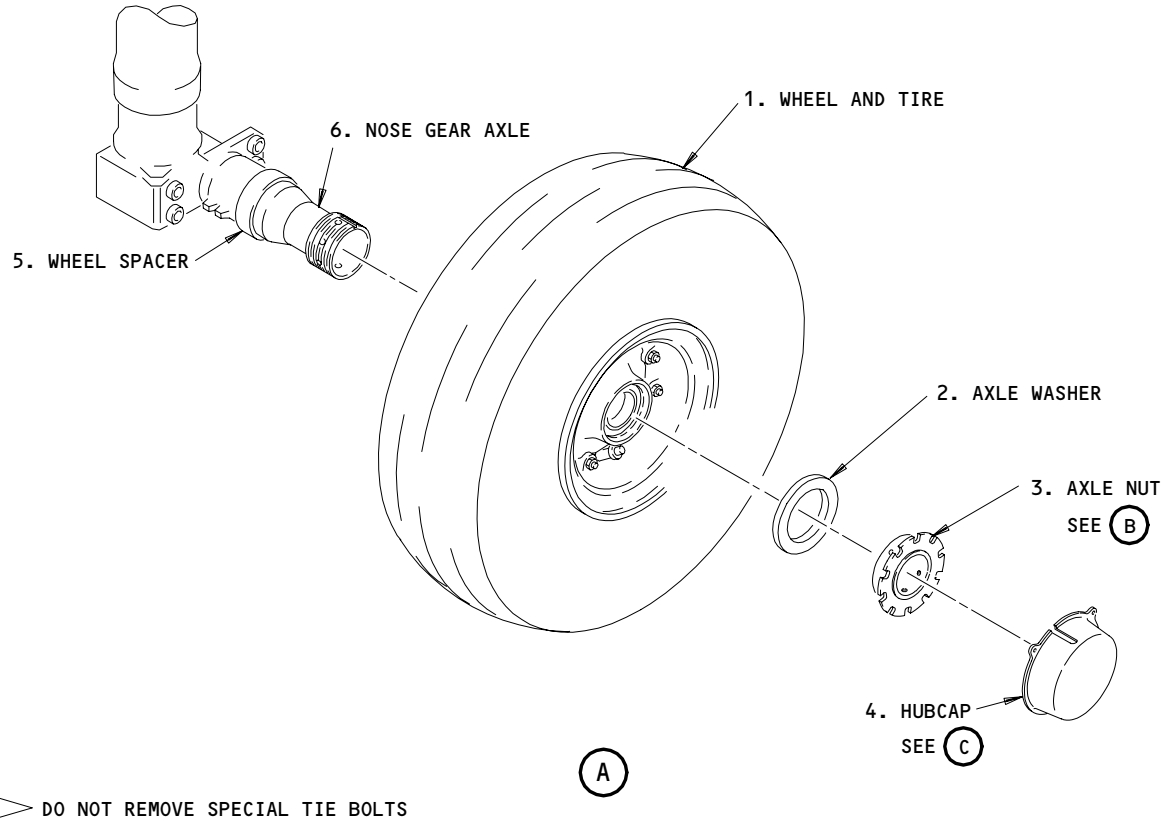
(a) 34M11, TIRE PRESS IND 2

MECH	INSP

(15) Do the operational test for the indicating system for tire pressure (Ref 32-45-00/501).

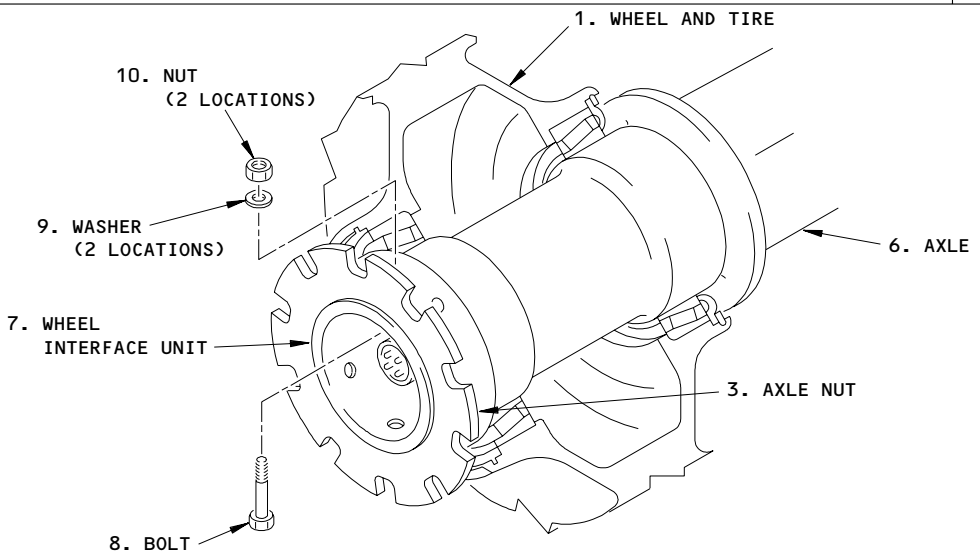






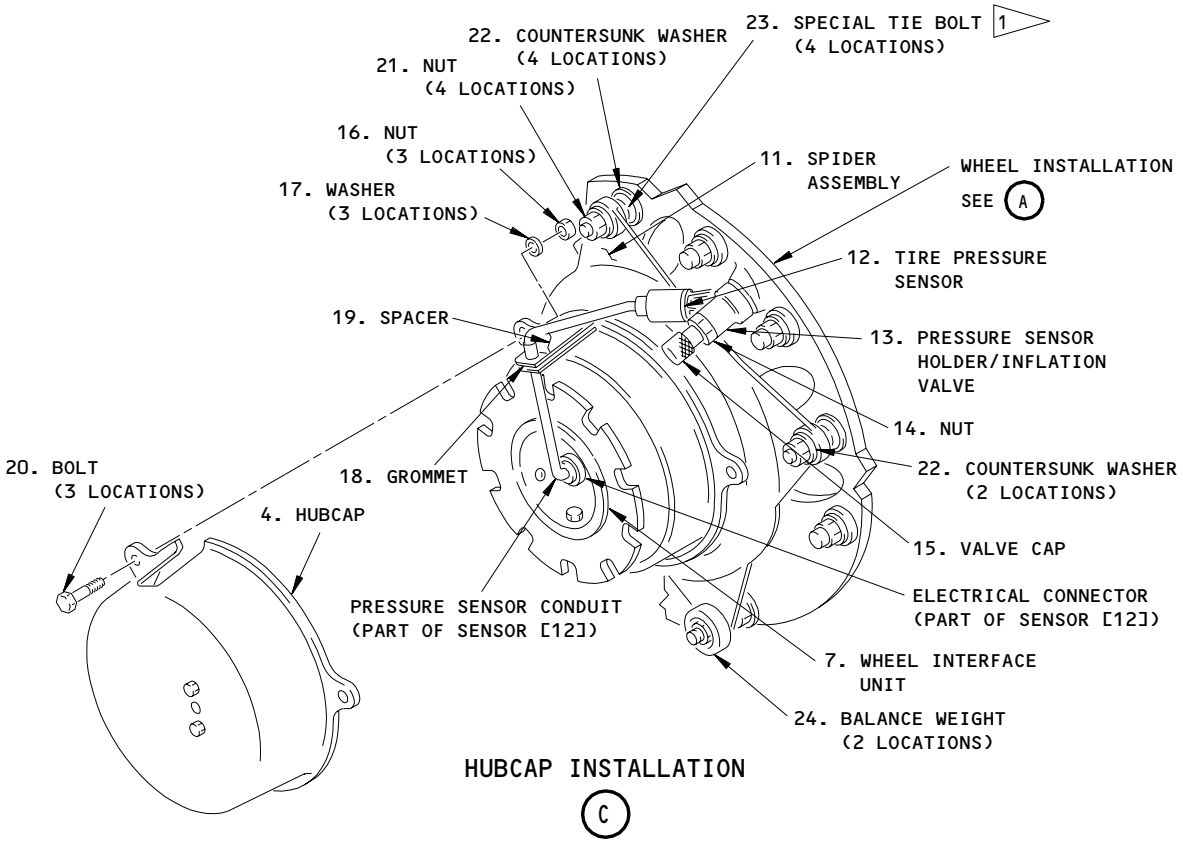
1 DO NOT REMOVE SPECIAL TIE BOLTS

Nose Gear Wheel and Tire Installation
Figure 401 (Sheet 1)



AXLE NUT INSTALLATION

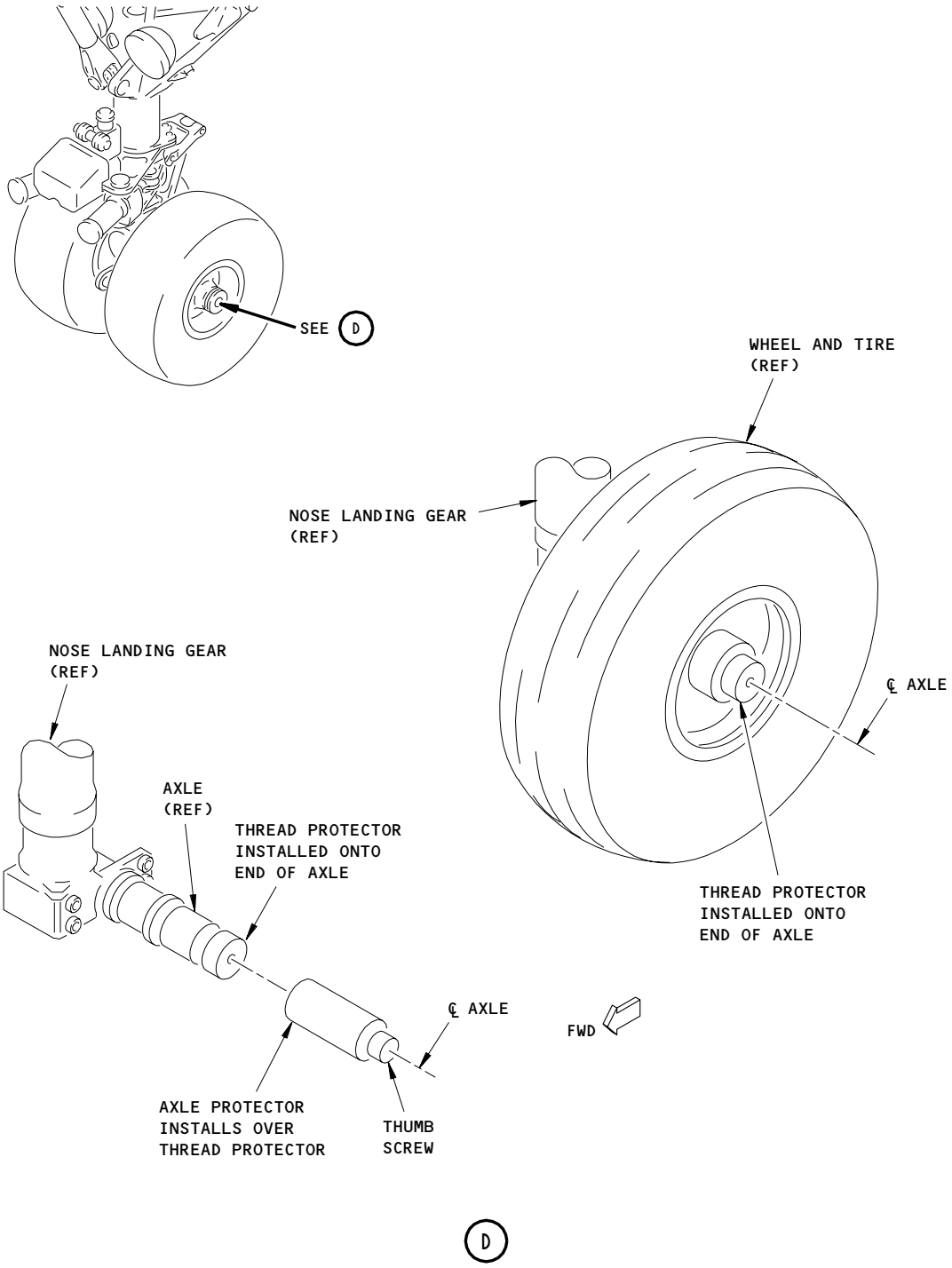
B



HUBCAP INSTALLATION

C

Nose Gear Wheel and Tire Installation
Figure 401 (Sheet 2)



Nose Gear Wheel and Tire Installation
Figure 401 (Sheet 3)

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-R14
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	LNDG GEAR			10202	012	APR 22/09

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
REPLACE	MAIN GEAR WHEEL BRAKES		NOTE	ALL

ZONES	ACCESS PANELS
731 741	1004 NOTE

MECH	INSP	MPD ITEM NUMBER

REPLACE THE MAIN LANDING GEAR WHEEL BRAKES. 32-41-08-4A

AIRPLANE NOTE: SB 767-32A0125, 767-32A0126, 767-32A0130 AND 767-32A132. APPLICABLE TO AIRPLANES THAT HAVE SB 767-32A0125 AND 767-32A0126 OR PRODUCTION EQUIVALENT INCORPORATED BUT NOT SB 767-32A0130 OR SB 767-32A0132.

ACCESS NOTE: SPECIAL ACCESS 1004 REQUIRES OPENING OF THE LANDING GEAR WHEEL WELL DOORS AND INSTALLING SAFETY LOCKS IN ACCORDANCE WITH MAINTENANCE MANUAL PROCEDURE 32-00-15.

THIS CARD IS NOT A SCHEDULED MAINTENANCE TASK. IT IS A COMPONENT CHANGE CARD AND IT IS PROVIDED FOR OPERATOR CONVENIENCE DURING UNSCHEDULED MAINTENANCE ACTIVITIES. SEE APPENDIX A OF THE 767 MAINTENANCE PLANNING DATA (MPD) DOCUMENT,D622T001, FOR A DESCRIPTION OF THE COMPONENT CHANGE CARDS.

MAIN GEAR WHEEL BRAKES - REMOVAL/INSTALLATION

1. Remove the Wheel Brake For the Main Landing Gear

   A. Equipment

      (1) SAS 150-154;
      MTH 275-276 PRE-SB 32-85;
      MLG Axle and Axle Thread Protector Equipment -

      (a) A32098-1 (Preferred) Includes:
      - Protector - Axle, MLG - A32098-3
      - Protector - Axle Threads, MLG - A32098-2

MECH | INSP

(b) A32007-17 (Optional) or A32007-16 (Optional) Includes:
- Protector - Axle, MLG - A32007-6
- Protector - Axle Threads, MLG - A32007-9

(2) SAS 050-149, 155-999;
MTH 275-276 POST-SB 32-85;
MLG Axle and Thread Protector Equipment - A32098-1 (Required)

(3) Brake Cradle - Commercially available

(4) Dolly, Wheel/Brake - Commercially available

(5) Sling, Nylon - MLG - Commercially available (a steel cable is optional to remove hot brakes)

B. References

(1) AMM 07-11-03/201, Jacking Airplane Axles

(2) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(3) AMM 32-00-20/201, Landing Gear Downlocks

(4) AMM 32-11-20/401, Main Gear Brake Rod

(5) AMM 32-45-01/401, Main Gear Wheel and Tire

(6) AMM 32-46-01/401, Brake Temperature Sensor

C. Access

(1) Location Zones
731 Main Landing Gear (Left)
741 Main Landing Gear (Right)

D. Remove the Wheel Brake For the Main Landing Gear (Fig. 401)

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

(2) Disconnect Brake Rod (AMM 32-11-20/401)

(3) Lift the axle with the jack to lift the wheel and tire clear of the ground (AMM 07-11-03/201).

MECH | INSP

(4) Remove the wheel and tire for the main landing gear (AMM 32-45-01/401).

(5) Remove the brake temperature sensor (AMM 32-46-01/401) from the brake.

NOTE: If it is necessary to keep the temperature sensor with the brake assembly, disconnect the connector for the brake temperature sensor only.

(6) Remove the pressure from the right and center hydraulic systems and the hydraulic reservoirs (AMM 29-11-00/201).

(7) Push the brake pedals fully seven times to let the pressure out of the brake accumulator.

NOTE: Make sure there is a minimum of 5 seconds between each time you apply the brake.

(8) Do the steps that follow to remove the wheel spacer (25) from the axle (View A-A):

(a) Pull the brake approximately 3 inches off the axle.

(b) Loosen and move the wheel spacer (25) out on the axle.

(c) Push the brake into the initial position.

(d) Remove the wheel spacer (25) from the axle.

(9) Make sure that the axle protector and the axle thread protector are installed.

(a) Turn the barrel of the brake disconnect (hose half) clockwise until the slot in the barrel is disengaged from the locking pin on the brake disconnect (brake half).

(b) Pull the barrel on the brake disconnect (hose half) away from the brake to engage the threads in the brake half with the threads in the hose half and turn the barrel counterlockwise to separate the hose half from the brake half.

(c) Tie the brake hose to adjacent landing gear structure to hold it away from the brake.

MECH | INSP

(10) Install a sling on the brake (1) to hold it during the removal.

NOTE: If the brake is hot, use a steel cable as an alternative to a sling to hold up the brake during the removal.

CAUTION: DO NOT HOLD THE BRAKE ON THE O.D. OF THE ROTORS AFTER YOU REMOVE THE BRAKE. YOU CAN DO THIS IF THE SURFACE YOU PUT THE ROTOR ON IS SMOOTH AND WILL GIVE UNDER THE WEIGHT OF THE CARBON DISKS AND THEN GO BACK TO ITS INITIAL SHAPE. IF THE WEIGHT OF THE BRAKE IS HELD ON THE O.D. OF THE ROTORS, IT CAN DAMAGE THE CARBON.

(11) Remove the brake (1).

(12) Put the brake (1), with the piston side up, on a dolly and cradle tool.

(13) Remove the brake grease seal (2) if the seal stays on the axle.

2. Install the Wheel Brake For the Main Landing Gear (Fig. 401)

A. Equipment

(1) SAS 150-154;
MTH 275-276 PRE-SB 32-85;
MLG Axle and Axle Thread Protector Equipment -

(a) A32098-1 (Preferred) Includes:
- Protector - Axle, MLG - A32098-3
- Protector - Axle Threads, MLG - A32098-2

(b) A32007-17 (Optional) Or A32007-16 (Optional) Includes:
- Protector - Axle, MLG - A32007-6
- Protector - Axle Threads, MLG - A32007-9

(2) SAS 050-149, 155-999;
MTH 275-276 POST-SB 32-85;
MLG Axle and Thread Protector Equipment - A32098-1 (Required)

(3) Brake Cradle - Commercially available

(4) Dolly, Wheel/Brake - Commercially available

MECH | INSP

(5) Sling, Nylon (MLG) - Commercially Available
(a steel cable is optional to remove hot brakes)

B. Consumable Materials

(1) D00633 Grease - BMS 3-33 (Recommended)
D00013 Grease - MIL-G-23827 (Alternative)

(2) Wheel bearing grease -
Aircraft, General Purpose, Wide Temperature:

(a) D00378 - Aeroshell 22 (Recommended)

(b) D00233 - Mobilgrease 28 (Alternative)

(c) D50005 - Mobil Aviation Grease SHC 100 (Alternative)

(d) D00258 - Aeroshell 5 (Alternative)

(3) G00009 Corrosion Inhibiting Compound - BMS 3-23

(4) A00359 Sealant - BMS 5-05

(5) D00153 Fluid, Hydraulic - BMS 3-11

C. Parts

MECH | INSP

AMM		NOMENCLATURE	AIPC		
FIG	ITEM		SUBJECT	FIG	ITEM
401	1	Brake	TBD		
	2	Grease Seal			
	3	Disconnect, Brake			
	13	Retainer Plate			
	14	Washer			
	15	Bolt			
	18	Retainer Plate			
	19	Retainer Plate			
	20	Spacer			
	21	Washer			
	22	Bolt			
	239	Washer			
	24	Nut			
	25	Wheel Spacer			
	26	Brake Axle Bushing			
	27	Brake Sleeve			

D. References

(1) AMM 07-11-03/201, Jacking Airplane Axles

(2) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(3) AMM 32-11-20/401, Main Gear Brake Rod

(4) AMM 32-11-26/601, Main Gear Axle

(5) AMM 32-41-06/401, Hydraulic Brake Disconnect

(6) AMM 32-45-01/401, Main Gear Wheel and Tire

(7) AMM 32-46-01/401, Brake Temperature Sensor

E. Access

MECH | INSP

(1) Location Zones
731 Main Landing Gear (Left)
741 Main Landing Gear (Right)

F. Procedure

(1) Make sure the pressure is removed from the right and center hydraulic systems (AMM 29-11-00/201).

(2) Examine the part of the axle that you can see. Look for marks, galling, or corrosion.

NOTE: The wear limits for the axles on the main landing gear are in 32-11-26.

(3) Make sure the axle protector and the axle thread protector are installed.

(4) Apply a thin layer of wheel bearing grease (Aeroshell 22) to the brake sleeve on the axle. Also, apply wheel bearing grease (Aeroshell 22) to the axle bushings on the brake assembly such that the grooves in the bushings are completely filled with grease.

NOTE: Wheel bearing grease (Aeroshell 22) is used because it has a higher flash point.

CAUTION: MAKE SURE THE GREASE SEAL IS INSTALLED CORRECTLY. A DAMAGED GREASE SEAL WILL ALLOW GREASE TO FILL THE TORQUE TUBE AREA AND WILL CAUSE A FIRE IN OPERATION.

(5) Make sure the brake axle bushing (26) is correctly installed in the brake housing and there is no damage to the bushing (26)

(6) If the replacement brake does not have a quick-disconnect brake fitting half, remove the fitting half from the old brake and install it on the new brake as shown in AMM 32-41-06/401.

(7) Put the brake retainer plate (13) at the mounting surface on the brake disconnect port on the brake with the offset mounting hole oriented as shown in Fig. 401, Detail C.

MECH | INSP

(a) Make sure that the brake disconnect half is installed in the brake port (AMM 32-41-06/401) before you install the brake disconnect plate (13).

(8) Fill the brake (1) with hydraulic fluid, if it is necessary.

(9) Install the brake sling on the brake (1).

(10) Install the brake (1) on the axle.

(11) Connect the brake hydraulic hose to the brake at the brake disconnect as follows:

(a) Align the barrel of the brake disconnect fitting (hose half) with the brake disconnect fitting (brake half).

(b) Engage the barrel of the hose half with the threads on the brake half.

(c) Turn the barrel clockwise until the locking pin on the brake disconnect (brake half) engages the slot on the barrel of the brake disconnect (hose half).

1) It will be harder to turn the barrel when it touches the upper surface of the locking pin. When you continue to turn the barrel and it goes past the locking pin, spring force will push the barrel down and cause the slot to engage the locking pin.

(12) Examine the wheel spacer (25) (View A-A). Replace the wheel spacer (25) if you find galling.

(13) Apply a thin layer of wheel bearing grease (Aeroshell 22) to the thrust faces of the wheel spacer (25).

CAUTION: INSTALL THE WHEEL SPACER CORRECTLY,IMPROPER ORIENTATION WILL CAUSE DAMAGE TO THE INNER WHEEL HALF HUB.

(14) Install the wheel spacer (25) on the axle.

(15) Install the brake temperature sensor (AMM 32-46-01/401) if it was removed.

(16) If the brake temperature sensor was not removed, install the connector for the brake temperature sensor.

MECH | INSP

WARNING: DO NOT REMOVE THE DOOR LOCKS AFTER YOU INSTALL THE WHEEL AND TIRE. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT DURING THE BRAKE OPERATIONAL TEST.

(17) Install the wheel and tire for the main landing gear (AMM 32-45-01/401).

NOTE: Keep the brake rod and the brake torque arm aligned during the wheel and tire installation. This will let you install the pin when the jack is removed.

(18) Lower the airplane and remove the jacks (AMM 07-11-03/201).

(19) Connect the Brake Rod (AMM 32-11-20/401).

(20) Apply grease (Royco 11-MS) at the lubrication fitting on the brake rod (7) that attaches to the brake torque arm and to the lubrication fitting on the face of the brake housing (AMM 12-21-14/301).

(21) Do the applicable steps below to complete installation of the brake unit and to prepare the brake unit for an operational test.

(a) It is not necessary to bleed a brake unit if these items are done before the installation of the brake unit:

1) The inner half of a hydraulic brake disconnect is installed on the brake unit.

2) The brake unit is completely filled with hydraulic fluid.

3) All air is bled from the brake.

(b) It is necessary to bleed a brake unit if all the items shown above are not done before installation of the brake unit.

(c) If it is not necessary to bleed the brake unit, do these steps:

1) Make sure that chocks are installed on the wheels.

2) Release the parking brake.

3) Pressurize the right hydraulic system and reservoir (AMM 29-11-00/201).

MECH | INSP

4) Do this sequence of steps six times to bleed any small quantities of air from the brakes.

a) Slowly push one of the two sets of brake pedals to limit of travel to fully operate the brakes.

b) Hold these brake pedals in this position momentarily.

c) Slowly release the brake pedals. Stop for ten seconds befor you operate the brakes again.

(d) If it is necessary to bleed the brake unit, bleed the brake unit with the procedure in 32-41-00/201.

G. Do the Test of Hydraulic Brake Operation

(1) Pressurize the right and center hydraulic systems (AMM 29-11-00/201).

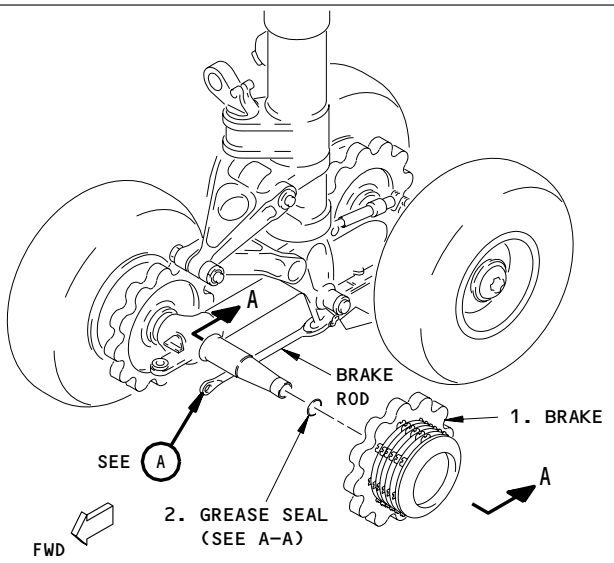
(2) Push the brake pedals again and again to apply and release the brakes.

(3) Examine the movement and position of the indicator pins for brake wear to make sure the brake operation is correct.

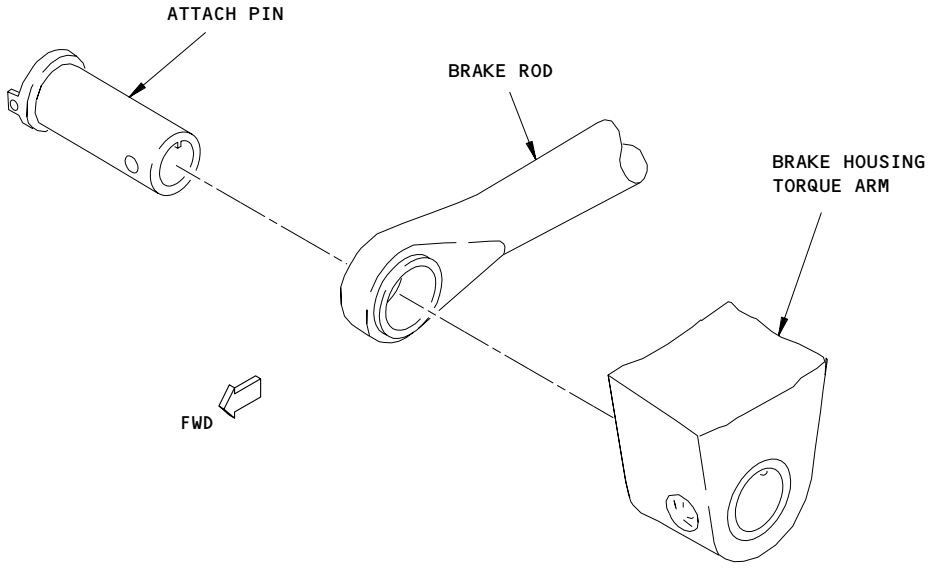
(4) Make sure there are no hydraulic leaks at the brake disconnect fittings.

H. Put the Airplane Back to Its Initial Condition

(1) Remove the pressure from the right and center hydraulic systems if it is not necessary (AMM 29-11-00/201).



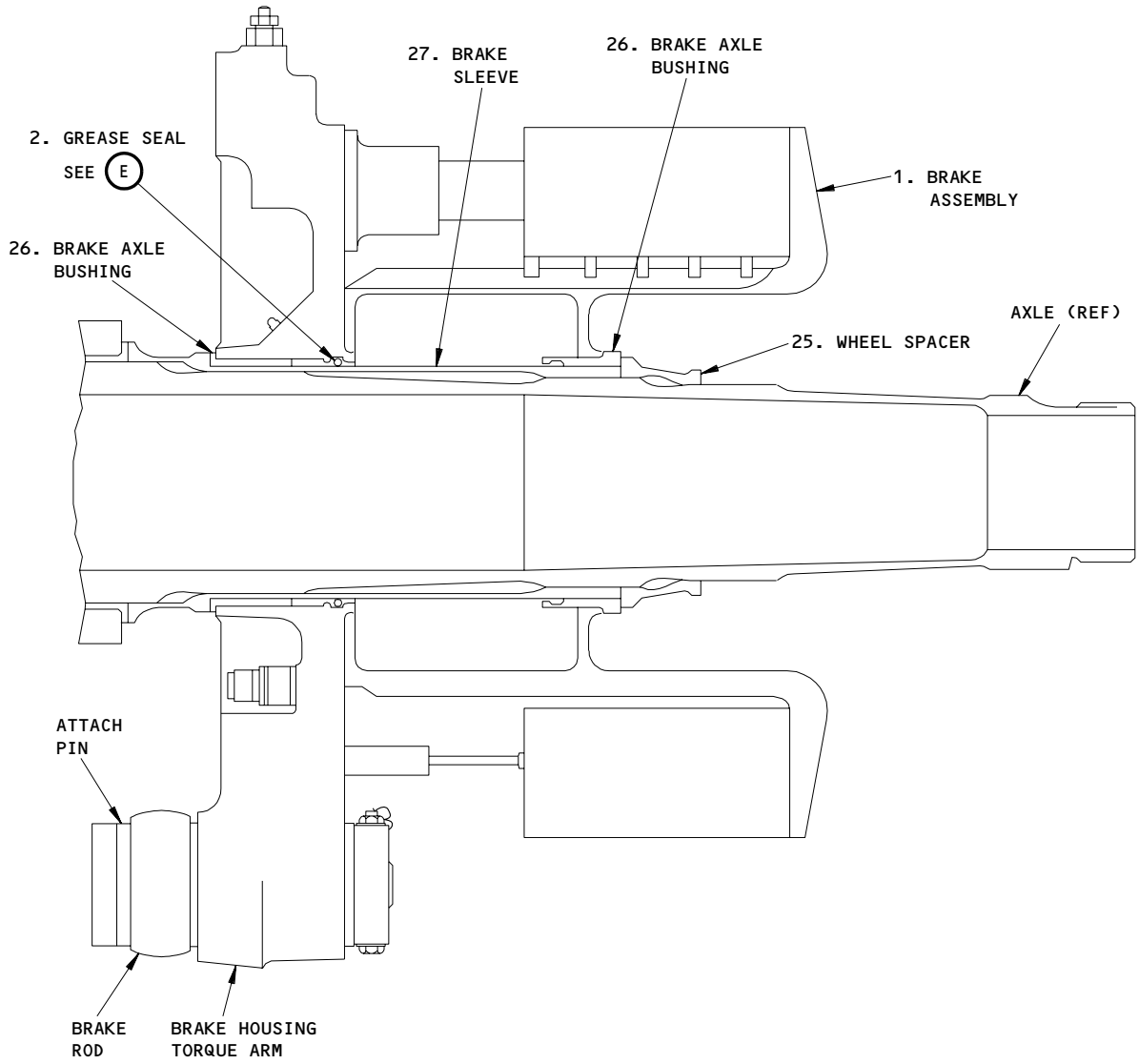
LEFT MAIN LANDING GEAR
(RIGHT MAIN LANDING GEAR OPPOSITE)



(EXAMPLE, 4 LOCATIONS)

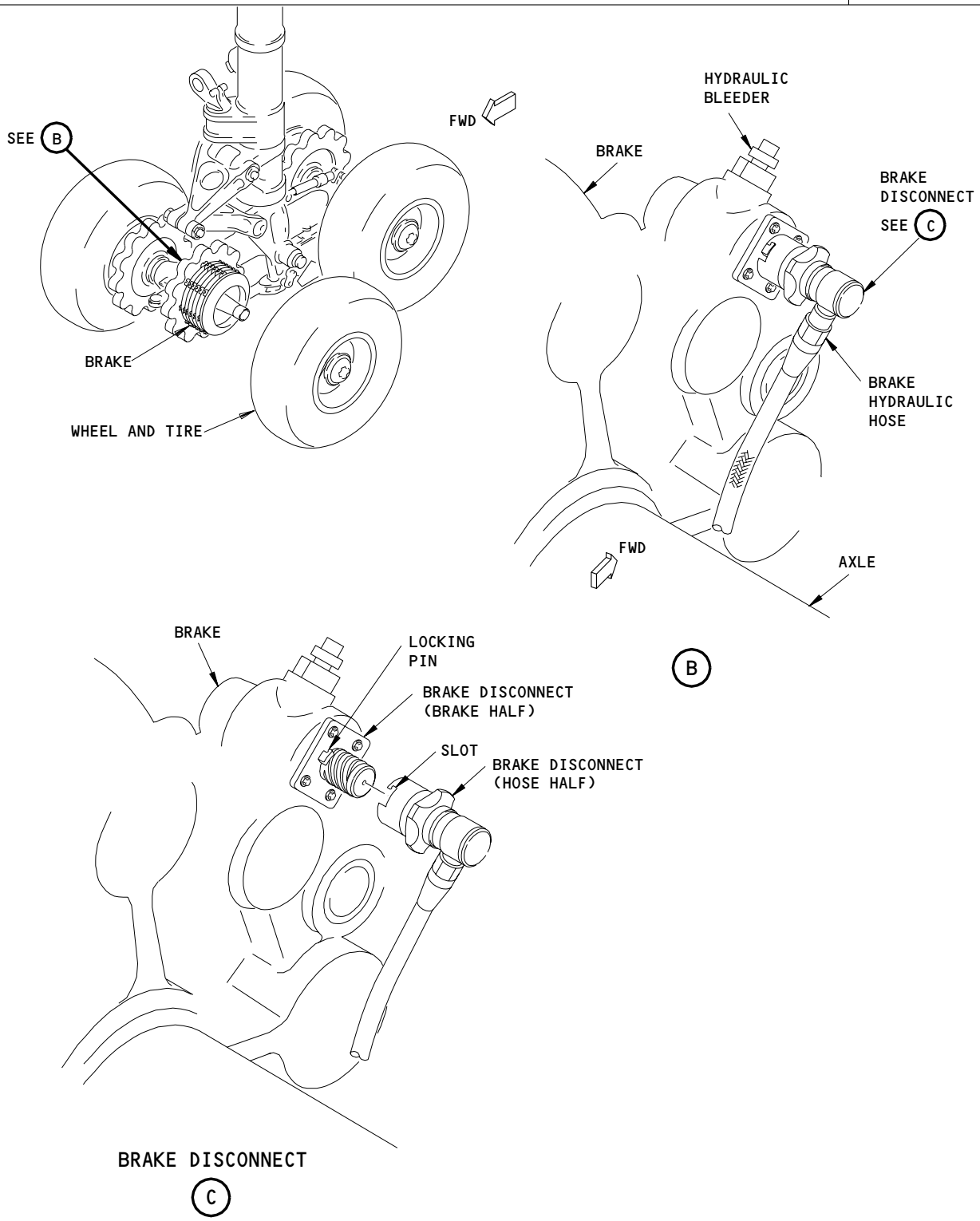
A

Main Landing Gear Brake Installation
Figure 401 (Sheet 1)



(VIEW WITH THE WHEEL REMOVED)
A-A

Main Landing Gear Brake Installation
Figure 401 (Sheet 2)



Main Landing Gear Brake Installation
Figure 401 (Sheet 3)

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-R15
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	LNDG GEAR			10202	012	DEC 22/08

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
REPLACE	MAIN GEAR WHEEL BRAKES		NOTE	ALL

ZONES	ACCESS PANELS
731 741	1004 NOTE

MECH | INSP

MPD ITEM NUMBER

REPLACE THE MAIN LANDING GEAR WHEEL BRAKES. 32-41-08-4A

AIRPLANE NOTE: SB 767-32A0125 AND 767-32A0130. APPLICABLE TO AIRPLANES WITH THE SERVICE BULLETINS OR PRODUCTION EQUIVALENT INCORPORATED BUT NOT SB 767-32A0132.

ACCESS NOTE: SPECIAL ACCESS 1004 REQUIRES OPENING OF THE LANDING GEAR WHEEL WELL DOORS AND INSTALLING SAFETY LOCKS IN ACCORDANCE WITH MAINTENANCE MANUAL PROCEDURE 32-00-15.

THIS CARD IS NOT A SCHEDULED MAINTENANCE TASK. IT IS A COMPONENT CHANGE CARD AND IT IS PROVIDED FOR OPERATOR CONVENIENCE DURING UNSCHEDULED MAINTENANCE ACTIVITIES. SEE APPENDIX A OF THE 767 MAINTENANCE PLANNING DATA (MPD) DOCUMENT,D622T001, FOR A DESCRIPTION OF THE COMPONENT CHANGE CARDS.

MAIN GEAR WHEEL BRAKES - REMOVAL/INSTALLATION

1. Remove the Wheel Brake For the Main Landing Gear

A. Equipment

(1) Protector Equipment - Axle Main Landing Gear A32098-1 (Recommended)

(2) Brake Cradle - Commercially available

(3) Dolly, Wheel/Brake - Commercially available

(4) Sling, Nylon - MLG - Commercially available (a steel cable is optional to remove hot brakes)

B. References

MECH | INSP

(1) AMM 07-11-03/201, Jacking Airplane Axles

(2) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(3) AMM 32-11-20/401, Main Gear Brake Rod

(4) AMM 32-00-20/201, Landing Gear Downlocks

(5) AMM 32-45-01/401, Main Gear Wheel and Tire

(6) AMM 32-46-01/401, Brake Temperature Sensor

C. Access

(1) Location Zones
731 Main Landing Gear (Left)
741 Main Landing Gear (Right)

D. Remove the Wheel Brake For the Main Landing Gear (Fig. 401)

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

(2) Disconnect the brake rod (AMM 32-11-20/401)

(3) Lift the axle with the jack to lift the wheel and tire clear of the ground (AMM 07-11-03/201).

(4) Remove the wheel and tire for the main landing gear (AMM 32-45-01/401).

(5) Remove the brake temperature sensor (AMM 32-46-01/401) from the brake.

NOTE: If it is necessary to keep the temperature sensor with the brake assembly, disconnect the connector for the brake temperature sensor only.

(6) Remove the pressure from the right and center hydraulic systems and the hydraulic reservoirs (AMM 29-11-00/201).

MECH	INSP

(7) Push the brake pedals fully seven times to let the pressure out of the brake accumulator.

NOTE: Make sure there is a minimum of 5 seconds between each time you apply the brake.

(8) Do the steps that follow to remove the wheel spacer (22) from the axle (View A-A):

(a) Pull the brake approximately 3 inches off the axle.

(b) Loosen and move the wheel spacer (22) out on the axle.

(c) Push the brake into the initial position.

(d) Remove the wheel spacer (22) from the axle.

(9) Make sure that the axle protector and the axle thread protector are installed.

(10) Disconnect the brake hydraulic line from the brake at the brake quick disconnect as follows:

(a) Turn the barrel of the brake disconnect (hose half) clockwise until the slot in the barrel is disengaged from the locking pin on the brake disconnect (brake half).

(b) Pull the barrel on the brake disconnect (hose half) away from the brake to engage the threads in the brake half with the threads in the hose half and turn the barrel counterlockwise to separate the hose half from the brake half.

(c) Tie the brake hose to adjacent landing gear structure to hold it away from the brake.

(11) Install a sling on the brake (1) to hold it during the removal.

NOTE: If the brake is hot, use a steel cable as an alternative to a sling to hold up the brake during the removal.

MECH | INSP

CAUTION: DO NOT HOLD THE BRAKE ON THE O.D. OF THE ROTORS AFTER YOU REMOVE THE BRAKE. YOU CAN DO THIS IF THE SURFACE YOU PUT THE ROTOR ON IS SMOOTH AND WILL GIVE UNDER THE WEIGHT OF THE CARBON DISKS AND THEN GO BACK TO ITS INITIAL SHAPE. IF THE WEIGHT OF THE BRAKE IS HELD ON THE O.D. OF THE ROTORS, IT CAN DAMAGE THE CARBON.

(12) Remove the brake (1).

(13) Put the brake (1), with the piston side up, on a dolly and cradle tool.

(14) Remove the brake grease seal (24) if the seal stays on the axle.

2. Install the Wheel Brake For the Main Landing Gear (Fig. 401)

A. Equipment

(1) SAS 150-154;
MTH 275-276 PRE-SB 32-85;
MLG Axle and Axle Thread Protector Equipment -

(a) A32098-1 (Preferred)
Includes:

1) Protector - Axle, MLG - A32098-3

2) Protector - Axle Threads, MLG - A32098-2

(b) A32007-17 (Optional) Or A32007-16 (Optional)
Includes:

1) Protector - Axle, MLG - A32007-6 -

2) Protector - Axle Threads, MLG - A32007-9

(2) SAS 050-149, 155-999;
MTH 275-276 POST-SB 32-85;
MLG Axle and Thread Protector Equipment -

(a) A32098-1 (Required)

(3) Brake Cradle - Commercially available

MECH | INSP

(4) Dolly, Wheel/Brake (Clyde Machine Model TB900) - Commercially available

(5) Sling, Nylon (MLG) - Commercially Available (a steel cable is optional to remove hot brakes)

B. Consumable Materials

(1) D00633 Grease - BMS 3-33 (Preferred)
D00013 Grease - MIL-PRF-23827 (Supersedes MIL-G-23827) (Alternate)

(2) Wheel bearing grease - Aircraft, General Purpose, Wide Temperature:

(a) D00378 - Aeroshell 22

(b) D00233 - Mobilgrease 28

(c) D50005 - Mobil Aviation Grease SHC 100

(d) D00258 - Aeroshell 5 (Alternative)

(3) D00153 Fluid, Hydraulic - BMS 3-11

(4) A00359 Sealant - BMS 5-95

(5) G00009 Corrosion Inhibiting Compound - BMS 3-23

(6) G50136 Corrosion Inhibiting Compound - BMS 3-38

C. Parts

AMM		NOMENCLATURE	AIPC		
FIG	ITEM		SUBJECT	FIG	ITEM
401	1	Brake	32-41-06	01	175
	8	Brake Disconnect			32
	9	Retainer Plate			235
	10	Retainer Plate			240
	11	Washer			265
	12	Nut			270
	13	Hose Fitting Half			xxx
	15	Bolt			225
	16	Washer			230
	17	Brake Fitting Half			30
	18	Bolt			250
	19	Retainer Plate			220
	20	Spacer			255
	21	Washer			260
	22	Wheel Spacer			
	23	Brake Axle Bushing			
	24	Grease Seal			
	25	Wheel Spacer			

D. References

(1) AMM 07-11-03/201, Jacking Airplane Axles

(2) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(3) AMM 32-11-20/401, Main Gear Brake Rod

(4) AMM 32-11-26/601, Main Gear Axle

(5) AMM 32-41-06/401, Hydraulic Brake Disconnect

(6) AMM 32-45-01/401, Main Gear Wheel and Tire

(7) AMM 32-46-01/401, Brake Temperature Sensor

E. Access

MECH | INSP

(1) Location Zones
731 Main Landing Gear (Left)
741 Main Landing Gear (Right)

F. Procedure

(1) Make sure the pressure is removed from the right and center hydraulic systems (AMM 29-11-00/201).

(2) Examine the part of the axle that you can see. Look for marks, galling, or corrosion.

NOTE: The wear limits for the axles on the main landing gear are in 32-11-26.

(3) Make sure the axle protector and the axle thread protector are installed.

(4) Apply a thin layer of wheel bearing grease to the brake sleeve on the axle. Also, apply wheel bearing grease to the axle bushings on the brake assembly such that the grooves in the bushings are completely filled with grease.

NOTE: Wheel bearing grease is used because it has a higher flash point.

CAUTION: MAKE SURE THE GREASE SEAL IS INSTALLED CORRECTLY. A DAMAGED GREASE SEAL WILL ALLOW GREASE TO FILL THE TORQUE TUBE AREA AND WILL CAUSE A FIRE IN OPERATION.

(5) Make sure the brake axle bushing (23) is correctly installed in the brake housing and there is no damage to the bushing (23).

(6) Install the grease seal (24) in the brake housing as follows:

NOTE: The grease seal (24) on a new brake assembly comes from the brake in its own container to prevent damage during transpotation of the brake.

MECH | INSP

(a) BENDIX OR MESSIER-BUGATTI ONE-PIECE O-RING TYPE GREASE SEAL; Install the grease seal (24) carefully in the groove in the piston housing.

(b) BENDIX TWO-PIECE GREASE SEAL (P/N 2612764); Install the grease seal as shown in Fig./401.

NOTE: Make sure that the grease seal is oriented as shown in the piston housing groove for best grease seal performance.

(7) If the replacement brake does not have a quick-disconnect brake fitting half, remove the fitting half from the old brake and install it on the new brake as shown in AMM 32-41-06/401.

(8) Fill the brake (1) with hydraulic fluid, if it is necessary.

(9) Install the brake sling on the brake (1).

(10) Install the brake (1) on the axle.

(11) Connect the brake hydraulic hose to the brake at the brake disconnect as follows:

(a) Align the barrel of the brake disconnect fitting (hose half) with the brake disconnect fitting (brake half).

(b) Engage the barrel of the hose half with the threads on the brake half.

(c) Turn the barrel clockwise until the locking pin on the brake disaconnect (brake half) engages the slot on the barrel of the brake disconnect (hose half).

1) It will be harder to turn the barrel when it touches the upper surface of the locking pin. When you continue to turn the barrel and it goes past the locking pin, spring force will push the barrel down and cause the slot to engage the locking pin.

(12) Examine the wheel spacer (22) (View A-A). Replace the wheel spacer (22) if you find galling.

(13) Apply a thin layer of wheel bearing grease to the thrust faces of the wheel spacer (22).

MECH | INSP

CAUTION: INSTALL THE WHEEL SPACER CORRECTLY,IMPROPER ORIENTATION WILL CAUSE DAMAGE TO THE INNER WHEEL HALF HUB.

(14) Install the wheel spacer (22) on the axle.

CAUTION: INSTALL THE SENSOR FOR THE BRAKE TEMPERATURE MONITOR WITH THE CONNECTOR MASTER KEYWAY IN THE DOWN POSITION. IF THE KEYWAY IS NOT IN THE DOWN POSITION, THE CONDUIT CONNECTED TO THE SENSOR WILL NOT MOVE FREELY. THIS CAN CAUSE DAMAGE TO THE CONDUIT.

(15) Install the brake temperature sensor (AMM 32-46-01/401) if it was removed.

(16) If the brake temperature sensor was not removed, install the connector for the brake temperature sensor.

WARNING: DO NOT REMOVE THE DOOR LOCKS AFTER YOU INSTALL THE WHEEL AND TIRE. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT DURING THE BRAKE OPERATIONAL TEST.

(17) Install the wheel and tire for the main landing gear (AMM 32-45-01/401).

NOTE: Keep the brake rod and the brake torque arm aligned during the wheel and tire installation. This will let you install the pin when the jack is removed.

(18) Lower the airplane and remove the jacks (AMM 07-11-03/201).

(19) Connect the Brake Rod (AMM 32-11-20/401)

(20) Apply grease (Royco 11-MS) at the lubrication fitting on the brake rod (2) that attaches to the brake torque arm and to the lubrication fitting on the face of the brake housing (AMM 12-21-14/301).

(21) Do the applicable steps below to complete installation of the brake unit and to prepare the brake unit for an operational test.

MECH | INSP

(a) It is not necessary to bleed a brake unit if these items are done before the installation of the brake unit:

1) The inner half of a hydraulic brake disconnect is installed on the brake unit.

2) The brake unit is completely filled with hydraulic fluid.

3) All air is bled from the brake.

(b) It is necessary to bleed a brake unit if all the items shown above are not done before installation of the brake unit.

(c) If it is not necessary to bleed the brake unit, do these steps:

1) Make sure that chocks are installed on the wheels.

2) Release the parking brake.

3) Pressurize the right hydraulic system and reservoir (AMM 29-11-00/201).

4) Do this sequence of steps six times to bleed any small quantities of air from the brakes.

a) Slowly push one of the two sets of brake pedals to limit of travel to fully operate the brakes.

b) Hold these brake pedals in this position momentarily.

c) Slowly release the brake pedals. Stop for ten seconds befor you operate the brakes again.

(d) If it is necessary to bleed the brake unit, bleed the brake unit with the procedure in 32-41-00/201.

G. Do the Test of Hydraulic Brake Operation

(1) Pressurize the right and center hydraulic systems (AMM 29-11-00/201).

(2) Push the brake pedals again and again to apply and release the brakes.

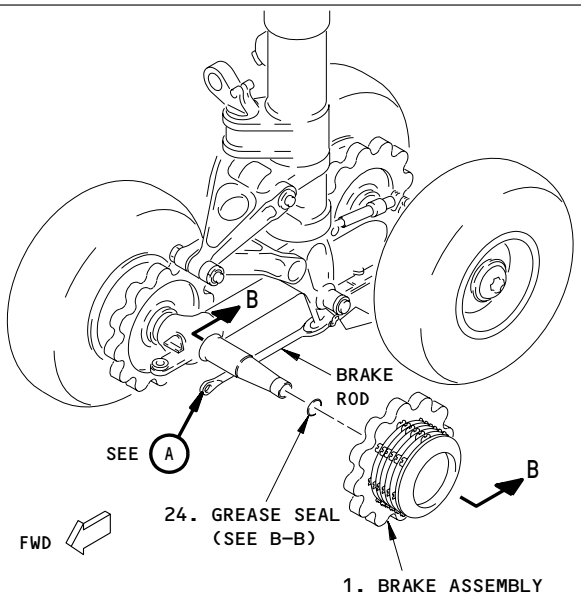
(3) Examine the movement and position of the indicator pins for brake wear to make sure the brake operation is correct.

MECH	INSP

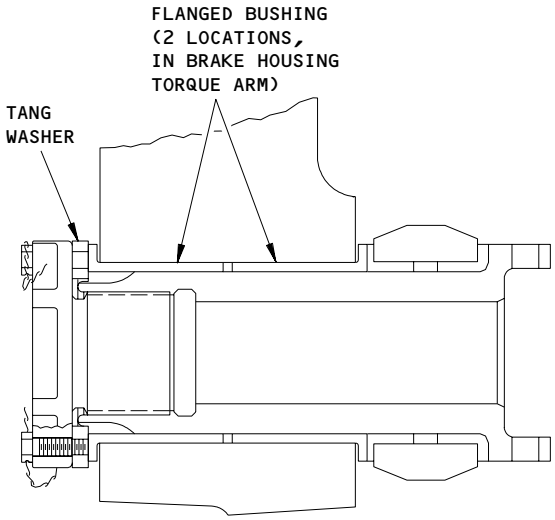
(4) Make sure there are no hydraulic leaks at the brake disconnect fittings.

H. Put the Airplane Back to Its Initial Condition

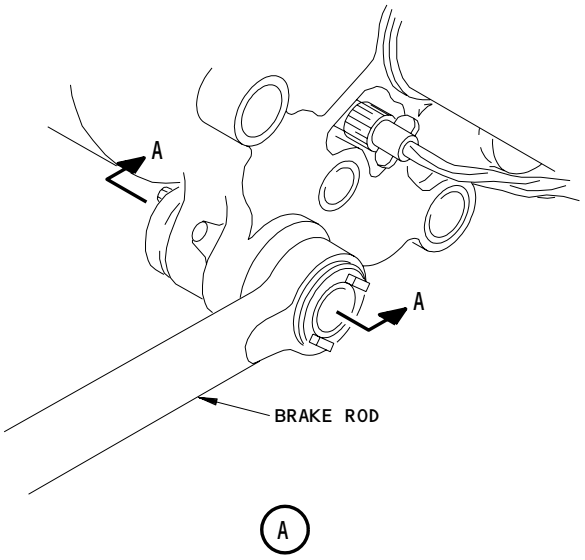
(1) Remove the pressure from the right and center hydraulic systems if it is not necessary (AMM 29-11-00/201).

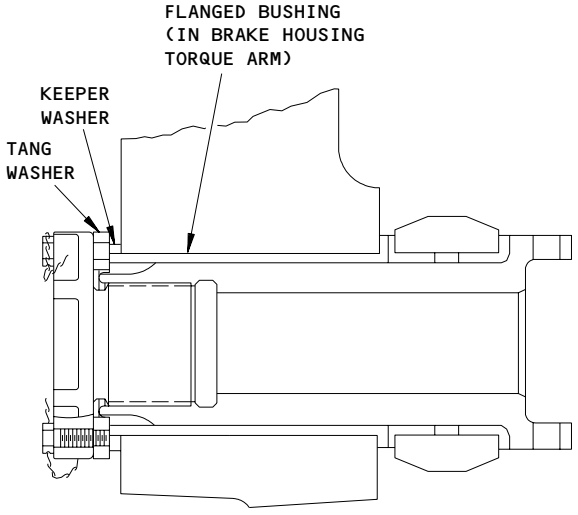


LEFT MAIN LANDING GEAR
(RIGHT MAIN LANDING GEAR IS OPPOSITE)



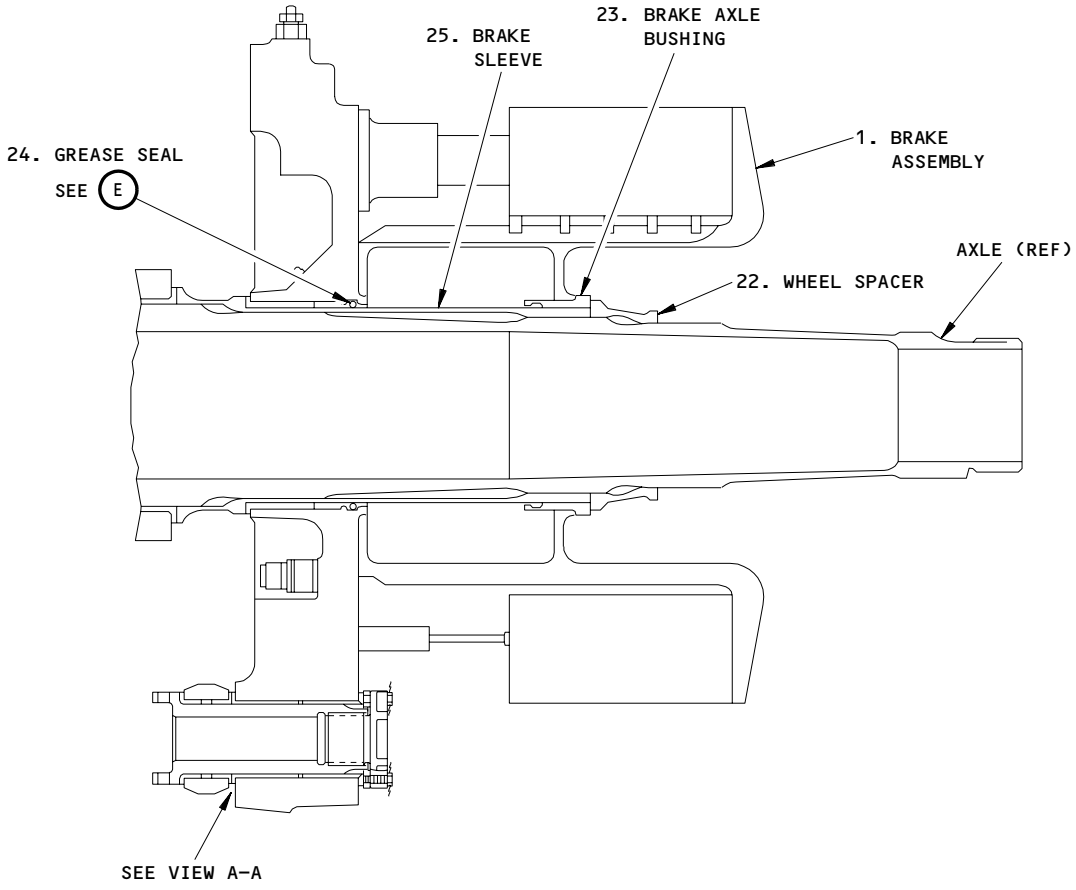
(AIRPLANES WITH BRAKES THAT HAVE
TWO FLANGED BUSHINGS IN TORQUE ARM)
A-A





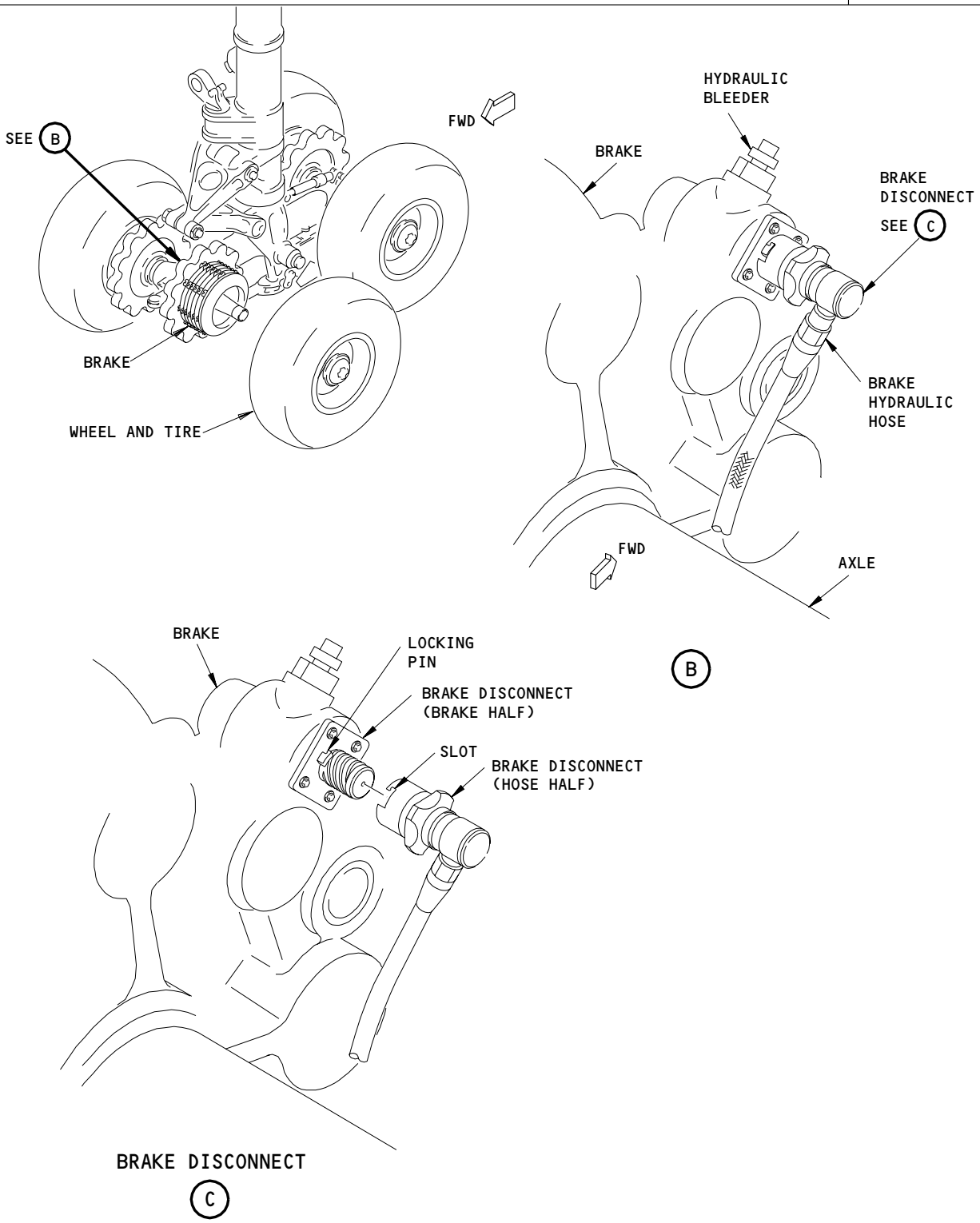
(AIRPLANES WITH BRAKES THAT HAVE
ONE FLANGED BUSHING IN TORQUE ARM)
A-A

Main Landing Gear Brake Installation
Figure 401 (Sheet 1)



(VIEW WITH THE WHEEL REMOVED)
B-B

Main Landing Gear Brake Installation
Figure 401 (Sheet 2)



Main Landing Gear Brake Installation
Figure 401 (Sheet 3)

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-021-01
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	FUSELAGE		04000 HRS (#)	10808	017	AUG 22/09

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
OPERATIONAL	MAIN/NOSE GEAR ALT EXTEND SYSTEM		NOTE	ALL

ZONES	ACCESS PANELS
119 211	119AL

MECH | INSP

MPD ITEM NUMBER

OPERATIONALLY CHECK THE MAIN/NOSE LANDING GEAR ALTERNATE EXTEND SYSTEM. CHECK LOAD LIMITERS FOR EVIDENCE OF PARTIAL OR FULLY CRUSHED CORE. 32-35-00-5A

(#) CMR FREQUENCY IS 4000 HOURS AND TAKES PRECEDENCE OVER THE MSG-3 FREQUENCY OF 3C DEVELOPED FOR THE ORIGINAL MRB REPORT.

AIRPLANE NOTE: THIS TASK IS APPLICABLE TO ALL AIRPLANE MODELS EXCEPT THE 767-400ER.

1. Operational Test - Alternate Extend System for the Landing Gear

A. References

(1) AMM 06-41-00/201, Fuselage (Major Zones 100 and 200) Access Doors and Panels

(2) AMM 24-22-00/201, Electrical Power - Control

(3) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(4) AMM 32-00-20/201, Landing Gear Downlocks

(5) AMM 32-35-14/401, Main Gear Alternate Extend Load Limiter

(6) AMM 32-35-15/401, Nose Gear Alternate Extend Load Limiter

B. Equipment

(1) Go/No Go Pins
Go - 0.0185-0.0195 inch diameter
No Go - 0.1045-0.1055 inch diameter

C. Prepare for the Operational Test

MECH | INSP

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

(2) Supply electrical power (AMM 24-22-00/201).

(3) Put the control lever for the landing gear in the OFF position and attach a DO-NOT-OPERATE tag.

(4) Make sure the load limiter clearances agree with Fig. 503 and Fig. 504 (Figures 503 and 504 are located in TASK 32-35-00-825-019, Adjustment-Alternare Extend System for the Landing Gear). Replace the load limiter if any portion protruding from the cartridge is colored red or if the clearance is not in these limits (AMM 32-35-14/401 or AMM 32-35-15/401). If you replace the load limiter cartridges, start the operational test again.

(5) Put a person near the nose landing gear to monitor the alternate extension roller.

(6) 767-300 AIRPLANES;
Open this circuit breaker on the overhead circuit breaker panel, P11, and attach a DO-NOT-CLOSE tag:

(a) 11U26, TAIL SKID CONT

D. Do the Operational Test for the Alternate Extension System

WARNING: MAKE SURE THAT PERSON AND EQUIPMENT STAY CLEAR OF THE AREA AROUND THE DOORS FOR THE MAIN LANDING GEAR. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Move the ALTN GEAR EXTENSION switch, on the panel P3, to the DN position, and make sure these conditions occur:

(a) The alternate extension roller for the nose landing gear (Detail B, Fig. 501) turns.

(b) The doors for the main landing gear open.

(2) Get access to the alternate extend actuator and load limiters, in the electrical/electronics bay, through the panel 119AL (AMM 06-41-00/201).

MECH	INSP

(3) Make sure the clearance between the stop crank and the frame is in the permitted tolerance as shown (Detail E, Fig. 501, Sheet 2). This will show that the actuator moved the full travel to the DN position.

NOTE: You can use the Go/No Go pins as an accurate tool to measure the clearance quickly if it is necessary.

(4) Make sure the load limiter clearances agree with Fig. 503 and Fig. 504 (Figures 503 and 504 are located in TASK 32-35-00-825-019, Adjustment-Alternate Extend System for the Landing Gear). Replace the load limiter if any portion protruding from the cartridge is colored red or if the clearances are not in these limits (AMM 32-35-14/401 or AMM 32-35-15/401). If you replace the load limiter cartridges, start the operational test again.

CAUTION: DO NOT OPERATE THE NORMAL EXTENSION AND RETRACTION SYSTEM FOR AT LEAST 70 SECONDS AFTER YOU MOVE THE ALTN GEAR EXTENSION SWITCH TO THE OFF POSITION. THIS IS NECESSARY TO PERMIT THE ALTERNATE EXTEND SYSTEM TO SET AGAIN AND PREVENT DAMAGE TO THE SYSTEM COMPONENTS.

(5) Put the ALTN GEAR EXTENSION switch to the OFF position.

(6) Make sure the roller for alternate extension of the nose landing gear goes to the usual position.

NOTE: The alternate extension system is set again when you move the ALTN GEAR EXTENSION switch to the OFF position.

(7) Make sure the clearance between the stop crank and the frame is in the permitted tolerance as shown (Detail E, Fig. 501). This will show that the actuator moved the full travel to the OFF position.

NOTE: You can use the Go/No Go pins as an accurate tool to measure the clearance quickly if it is necessary.

MECH	INSP

WARNING: MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE AREA AROUND THE TAIL SKID (IF APPLICABLE). THE TAIL SKID (IF APPLICABLE) WILL EXTEND WHEN HYDRAULIC PRESSURE IS APPLIED AND CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(8) Pressurize the center hydraulic system (AMM 29-11-00/201).

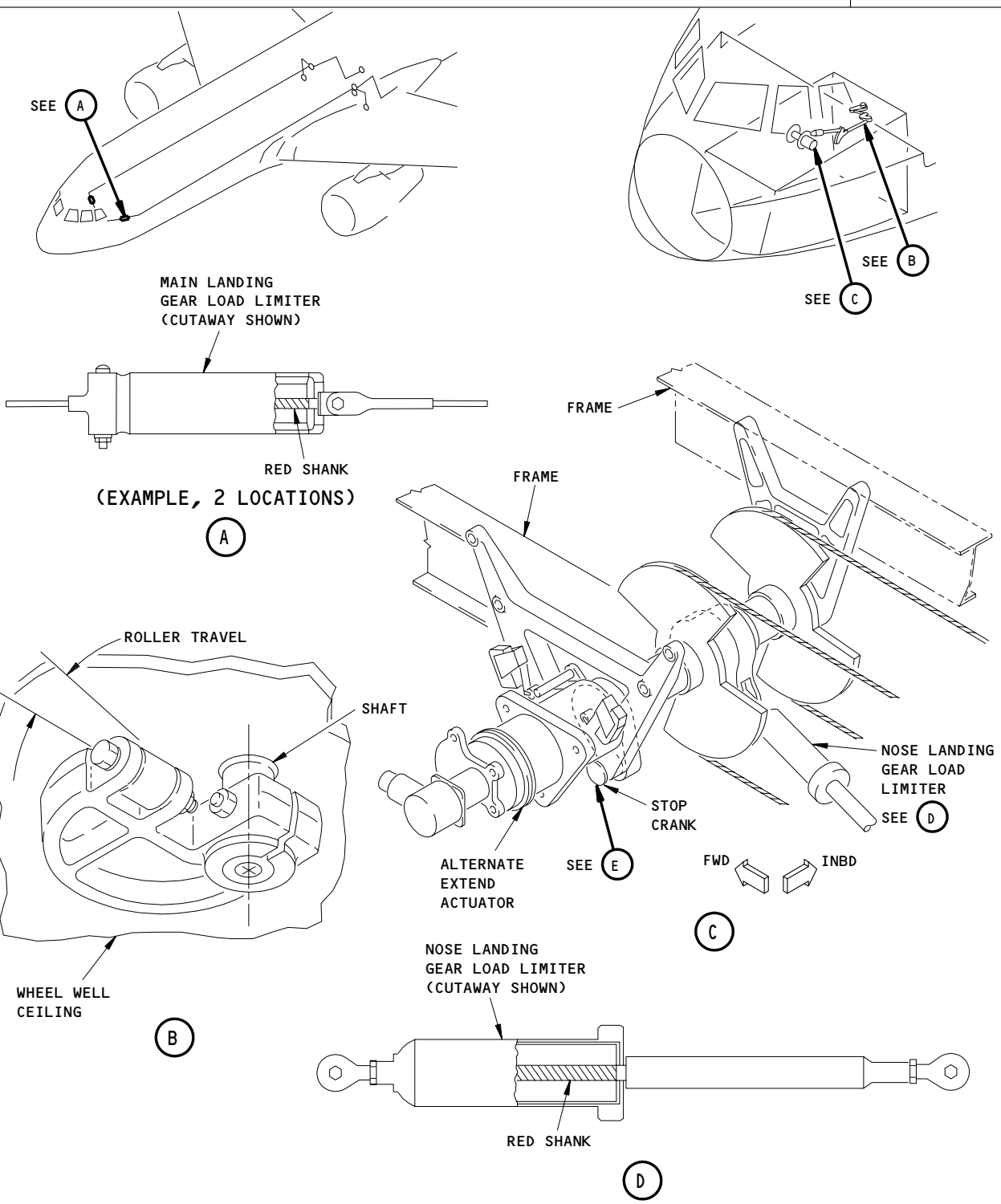
WARNING: MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE AREA AROUND THE DOORS FOR THE MAIN LANDING GEAR. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(9) Remove the DO-NOT-OPERATE tag from the control lever for the landing gear.

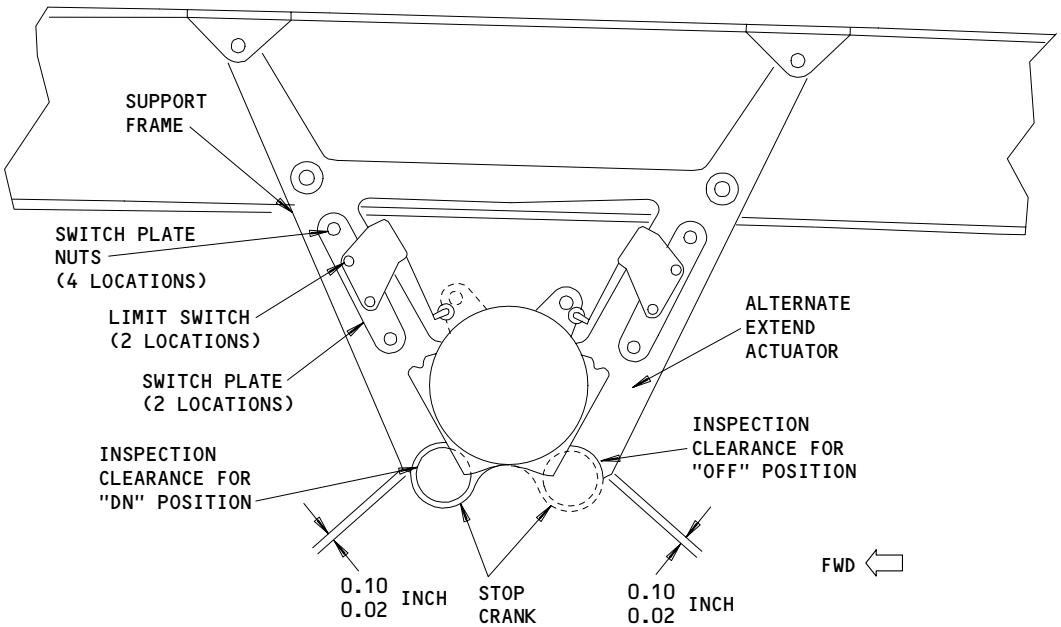
(10) Move the lever to the DN position to close the doors for the main landing gear.

(11) Remove the pressure from the center hydraulic system (AMM 29-11-00/201) if it is not necessary.

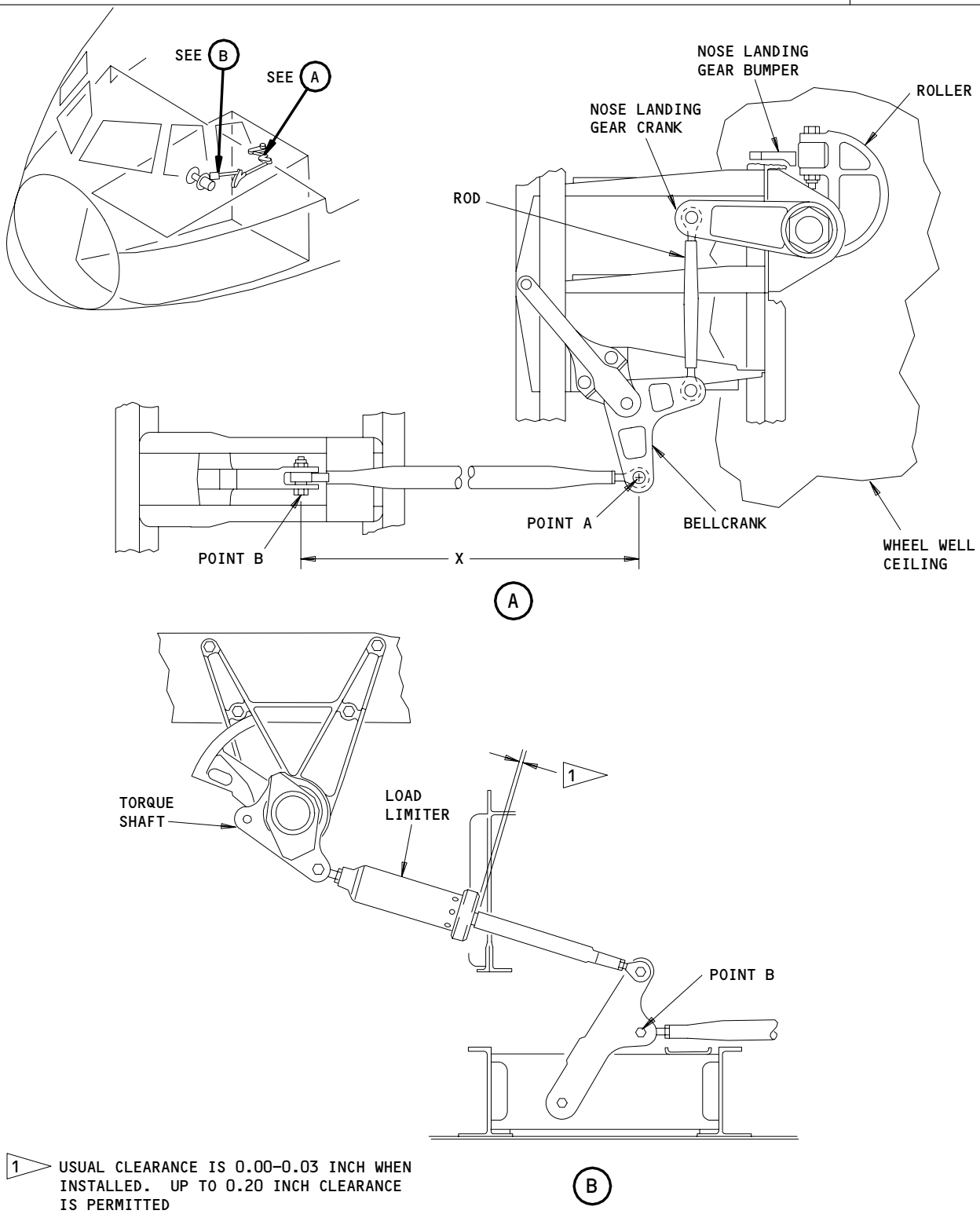
(12) Remove electrical power if it is not necessary (AMM 24-22-00/201).



Alternate Extend System Operational Test
Figure 501 (Sheet 1)

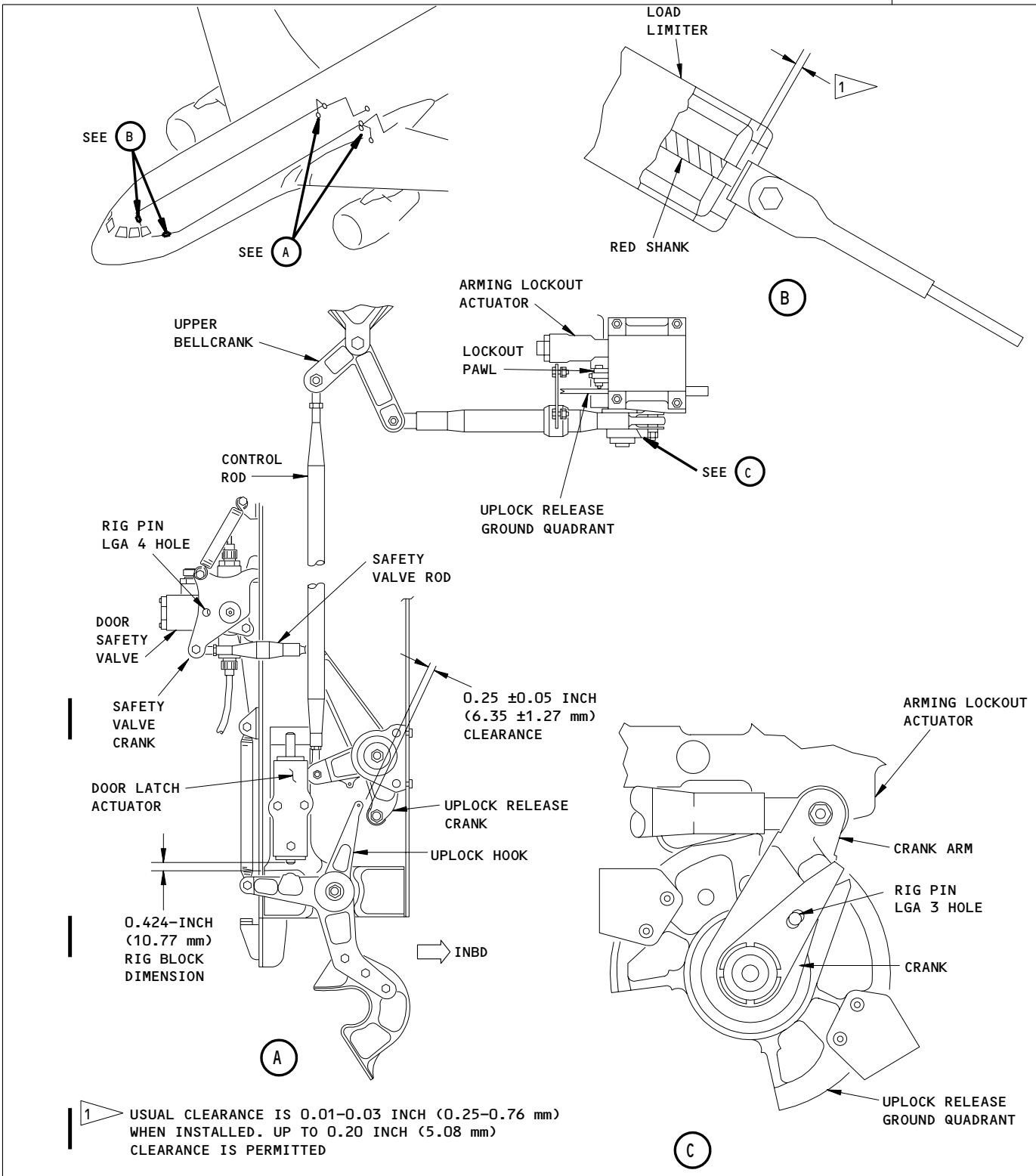


Alternate Extend System Operational Test
Figure 501 (Sheet 2)



1 USUAL CLEARANCE IS 0.00-0.03 INCH WHEN INSTALLED. UP TO 0.20 INCH CLEARANCE IS PERMITTED

Nose Landing Gear Alternate Extend Adjustment
Figure 503



1 USUAL CLEARANCE IS 0.01-0.03 INCH (0.25-0.76 mm) WHEN INSTALLED. UP TO 0.20 INCH (5.08 mm) CLEARANCE IS PERMITTED

Main Gear Door Uplock Release and Alternate Extend Cables Adjustment
Figure 504

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-024-02-1
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	L MAIN GEAR		00100 CYC	003SC	004	DEC 22/07

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
CHECK/INSP	LEFT MAIN GEAR BRAKES		NOTE	ALL

ZONES	ACCESS PANELS
211 731	

MECH | INSP

MPD ITEM NUMBER

APPLY BRAKES AND VISUALLY CHECK LEFT MAIN GEAR BRAKES FOR WEAR AND CONDITION. 32-41-08-6A

AIRPLANE NOTE: THIS TASK IS APPLICABLE TO ALL AIRPLANE MODELS EXCEPT THE 767-400ER.

1. Inspect the Wheel Brake for the Main Landing Gear (With the Wheel Installed)

A. References

(1) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(2) AMM 32-00-20/201, Landing Gear Downlocks

B. Prepare for the Inspection

(1) Make sure that the landing gear downlocks are installed (AMM 32-00-20/201).

(2) Make sure that chocks are installed on the wheels.

(3) Release the parking brake.

C. Procedure

CAUTION: BE VERY CAREFUL WHEN YOU DO A CHECK OF THE BRAKES TO NOT SPILL HYDRAULIC BRAKE FLUID ON THE BRAKE LININGS. IF YOU SPILL BRAKE FLUID ON THE BRAKE LININGS, THE BRAKES WILL NOT OPERATE CORRECTLY.

(1) Presssurize the Right hydraulic system and reservior. (AMM 29-11-00/201).

MECH | INSP

(2) Fully apply and release the left and right captain's or first officer's brake pedals five times.

(3) With the brake pedals not applied, do a check of the brakes for fluid leaks at these locations:

(a) brake pistons.

(b) brake housing plugs.

(c) inlet and drain ports.

(d) bleed ports.

(4) If the total leakage per brake at the above location is greater than one (1) drop per minute with the pedals not applied, repair the leakage or replace the brakes prior to dispatch.

(5) Slowly apply the brake pedals to the stops.

(6) While the brake pedals are applied, do a check for leaks at the same places on the brake that you did in step (3).

(7) If the total leakage per brake at the above locations is greater that five (5) drops per minute while the brakes are being applied, repair the leakage or replace the brake prior to dispatch.

(8) Brakes with leaks below these limits must be rechecked prior to each flight, and should be repaired or replaced at the next opportunity that manpower and material allow.

(9) If it is suspected that a brake has been exposed to significant levels of contamination, the brake should be removed, inspected and cleaned in accordance with the brake supplier component maintenance manual. Signs of contamination include a wet or oily appearance, buildup of charred residue, or heavy smoke after landing.

(10) Release the brakes and make sure that the pressure plate returns to the proper brake released position.

(11) Carbon Brake Inspection, Pressure Plate Piston Impressions

(a) With brake unpressurized, visually inspect for pressure plate impressions from the piston caps.

(b) If pressure plate impressions do not exist, no additional inspection necessary.

MECH	INSP

(c) If pressure plate impressions exist, pressureize brake.

(d) If piston cap surface 'A' is flush (dimension'X'= 0) or below pressure plate surface 'B' (dimension 'X' > 0), then brake should be removed from airplane.

(12) Do a check for missing brake wear indicator pins.

NOTE: Each brake has two brake wear indicator pins.

(a) If the two wear pins are missing, you must replace the brake prior to the next flight.

(b) If one wear pin is missing, the brake can stay in service if the remaining wear pin operation is satisfactory.

(13) Do a check of brake wear as follows:

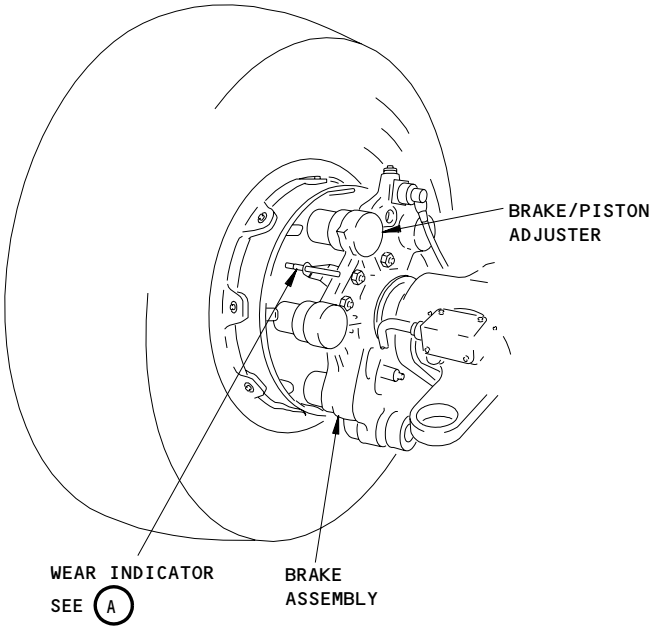
(a) Push the brake pedals fully forward to apply normal brake pressure (3000 psi).

(b) Look at the two wear pins on each brake to see if they extend out of the pin support tube (See Fig. 601).

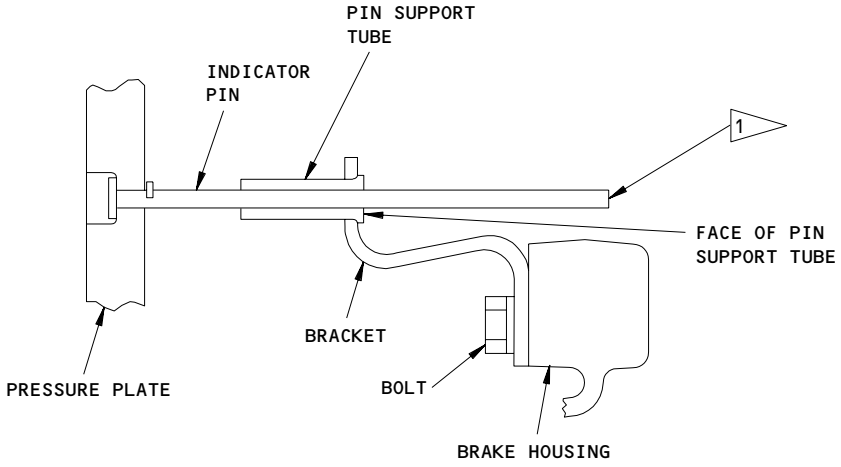
(c) Replace the brake if the end of the indicator pin is level with, or below the face of the pin support tube.

(14) Remove the pressure from the right hydraulic system if it is not necessary (AMM 29-11-00/201).

(15) Put the airplane back to its usual condition.



HONEYWELL CARBON BRAKE



WEAR INDICATOR

A

1 REPLACE THE BRAKE UNIT IF THE END OF THE INDICATOR PIN IS LEVEL WITH, OR BELOW, THE FACE OF THE PIN SUPPORT TUBE

Brake Wear Check
Figure 601

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-024-02-2
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	R MAIN GEAR		00100 CYC	003SC	004	DEC 22/07

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
CHECK/INSP	RIGHT MAIN GEAR BRAKES		NOTE	ALL

ZONES	ACCESS PANELS
211 741	

MECH	INSP	MPD ITEM NUMBER

APPLY BRAKES AND VISUALLY CHECK RIGHT MAIN GEAR BRAKES FOR WEAR AND CONDITION. 32-41-08-6A

AIRPLANE NOTE: THIS TASK IS APPLICABLE TO ALL AIRPLANE MODELS EXCEPT THE 767-400ER.

1. Inspect the Wheel Brake for the Main Landing Gear (With the Wheel Installed)

A. References

(1) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(2) AMM 32-00-20/201, Landing Gear Downlocks

B. Prepare for the Inspection

(1) Make sure that the landing gear downlocks are installed (AMM 32-00-20/201).

(2) Make sure that chocks are installed on the wheels.

(3) Release the parking brake.

C. Procedure

CAUTION: BE VERY CAREFUL WHEN YOU DO A CHECK OF THE BRAKES TO NOT SPILL HYDRAULIC BRAKE FLUID ON THE BRAKE LININGS. IF YOU SPILL BRAKE FLUID ON THE BRAKE LININGS, THE BRAKES WILL NOT OPERATE CORRECTLY.

(1) Presssurize the Right hydraulic system and reservior. (AMM 29-11-00/201).

MECH | INSP

(2) Fully apply and release the left and right captain's or first officer's brake pedals five times.

(3) With the brake pedals not applied, do a check of the brakes for fluid leaks at these locations:

(a) brake pistons.

(b) brake housing plugs.

(c) inlet and drain ports.

(d) bleed ports.

(4) If the total leakage per brake at the above location is greater than one (1) drop per minute with the pedals not applied, repair the leakage or replace the brakes prior to dispatch.

(5) Slowly apply the brake pedals to the stops.

(6) While the brake pedals are applied, do a check for leaks at the same places on the brake that you did in step (3).

(7) If the total leakage per brake at the above locations is greater that five (5) drops per minute while the brakes are being applied, repair the leakage or replace the brake prior to dispatch.

(8) Brakes with leaks below these limits must be rechecked prior to each flight, and should be repaired or replaced at the next opportunity that manpower and material allow.

(9) If it is suspected that a brake has been exposed to significant levels of contamination, the brake should be removed, inspected and cleaned in accordance with the brake supplier component maintenance manual. Signs of contamination include a wet or oily appearance, buildup of charred residue, or heavy smoke after landing.

(10) Release the brakes and make sure that the pressure plate returns to the proper brake released position.

(11) Carbon Brake Inspection, Pressure Plate Piston Impressions

(a) With brake unpressurized, visually inspect for pressure plate impressions from the piston caps.

(b) If pressure plate impressions do not exist, no additional inspection necessary.

MECH	INSP

(c) If pressure plate impressions exist, pressureize brake.

(d) If piston cap surface 'A' is flush (dimension'X'= 0) or below pressure plate surface 'B' (dimension 'X' > 0), then brake should be removed from airplane.

(12) Do a check for missing brake wear indicator pins.

NOTE: Each brake has two brake wear indicator pins.

(a) If the two wear pins are missing, you must replace the brake prior to the next flight.

(b) If one wear pin is missing, the brake can stay in service if the remaining wear pin operation is satisfactory.

(13) Do a check of brake wear as follows:

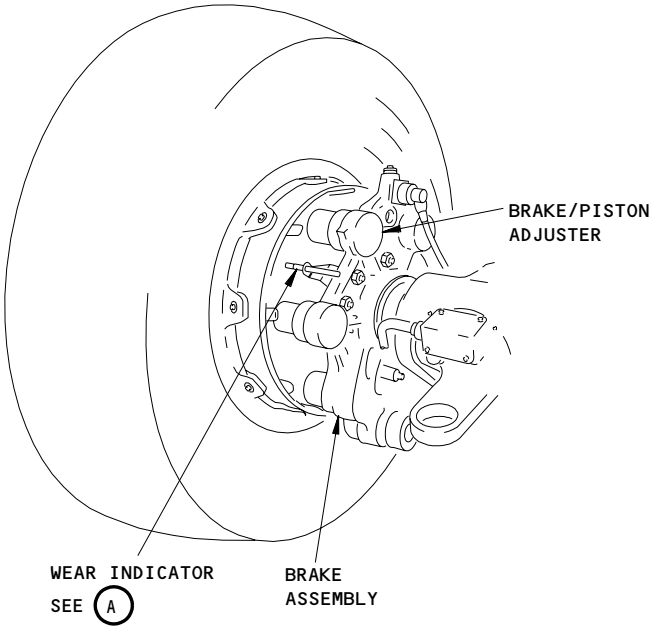
(a) Push the brake pedals fully forward to apply normal brake pressure (3000 psi).

(b) Look at the two wear pins on each brake to see if they extend out of the pin support tube (See Fig. 601).

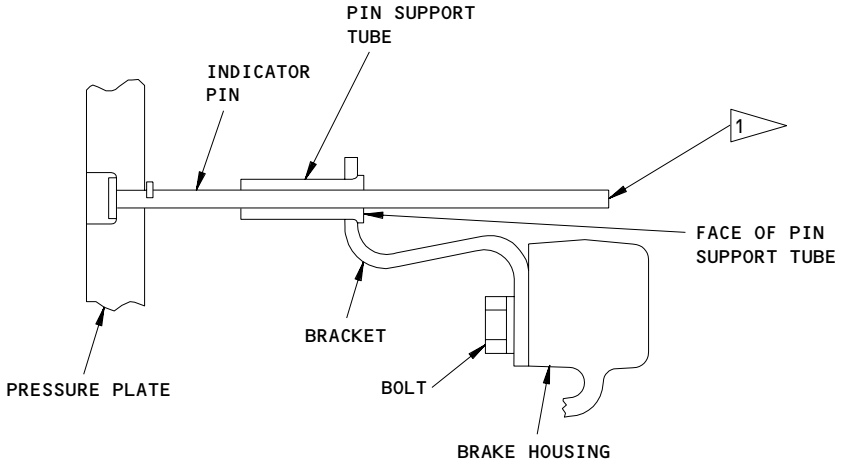
(c) Replace the brake if the end of the indicator pin is level with, or below the face of the pin support tube.

(14) Remove the pressure from the right hydraulic system if it is not necessary (AMM 29-11-00/201).

(15) Put the airplane back to its usual condition.



HONEYWELL CARBON BRAKE



WEAR INDICATOR

A

1 REPLACE THE BRAKE UNIT IF THE END OF THE INDICATOR PIN IS LEVEL WITH, OR BELOW, THE FACE OF THE PIN SUPPORT TUBE

Brake Wear Check
Figure 601

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-024-03-1
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	L MAIN GEAR		00100 CYC	003SC	004	AUG 22/09

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
CHECK/INSP	LEFT MAIN GEAR BRAKES		NOTE	ALL

ZONES	ACCESS PANELS
211 731	

MECH | INSP

MPD ITEM NUMBER

APPLY BRAKES AND VISUALLY CHECK LEFT MAIN GEAR BRAKES FOR WEAR AND CONDITION. 32-41-08-6A

AIRPLANE NOTE: THIS TASK IS APPLICABLE TO ALL AIRPLANE MODELS EXCEPT THE 767-400ER.

1. Inspect the Wheel Brake for the Main Landing Gear (With the Wheel Installed)

A. References

(1) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(2) AMM 32-00-20/201, Landing Gear Downlocks

B. Prepare for the Inspection

(1) Make sure that the landing gear downlocks are installed (AMM 32-00-20/201).

(2) Make sure that chocks are installed on the wheels.

(3) Release the parking brake.

C. Procedure

CAUTION: BE VERY CAREFUL WHEN YOU DO A CHECK OF THE BRAKES TO NOT SPILL HYDRAULIC BRAKE FLUID ON THE BRAKE LININGS. IF YOU SPILL BRAKE FLUID ON THE BRAKE LININGS, THE BRAKES WILL NOT OPERATE CORRECTLY.

(1) Presssurize the right hydraulic system and reservoir. (AMM 29-11-00/201).

MECH	INSP

(2) Fully apply and release the left and right captain's or first officer's brake pedals five times.

(3) With the brake pedals not applied, do a check of the brakes for fluid leaks at these locations:

(a) brake pistons.

(b) brake housing plugs.

(c) inlet and drain ports.

(d) bleed ports.

(e) all hydraulic line connections.

(4) If the total leakage per brake at the above locations is greater than one (1) drop per minute with the brake pedals not applied, repair the leaks or replace the brake prior to dispatch.

(5) Slowly apply the brake pedals to the stops.

(6) While the brake pedals are applied, do a check for leaks at the same places on the brake that you did in step (3).

(7) If the total leakage per brake at the above locations is greater than five (5) drops per minute while the brakes are being applied, repair the leakage or replace the brake prior to dispatch.

(8) Brakes with leaks below these limits must be rechecked prior to each flight, and should be repaired or replaced at the next opportunity that manpower and material allow.

(9) If it is suspected that a brake has been exposed to significant levels of contamination, the brake should be removed, inspected and cleaned in accordance with the brake supplier component maintenance manual. Signs of contamination include a wet or oily appearance, buildup of charred residue, or heavy smoke after landing.

(10) Release the brakes and make sure that the pressure plate returns to the proper brake released position.

(11) Do a check for missing brake wear indicator pins.

NOTE: Each brake has two brake wear indicator pins.

MECH | INSP

(a) If the two wear pins are missing, you must replace the brake prior to the next flight.

(b) If one wear pin is missing, the brake can stay in service if the remaining wear pin operation is satisfactory.

(12) Do a check of brake wear as follows:

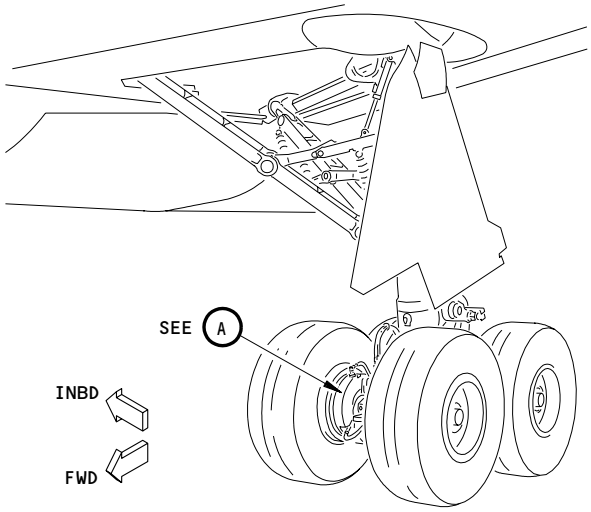
(a) Push the brake pedals fully forward to apply normal brake pressure (3000 psi).

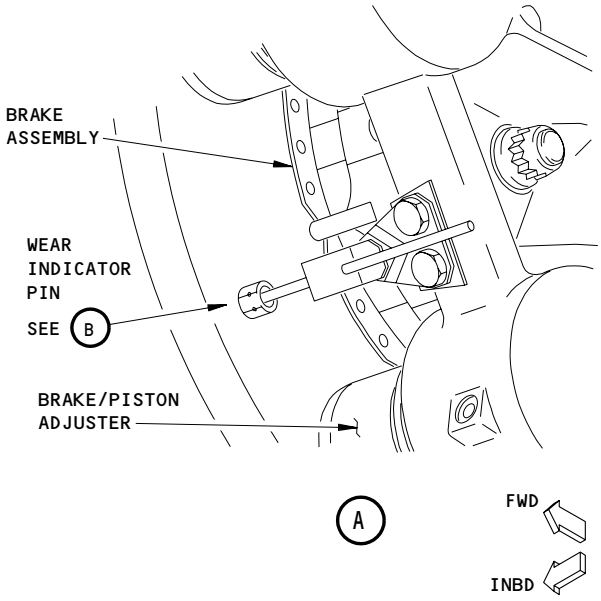
(b) Look at the two wear pins on each brake to see if they extend out of the wear indicator index pin bracket (See Fig. 601).

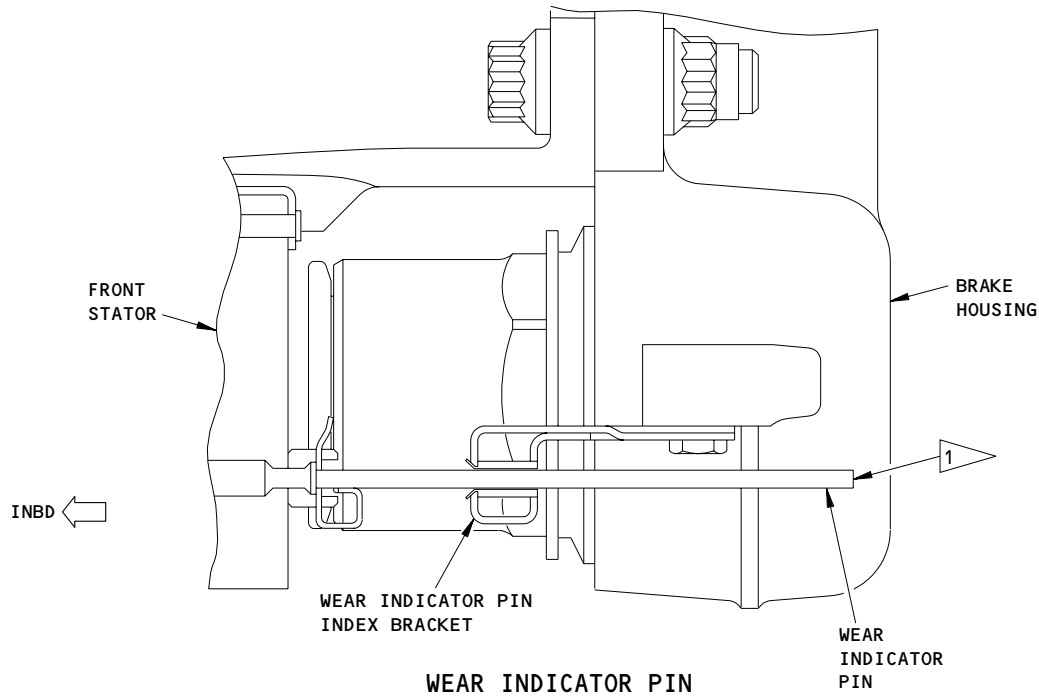
(c) The brake unit is fully worn when the indicator pin is flush with the face of the wear indicator pin index bracket. Replace the brake unit when this condition occurs.

(13) Remove the pressure from the right hydraulic system if it is not necessary (AMM 29-11-00/201).

(14) Put the airplane back to its usual condition.







WEAR INDICATOR PIN

B

1 THE BRAKE UNIT IS FULLY WORN WHEN THE INDICATOR PIN IS FLUSH WITH THE FACE OF THE WEAR INDICATOR PIN INDEX BRACKET. REPLACE THE BRAKE UNIT WHEN THIS CONDITION OCCURS.

Brake Wear Check
Figure 601

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-024-03-2
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	R MAIN GEAR		00100 CYC	003SC	004	AUG 22/09

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
CHECK/INSP	RIGHT MAIN GEAR BRAKES		NOTE	ALL

ZONES	ACCESS PANELS
211 741	

MECH | INSP

MPD ITEM NUMBER

APPLY BRAKES AND VISUALLY CHECK RIGHT MAIN GEAR BRAKES FOR WEAR AND CONDITION. 32-41-08-6A

AIRPLANE NOTE: THIS TASK IS APPLICABLE TO ALL AIRPLANE MODELS EXCEPT THE 767-400ER.

1. Inspect the Wheel Brake for the Main Landing Gear (With the Wheel Installed)

A. References

(1) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(2) AMM 32-00-20/201, Landing Gear Downlocks

B. Prepare for the Inspection

(1) Make sure that the landing gear downlocks are installed (AMM 32-00-20/201).

(2) Make sure that chocks are installed on the wheels.

(3) Release the parking brake.

C. Procedure

CAUTION: BE VERY CAREFUL WHEN YOU DO A CHECK OF THE BRAKES TO NOT SPILL HYDRAULIC BRAKE FLUID ON THE BRAKE LININGS. IF YOU SPILL BRAKE FLUID ON THE BRAKE LININGS, THE BRAKES WILL NOT OPERATE CORRECTLY.

(1) Presssurize the right hydraulic system and reservoir. (AMM 29-11-00/201).

MECH	INSP

(2) Fully apply and release the left and right captain's or first officer's brake pedals five times.

(3) With the brake pedals not applied, do a check of the brakes for fluid leaks at these locations:

(a) brake pistons.

(b) brake housing plugs.

(c) inlet and drain ports.

(d) bleed ports.

(e) all hydraulic line connections.

(4) If the total leakage per brake at the above locations is greater than one (1) drop per minute with the brake pedals not applied, repair the leaks or replace the brake prior to dispatch.

(5) Slowly apply the brake pedals to the stops.

(6) While the brake pedals are applied, do a check for leaks at the same places on the brake that you did in step (3).

(7) If the total leakage per brake at the above locations is greater than five (5) drops per minute while the brakes are being applied, repair the leakage or replace the brake prior to dispatch.

(8) Brakes with leaks below these limits must be rechecked prior to each flight, and should be repaired or replaced at the next opportunity that manpower and material allow.

(9) If it is suspected that a brake has been exposed to significant levels of contamination, the brake should be removed, inspected and cleaned in accordance with the brake supplier component maintenance manual. Signs of contamination include a wet or oily appearance, buildup of charred residue, or heavy smoke after landing.

(10) Release the brakes and make sure that the pressure plate returns to the proper brake released position.

(11) Do a check for missing brake wear indicator pins.

NOTE: Each brake has two brake wear indicator pins.

MECH	INSP

(a) If the two wear pins are missing, you must replace the brake prior to the next flight.

(b) If one wear pin is missing, the brake can stay in service if the remaining wear pin operation is satisfactory.

(12) Do a check of brake wear as follows:

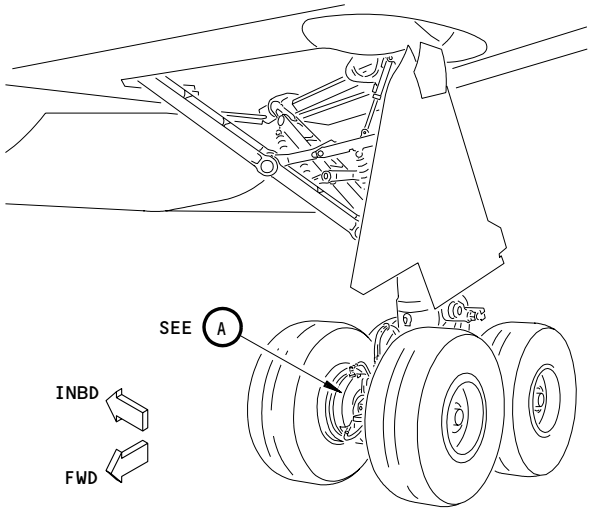
(a) Push the brake pedals fully forward to apply normal brake pressure (3000 psi).

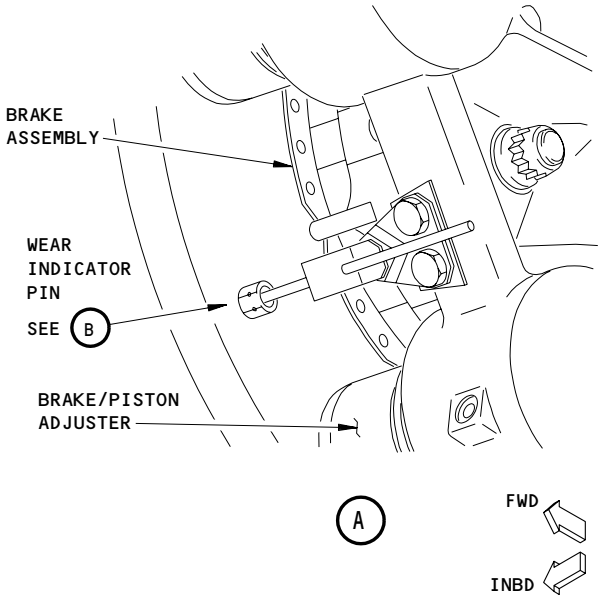
(b) Look at the two wear pins on each brake to see if they extend out of the wear indicator index pin bracket (See Fig. 601).

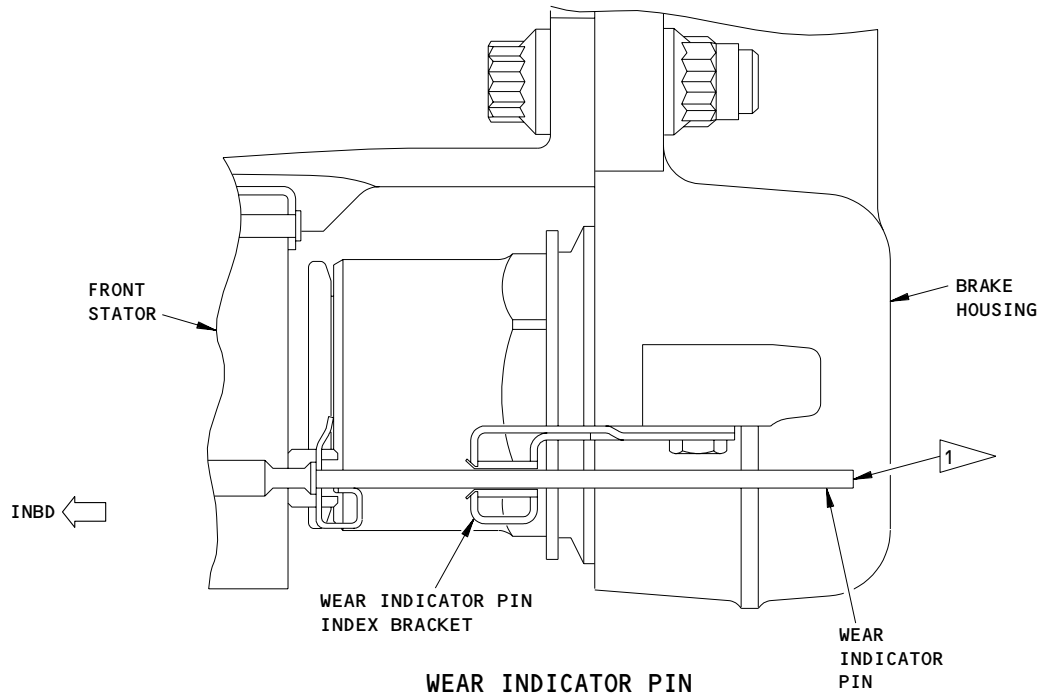
(c) The brake unit is fully worn when the indicator pin is flush with the face of the wear indicator pin index bracket. Replace the brake unit when this condition occurs.

(13) Remove the pressure from the right hydraulic system if it is not necessary (AMM 29-11-00/201).

(14) Put the airplane back to its usual condition.







WEAR INDICATOR PIN

B

1 THE BRAKE UNIT IS FULLY WORN WHEN THE INDICATOR PIN IS FLUSH WITH THE FACE OF THE WEAR INDICATOR PIN INDEX BRACKET. REPLACE THE BRAKE UNIT WHEN THIS CONDITION OCCURS.

Brake Wear Check
Figure 601

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-025-04
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
ELECT	CREW CABIN		1C	11212	018	AUG 22/09

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
OPERATIONAL	ALT BRAKE SYSTEM/SELECTOR VALVE		NOTE	ALL

ZONES	ACCESS PANELS
211 212 731 741	

MECH | INSP

MPD ITEM NUMBER

OPERATIONALLY CHECK THE ALTERNATE BRAKE SYSTEM INCLUDING ALTERNATE BRAKE SELECTOR VALVE. 32-41-00-5A

AIRPLANE NOTE: AIRPLANES WITH SINGLE BRAKE CABLE CONTROL SYSTEM.

A. References

(1) AMM 24-22-00/201, Electrical Power - Control

(2) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(3) AMM 34-21-00/501, Inertial Reference System

B. Procedure

(1) Supply electrical power (AMM 24-22-00/201).

(2) Make sure that the wheel chocks are installed at each wheel.

(3) Release the parking brake.

(4) Make sure that circuit breaker on the main power distribution panel, P6, is closed:

(a) 6F4, PARKING BRAKE VLV

(5) Make sure that these circuit breakers on the overhead panel, P11, are closed:

(a) 11A33, IND LIGHTS 1

(b) 11C31, LANDING GEAR ANTISKID 2-6

(c) 11C32, LANDING GEAR ANTISKID 3-7

(d) 11L15, HYDRAULIC ELEC PUMP CENTER 1

(e) 11L23, HYDRAULIC R ENG PUMP DEPRESS

(f) 11L24, HYDRAULIC ELEC PUMP CENTER 2

(g) 11U12, AUTOBRKS ANTISKID TEST/IND 1

(h) 11U18, LAND GEAR ANTISKID 1-5

(i) 11U20, LANDING GEAR LEVER LOCK

(j) 11U21, AUTOBRKS ANTISKID TEST/IND 2

(k) 11U22, BRAKE PRESS

(l) 11U27, LANDING GEAR ANTISKID 4-8

(6) Make sure that this P11 circuit breaker is open:

(a) 11U26, TAIL SKID CONT

(7) Make sure that the antiskid switch is ON, if installed, and the ANTISKID light on panel P5 is off.

1. Hydraulic Brake System Operational Test - Alternate Brake Source Selection (Fig. 501)

A. Reference

(1) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

B. Access

(1) Location Zones

211 Control Cabin, Left
212 Control Cabin, Right
731 Main Landing Gear, Left
741 Main Landing Gear, Right

C. Procedure

(1) Do the Prepare for the Opertional Tests of the Hydraulic Brake System Test.

MECH | INSP

(2) Remove the pressure from the right and center hydraulic systems (AMM 29-11-00/201).

(3) Make sure that the BRAKE SOURCE light (on the Captain's instrument panel) is on.

(4) Do the alternate brake source selection test as follows:

(a) Push in and release the brake pedals until the brake accumulator is depleted of fluid.

(b) Make sure that the BRAKE PRESS gauge (on the captain's center instrument panel) becomes stable at the top of the amber band.

(c) Pressurize the right hydraulic system (AMM 29-11-00/201).

(d) Make sure that the BRAKE SOURCE light goes off.

(e) Make sure that the BRAKE PRESS gauge shows 2800 to 3200 psi.

(f) Pressurize the center hydraulic system (AMM 29-11-00/201).

NOTE: If you pressurize the center hydraulic system with the ACMPs, make sure both ACMPs are on.

(g) Push in and release the brake pedals several times.

(h) Make sure that the BRAKE PRESS gauge momentarily drops by 500 to 1000 psi each time that you apply the brakes, then goes to 2800 to 3200 psi.

(i) Remove the pressure from the right hydraulic system (AMM 29-11-00/201).

(j) Make sure that the FLIGHT CONTROL SHUTOFF - GROUND USE ONLY valve V99 and/or V102 is OPEN to allow the pressure to dissipate when you operate the control wheel or control column to remove any pressure that remains in the brake system.

NOTE: If valves V99 and/or V102 are closed, they can be opened manually or electrically by closing circuit breakers C1012 and or C1015, flollowed by pressing switch S1 and or S2, on the P61 panel to the ON position.

(k) Make sure the R hydraulic system pressure bleeds down to 0 to 160 psig and stays in that range.

(l) Bleed any pressure that remains in the R hydraulic system by moving the controls for the flight controls on the wing and/or the horizontal tail.

1) Move the control wheel in the clockwise and counterclockwise directions to move the ailerons.

2) Move the control column in the forward and back directions to move the elevators.

(m) Make sure the R hydraulic system pressure bleeds down to 0 to 160 psig and stays in that range.

(n) Wait for 10 minutes minimum to allow for any accumulator check valve leakage to occur before you put the flight control shutoff valves to the previous position.

(o) Make sure that the BRAKE SOURCE light is still off.

(p) Make sure that the BRAKE PRESS gauge still shows 2800 to 3200 psi.

(q) Push in and release the brake pedals several times.

(r) Make sure that the BRAKE PRESS gage still shows 2800 to 3200 psi.

NOTE: There will be a momentary pressure drop below 2800 psi with the right hydraulic system inoperative.

(5) Make sure that the L, R, and C IRU's are aligned and in NAV mode (AMM 34-21-00/501). (Do this task to prepare to test alternate brake system.)

D. Put the Airplane Back to Its Usual Condition

(1) Set the parking brake.

(2) Remove electrical power if it is not necessary (AMM 24-22-00/201).

(3) Remove hydraulic power if it is not necessary (AMM 29-11-00/201).

2. Hydraulic Brake System Operational Test - Alternate Brake System (Fig. 501).

A. References

(1) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(2) AMM 34-21-00/501, Inertial Reference System

B. Access

(1) Location Zones

211 Control Cabin, Left
212 Control Cabin, Right
731 Main Landing Gear, Left
741 Main Landing Gear, Right

C. Procedure

(1) Make sure that the L, R, and C IRU's are aligned and in the NAV mode (AMM 34-21-00/501).

(2) Release the parking brake.

(3) Open this circuit breaker on the P6 main power distribution panel and install a DO-NOT-CLOSE tag:

(a) 6F4, PARKING BRAKE VALVE

NOTE: Open the PARK BRAKE VALVE circuit breaker before you set the parking brake to hold the applied brake pressure and not close the parking brake valve. If the parking brake valve is closed, antiskid operation is prevented and the alternate system brake release through the antiskid valves cannot be checked.

(4) Make sure that you have removed the pressure from the right hydraulic system (AMM 29-11-00/201).

(5) Pressurize the center hydraulic system and reservoir (AMM 29-11-00/201).

(6) Continue the alternate brake system test.

(7) Set the parking brake.

(8) Look at the wear indicator on each brake to make sure that brake pressure is applied.

(9) Make sure that the ANTISKID light on the P5 panel is off.

(10) Operate the brake test switch in the sequence shown in Table 501 and check for results as shown. Do the test for each brake switch position as follows:

(a) Place the BRAKE TEST rotary switch, located on the front of antiskid/autobrake control unit (in the E/E bay), in the position shown in Table 501.

(b) Press the ENABLE/VERIFY switch and hold, then press the VERIFY switch and release both at the same time. Make sure that the alternate brake pairs shown in Table 501 release for 5 ±2 seconds and then reapply. Make sure that the display messages on the control unit are as shown.

NOTE: You can look at the movement of the brake pistons and the brake stack as the brake applies and releases to make sure that the brake pairs release and reapply as required.

TABLE 501

Brake Test Switch Position	Message	Brake Release *[1]
Brake Test 1	BRK 1	1-2
3	BRK 3	3-4
5	BRK 5	5-6
7	BRK 7	7-8

*[1] Brakes will cycle to release for 5±2 seconds, then reapply.

(11) Put the BRAKE TEST rotary switch to NORM and press the RESET switch on the Antiskid/Autobrake Control Unit.

(12) Close this circuit breaker on the P6 main power distribution panel:

(a) 6F4, PARK BRAKE VLV

D. Put the Airplane Back to Its Usual Condition.

MECH | INSP

(1) Remove electrical power if it is not necessary (Ref 24-22-00/201).

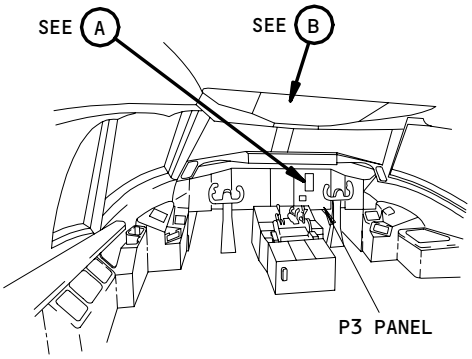
(2) Remove hydraulic power if it is not necessary (AMM 29-11-00/201).

E. Put the Airplane Back to Its Usual Condition.

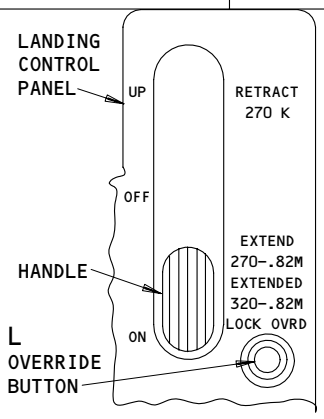
(1) Set the parking brake.

(2) Remove hydraulic power if it is not necessary (AMM 29-11-00/201).

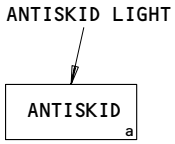
(3) Remove electrical power if it is not necessary (AMM 24-22-00/201).



FLT COMPT

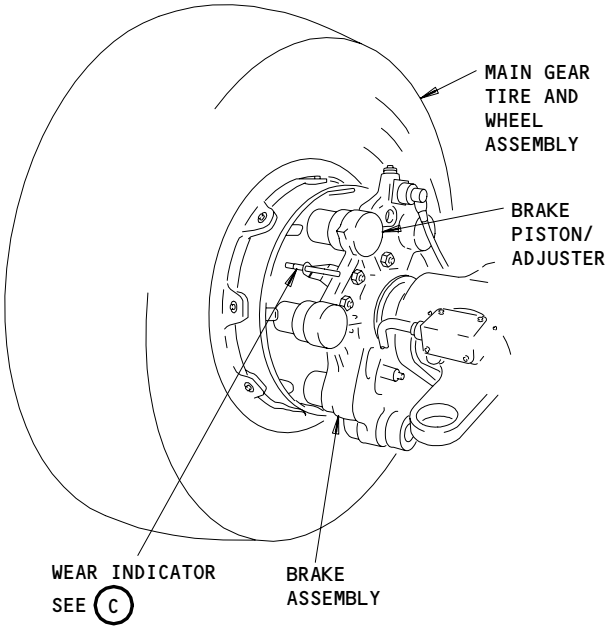


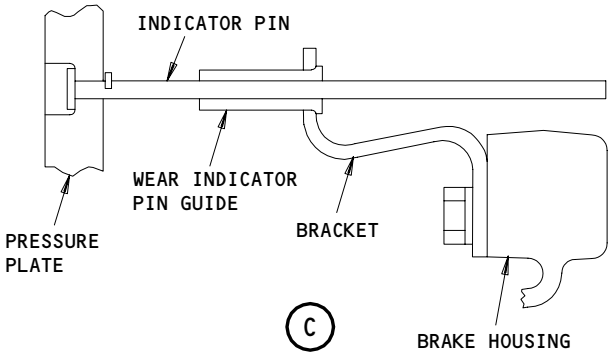
A



MISC ANNUNCIATOR ON P5

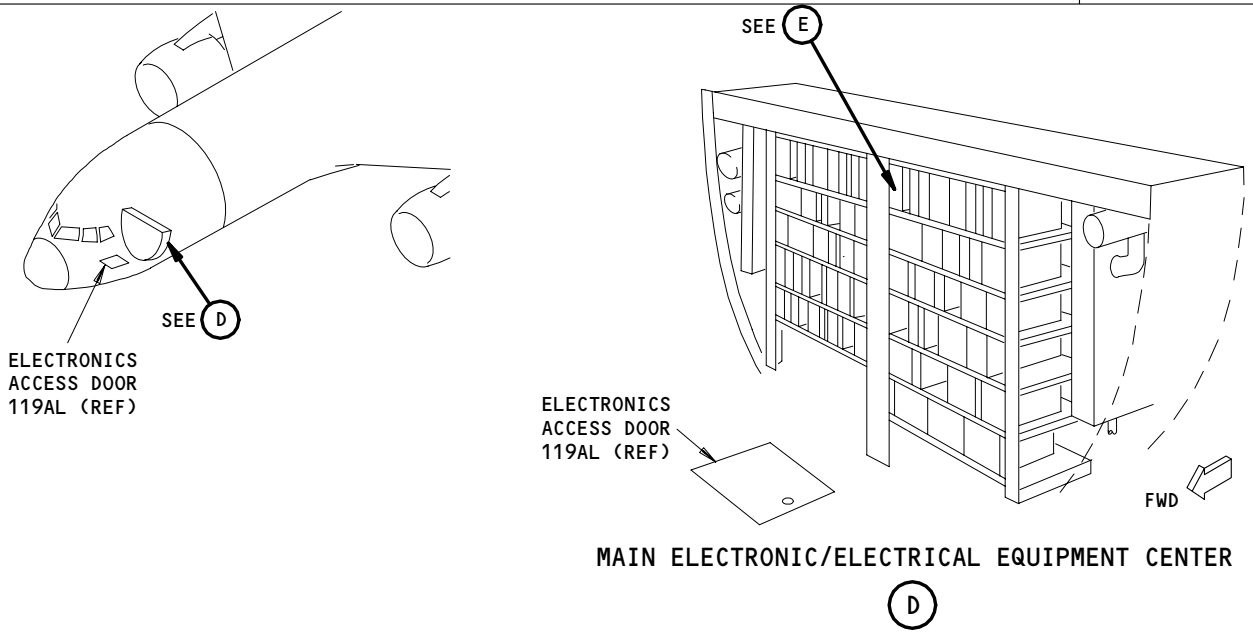
B





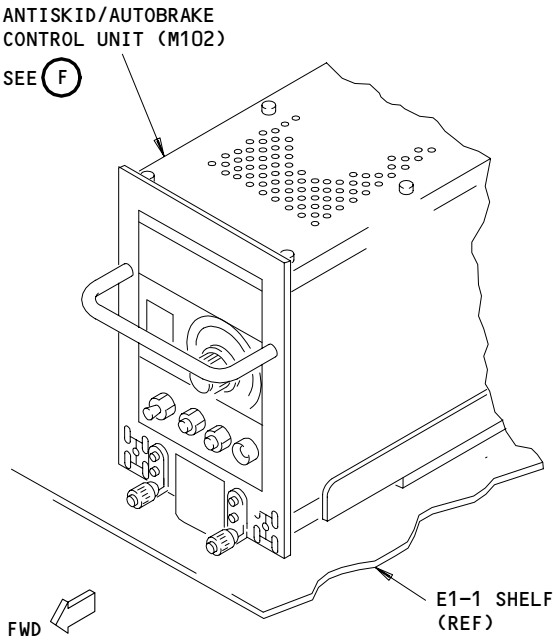
C

Alternate Brake System Operation Test Component Location
Figure 501 (Sheet 1)

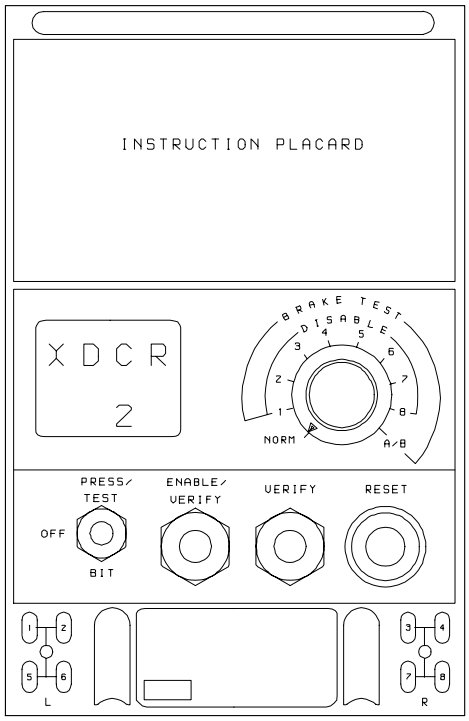


MAIN ELECTRONIC/ELECTRICAL EQUIPMENT CENTER

D



E



ANTISKID/AUTOBRAKE CONTROL UNIT FRONT FACE

F

Alternate Brake System Operation Test Component Location
Figure 501 (Sheet 2)

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-026-01
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	LNDG GEAR		4C	14848	012	DEC 22/05

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
OPERATIONAL	ANTISKID MODULE HYDRAULIC FUSES		ALL	ALL

ZONES	ACCESS PANELS
211 212 551 651 731 741	1004 651TB

MECH | INSP

MPD ITEM NUMBER

OPERATIONALLY CHECK ANTISKID MODULE HYDRAULIC FUSES. 32-41-00-2A

ACCESS NOTE: SPECIAL ACCESS 1004 REQUIRES OPENING OF THE LANDING GEAR DOORS AND INSTALLING SAFETY LOCKS IN ACCORDANCE WITH MAINTENANCE MANUAL PROCEDURE 32-00-15.

1. Capacity Test For the Antiskid Module Hydraulic Fuse

A. Equipment

(1) Container - 3 U.S. gallon capacity minimum

B. Consumable Materials

(1) D00153 Hydraulic Fluid - BMS 3-11

C. References

(1) 12-12-01/301, Hydraulic System Servicing

(2) 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems

(3) 32-00-15/201, Landing Gear Door Locks

(4) 32-00-20/201, Land Gear Downlocks

D. Access

(1) Location Zone

211 Control cabin (Left Side)
212 Control Cabin (Right Side)
731 Main Landing Gear (Left)
741 Main Landing Gear (Right)

MECH | INSP

E. Prepare For the Test of the Brake System Fuses

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

(2) Make sure the chocks are installed on the wheels.

WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO INSTALL THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(3) Open the doors for the main landing gear and install the door locks (AMM 32-00-15/201).

(4) Make sure the parking brake is released.

F. Do the Capacity Test on the Brake Fuses

(1) To do a test of the fuses for the normal brake system, do the steps that follow:

(a) Remove the screw and the washer from the end of the bleeder screw.

(b) Install a bleed hose over the end of the bleeder screw.

(c) Put a container with a minimum capacity of 3 U.S. gallons near the brake bleeder port so that fluid can flow directly from the bleed hose into the container.

(d) Pressurize the right hydraulic system (AMM 29-11-00/201).

(e) Push the brake pedals to the maximum travel to apply the full brake pressure.

NOTE: You can use the parking brake to keep the brake pedals pushed for the fuse test.

(f) Wear goggles to keep the spray from the brake bleed hose away from the eyes.

MECH | INSP

(g) While you apply full brake pressure, open the bleeder screw a half of a turn. Let the fluid flow into the container until the flow stops. This shows that the fuse closed.

NOTE: The fluid can flow out of the brake very quickly and intermittently. Do not let it get into the area around the container.

(h) Close the bleeder screw.

(i) Set the fuse as follows (Fig. 202):

1) Hold the fuse reset knob in the bypass position for 5 seconds minimum to make sure the fuse is set.

2) While you hold the fuse in the bypass position push in and hold the brakes and listen to hear an audible sound as the fuse fills up with hydraulic fluid.

(j) Do the fuse capacity test again for each of the other brake fuses for the normal brake system (seven locations).

NOTE: Monitor the hydraulic reservoir quantity carefully. The sequence of tests you do for the normal brake system will use approximately 2.8 gallons of hydraulic fluid.

(k) Make sure the quantity of fluid you collected is not more than 3 gallons total from all the brakes (8 locations).

(l) If you will not do the capacity test for the alternate brake system fuses at this time, do the steps that follow:

1) Do this task; Bleed the Wheel Brake System for the Main Landing Gear(AMM 32-41-00/201).

2) Install the screw and the washer in the bleeder screw.

3) Tighten the bleeder screw to 60 +/-20 pound inches.

4) Install lockwire between the bleeder screw and the bleed port.

(m) Make sure the fluid in the right hydraulic system reservoir is at the correct level. Fill if it is necessary (AMM 12-12-01/301).

(2) To do a test of the fuses for the alternate brake system, do the steps that follow:

(a) Remove the screw and the washer from the end of the bleeder screw.

(b) Install a bleed hose over the end of the bleeder screw.

(c) Put a container with a minimum capacity of 3 U.S. gallons near the brake bleeder port to let the fluid flow directly from the bleed hose into the container.

(d) Pressurize the center hydraulic system and remove the pressure from the right hydraulic system (AMM 29-11-00/201).

(e) Push the brake pedals the maximum travel to apply full brake pressure.

NOTE: You can use the parking brake to keep the brake pedals pushed for the fuse test.

(f) While you apply full brake pressure, open the bleeder screw a half of a turn. Let the fluid flow into the container until the flow stops. This shows that the fuse closed.

NOTE: The fluid can flow out of the brake very quickly and intermittently. Do not let it get into the area around the container.

(g) Close the bleeder screw.

(h) Set the fuse as follows (Fig. 202):

1) Hold the fuse reset knob in the bypass position for 5 seconds minimum to make sure the fuse is set.

2) While you hold the fuse in the bypass position push in and hold the brakes and listen to hear an audible sound as the fuse fills up with hydraulic fluid.

MECH	INSP

(i) Do the test again for each fuse.

NOTE: In the alternate brake system, two side by side brakes on an axle use one fuse. Thus, it is only necessary to bleed at the four bleed plug locations.

Monitor the hydraulic reservoir quantity carefully. The sequence of tests you do for the alternate brake system will use approximately 1.4 gallons of hydraulic fluid.

(j) Make sure the quantity of fluid you collected is not more than 1.5 gallons total from all of the brakes on the four axles.

(k) Do this task; Bleed the Wheel Brake System for the Main Landing Gear (AMM 32-41-00/201).

(l) Do the steps that follow to put the brakes to normal:

1) Remove the bleed hose.

2) Install the screw and the washer in the bleeder screw.

3) Tighten the bleeder screw to 60 +/-20 pound inches.

4) Install lockwire between the bleeder screw and the bleed port.

(m) Make sure the fluid in the center hydraulic system reservoir is at the correct level. Fill if it is necessary (AMM 12-12-01/301).

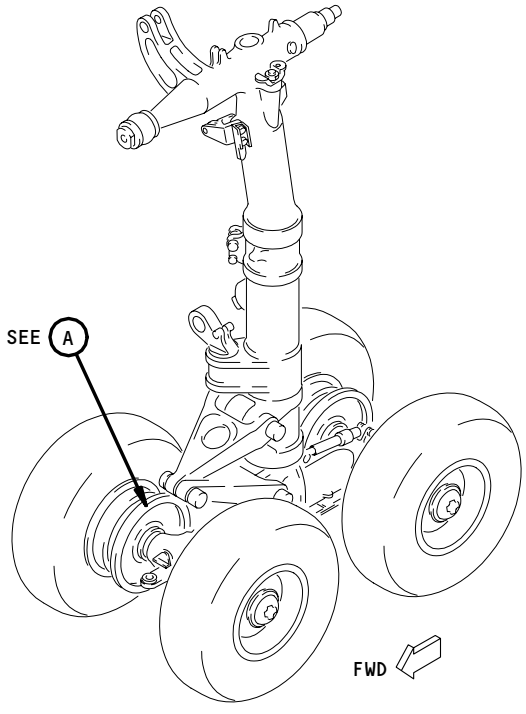
G. Put the Airplane Back to Its Usual Condition

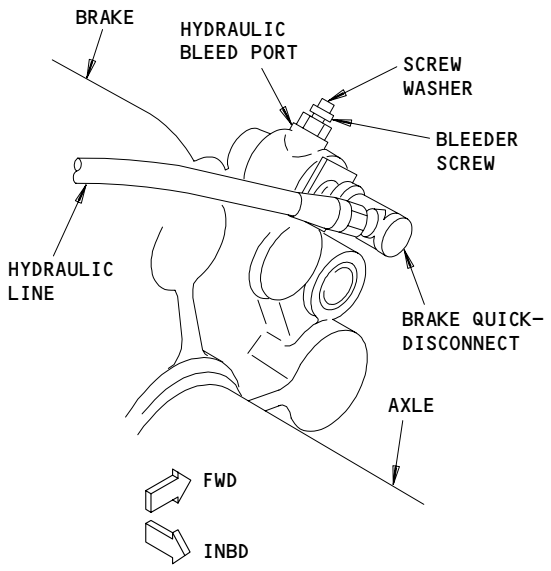
(1) Set the parking brake.

WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO REMOVE THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(2) Remove the door locks from the main landing gear and close the doors for the main landing gear (AMM 32-00-15/201).

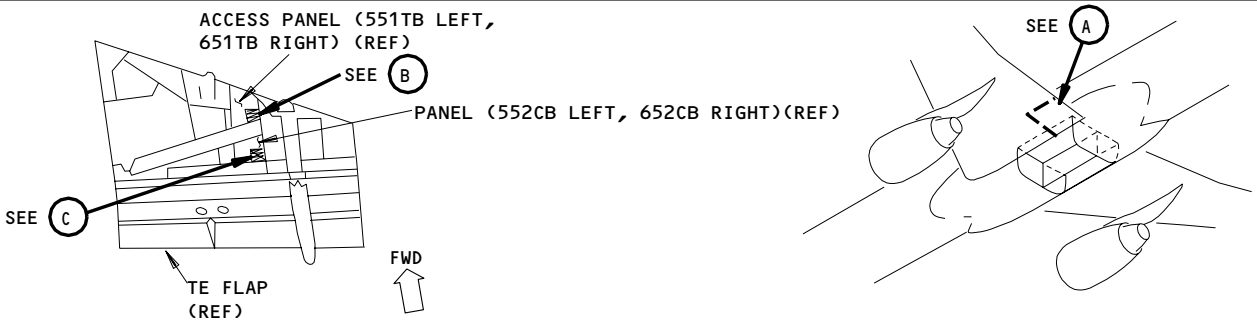
(3) Remove the pressure from the hydraulic system if it is not necessary (AMM 29-11-00/201).





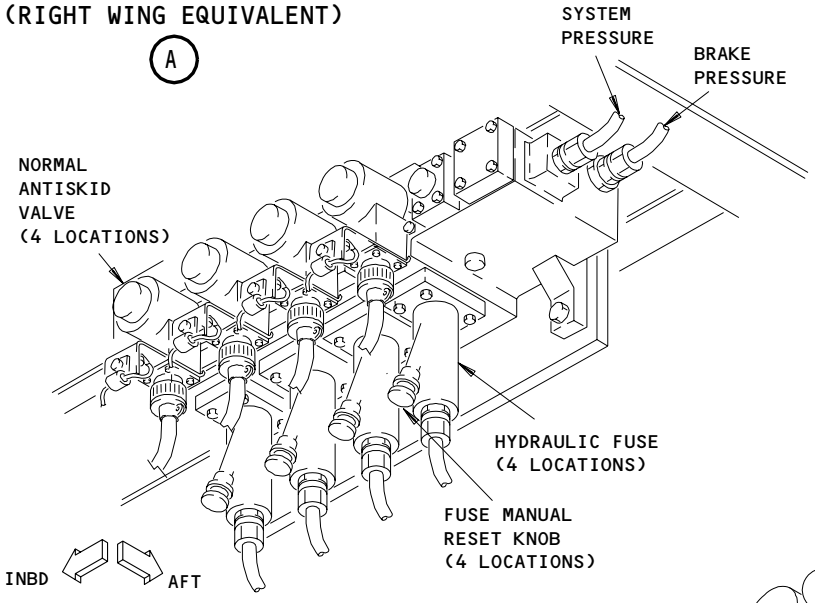
(EXAMPLE - EACH BRAKE)
A

Hydraulic Brake Bleed Port Location
Figure 201



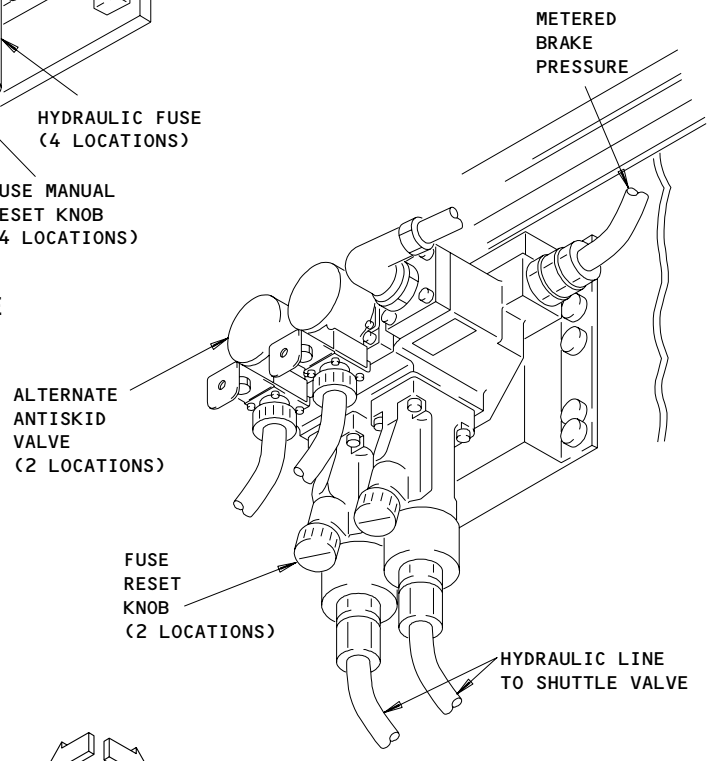
LEFT WING UNDERSIDE SHOWN
(RIGHT WING EQUIVALENT)

A



NORMAL ANTISKID MODULE

B



ALTERNATE ANTISKID MODULE

C

Brake System Hydraulic Fuses (Sub-Assemblies of the Antiskid Valves)
Figure 202

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-028-01
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	R MAIN W/W		1A	10101	002	APR 22/07

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
SERVICE	PARKING BRAKE ACCUMULATOR		ALL	ALL

ZONES	ACCESS PANELS
144	742

MECH	INSP	MPD ITEM NUMBER

CHECK PARKING BRAKE ACCUMULATOR PRESSURE AND SERVICE AS REQUIRED. 12-15-04-3A

1. Fill the Parking Brake Accumulator

A. Equipment

(1) Pressurized Nitrogen Source - Commercially Available

B. References

(1) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems

(2) AMM 32-00-15/201, Landing Gear Door Locks

(3) AMM 32-00-20/201, Landing Gear Downlocks

C. Access

(1) Location Zones
143/144 Main Landing Gear Wheel Well

D. Procedure

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

WARNING: OBEY THE INSTALLATION PROCEDURE FOR THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

MECH | INSP

(2) Open the doors for the right main landing gear and install the door locks (AMM 32-00-15/201).

(3) Remove the pressure from the right and center hydraulic systems (AMM 29-11-00/201).

(4) Put chocks on the landing gear wheels.

(5) Release the parking brake, if it is set.

(6) Operate the left and right brake pedals a minimum of ten times to remove the pressure from the brake system.

(7) Do a check of the pressure indication on the brake accumulator pressure gage, found adjacent to the charging valve, to see if it is in the correct precharge pressure range as shown on the placard (View C).

(8) If the pressure shown is not in the correct precharge pressure range shown on the placard (View C), do the servicing of the accumulator with nitrogen as follows:

(a) Operate the brake pedals until the pressure shown on the gage does not decrease any more.

(b) Remove the cap from the charging valve (Views A and B).

(c) Attach a nitrogen source to the charging valve.

WARNING: DO NOT LOOSEN THE CHARGING VALVE. THE INTERNAL PRESSURE CAN BLOW THE VALVE OUT AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(d) Loosen the swivel nut one turn.

(e) Fill the accumulator to the pressure shown on the placard adjacent to the charging valve.

NOTE: If a large amount of charging with nitrogen is necessary, allow the accumulator pressure and temperature to stabilize for five minutes, and then do a check of the pressure again.

(f) Tighten the swivel nut.

MECH	INSP

(g) Operate the brake pedals again and make sure the accumulator pressure does not decrease.

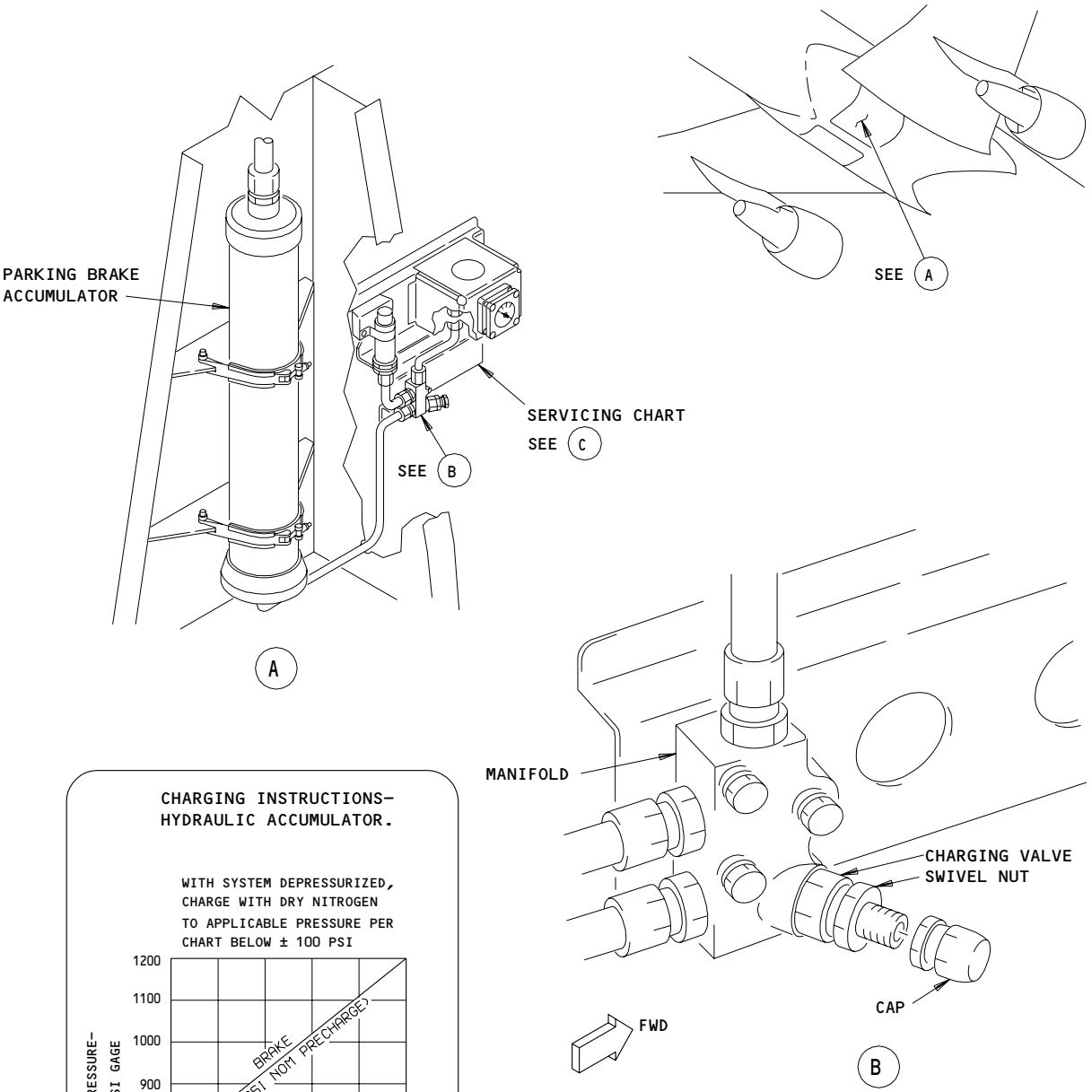
1) If the pressure decreases, continue to fill the accumulator to the pressure shown on the placard until operation of the brake pedals does not cause the pressure to decrease.

(h) Remove the nitrogen source, and make sure there is no external leakage at charging valve.

(i) Attach the cap to the charging valve.

WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO REMOVE THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(9) Remove the door lock from the right main landing gear and close the door (AMM 32-00-15/201).



Parking Brake Servicing Location
Figure 301

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-029-01
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL		PHASE	MPD REV	TASK CARD REVISION
AIRPL	LNDG GEAR	W-32-030-01	00048 HRS	NOTE	002DY	011	DEC 22/07

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
CHECK/INSP	MAIN & NOSE GEAR TIRES		ALL	ALL

ZONES	ACCESS PANELS
711 731 741	

MECH	INSP	MPD ITEM NUMBER

INSPECT MAIN AND NOSE GEAR TIRES FOR WEAR. 32-45-04-6A

INTERVAL NOTE: 48 ELAPSED CLOCK HOURS.

1. Tires Inspection/Check

A. References

(1) AMM 05-51-16/201, Burst/Flat Spotted Tires (Conditional Inspection)

(2) AMM 12-15-03/301, Tires - Servicing

(3) AMM 32-00-20/201, Landing Gear Downlocks

B. Procedure

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

(2) Put wheel chocks on all landing gear wheels to prevent the airplane movement.

(3) Do a check of the tire pressure to see if it is within the allowable pressure range (AMM 12-15-03/301).

(a) If a tire has been turned when it is flat, all tires on that axle must be removed. Also, all tires on that axle must be removed when a tire is turned at 20 percent or more below the allowable pressure range.

(b) If it is shown that a pressure decrease occurred after the airplane was parked (and the tire did not turn), remove the tire with the low pressure (AMM 12-15-03/301).

C. Examine the Tires

MECH | INSP

(1) Do the steps that follow and examine the tires for wear and damage conditions.

(a) Refer to figure 602 for wear and damage conditions and replace the tires that exceed the limits.

NOTE: Refer to Fig. 601 for tire nomenclature and tire construction details.

(b) Examine the tires for the presence of contaminants.

1) Keep the tires clean of contaminants such as oils, fuels, hydraulic fluids, aircraft cleaning agents, and greases. Cover the tire if these or other potentially harmful chemicals may spill or drip on the tire.

2) Wipe off the tire with a soapy solution if the tire becomes contaminated.

3) The tire should be removed from service as soon as practical if the surface of the tire appears soft, spongy, or there are bulges present.

(c) Examine the tires for air leaks, abrasions, unusual worn areas, cuts, and flat spots (See Fig. 602 for damage limits).

(d) Remove the tires that have the damage or wear conditions that follow:

1) Cuts or weather cracks in the grooves, tread, shoulder, or the sidewalls that exceed the limits shown in Fig. 602.

2) Blisters, bulges, or other signs of ply separation in the tread, shoulder, or sidewall area.

3) Tires with a flat spot which shows the thread reinforcement ply (bias) or cut protector (radial).

NOTE: If the cut protector (radial) or tread reinforcement ply (bias) shows, the tire should be replaced as soon as possible. If necessary, the tire may be used for a small number of landings until it is replaced. However, you may not be able to retread the tire if you leave the tire in service too long with this condition.

4) Other types of damage which can cause tire problems.

(e) Examine the tires for worn areas:

1) Measure the depth of the tire tread groove at three points that are equally spaced apart.

2) If the average depth of any groove is 1/32 inch (0.79 mm) or less, the tire must be replaced at the next convenient maintenance opportunity.

3) If the tread ply (radial) or carcass ply (bias) shows at any location, the tire is not serviceable and must be replaced.

4) If the tread is worn so that the cut protector (radial) or tread reinforcement ply (bias) shows at any location, the tire must be replaced at the next convenient maintenance opportunity.

NOTE: If the cut protector (radial) or tread reinforcement ply (bias) shows, the tire should be replaced as soon as possible. If necessary, the tire may be used for a small number of landings until it is replaced. However, you may not be able to retread the tire if you leave the tire in service too long with this condition.

D. Examine the thermal fuse

(1) The steps that follow are the specifications for the thermal fuse conditions:

(a) A tire is not serviceable when there is a decrease in the pressure because the wheel thermal fuse melted or extruded. When this occurs, remove the tire and do the high energy stop/heat damage conditional inspection (AMM 05-51-14/201).

NOTE: All other main gear tire-wheels must be examined for signs that the thermal fuses are melted, extruded, or they leaked. This is specially at the tire-wheel positions that have hot brakes.

(b) When an inspection shows that a wheel thermal fuse is not fully melted (extruded) but does not leak, do the steps that follow:

MECH	INSP

1) Do the high energy stop/heat damage conditional inspection (AMM 05-51-14/201).

2) Examine the wheel before each flight until the tire-wheel is not serviceable and is removed.

(c) When a tire-wheel assembly, or a wheel has been removed because of the steps that follow, tag the wheel and tell why it was removed. Also, do an inspection of the wheel (Ref 32-45-03).

1) The wheel turned on a runway without a tire.

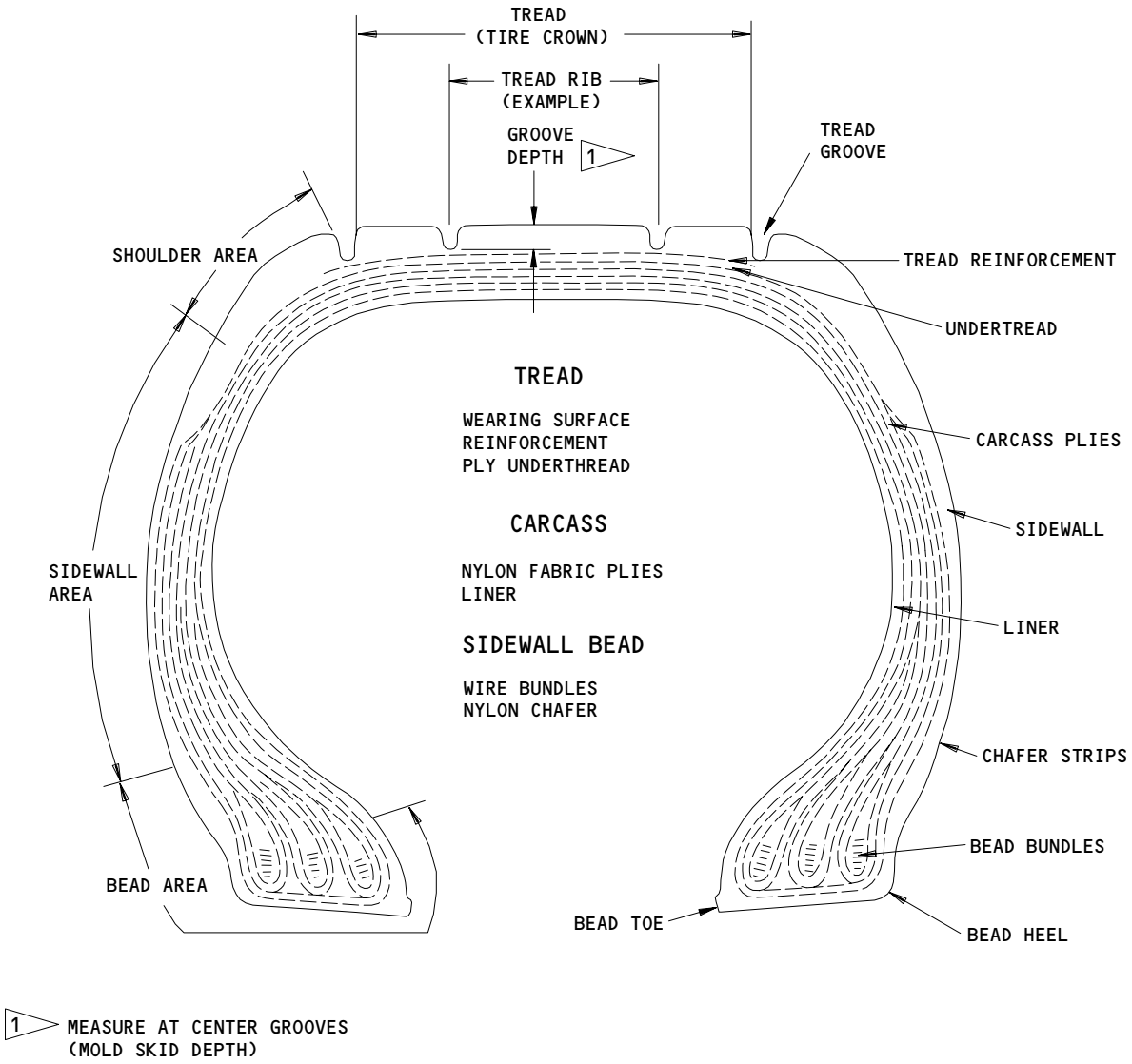
2) Each tire on the same axle is a flat tire, and they were turned on a runway.

NOTE: Put tags on both wheels to be inspected.

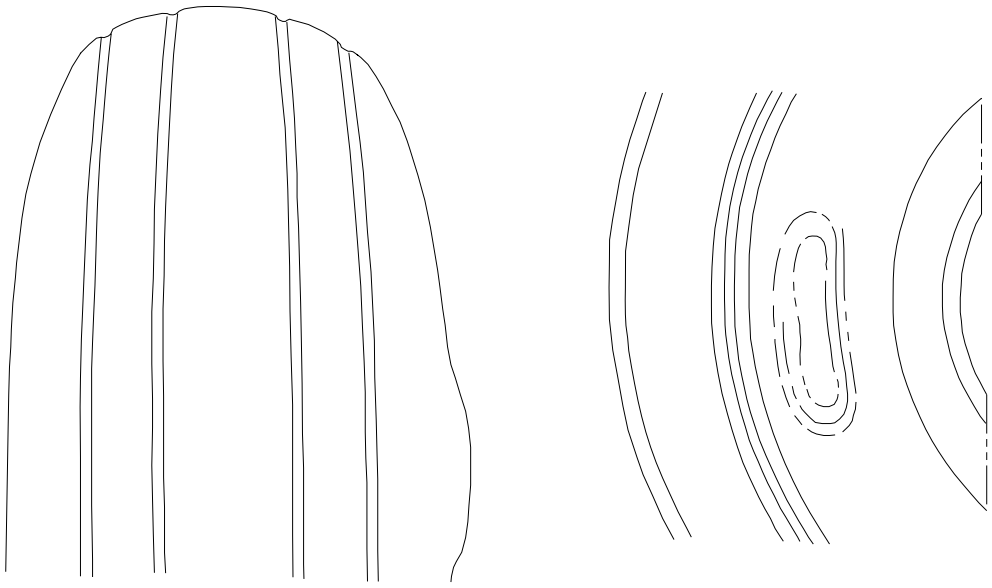
3) The wheel shows signs of a melted, extruded, or a wheel thermal fuse that leaks.

4) When one of the wheels on an axle has a flat tire, replace the other tire-wheel assembly on that axle. Also, do this if the tire is not there. Put a tag on the assembly to discard the tire (Ref 12-15-03).

NOTE: When the pressure decrease was after the airplane was parked (the tire did not turn), the good tire on that axle does not have to be replaced.

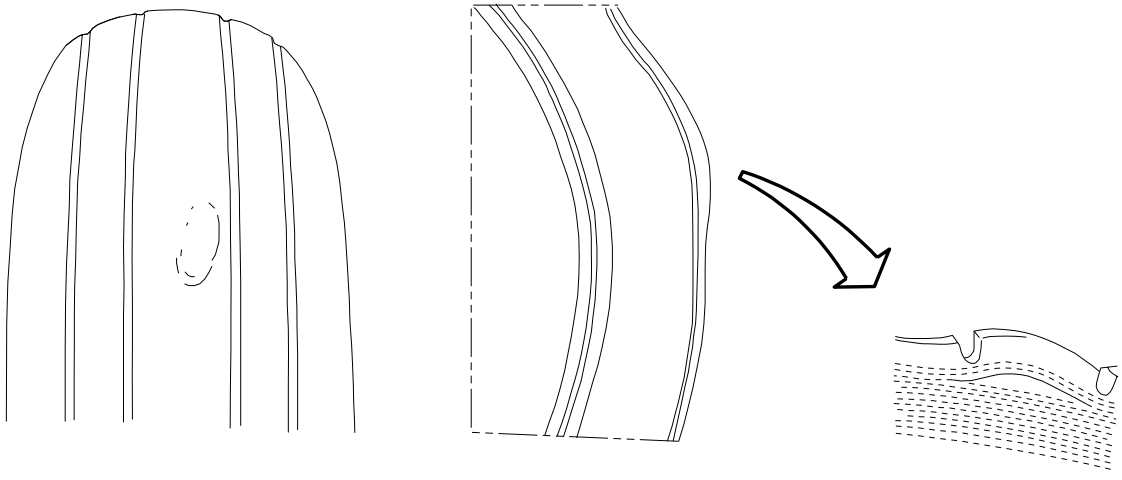


Tire Nomenclature (Example)
Figure 601



SIDEWALL SEPARATION

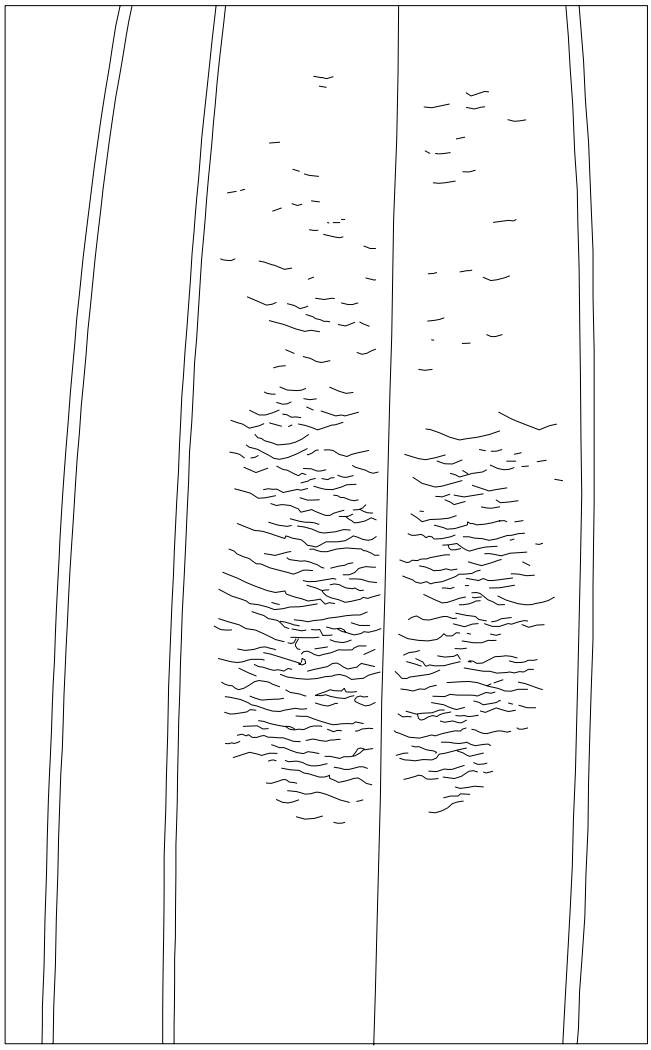
TIRES WITH BLISTERS OR BULGES IN THE SIDEWALL ARE NOT SERVICEABLE. REMOVE TIRE IMMEDIATELY.



TREAD SEPARATION

TIRES WITH BLISTERS OR BULGES IN THE TREAD ARE NOT SERVICEABLE. REMOVE TIRE IMMEDIATELY.

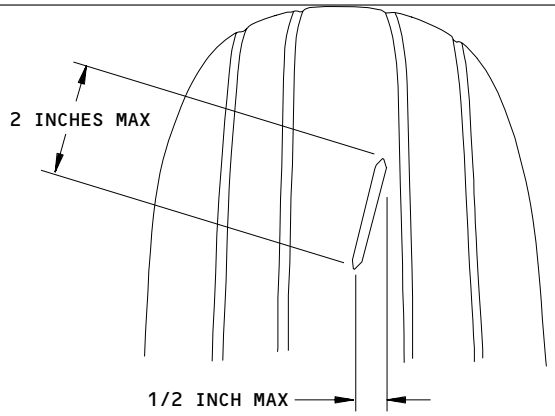
Tire Damage/Wear Conditions
Figure 602 (Sheet 1)

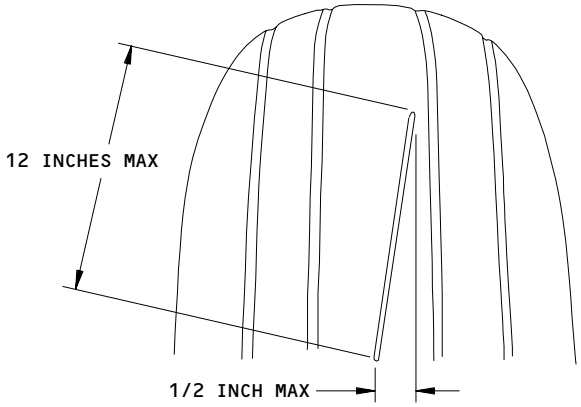


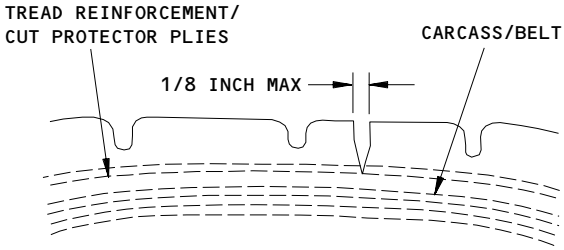
CHEVRON CUTS

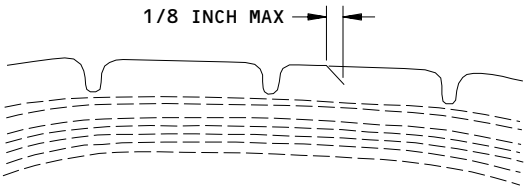
TIRES WITH CHEVRON CUTS IN THE TREAD ARE NOT SERVICEABLE IF ANY OF THE SINGLE CUT LIMITS ARE EXCEEDED OR CHUNKING OCCURS WHICH EXPOSES THE FABRIC.

Tire Damage/Wear Conditions
Figure 602 (Sheet 2)







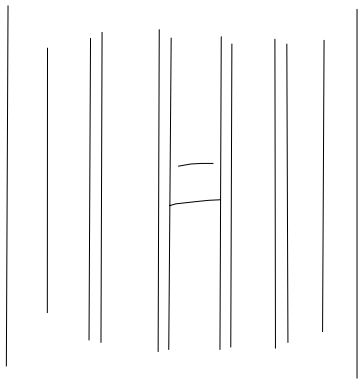


CIRCUMFERENTIAL CUTS

CUTS THAT PENETRATE THE TREAD REINFORCEMENT/CUT PROTECTOR PLIES ARE NOT SERVICEABLE IF:

(A) CUT EXCEEDS THE ABOVE LIMITS.
(B) CUT PENETRATES THE CARCASS PLIES (BIAS) OR BELT PLIES (RADIAL)
(C) CUT IS NOT CONTAINED WITHIN ONE RIB.

CUTS THAT DO NOT EXPOSE FABRIC ARE NOT SERVICEABLE IF THEY EXCEED THE ABOVE LIMITS.

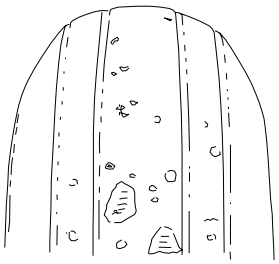


TRANSVERSE CUTS

(A) TRANSVERSE CUTS THAT ARE CONTAINED WITHIN A RIB AND PENETRATE INTO THE CARCASS PLIES (BIAS) OR BELT PLIES (RADIAL) ARE NOT SERVICEABLE.

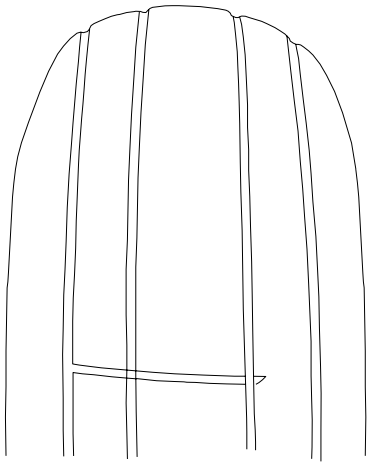
(B) CUTS THAT EXTEND ACROSS A RIB FROM GROOVE TO GROOVE WHICH ARE DEEPER THAN THE GROOVE ARE NOT SERVICEABLE.

Tire Damage/Wear Conditions
Figure 602 (Sheet 3)



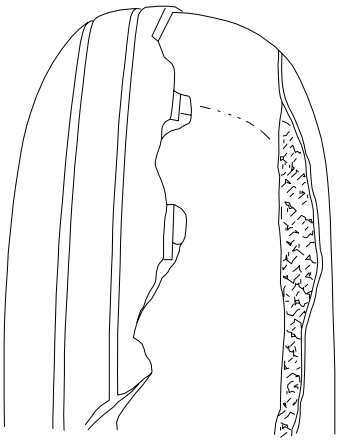
TREAD FLAKING, CHIPPING OR CHUNKING

TIRES WITH FLAKING, CHIPPING OR CHUNKING TREADS ARE NOT SERVICEABLE IF ANY FABRIC IS EXPOSED.



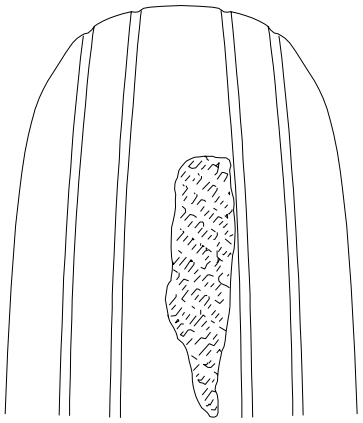
OPEN TREAD SPLICE

TIRES WITH AN OPEN TREAD SPLICE ARE NOT SERVICEABLE. A CLOSED TREAD SPLICE WILL APPEAR AS A THIN LINE THAT CROSSES THE TREAD RIBS.



THROWN TREAD

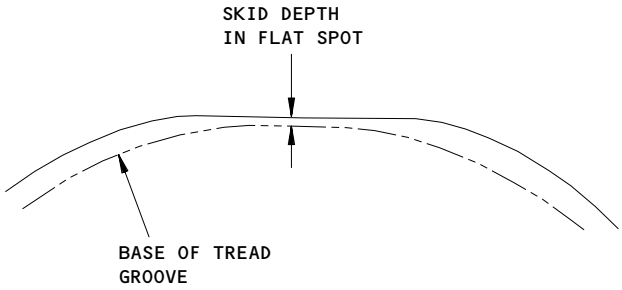
TIRES WITH THROWN TREADS ARE NOT SERVICEABLE.



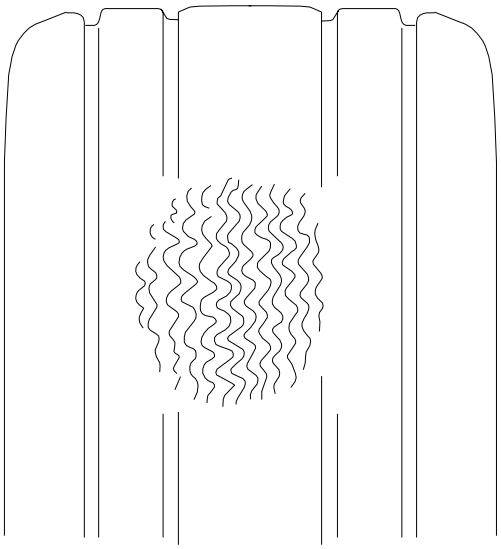
PEELED RIB

TIRES WITH PEELED RIBS ARE NOT SERVICEABLE.

Tire Damage/Wear Conditions
Figure 602 (Sheet 4)

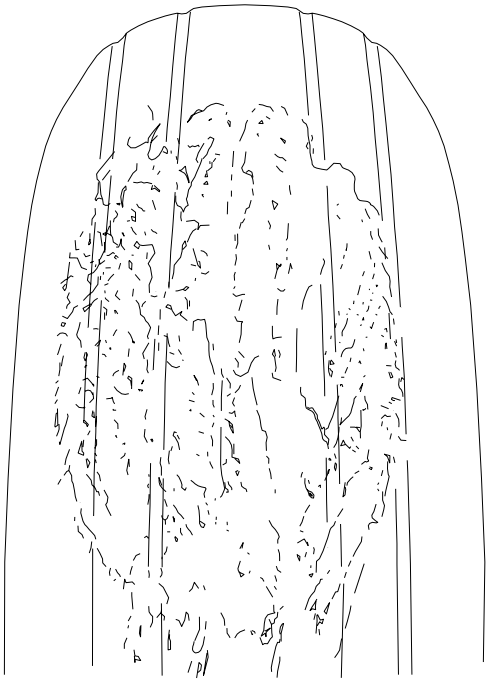


TREAD FLAT SPOTS



FLAT SPOT

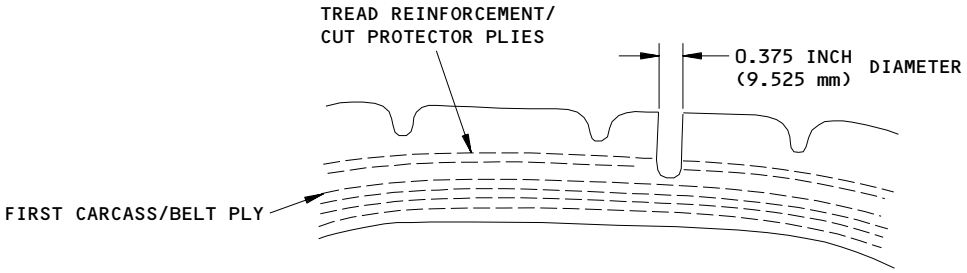
TIRES WITH FLAT SPOTS ARE NOT SERVICEABLE IF THE FLAT SPOT EXPOSES THE TREAD REINFORCEMENT OR CUT PROTECTOR PLIES OR TIRE BALANCE AFFECTED.



ICE SKID BURN/TREAD RUBBER REVERSION

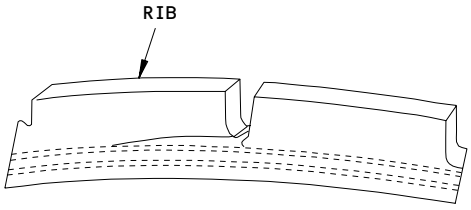
TIRES WITH ICE BURN/TREAD RUBBER REVERSION ARE NOT SERVICEABLE IF THE DAMAGE EXPOSES THE TREAD REINFORCEMENT OR CUT PROTECTOR PLIES OR TIRE BALANCE IS AFFECTED.

Tire Damage/Wear Conditions
Figure 602 (Sheet 5)



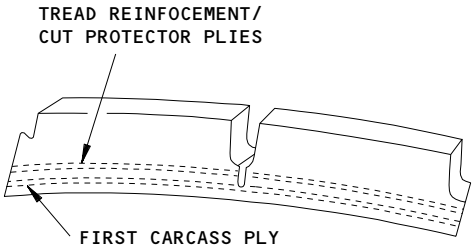
PUNCTURE

TIRES WITH HOLES LARGER THAN 0.375 INCH (9.525 mm) DIAMETER OR HOLES THAT PENETRATE INTO THE CARCASS PLIES (BIAS) OR BELT PLIES (RADIAL) ARE NOT SERVICEABLE.



RIB UNDERCUTS

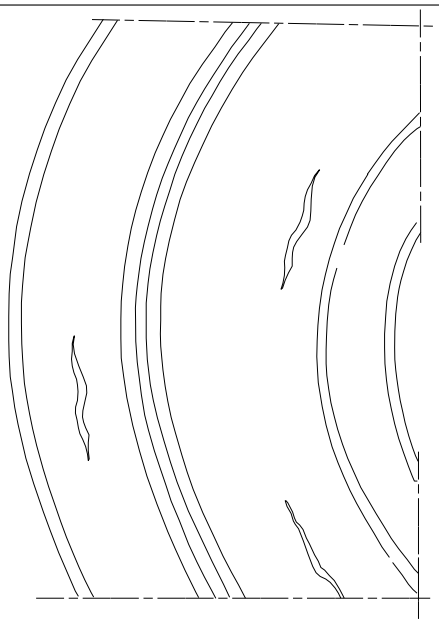
TIRES WITH A CRACK THAT EXTENDS BELOW A TREAD RIB ARE NOT SERVICEABLE.



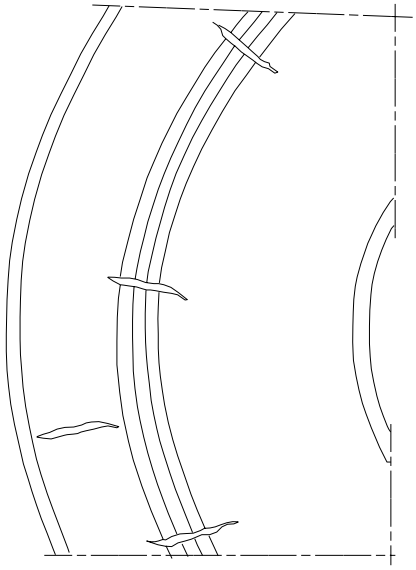
GROOVE CRACKS

TIRES WITH CIRCUMFERENTIAL CRACKS AT THE BOTTOM OF THE GROOVES ARE NOT SERVICEABLE IF THE CRACKS EXPOSES ANY FABRIC.

Tire Damage/Wear Conditions
Figure 602 (Sheet 6)

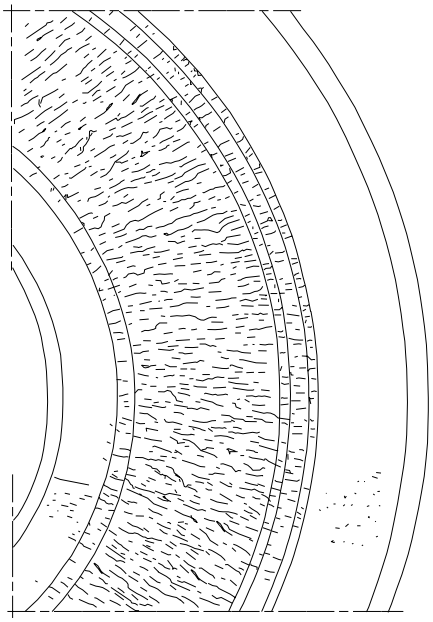


CIRCUMFERENTIAL SIDEWALL CRACKS OR CUTS



RADIAL SIDEWALL CRACKS OR CUTS

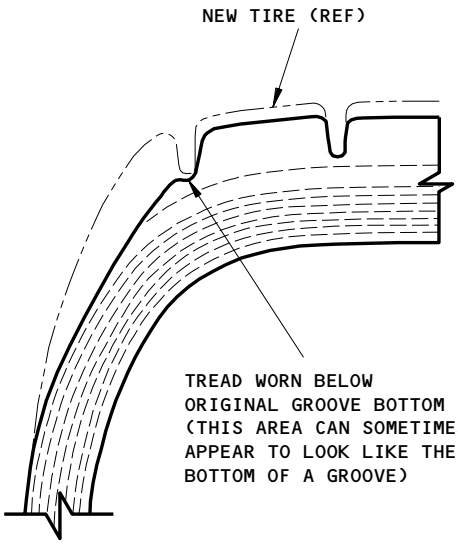
TIRES WITH CIRCUMFERENTIAL OR RADIAL CRACKS OR CUTS IN THE SIDEWALL OR SHOULDER AREA THAT EXPOSE THE FABRIC ARE NOT SERVICEABLE.



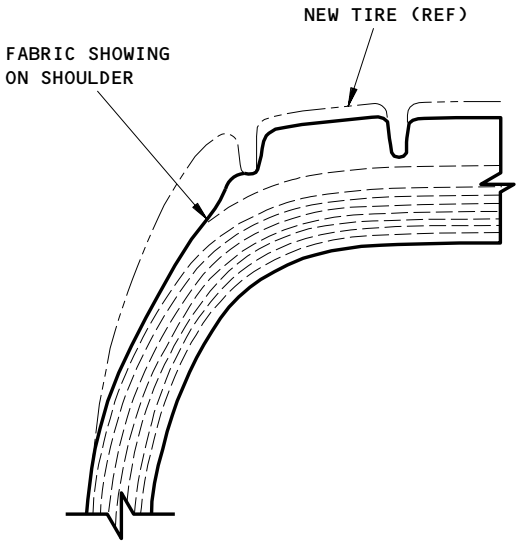
OZONE AND/OR WEATHER CRACKS OR CUTS

TIRES WITH CRACKS OR CUTS IN THE SIDEWALL WHICH ARE CAUSED BY AGE/WEATHER DETERIORATION ARE NOT SERVICEABLE IF THE FABRIC IS EXPOSED.

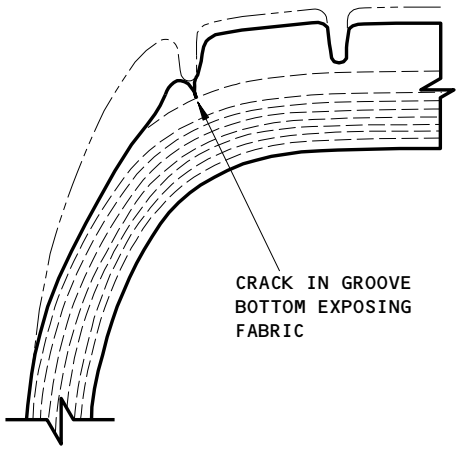
Tire Damage/Wear Conditions
Figure 602 (Sheet 7)



TIRE SHOULD BE REMOVED
IF TREAD WEARS BELOW
BOTTOM OF TREAD GROOVE



TIRE SHOULD BE REMOVED
IF ANY FABRIC IS SHOWING
ON SHOULDER



TIRE SHOULD BE REMOVED
IF BLISTERS OR CRACKS ARE
FOUND IN A GROOVE BOTTOM
WHICH EXPOSES FABRIC

SHOULDER WEAR CONDITIONS

Tire Damage/Wear Conditions
Figure 602 (Sheet 8)

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-029-02
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	LNDG GEAR		00750 HRS	10101	019	AUG 22/08

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
CHECK/INSP	NOSE AND MAIN GEAR TIRES AND WHEELS		ALL	ALL

ZONES	ACCESS PANELS
711 731 741	

MECH	INSP	MPD ITEM NUMBER

VISUALLY INSPECT THE NOSE AND MAIN LANDING GEAR TIRES AND WHEELS FOR OBVIOUS DAMAGE. — 32-45-00-A

EFFECTIVITY

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-029-04
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL		PHASE	MPD REV	TASK CARD REVISION
AIRPL	LNDG GEAR	W-32-029-01	00048 HRS	NOTE	002DY	011	APR 22/08

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
SERVICE	TIRE PRESSURE		ALL	ALL

ZONES	ACCESS PANELS
711 731 741	

MECH	INSP	MPD ITEM NUMBER

CHECK MAIN AND NOSE GEAR TIRES FOR INFLATION PRESSURE. 12-15-03-3B

INTERVAL NOTE: 48 ELAPSED CLOCK HOURS.

1. Tire Servicing

A. Equipment

(1) Tire Inflation Adapter - A12007-11

B. Consumable Materials

(1) G01158 Nitrogen, Gaseous (Dry, Commercial Grade, 99.5 percent pure), from a pressure regulated source

(2) Air - If nitrogen is not available, clean dry air with maximum moisture content that is equivalent to an atmospheric dew point of -20 degrees F (-29 degrees C), from a pressure regulated source

C. References

(1) AMM 32-45-01/401, Main Gear Tires

(2) AMM 32-45-02/401, Nose Gear Tires

D. Access

(1) Location Zones

711 Nose Landing Gear
731 Left Main Landing Gear
741 Right Main Landing Gear

E. Procedure to Find the necessary tire presssure (Fig. 301, Fig. 301A)

CAUTION: TO OPERATE AT A HIGHER GROSS WEIGHT, MAKE SURE YOU SERVICE THE TIRE TO THE PRESSURE THAT IS NECESSARY FOR THAT GROSS WEIGHT. ADJUST THE TIRE PRESSURE AS SHOWN IN THE TIRE PRESSURE LIMIT CHARTS. DAMAGE TO THE TIRES WILL OCCUR IF THE TIRE PRESSURE IS TOO LOW FOR THE AIRPLANE GROSS WEIGHT.

(1) Use the Tire Pressure Limit charts to find the tire pressure for the airplane's maximum gross weight.

(2) If the airplane is usually operated at less than the maximum gross weight (for example, pilot training), you can lower the pressure as shown in the Tire Pressure Limit charts.

(3) You can use the maximum pressure shown on the Tire Pressure Limit charts at all gross weights.

(4) Use the same pressure in all of the main tires and the same pressure in all of the nose tires.

F. Tire Pressure Check

(1) Let the tires cool for a minimum of 2 hours after a flight.

(2) Do a check of the tire pressure with an accurate gage.

(3) Do a check of the tire pressure of each tire with an accurate gage or the tire pressure indicating system (TPIS), if installed.

(4) Compare the measured pressure with the tire pressure you found in the Find an Applicable Tire Pressure procedure.

(5) Do the applicable steps that follow:

(a) If the measured tire pressure is less than the tire pressure found in the main and nose gear tire pressure limits charts (Fig. 301 and Fig. 302) by no more than 5 percent, inflate the tire to the pressure in the charts.

(b) If the tire pressure is between 5 percent and 10 percent less than the tire pressure found in the charts, do the steps that follow:

MECH	INSP

WARNING: USE A REGULATED PRESSURE SOURCE TO SERVICE THE TIRES. AN UNREGULATED PRESSURE SOURCE CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

1) Inflate the tire to the necessary pressure.

2) Do a check of the pressure again after 24 hours.

CAUTION: TIRES THAT REQUIRE FREQUENT REFILLS TO MAINTAIN THE NOMINAL SERVICE PRESSURE ARE LIKELY TO HAVE A TREAD LOSS OR CARCASS RUPTURE IF THEY ARE LEFT IN SERVICE TOO LONG. THESE TIRES SHOULD BE REMOVED FROM SERVICE AS SOON AS POSSIBLE.

3) If the tire pressure is more than 5% below the necessary pressure again, replace the tire.

a) Remove the wheel and tire assembly (AMM 32-45-01/401, Main Gear; AMM 32-45-02/401, Nose Gear).

b) Send the wheel and tire assembly for an inspection to find the cause for the low tire pressure.

(c) If the tire pressure is between 10% - 20% below the necessary tire pressure, do these steps:

1) Replace the tire and wheel assembly.

a) Remove the tire and wheel assembly (AMM 32-45-01/401, Main Gear; AMM 32-45-02/401, Nose Gear).

b) Send the wheel and tire assembly for an inspection to find the cause for the low pressure.

(d) If the tire pressure is more than 20% below the necessary tire pressure, do these steps:

1) Replace the tire and wheel assembly.

a) Send the wheel and tire assembly for an inspection to find the cause for the low tire pressure.

2) If the wheel and tire assembly has turned with the airplane weight on it after the pressure had decreased, replace the wheel and tire assembly installed on the opposite side of that axle.

a) Mark on the tire that it was on the same axle with a wheel and tire assembly that was replaced because of low tire pressure.

b) Send the tire for inspection for damage.

3) Mark the reason for the tire removal on the tire to aid the inspectors when they examine the tire.

G. Procedure to Initially Inflate a Tire

NOTE: Use the handheld pressure gage to measure the pressure when you inflate the tire.

WARNING: INITIALLY FILL THE TIRE WITH NITROGEN. A HOT TIRE THAT IS FILLED WITH AIR WILL MAKE EXPLOSIVE GASES. If YOU FILL THE TIRE WITH AIR, AN EXPLOSION CAN OCCUR AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Use the instructions on the tire inflation tool and install the tool.

WARNING: USE A REGULATED PRESSURE SOURCE TO SERVICE THE TIRES. AN UNREGULATED PRESSURE SOURCE CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) Inflate the tire with nitrogen to the pressure shown on Figs. 301 and 302.

(3) Remove the tire inflation tool.

H. Procedure to Add Nitrogen or Air to a Tire (Figs. 301 and 302)

MECH | INSP

(1) If the volume of the oxygen in the tire will be more than 5 percent, fill the tire as follows:

NOTE: See the fill procedure in the steps that follow to calculate the volume of oxygen.

(a) Deflate the tire to one atmosphere pressure.

(b) Inflate the tire with the Initially Inflate the Tire procedure.

(2) Install the tire inflation tool.

(3) If nitrogen is available, fill the tire with nitrogen to the pressure that is necessary (Figs. 301 and 302).

(4) If nitrogen is not available, fill the tire with air as shown in Procedure 1 or Procedure 2.

NOTE: You can use air when nitrogen is not available but you must obey this limit:
- The air that you add can not cause the volume of the oxygen in the tire to be more than 5 percent.
- To make sure that the oxygen does not become more than 5 percent, use one of the procedures that follow (Procedure 1 or Procedure 2):

(a) Procedure 1:
Make a record of the quantity of the air that you add each time that you fill the tire. The sum of all the air refill pressures must not be more than 13 psi.

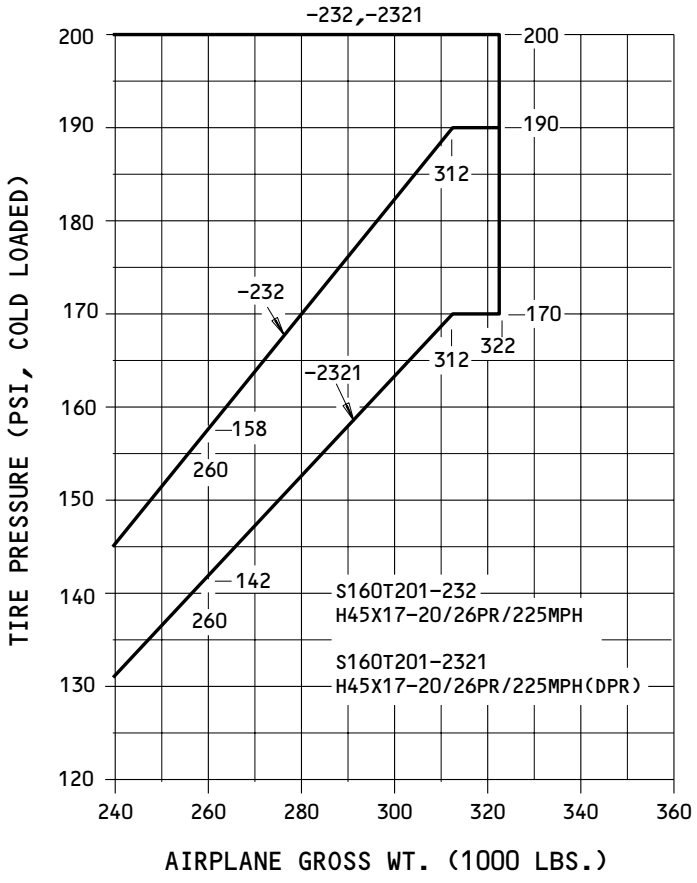
EXAMPLE: You can add one 6 psi and one 7 psi refill of air. Deflate the tire and inflate it with nitrogen when the it is necessary to increase the pressure again.

MECH	INSP

(b) Procedure 2:
Make a record of the quantity of the air that you add each time that you fill the tire (for example, 5 psi, 8 psi, etc.). The sum of all the quantities of air that you add must not be more than the maximum quantity shown in Fig. 304.

EXAMPLE: For example, you initially inflate the tire to 165 psi with nitrogen. As shown in Fig. 304, the sum of all the quantities of air that you add can not be more than 30 psi. For example, you can add one 6 psi, one 14 psi, and two 5 psi refills. When it is necessary to add gas to the tire again, you must deflate the tire and inflate it with nitrogen.

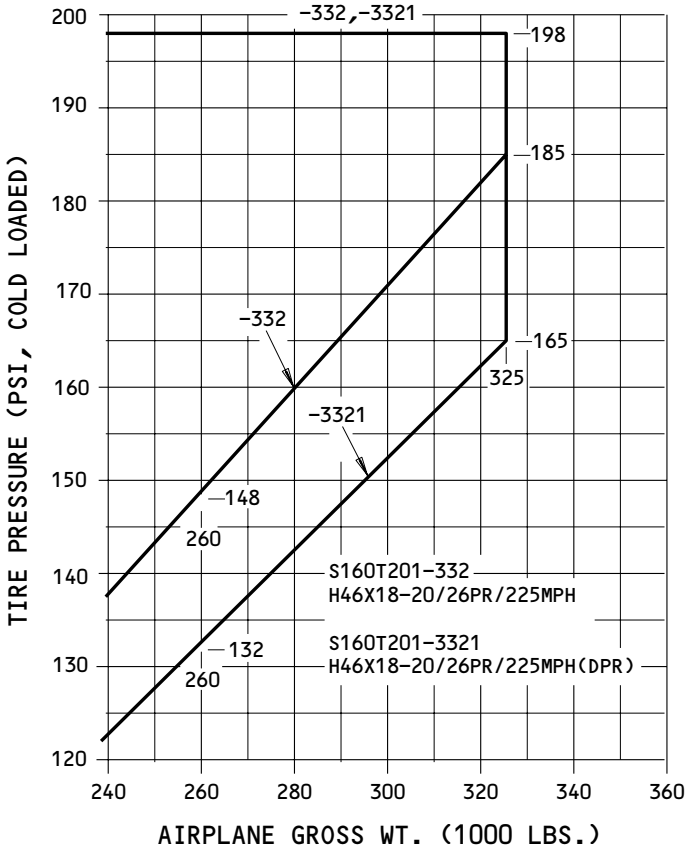
(5) Remove the tire inflation tool.



MAIN GEAR

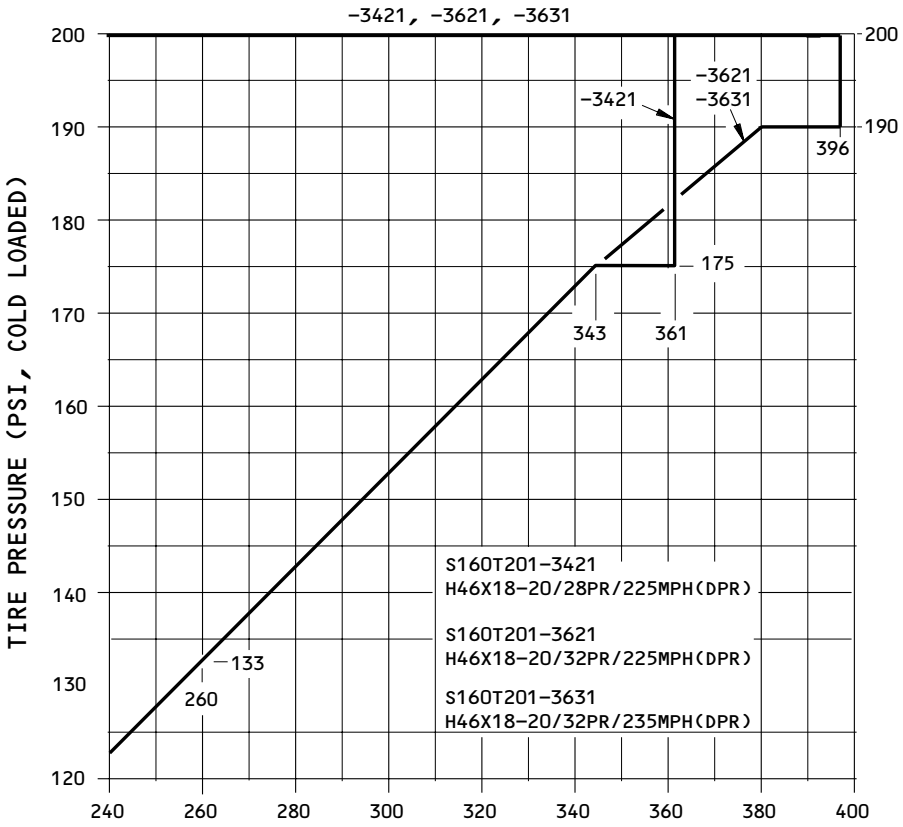
NOTES:
1. FIND A TIRE PRESSURE IN THE APPLICABLE RANGE FOR THE TIRE AND AIRPLANE WEIGHT.
2. YOU MUST INFLATE THE TIRES ON THE SAME AXLE TO THE SAME PRESSURE.
3. THE TOLERANCE FOR THE INFLATION PRESSURE IS +5/-0 PSI.
4. THE INFLATION PRESSURES THAT ARE SHOWN ARE FOR COLD, LOADED (THE WEIGHT OF THE AIRPLANE IS ON THE TIRES) TIRES. REDUCE THE PRESSURE 4% FOR TIRES THAT ARE NOT LOADED.
5. THE OPERATIONAL WEIGHT OF THE AIRPLANE MUST BE LESS THAN OR EQUAL TO THE AIRPLANE'S MAXIMUM DESIGN TAXI WEIGHT (REFER TO THE AIRPLANE WEIGHT - CENTER OF GRAVITY LIMITS IN THE WEIGHTS AND BALANCE MANUAL FOR THE MAXIMUM DESIGN TAXI WEIGHT).
6. (DPR) = DUAL PRESSURE RATED TIRE PER S160T201

Tire Pressure Limits
Figure 301 (Sheet 1)



MAIN GEAR

Tire Pressure Limits
Figure 301 (Sheet 2)



MAIN GEAR

NOTES:
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6. (DPR) = DUAL PRESSURE RATED TIRE PER S16OT201.

Tire Pressure Limits
Figure 301 (Sheet 3)

767 MGTOW: 389 - 409 K

	GEAR	BARS	PSI
Standard Inflation Pressure : On-Ground (loaded)	MAIN	13,8-13,1	200-190
	NOSE	12,4-11,7	180-170
If a tire is found within : re-infl to max std	MAIN	13,1-12,4	190-180
	NOSE	11,7-11,0	170-160
If found within : replace that wheel	MAIN	12,4-9,6	180-140
	NOSE	11,0-8,6	160-125
If found below : replace both wheels	MAIN	9,6	140
	NOSE	8,6	125

Figure 301A sheets 2 and 3 indicate correct inflation pressure acc. to A/C Take-Off Weight.

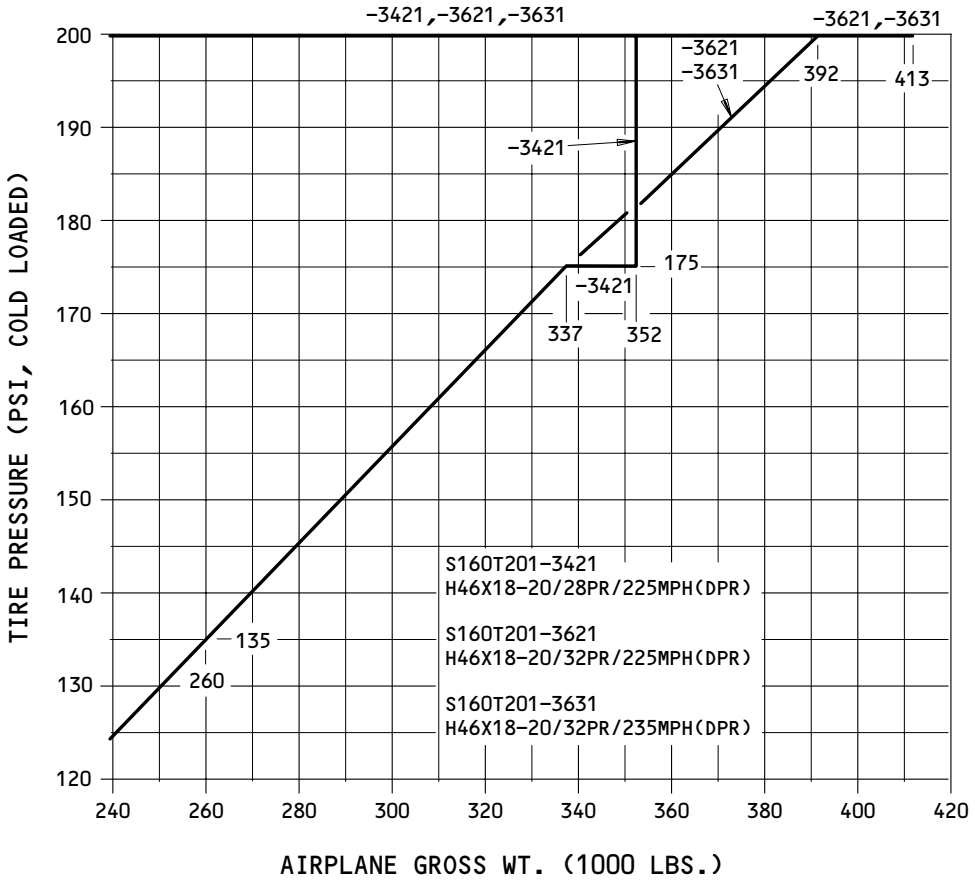
Because of difficulties in constantly changing pressures, the standard inflation pressure shall be as given in the table above.

NOTES: 1. TIRES ON THE SAME AXLE MUST BE INFLATED TO THE SAME PRESSURE.

2. INFLATION PRESSURE TOLERANCE IS +5/-0 PSI OR 0.35 BARS.

3. INFLATION PRESSURES SHOWN ARE COLD, LOADED PRESSURES (WITH AIRPLANES RESTING ON TIRES). FOR UNLOADED TIRES, REDUCE THE PRESSURE BY 4%.

Landing Gear Tire Inflation Limits
Figure 301A (Sheet 1)



MAIN GEAR

NOTES:
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6. (DPR) = DUAL PRESSURE RATED TIRE PER S160T201.

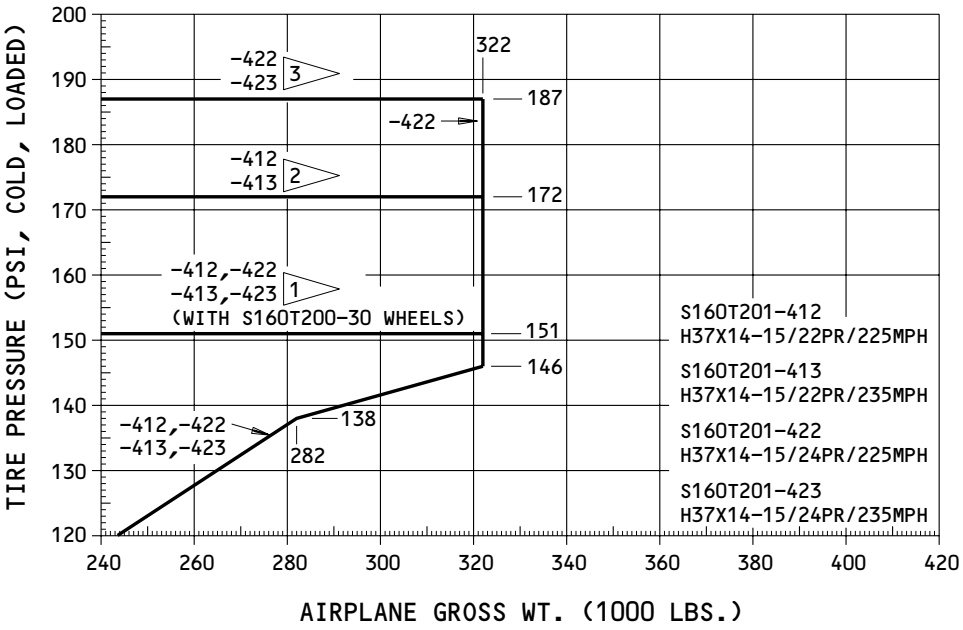
Tire Pressure Limits
Figure 301A (Sheet 2)

AIRCRAFT TYPE	GROSS WEIGHT (LBS X 1000)
767-200	240 282 322
767-200ER	240 295 352.2 361
767-200ER(IGW)	240 295 354 360 388
767-300	240 315.5 352
767-300ER	240 315.5 381 388
767-300ER(IGW)	240 320 401 409

NOTE: USE THIS CHART TO FIND THE CORRECT NOSE GEAR TIRE SERVICING CHART IN FIG. 303. DETERMINE THE MAXIMUM GROSS WEIGHT CONFIGURATION OF THE AIRPLANE TO BE SERVICED AND USE THE TIRE SERVICING CHART FOR THE CORRESPONDING AIRPLANE TYPE. (FOR EXAMPLE, IF YOU ARE SERVICING THE NOSE GEAR TIRE ON A 401,000 POUND MAXIMUM TAXI WEIGHT AIRPLANE, USE THE 767-300ER NOSE GEAR TIRE SERVICING CHART.)

1 THE GROSS WEIGHTS SHOWN ARE THE MAXIMUM TAXI WEIGHTS FOR THE VARIOUS CONFIGURATIONS OF 767-200 AND 767-300 TYPE AIRPLANES IN SERVICE.

767-200 and 767-300 Airplane Type and Gross Weight Configurations
Figure 302



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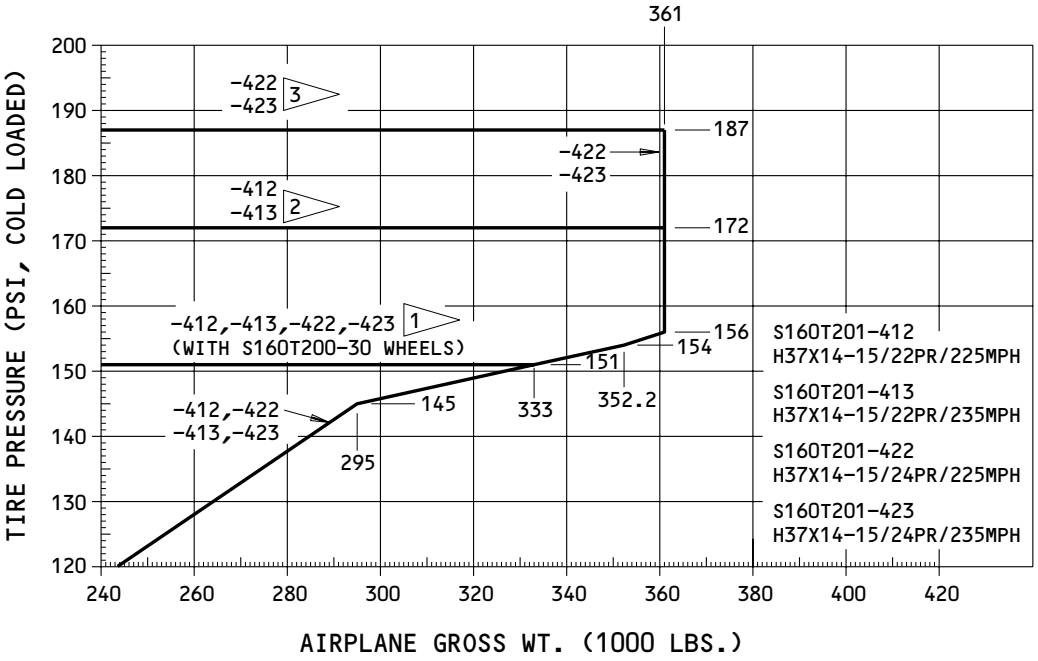
6. (DPR) = DUAL PRESSURE RATED TIRE PER S160T201

1 LIMIT TIRE INFLATION PRESSURE TO 151 PSI MAXIMUM WHEN THE AIRPLANE IS OPERATED WITH THE S160T200-30 WHEEL

2 LIMIT TIRE INFLATION PRESSURE TO 172 PSI MAXIMUM WHEN THE AIRPLANE IS OPERATED WITH THE S160T201-412 OR -413 TIRE

3 LIMIT TIRE INFLATION PRESSURE TO 187 PSI MAXIMUM WHEN THE AIRPLANE IS OPERATED WITH THE S160T201-422 OR -423 TIRE

Nose Gear Tire Pressure Limits
Figure 303 (Sheet 1)



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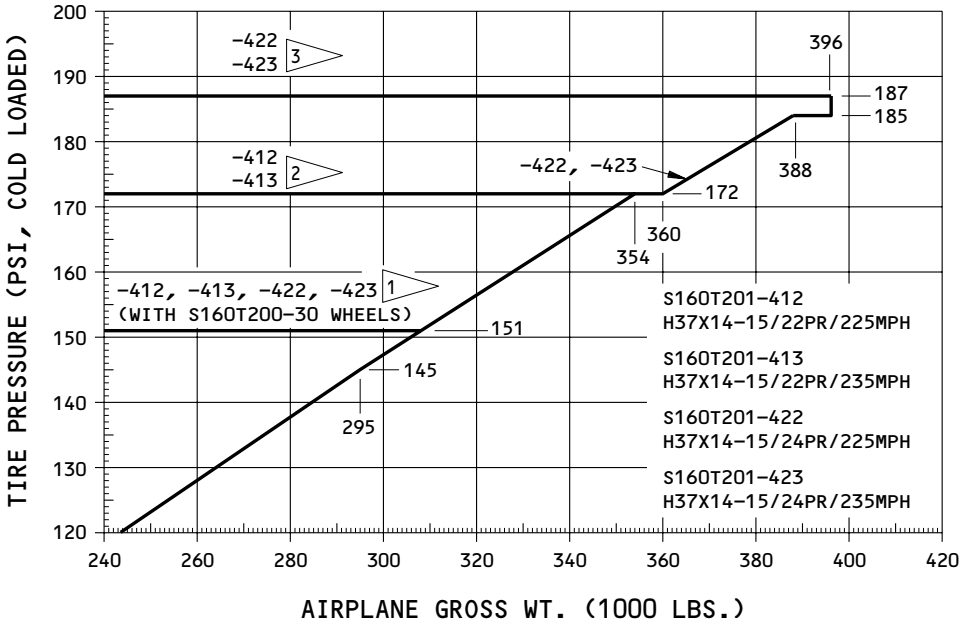
Nose Gear Tire Pressure Limits
Figure 303 (Sheet 2)



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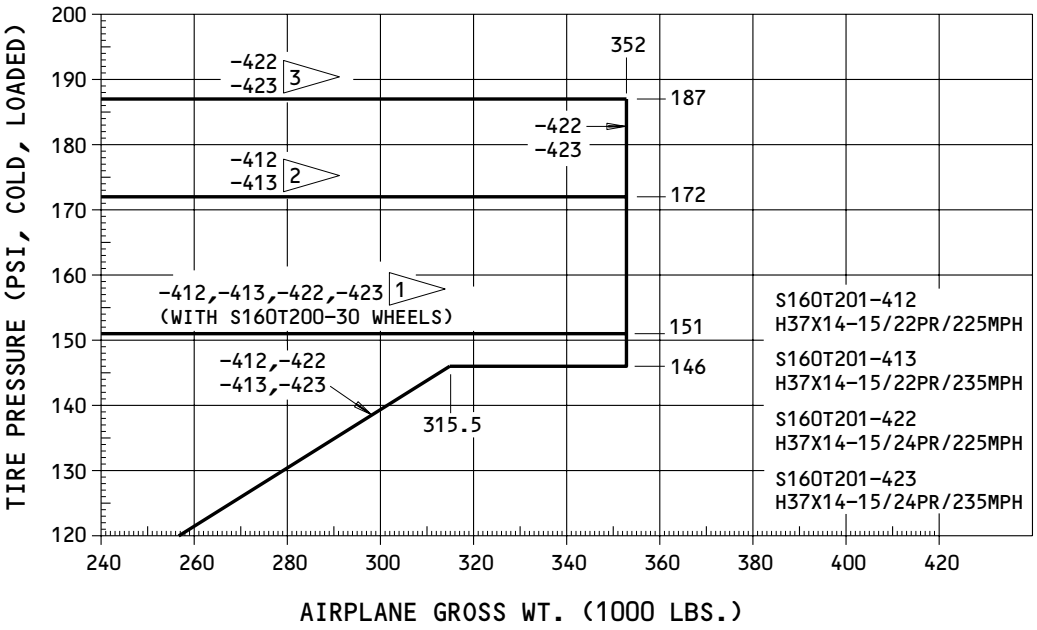
Nose Gear Tire Pressure Limits
Figure 303 (Sheet 3)



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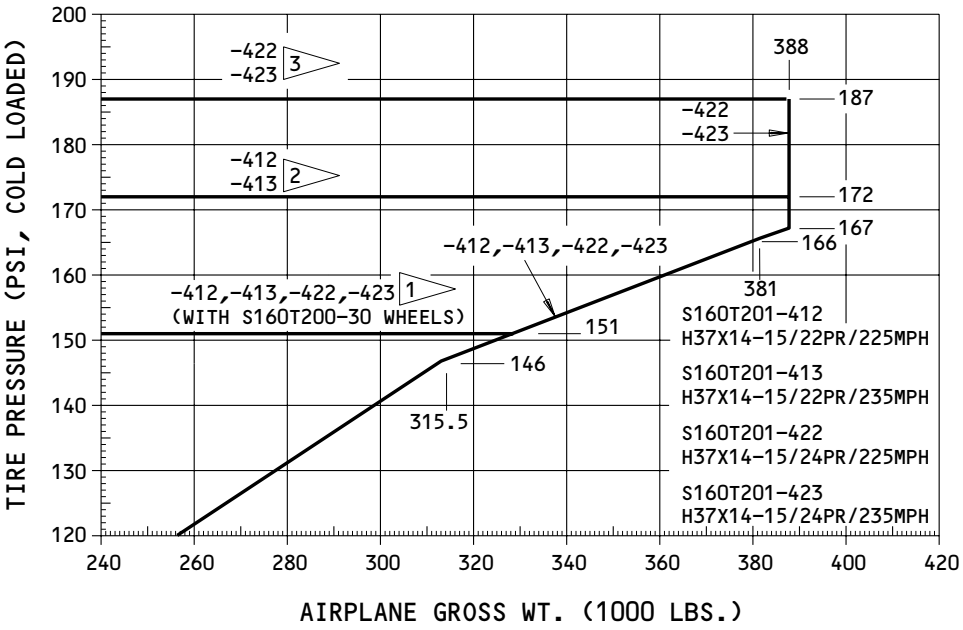
Nose Gear Tire Pressure Limits
Figure 303A (Sheet 1)



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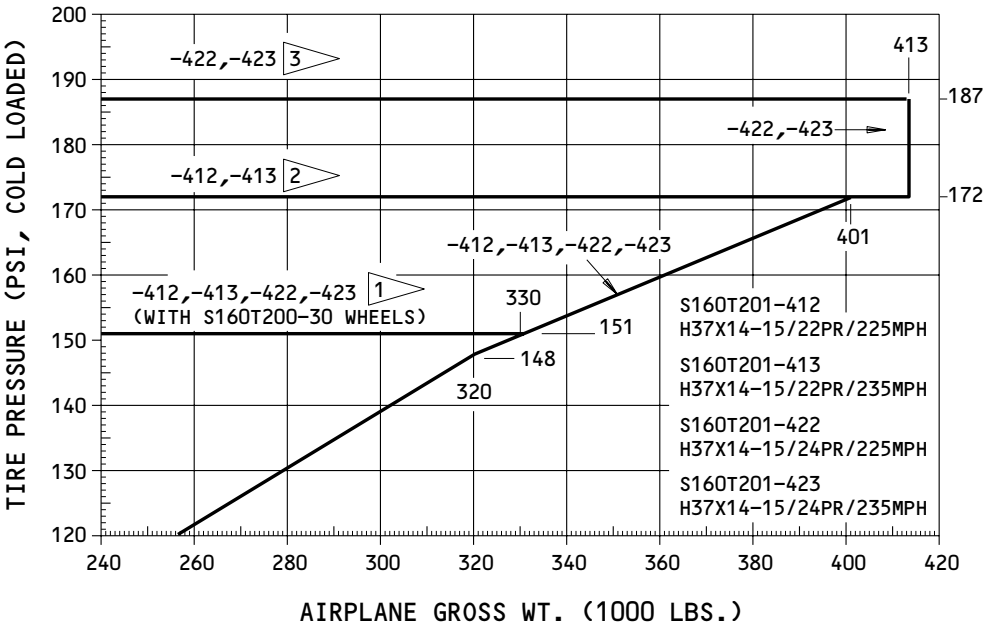
Nose Gear Tire Pressure Limits
Figure 303A (Sheet 2)



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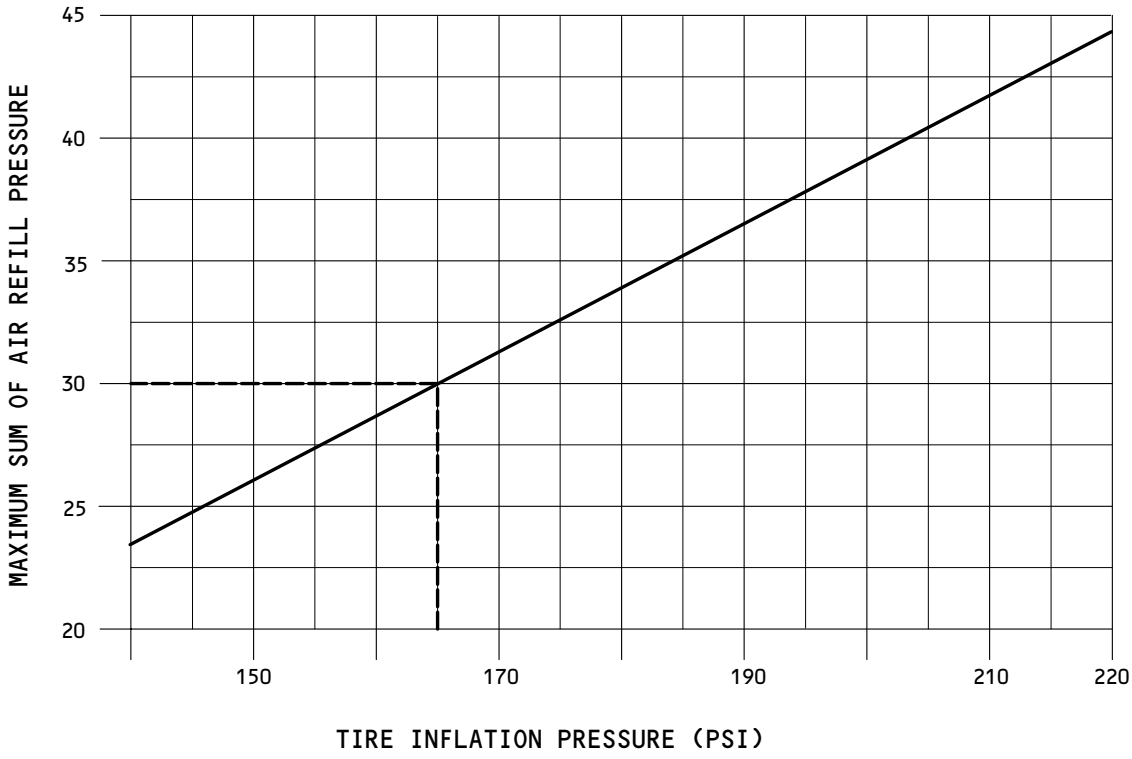
3. THE TOLERANCE FOR THE INFLATION PRESSURE IS +5/-0 PSI.
4. THE INFLATION PRESSURES THAT ARE SHOWN ARE FOR COLD, LOADED (THE WEIGHT OF THE AIRPLANE IS ON THE TIRES) TIRES. REDUCE THE PRESSURE 4% FOR TIRES THAT ARE NOT LOADED.
5. THE OPERATIONAL WEIGHT OF THE AIRPLANE MUST BE LESS THAN OR EQUAL TO THE AIRPLANE'S MAXIMUM DESIGN TAXI WEIGHT (REFER TO THE AIRPLANE WEIGHT - CENTER OF GRAVITY LIMITS IN THE WEIGHTS AND BALANCE MANUAL FOR THE MAXIMUM DESIGN TAXI WEIGHT).
6. (DPR) = DUAL PRESSURE RATED TIRE PER S160T201

1 LIMIT TIRE INFLATION PRESSURE TO 151 PSI MAXIMUM WHEN THE AIRPLANE IS OPERATED WITH THE S160T200-30 WHEEL

2 LIMIT TIRE INFLATION PRESSURE TO 172 PSI MAXIMUM WHEN THE AIRPLANE IS OPERATED WITH THE S160T201-412 OR -413 TIRE

3 LIMIT TIRE INFLATION PRESSURE TO 187 PSI MAXIMUM WHEN THE AIRPLANE IS OPERATED WITH THE S160T201-422 OR -423 TIRE

Nose Gear Tire Pressure Limits
Figure 303A (Sheet 3)



Air Refill Pressure
Figure 304

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-030-01
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL		PHASE	MPD REV	TASK CARD REVISION
AIRPL	LNDG GEAR	W-32-029-01	00048 HRS	NOTE	002DY	002	APR 22/05

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
CHECK/INSP	MAIN AND NOSE GEAR WHEELS		ALL	ALL

ZONES	ACCESS PANELS
711 731 741	

MECH	INSP	MPD ITEM NUMBER

VISUALLY INSPECT MAIN & NOSE GEAR WHEELS FOR CONDITION AND INTEGRITY. 32-45-03-6A

INTERVAL NOTE: 48 ELAPSED CLOCK HOURS.

1. Examine the Wheels (Wheel Installed on Airplane) (Fig. 601)

   A. References

      (1) 32-00-20/201, Landing Gear Downlocks

      (2) 32-45-01/401, Main Gear Wheel and Tire

   B. Procedure

      (1) Make sure that the landing gear downlocks are installed (AMM 32-00-20).

      (2) Examine the wheels for cracks, flaked paint and corrosion.

      (3) Examine the main gear wheels for evidence that they have overheated.

      (4) If a wheel or wheels have a flat tire or the tire is not there, do the steps that follow:

         (a) If the tire on a wheel is flat, replace the wheel and tire assembly.

            NOTE: If two wheels on the same axle have flat tires, put tags on the wheels to make sure that they are checked for deformation in the overhaul shop.

MECH	INSP

(b) If there is no tire on the wheel, discard the wheel if there is evidence that the wheel has turned on the runway without the tire.

NOTE: If an airplane is moved on a wheel without a tire, the wheel is permanently damaged. Damage occurs quickly in the vertical part of the rim flange, but you cannot always see the damage. If such a wheel is used again, the wheel rim flange will usually break suddenly into small pieces. Thus, no repairs are permitted although damage is not always apparent.

(5) If two tires on the same axle are flat, make sure that you tag the wheels to do a check for deformation as given in the wheel supplier data before you install tires on them.

(6) Do a check of the hubcaps for loose retainer clamps and tighten or replace them if it is necessary.

(7) Examine the tiebolt installations for:

(a) Loose tiebolts and tiebolt nuts

(b) Damaged tiebolts

(c) Missing tiebolt(s).

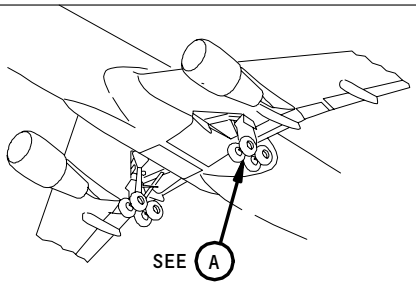
(8) If you found a loose or damaged tiebolt or if there is a missing tiebolt, remove the wheel (AMM 32-45-01/401, Main Wheel; AMM 32-45-02/401, Nose Wheel).

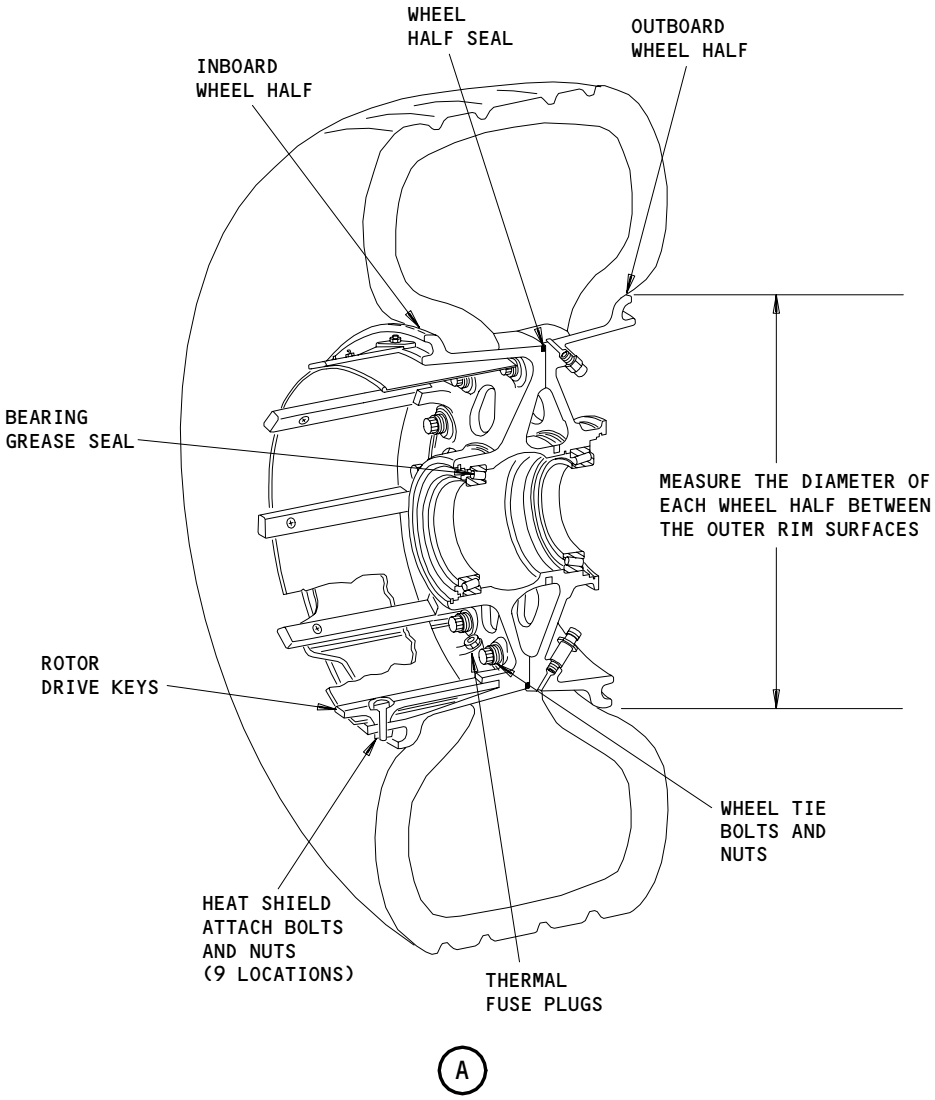
(9) If you removed the wheel, do the steps to examine the wheel with the wheel removed from the airplane (below).

NOTE: Carefully examine the wheel for damage and broken parts.

(10) If you removed a main wheel, examine the brake for damage and broken parts.

(11) Do a check to make sure the heat shield fasteners are tightly attached. Tighten the nuts to 800 ± 25 lb-in, if it is necessary.





Main Gear Overheated Wheel Check
Figure 601

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-035-01
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	FWD COMPT		3C	13636	017	APR 22/06

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
CHECK/INSP	CENTERING & RUDDER INTERCONNECT MECH		ALL	ALL

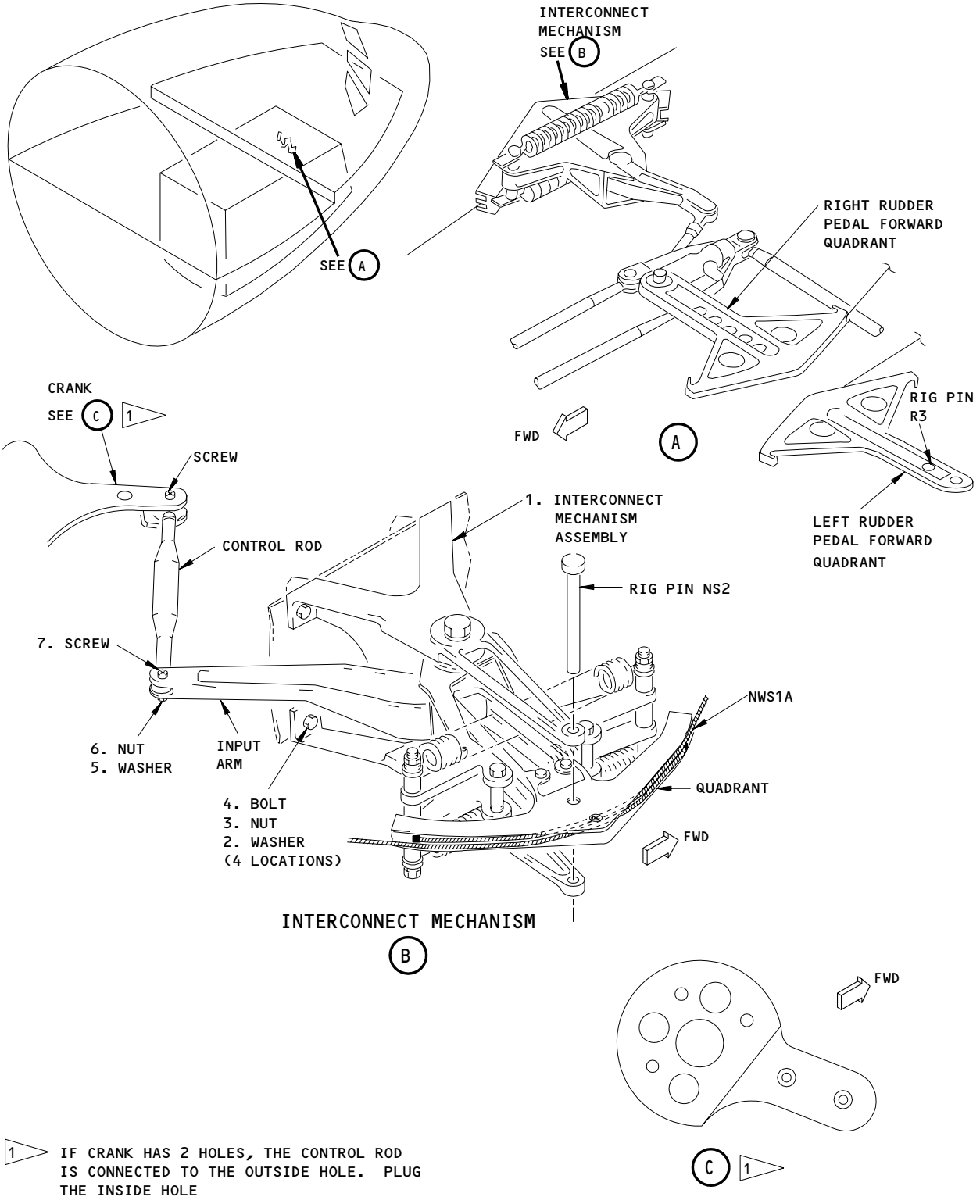
ZONES	ACCESS PANELS
117 118	119AL

MECH	INSP	MPD ITEM NUMBER

VISUALLY INSPECT NOSE WHEEL CENTERING & RUDDER INTERCONNECT MECHANISM FOR CONDITION AND INTEGRITY. 32-51-02-B

EFFECTIVITY

3 3 4 9



Centering and Rudder Interconnect Mechanism Installation
Figure 401

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-037-01
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
ELECT	MAIN EE CTR		2C	12424	007	AUG 22/09

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
FUNCTIONAL	ANTI-SKID/AUTOBRAKE CONTROL UNIT		ALL	ALL

ZONES	ACCESS PANELS
119 211 731 741	

MECH	INSP	MPD ITEM NUMBER

FUNCTIONALLY CHECK ANTI-SKID/AUTOBRAKE CONTROL UNIT FOR PROPER BRAKE APPLICATION. 32-42-00-5A

1. Antiskid System Test - Brake Release (Fig. 501)

A. References

(1) AMM 24-22-00/201, Electrical Power - Control

(2) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(3) AMM 32-00-15/201, Landing Gear Door Locks

(4) AMM 32-00-20/201, Landing Gear Downlocks

(5) AMM 34-21-00/501, Inertial Reference System

B. General

(1) This is a test to make sure that the brakes release and reapply with the antiskid system controls.

(2) You can monitor brake adjuster indicator pin movement on the brake to see that the brakes release and reapply. Wheel pairs for locked wheel protection are wheels 1 and 5, 2 and 6, 3 and 7, and 4 and 8. The front panel of the Antiskid/Autobrake Control Unit (Fig. 501) shows the wheel number assignment.

C. Prepare for the Test

(1) Make sure the downlocks are installed on the main and nose landing gear (AMM 32-00-20/201).

MECH | INSP

WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO INSTALL THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(2) Open the doors for the main landing gear and install the door locks (AMM 32-00-15/201).

(3) Make sure that chocks are installed on the landing gear wheels.

(4) Supply electrical power (AMM 24-22-00/201).

(5) Do these steps to install a pressure gage at each of the brake units of the main landing gear (8 locations):

(a) Make sure that the parking brake is released.

(b) Make sure that the brakes are not operated manually.

WARNING: THE BRAKES MUST NOT BE IN OPERATION WHEN YOU CONNECT OR DISCONNECT THE TWO PARTS OF A HYDRAULIC BRAKE DISCONNECT. IF YOU TRY TO CONNECT OR DISCONNECT A HYDRAULIC BRAKE DISCONNECT WITH THE BRAKE IN OPERATION, HYDRAULIC FLUID UNDER HIGH PRESSURE CAN RELEASE. THIS CAN CAUSE INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(c) To remove all pressure from the brake unit, disconnect the hose half of the hydraulic brake disconnect from the brake half.

(d) Remove the brake bleeder assembly from the brake unit housing.

NOTE: Each brake bleeder assembly has a bleeder valve installed in an adapter. The adapter is installed in the brake unit housing.

CAUTION: BE CAREFUL DURING INSTALLATION OF THE PRESSURE GAGE IN THE PORT ON THE BRAKE UNIT HOUSING. DO NOT INSTALL THE PRESSURE GAGE WITH MORE THAN 110 POUND-INCHES OF TORQUE. IF YOU USE TOO MUCH TORQUE DURING INSTALLATION OF A PRESSURE GAGE, YOU CAN DAMAGE THE BRAKE UNIT HOUSING.

(e) Install a pressure gage in the port on the brake unit housing.

(f) Connect the hose half of the hydraulic brake disconnect to the brake half.

(6) Pressurize the right hydraulic system and reservoir (AMM 29-11-00/201).

(7) Put the L, R, and C IRUs in the NAV mode (AMM 34-21-00/501).

NOTE: The IRUs must be aligned.

D. Do a Brake Release Test with the Normal Brake Hydraulic System

WARNING: THIS TEST APPLIES AND RELEASES THE BRAKES. MAKE SURE THAT THE AREA AROUND THE BRAKES IS CLEAR AND THAT CHOCKS ARE INSTALLED ON THE AIRPLANE WHEELS. THIS WILL PREVENT POSSIBLE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Release the parking brake.

(2) Open this circuit breaker on the P6 panel:

(a) 6F4, PARKING BRAKE VLV

(3) Set the parking brake.

(4) Make sure that all of the brake pressure gages show within ±200 psi of right hydraulic system pressure.

NOTE: You don't have to hold the brake pedals for this test because the parking brake is set with pressure applied.

MECH | INSP

(5) Do a brake release test as follows for each of the eight brake positions as shown in Table 503:

NOTE: This test will show if two or more antiskid system hydraulic lines are connected to the incorrect valve ports. It is important that the brakes release only as shown in Table 503.

You can see the brake cycles if you look at the brake adjuster movement (about 0.15 to 0.20 inch) when the correct brake releases and then applies again. The brake pressure gages must show not more than 100 psi when the brake is released and 2900 ±200 psi when the brake is applied.

The ANTISKID light on P5, the ANTISKID message on the EICAS, the NORM ANTISKID message on the EICAS maintenance and the status pages will illuminate intermittently. The ANTISKID/AUTOBRK message on EICAS maintenance page will stay on for this test.

(a) Put the BRAKE TEST rotary switch on the Antiskid/Autobrake Control Unit in the position shown.

(b) Press the ENABLE/VERIFY switch and hold, then press the VERIFY switch. Make sure that the the brake shown in Column A cycles (releases for 5 ±2 seconds and then applies again). Make sure that the messages come into view as shown in the table.

NOTE: It is not necessary to release the ENABLE/VERIFY and VERIFY switches until you have completed the test at all eight brake test switch test positions "BRAKE TEST 1" thru "BRAKE TEST 8" (Steps 1 thru 8 of Table 503).

Table 503				
Step	Brake Test Switch Position on the Control Unit	Control Unit Message Display During Brake Cycle	A	B
1	BRAKE TEST 1	BRK 1	1	1-2
2	BRAKE TEST 2	BRK 2	2	1-2
3	BRAKE TEST 3	BRK 3	3	3-4
4	BRAKE TEST 4	BRK 4	4	3-4
5	BRAKE TEST 5	BRK 5	5	5-6
6	BRAKE TEST 6	BRK 6	6	5-6
7	BRAKE TEST 7	BRK 7	7	7-8
8	BRAKE TEST 8	BRK 8	8	7-8

E. Do a Brake Release Test with the Alternate Brake Hydraulic System

NOTE: You should do this test as quickly as possible because hydraulic pressure could decrease enough to cause steps (6) and (7) to fail. Only the brake accumulator is pressurizing the brakes for this test and the parking brake valve is open because the circuit breaker has been opened before this test. Therefore, the accumulator pressure will continuosly decrease. Brake system pressure must be great enough to keep the brake metered pressure switches actuated in this test. The switches must be actuated to get the PRESS L and PRESS R messages in steps (6) and (7). If you wait, the accumulator pressure could decrease by a great enough amount so that the switches do not stay actuated and cause steps (6) and (7) to fail.

WARNING: THIS TEST APPLIES AND RELEASES THE BRAKES. MAKE SURE THAT THE AREA AROUND THE BRAKES IS CLEAR AND THAT CHOCKS ARE INSTALLED ON THE AIRPLANE WHEELS. THIS WILL PREVENT POSSIBLE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Make sure that the parking brake is set.

MECH	INSP

(2) Remove the pressure from the right and center hydraulic systems without moving the brake pedals (AMM 29-11-00/201).

(3) Make sure that the BRAKE SOURCE light on P1 comes on.

(4) Put the BRAKE TEST rotary switch on the Antiskid/Autobrake Control Unit in NORM.

(5) Push in and hold the ENABLE/VERIFY switch then push in the VERIFY switch.

(6) Release the ENABLE/VERIFY switch and the VERIFY switch. Make sure that the display shows PRESS L. (Left Metered Pressure Switch)

NOTE: Make sure that the accumulator pressure is greater than 850 psi with the parking brake set, or the metered pressure switches may not operate and the PRESS L message will not appear. The PRESS L and PRESS R messages are an indication of high metered brake pressure which will also send a signal to the control unit to disconnect the autobrake because the system senses brake pressure input from the brake pedals.

(7) Push in the VERIFY switch and make sure that the display shows PRESS R. (Right Metered Pressure Switch)

NOTE: Accumulator pressure must be greater than 850 psi with the parking brake set, or the metered pressure switches will not operate and the PRESS R message will not appear.

(8) Push in the VERIFY switch and make sure that the display shows PRESS ACC.

(9) Push in the VERIFY switch. Make sure that the display flashes WAIT and then shows PWR A/B.

(10) Push in the VERIFY switch. Make sure that the display shows TEST END.

(11) Release the parking brake.

(12) Pressurize the center hydraulic system (AMM 29-11-00/201).

(13) Make sure that this circuit breaker on the P6 panel is open:

(a) 6F4, PARKING BRAKE VALVE

(14) Set the parking brake.

(15) Do steps 1 thru 8 of Table 503. Make sure that the alternate brake pairs shown in Column B release and reapply. They must release and reapply as they did with the normal hydraulic system.

NOTE: This test will show when two or more hydraulic lines in the antiskid system are connected to the incorrect valve ports. It is important that the brakes release occurs only on brakes as shown in Table 503.

(16) Remove the pressure from the Center Hydraulic System (AMM 29-11-00/201).

(17) Close this circuit breaker on panel P6:

(a) 6F4, PARKING BRAKE VLV

(18) Put the BRAKE TEST rotary switch to NORM.

(19) Push in the RESET button to remove all faults in the memory.

(20) Make sure that the ANTISKID/AUTOBRK message does not come into view on the EICAS maintenance page.

(21) Do the steps in the Restore Airplane to Normal paragraph if the test has been completed.

2. Antiskid Transducer Spin-Up Test (Fig. 501)

A. General

(1) This is a test to make sure that brakes apply and release while you manually turn the antiskid transducer.

(2) You can see the brakes apply and release if you look at the movement of the brake pistons or the brake wear indicator pins.

B. Equipment

(1) Antiskid Transducer Spin-Up Equipment -
A32075-10 (Recommended)
A32075-9 (Alternative)
A32075-1 (Alternative)

MECH | INSP

C. References

(1) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(2) AMM 32-00-15/201, Landing Gear Door Locks

(3) AMM 32-00-20/201, Landing Gear Downlocks

(4) AMM 34-21-00/501, Inertial Reference System

D. Access

(1) Location Zones

211	Control Cabin, Left
212	Control Cabin, Right
731	Landing Gear Left
741	Landing Gear Right

E. Prepare for the Test

(1) Make sure the downlocks are installed on the main and nose landing gear (AMM 32-00-20/201).

WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO INSTALL THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(2) Open the doors for the main landing gear and install the door locks (AMM 32-00-15/201).

(3) Make sure that chocks are installed on the landing gear wheels.

(4) Supply electrical power (AMM 24-22-00/201).

(5) Pressurize the right hydraulic system and reservoir (AMM 29-11-00/201).

(6) Open this circuit breaker on the P6 panel and attach a DO-NOT-CLOSE tag:

(a) 6F4, PARKING BRAKE VLV

(7) Set the parking brake.

MECH | INSP

F. Procedure to do the Antiskid Transducer Spin-Up Test

NOTE: When you do the transducer spin test, the locked wheel protetion and the skid protection functions are tested. Locked wheel protection continously compares the fore/aft (tandem) wheel speeds. A difference in wheel speeds of 30% will cause the brake pressure of the slower wheel to be released. For example, while you spin the transducer for wheel No. 1, the brake pressure for wheel No. 5 should release (the slower/stopped tandem wheel).

The second part of the transducer spin test, stopping the spinning transducer quickly, tests the skid protection funtion. When the transducer is stopped, the antiskid card senses this as a skid of the wheel and releases that brake. For example, when the spinning transduer for wheel No. 1 is stopped quickly, the brake pressure for wheel No. 1 should release.

WARNING: THE TEST THAT FOLLOWS APPLIES AND RELEASES THE BRAKES. MAKE SURE THAT THE AREA AROUND THE BRAKES IS CLEAR AND THAT CHOCKS ARE INSTALLED ON THE AIRPLANE WHEELS. THIS WILL PREVENT POSSIBLE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Remove the hubcaps from all the main gear wheels.

(2) Turn the wheel speed transducer on wheel 1 as quickly as possible (approximately 600 RPM necessary) and make sure that while the wheel turns the other brake of the fore-aft pair (wheel 5) releases. Turn the wheel as follows for this test:

(a) Turn the wheel speed transducer with the transducer spinup tool.

(3) Stop the movement of the transducer as quickly as it is possible. Make sure that the brake (wheel 5) that had released applies again.

(4) Turn the transducer on wheel 1 again and then stop its movement quickly. Make sure that wheel 1 releases and then applies again.

(5) Do steps 2, 3, and 4 again for wheels 2 through 8.

(6) Install the hubcap as follows (if it was removed):

(a) Put the clamp in its position on the wheel flange.

(b) Hold the hubcap with the TPIS driver installed in it's position on the wheel flange and hold while you fasten the clamp. Tighten the nut on the T-bolt to 35 to 40 pound-inches.

(7) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P6 panel:

(a) 6F4, PARKING BRAKE VLV

(8) Release the parking brake.

3. Autobrake System Test - Autobrake Application (Fig. 501)

A. General

(1) The test gives a check of autobrake pressures for each autobrake switch position. Brake pressure gages are installed at each brake to monitor brake pressure.

B. Equipment

(1) Pressure gages - 0 to 4000 psi, for BMS 3-11 hydraulic fluid - F72977-62 (8 required)

(2) AMM 24-22-00/201, Electrical Power - Control

(3) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(4) AMM 32-00-15/201, Landing Gear Door Locks

(5) AMM 32-00-20/201, Landing Gear Downlocks

(6) AMM 34-21-00/501, Inertial Reference System

C. Prepare for the Test

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

(2) Make sure that there are chocks on the wheels.

(3) Release the parking brake.

MECH | INSP

WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO INSTALL THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) Open the doors for the main gear and install the door locks (AMM 32-00-15/201).

(5) Supply electrical power (AMM 24-22-00/201).

(6) If necessary, do these steps to install a pressure gage at each of the eight brake units:

(a) Make sure that the parking brake is released.

(b) Make sure that the brakes are not operated manually.

WARNING: THE BRAKES MUST NOT BE IN OPERATION WHEN YOU CONNECT OR DISCONNECT THE TWO PARTS OF A HYDRAULIC BRAKE DISCONNECT. IF YOU TRY TO CONNECT OR DISCONNECT A HYDRAULIC BRAKE DISCONNECT WITH THE BRAKE IN OPERATION, HYDRAULIC FLUID UNDER HIGH PRESSURE CAN RELEASE. THIS CAN CAUSE INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(c) To remove all pressure from the brake unit, disconnect the hose half of the hydraulic disconnect from the brake half.

(d) Remove the brake bleeder assembly from the brake unit housing.

NOTE: Each brake bleeder assembly has a bleeder valve installed in an adapter. The adapter is installed in the brake unit housing.

(e) Install a pressure gage in the port on the brake unit housing.

(f) Connect the hose half of the hydraulic brake disconnect to the brake half.

(7) Pressurize the hydraulic systems (AMM 29-11-00/201).

(8) Put the L, R, and C IRU's in the NAV mode (AMM 34-21-00/501).

NOTE: The IRU's must be aligned.

D. Do the Autobrake Application Test

WARNING: THIS TEST APPLIES AND RELEASES BRAKES. MAKE SURE THAT THE AREA AROUND THE BRAKES IS CLEAR AND THAT YOU HAVE PUT CHOCKS ON THE AIRPLANE WHEELS. THIS WILL PREVENT POSSIBLE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Put the BRAKE TEST rotary switch on the Antiskid/Autobrake Control Unit in the A/B position.

NOTE: The EICAS message, ANTISKID/AUTOBRK, on the maintenance page will be displayed when the BRAKE TEST rotary switch is not in the NORM position.

(2) Do the steps that follow for each of the autobrake-selector-switch positions shown in Table 504:

Table 504

Switch Position	Display Message	Brake Pressure Gage Indication (psig)
1	BRK A/B 1	1290 ±200
2	BRK A/B 2	1500 ±200
3	BRK A/B 3	1750 ±200
4	BRK A/B 4	2050 ±200
MAX AUTO	BRK A/B 5	3000 ±200

(a) Find the AUTOBRAKES selector switch (referred to as the selector switch) in the flight compartment on the P1-3 panel.

1) Turn the selector switch to one of the positions below "Switch Position" in Table 504.

2) Make sure that the selector switch stays in that position.

(b) Find the Antiskid/Autobrake Control Unit, M102, in the main equipment center.

1) Push and hold the ENABLE/VERIFY switch, then push the VERIFY switch.

2) Make sure that the display shows the same data below "Display Message" for the applicable selector switch position in Table 504.

3) Make sure that AUTOBRAKES shows on the EICAS display.

4) Make sure that the AUTOBRAKES light on the P1-3 panel comes on.

(c) Make sure that the pressure gage shows these pressures:

1) For approximately ten seconds the gage shows the pressure below "Brake Pressure" for the switch position in Table 504 .

2) Then the gage goes to 300 ± 200 psi for approximately five seconds.

3) Then the gage goes to less than 100 psi.

(d) Make sure that the selector switch goes to the DISARM position.

(3) Turn the AUTOBRAKES selector switch to OFF.

(4) Turn the BRAKE TEST rotary switch on Antiskid/Autobrake Control Unit to the NORM position.

(5) Press the RESET button on the Antiskid/Autobrake Control Unit to erase all faults from memory.

(6) Make sure that the EICAS message, ANTISKID/AUTOBRK, is not shown on the EICAS maintenance page.

4. Put the Airplane Back to Its Usual Condition

A. References

(1) AMM 24-22-00/201, Electrical Power - Control

(2) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

MECH | INSP

(3) AMM 32-00-15/201, Landing Gear Door Locks

B. Procedure

(1) Remove the power from the hydraulic systems (AMM 29-11-00/201).

(2) Make sure the parking brake is released.

(3) Do these steps at each brake unit to remove the pressure gage and to install a brake bleeder assembly (8 locations).

(a) Make sure that the parking brake is released.

(b) Make sure that the parking brakes are not operated manually.

WARNING: THE BRAKES MUST NOT BE IN OPERATION WHEN YOU CONNECT OR DISCONNECT THE TWO PARTS OF A HYDRAULIC BRAKE DISCONNECT. IF YOU TRY TO CONNECT OR DISCONNECT A HYDRAULIC BRAKE DISCONNECT WITH THE BRAKE IN OPERATION, HYDRAULIC FLUID UNDER HIGH PRESSURE CAN RELEASE. THIS CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(c) To remove all pressure from the brake, disconnect the hose half of the hydraulic disconnect from the brake half.

(d) Remove the pressure gage from the brake unit housing.

(e) Do these steps to install a brake bleeder assembly on the brake unit housing:

NOTE: Each brake bleeder assembly has a bleeder valve installed in an adapter. The adapter is installed in the brake unit housing.

CAUTION: TIGHTEN THE ADAPTER TO 150-190 POUND INCHES. IF YOU TIGHTEN THE ADAPTER TO MORE THAN 190 POUND-INCHES, YOU CAN DAMAGE THE ADAPTER OR THE BRAKE UNIT HOUSING.

MECH | INSP

(f) Tighten the adapter to 150-190 pound-inches.

NOTE: The specified torque values are for installation of the adapter in the brake unit housing. The allowable torque range for the bleeder valve, which you do not operate in this procedure, is 40-80 pound-inches.

(4) Connect the hydraulic line to the brakes at the quick-disconnect fittings.

(5) Pressurize the hydraulic systems and reservoirs (AMM 29-11-00/201).

(6) Set the parking brake.

(7) Make sure there are no hydraulic leaks.

(8) Put the L, R, and C IRU's to the OFF position.

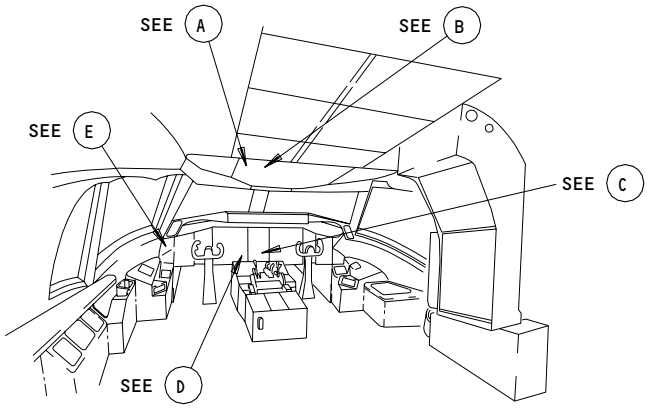
(9) Push in the RESET button on the Antiskid/Autobrake Control Unit to clear all faults from memory.

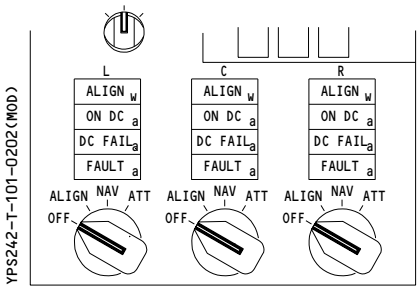
WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO REMOVE THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(10) Remove the door locks from the landing gear doors and close the doors (AMM 32-00-15/201).

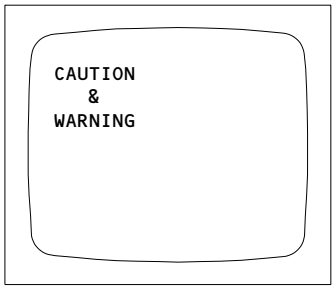
(11) Remove the power from the hydraulic system if it is not necessary (AMM 29-11-00/201).

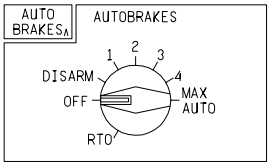
(12) Remove electrical power if it is not necessary (AMM 24-22-00/201).





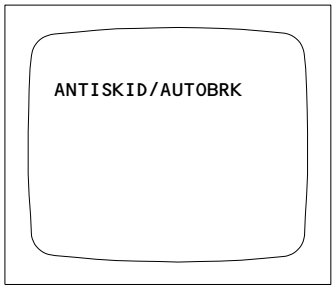
IRS MODE SELECT
SWITCH ON P5
A



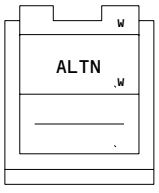


AUTOBRAKES SELECTOR
SWITCH ON P1-3
D

MISC ANNUNCIATOR ON P5
B

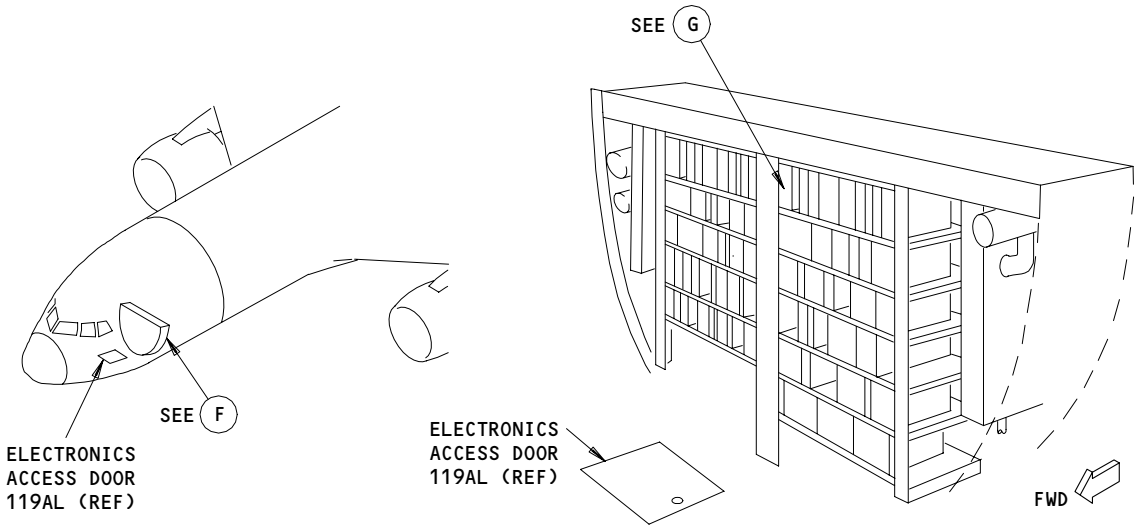


EICAS DISPLAY UNITS ON P2
C



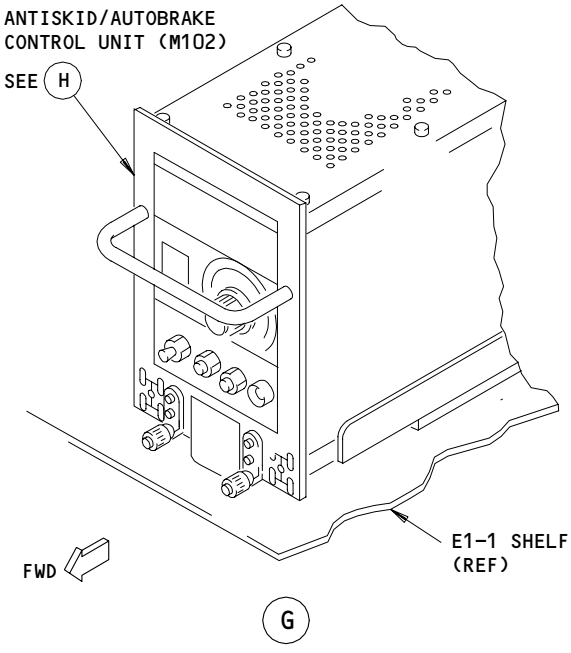
IRS INSTR SOURCE
SEL SWITCH ON P1-1 AND P3-3
E

Antiskid/Autobrake System Adjustment/Test
Figure 501 (Sheet 1)



MAIN ELECTRONIC/ELECTRICAL EQUIPMENT CENTER

F



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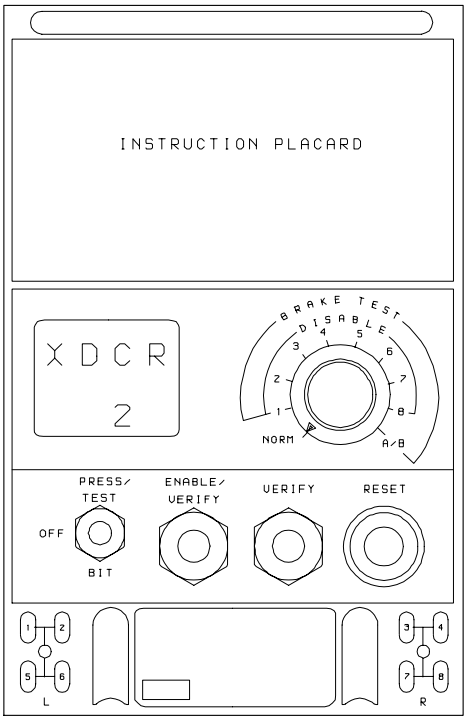


ANTISKID/AUTOBRAKE CONTROL UNIT
FRONT FACE

H

Antiskid/Autobrake System Adjustment/Test
Figure 501 (Sheet 2)

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-040-04
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	MAIN GEAR		1C	11212	012	DEC 22/01

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
OPERATIONAL	AUTOMATIC GEAR RETRACTION BRAKE		ALL	ALL

ZONES	ACCESS PANELS
212 731 741	

MECH	INSP	MPD ITEM NUMBER

OPERATIONALLY CHECK THE AUTOMATIC GEAR RETRACTION BRAKE. 32-41-00-5B

A. References

(1) AMM 24-22-00/201, Electrical Power - Control

(2) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(3) AMM 32-00-15/201, Landing Gear Door Locks

(4) AMM 32-00-20/201, Landing Gear Downlocks

(5) AMM 32-41-00/201, Hydraulic Brake System

B. Procedure

(1) Supply electrical power (AMM 24-22-00/201).

1. Hydraulic System Operational Test - Alternate System Automatic Gear Retraction Brake (Fig. 501)

A. References

(1) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(2) AMM 32-00-15/201, Landing Gear Doorlocks

(3) AMM 32-00-20/201, Landing Gear Downlocks

B. Access

(1) Location Zones
211 Control Cabin, Left
212 Control Cabin, Right
731 Main Landing Gear, Left
741 Main Landing Gear, Right

C. Procedure

WARNING: MAKE SURE THAT THE NOSE AND MAIN LANDING GEAR DOWNLOCKS ARE INSTALLED BEFORE YOU MOVE THE LANDING GEAR CONTROL LEVER. IF YOU MOVE THE CONTROL LEVER WITHOUT THE DOWNLOCKS INSTALLED THE LANDING GEAR CAN RETRACT AND INJURE PERSONNEL AND DAMAGE EQUIPMENT.

(1) Make sure the downlocks for the nose and main landing gear are installed (AMM 32-00-20/201).

WARNING: REFER TO AMM 32-00-15/201 FOR THE DOOR LOCK INSTALLATION PROCEDURE. FAST MOVEMENT OF THE DOORS CAN CAUSE INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT IF THE DOOR LOCKS ARE NOT CORRECTLY INSTALLED.

(2) Open the nose and main landing gear doors and install the door locks (AMM 32-00-15/201).

(3) Do a test of the alternate system automatic gear retraction brake (Fig. 501)

(4) Put chocks on the landing gear wheels.

(5) Release the parking brake.

(6) Pressurize the right and center hydraulic systems (AMM 29-11-00/201).

WARNING: MAKE SURE THE AREA AROUND THE TAIL SKID (IF APPLICABLE) IS CLEAR OF PERSONS AND EQUIPMENT WHEN IT OPERATES. IF THE AREA IS NOT CLEAR INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

MECH | INSP

(7) Push the manual override button on the landing gear control panel and move the landing gear control handle to the UP position.

(8) Look at the wear indicator on each brake to make sure that pressure is applied.

(9) Move the landing gear control handle to the DN position.

(10) Look at the wear indicators on each brake to make sure that the pressure has released.

WARNING: REFER TO AMM 32-00-15/201 FOR THE LOCK REMOVAL PROCEDURE. FAST MOVEMENT OF THE DOORS CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

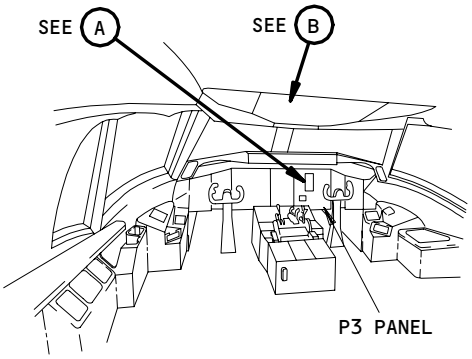
(11) Remove the main gear door locks (AMM 32-00-15/201).

D. Put the Airplane Back to Its Usual Condition.

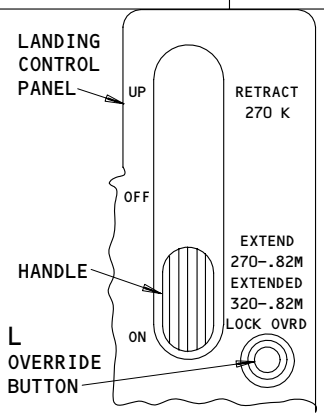
(1) Set the parking brake.

(2) Remove hydraulic power if it is not necessary (AMM 29-11-00/201).

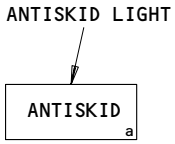
(3) Remove electrical power if it is not necessary (AMM 24-22-00/201).



FLT COMPT

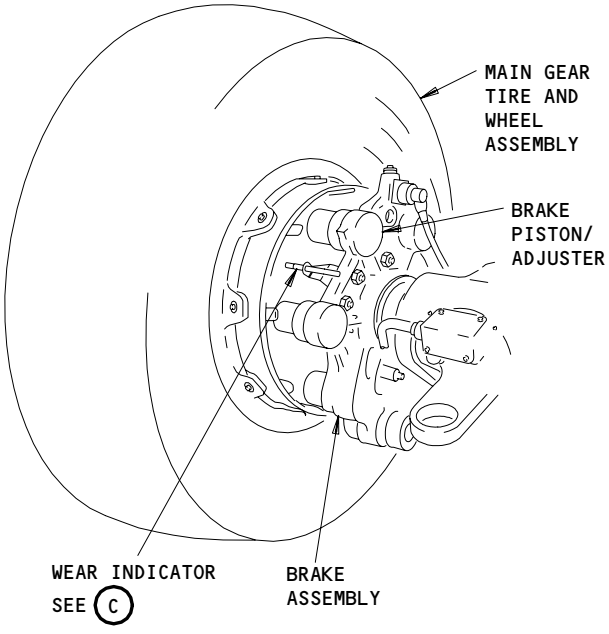


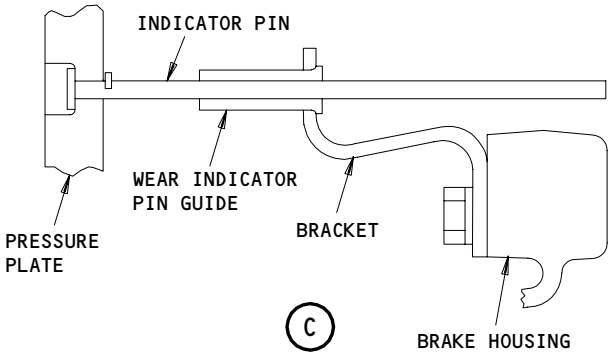
A



MISC ANNUNCIATOR ON P5

B





C

Alternate Brake System Operation Test Component Location
Figure 501 (Sheet 1)

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-040-05-1
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	L WING TE		2C	12424	017	DEC 22/03

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
SERVICE	LEFT BRAKE SURGE ACCUMULATOR		ALL	ALL

ZONES	ACCESS PANELS
551	551UB 551XBX NOTE

MECH | INSP

MPD ITEM NUMBER

CHECK BRAKE HYDRAULIC SYSTEM SURGE ACCUMULATOR AND SERVICE AS REQUIRED. 12-15-09-3A

ACCESS NOTE: SB 767-57-5. PRODUCTION LINE NO. 2 THROUGH 86 WERE CONFIGURED WITH ACCESS PANEL 551UB. INCORPORATION OF THIS SERVICE BULLETIN REVISES THIS CONFIGURATION TO THREE PANELS: 551UB, 551XBX AND 551YBX.

1. Servicing of the Surge Accumulator for the Brake Hydraulic System (Fig. 301)

A. Equipment

(1) Pressurized Nitrogen Source

B. References

(1) AMM 06-44-00/201, Wing Access Doors and Panels

(2) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(3) AMM 32-00-20/201, Landing Gear Downlocks

C. Prepare for the Servicing

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

D. Do the Servicing of the Surge Accumulator

(1) Release the parking brake.

(2) Remove the pressure from the right and center hydraulic systems (AMM 29-11-00/201).

MECH | INSP

(3) Operate the left and right brake pedals a minimum of seven times to remove the pressure from the brake system.

(4) Get access to the accumulator charging valve through the trunnion doors and the access panels as shown in Fig. 301 (AMM 06-44-00/201).

(5) Remove the cap from the charging valve (Detail B).

(6) Attach a dry nitrogen source.

WARNING: DO NOT LOOSEN THE CHARGING VALVE. THE INTERNAL PRESSURE CAN BLOW THE VALVE OUT, AND THIS CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

WARNING: USE A REGULATED PRESSURE SOURCE TO SERVICE THE ACCUMULATOR. AN UNREGULATED PRESSURE SOURCE CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(7) Loosen the swivel hex nut on the charging valve one turn.

(8) Do the servicing of the accumulator to the pressure shown on the chart (Detail C) adjacent to the charging valve.

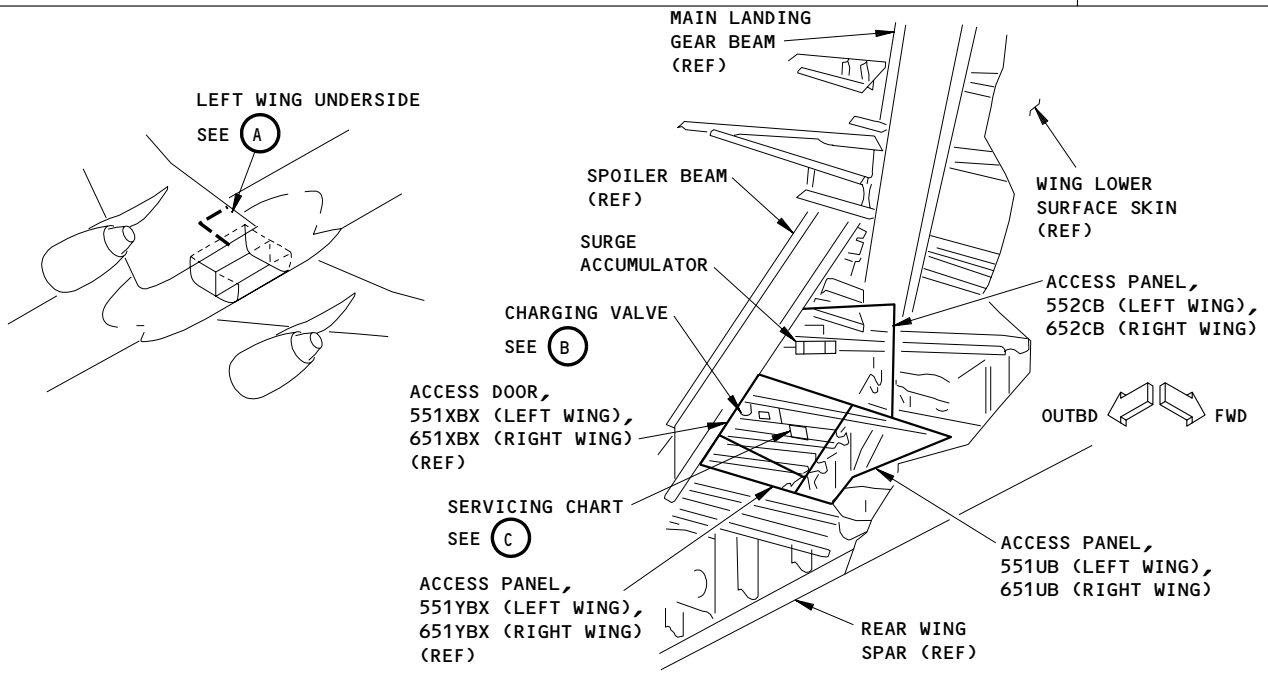
(9) Tighten the swivel hex nut.

(10) Remove the nitrogen source.

(11) Install the cap on the charging valve.

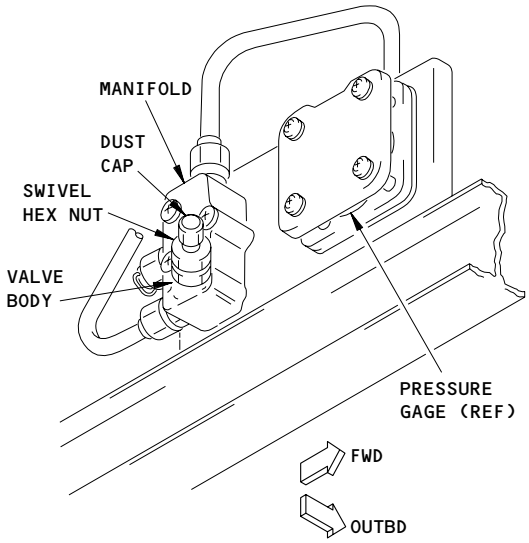
(12) Set the parking brake.

(13) Install the access panels that were removed (AMM 06-44-00/201).



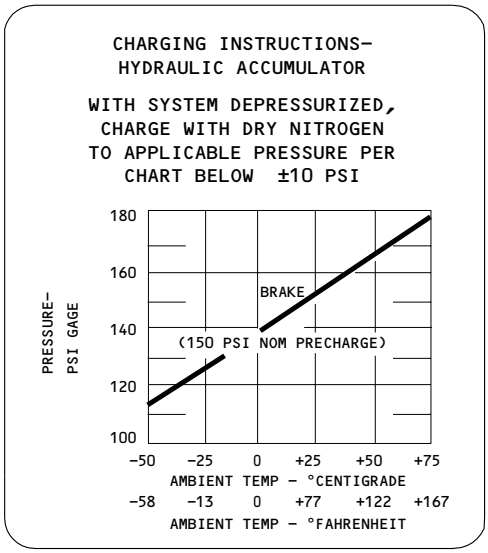
LEFT WING UNDERSIDE
(RIGHT WING UNDERSIDE IS EQUIVALENT)

A



CHARGING VALVE

B



SERVICING CHART

C

Brake Hydraulic System Surge Accumulator Servicing
Figure 301

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-040-05-2
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	R WING TE		2C	12424	017	DEC 22/03

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
SERVICE	RIGHT BRAKE SURGE ACCUMULATOR		ALL	ALL

ZONES	ACCESS PANELS
651	651UB 651XBX NOTE

MECH	INSP	MPD ITEM NUMBER

CHECK BRAKE HYDRAULIC SYSTEM SURGE ACCUMULATOR AND SERVICE AS REQUIRED. 12-15-09-3A

ACCESS NOTE: SB 767-57-5. PRODUCTION LINE NO. 2 THROUGH 86 WERE CONFIGURED WITH ACCESS PANEL 651UB. INCORPORATION OF THIS SERVICE BULLETIN REVISES THIS CONFIGURATION TO THREE PANELS: 651UB, 651XBX AND 651YBX.

1. Servicing of the Surge Accumulator for the Brake Hydraulic System (Fig. 301)

A. Equipment

(1) Pressurized Nitrogen Source

B. References

(1) AMM 06-44-00/201, Wing Access Doors and Panels

(2) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(3) AMM 32-00-20/201, Landing Gear Downlocks

C. Prepare for the Servicing

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

D. Do the Servicing of the Surge Accumulator

(1) Release the parking brake.

(2) Remove the pressure from the right and center hydraulic systems (AMM 29-11-00/201).

MECH | INSP

(3) Operate the left and right brake pedals a minimum of seven times to remove the pressure from the brake system.

(4) Get access to the accumulator charging valve through the trunnion doors and the access panels as shown in Fig. 301 (AMM 06-44-00/201).

(5) Remove the cap from the charging valve (Detail B).

(6) Attach a dry nitrogen source.

WARNING: DO NOT LOOSEN THE CHARGING VALVE. THE INTERNAL PRESSURE CAN BLOW THE VALVE OUT, AND THIS CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

WARNING: USE A REGULATED PRESSURE SOURCE TO SERVICE THE ACCUMULATOR. AN UNREGULATED PRESSURE SOURCE CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(7) Loosen the swivel hex nut on the charging valve one turn.

(8) Do the servicing of the accumulator to the pressure shown on the chart (Detail C) adjacent to the charging valve.

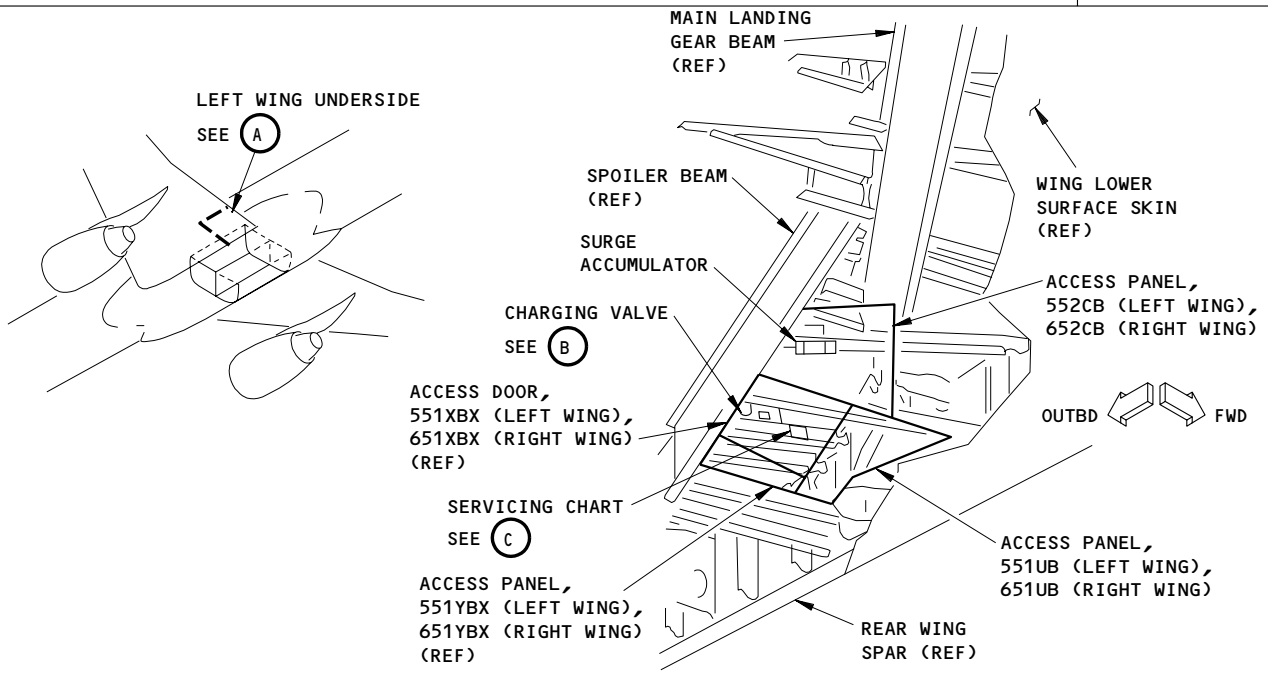
(9) Tighten the swivel hex nut.

(10) Remove the nitrogen source.

(11) Install the cap on the charging valve.

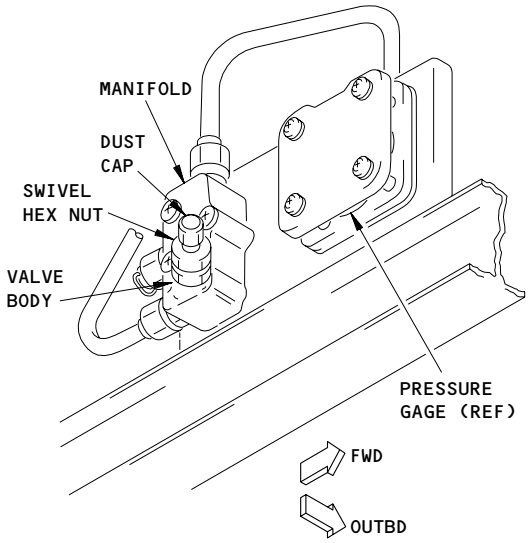
(12) Set the parking brake.

(13) Install the access panels that were removed (AMM 06-44-00/201).



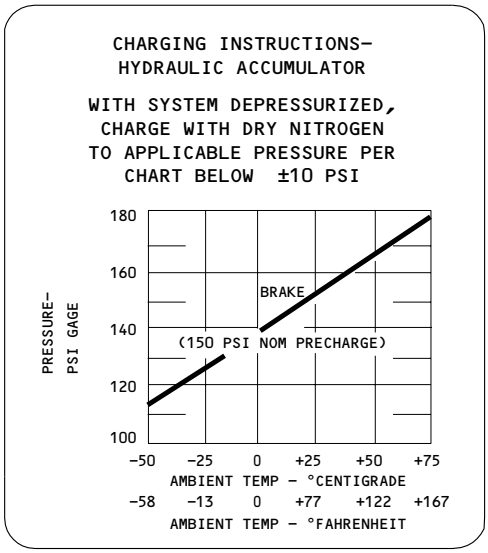
LEFT WING UNDERSIDE
(RIGHT WING UNDERSIDE IS EQUIVALENT)

A



CHARGING VALVE

B



SERVICING CHART

C

Brake Hydraulic System Surge Accumulator Servicing
Figure 301

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-040-51
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL		PHASE	MPD REV	TASK CARD REVISION
AIRPL	EMPENNAGE		00048 HRS	NOTE	002DY	003	APR 22/05

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
CHECK/INSP	TAIL SKID POP-UP INDICATOR		300	ALL

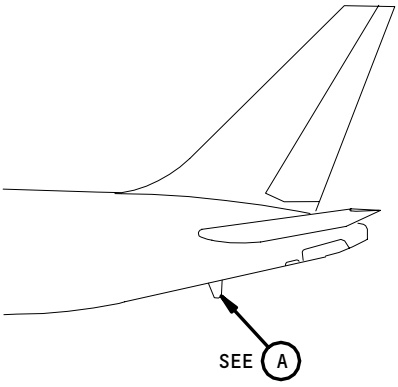
ZONES	ACCESS PANELS
312	

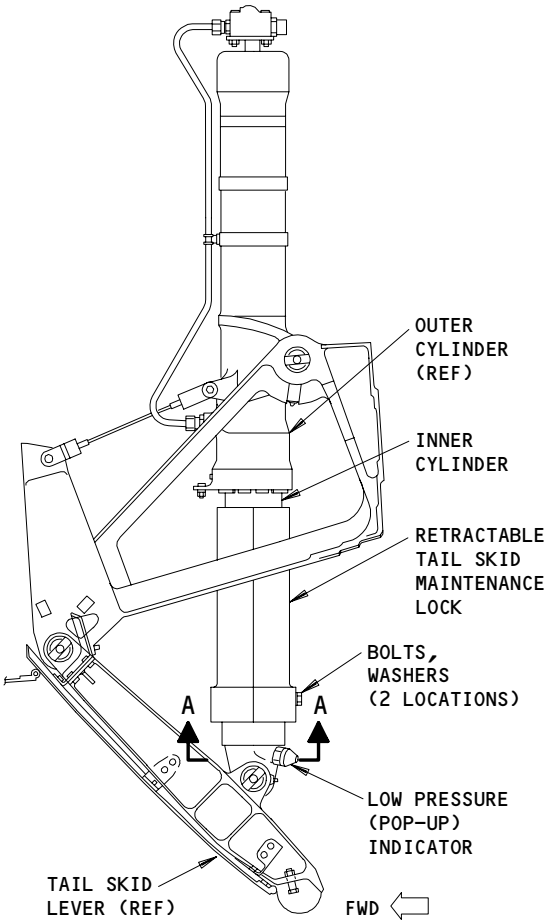
MECH	INSP	MPD ITEM NUMBER

VISUALLY CHECK THE TAIL SKID SHOCK STRUT POP-UP INDICATOR. 12-15-05-3A

INTERVAL NOTE: 48 ELAPSED CLOCK HOURS.

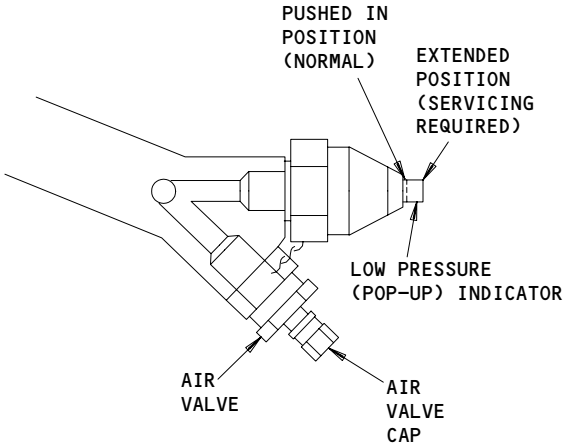
EFFECTIVITY





SHOCK STRUT/ACTUATOR
(EXTENDED POSITION)

A



A-A

Tail Skid Strut/Actuator Pressurization
Figure 301

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	EMPENNAGE		4C	14848	010	DEC 22/08

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
FUNCTIONAL	TAIL SKID HYDRAULIC FUSE		300	ALL

ZONES	ACCESS PANELS
311 312	312AR

MECH | INSP

MPD ITEM NUMBER

FUNCTIONALLY CHECK THE TAIL SKID HYDRAULIC FUSE. 32-71-04-5A

TAIL SKID HYDRAULIC FUSE - ADJUSTMENT/TEST

1. General

A. This procedure contains this task:

(1) Test of the tail skid hydraulic fuse.

2. Test of the Tail Skid Hydraulic Fuse (Fig. 501)

A. References

(1) AMM 06-42-00/201, Empennage (Major Zone 300) Access Doors and Panels.

(2) AMM 12-12-01/301, Hydraulic Systems

(3) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(4) AMM 32-00-15/201, Landing Gear Door Locks

(5) AMM 32-00-20/201, Landing Gear Downlocks

B. Equipment

(1) Hydraulic Service Cart, 0 to 3000 psi (0 to 21000 KPa), with hydraulic fluid, fire resistant, BMS 3-11.

(2) Container - Oil Resistant, 5 gallon (commercially available).

C. Consumable Materials

(1) D00153 Hydraulic Fluid, Fire Resistant - BMS 3-11

MECH	INSP

D. Access

(1) Location Zones
311 Area Aft of Pressure Bulkhead (Left)
312 Area Aft of Pressure Bulkhead (Right)

(2) Access Panel
312AR Stabilizer/Trim Jackscrew Compartment Access Door

E. Prepare for the Test

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO INSTALL THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(2) Open main landing gear doors and install the door locks (AMM 32-00-15/201).

WARNING: DO NOT MANUALLY OPERATE THE TAIL SKID CONTROL VALVE. EXTENSION OF THE TAIL SKID CAN CAUSE INJURY TO PERSONNEL.

(3) Remove the pressure from the center hydraulic system and hydraulic reservoir (AMM 29-11-00/201).

F. Procedure

WARNING: STAY OFF OF THE ACCESS DOOR 312AR. THE WEIGHT OF A PERSON COULD CAUSE THE SPRING-LOADED LATCHES TO RELEASE, AND CAUSE INJURY TO PERSONS WHEN THEY FALL THROUGH THE OPEN DOOR.

(1) Open the stabilizer/trim jackscrew compartment access door, 312AR (AMM 06-42-00/201).

(2) Disconnect the hydraulic line from the fuse to the blocking valve. Leave the hydraulic line to the control module attached.

MECH | INSP

WARNING: MAKE SURE YOU INSTALL A METAL PLUG IN THE DISCONNECTED HYDRUALIC LINE. HYDRAULIC FLUID COULD FLOW OUT OF THE LINE IF THE LANDING GEAR CONTROL LEVER WAS MOVED TO THE DOWN POSITION WITH HYDRAULIC PRESSURE SUPPLIED. THIS COULD CAUSE INJURY TO PERSONS OR DAMAGE TO THE EQUIPMENT.

(3) Install a plug in the disconnected line.

(4) Put a container at the fuse port to catch hydraulic fluid. Fluid will flow from the fuse port when the hydraulic system is pressurized.

NOTE: You can attach a flexible hose to the fuse, then put the hose in the container.

(5) Put the control lever for the landing gear in the UP position.

WARNING: KEEP PERSONS CLEAR OF THE OPEN FUSE PORT WHILE THE HYDRAULIC LINE IS DISCONNECTED FROM THE PORT AND THE CENTER HYDRAULIC SYSTEM IS PRESSURIZED. HIGH PRESSURE HYDRAULIC FLUID CAN CAUSE INJURY TO PERSONS.

(6) Supply 70 psi (482 KPa) to the center hydraulic system with a hydraulic ground cart (AMM 29-11-00/201).

(7) When the fuse closes, increase the applied pressure to 3000 psi (21000 KPa) and hold it for 5 minutes.

(8) Make sure the leakage from the fuse port is not more then one drop per minute for the last 3 minutes.

(9) Remove the power from the center hydraulic system (AMM 29-11-00/201).

(10) Remove the plug from the hydraulic line.

(11) Reconnect the hydraulic line to the fuse.

(12) Reset the line fuse.

G. Procedure to Make Sure the Tail Skid is Reset

MECH | INSP

WARNING: MAKE SURE THAT THE DOWNLOCKS ARE INSTALLED IN ALL OF THE LANDING GEAR BEFORE YOU MOVE THE CONTROL LEVER. WITHOUT THE DOWNLOCKS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlocks are installed in the nose and main landing gear (AMM 32-00-20/201).

WARNING: OBEY THE INSTALLATION PROCEDURE FOR THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) Open the doors for the landing gear and install the door locks (AMM 32-00-15/201).

(3) Supply electrical power (AMM 24-22-00/201) if it is not already supplied.

(4) Pressurize the center hydraulic system and hydraulic reservoir (AMM 29-11-00/201).

WARNING: MAKE SURE THAT PERSONS AND EQUPMENT ARE CLEARED FROM THE TAIL SKID AND THE AREA INSIDE THE STABILIZER TRIM JACKSCREW COMPARTMENT. TAIL SKID MOVEMENT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(5) Move the control lever for the landing gear to the OFF position.

(6) Look to see that the tail skid retracts. Make sure the TAIL SKID light (on the P3 panel) is on and the TAILSKID EICAS message shows on the upper display within 40 seconds.

(7) Move the control lever to DN.

(8) Look to see that the tail skid extends. Make sure the TAIL SKID light (on the P3 panel) is off and the TAILSKID EICAS message does not show on the upper display within 40 seconds.

(9) Examine the hydraulic fuse for hydraulic leaks.

H. Put the Airplane Back to Its Usual Condition

MECH | INSP

(1) Clean up hydraulic fluid from the installation area if necessary.

(2) Close the access door for the stabilizer/trim jackscrew compartment, 312AR.

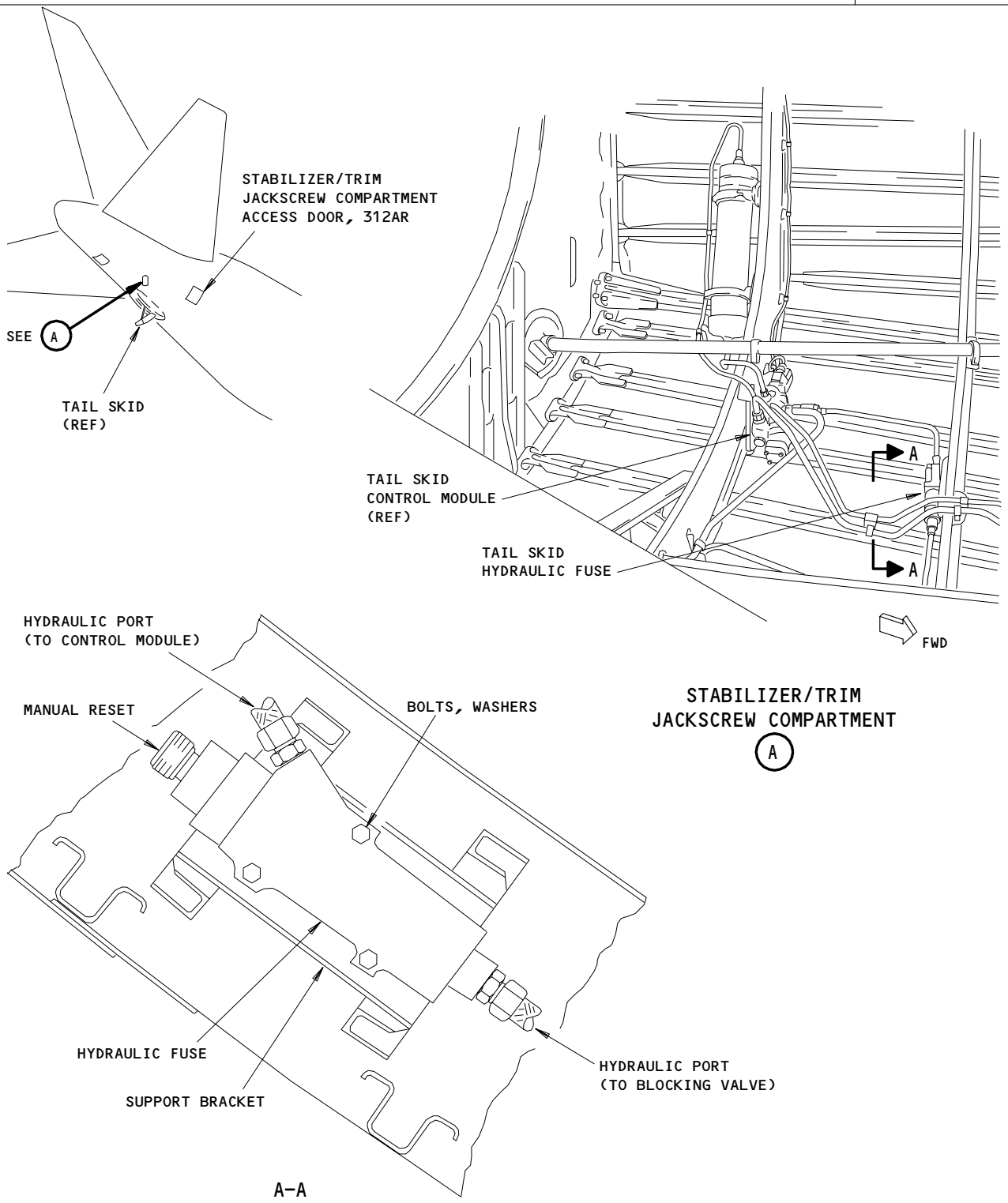
(3) Make sure the fluid in the center hydraulic reservoir is at the correct level. Fill if it is necessary (AMM 12-12-01/301).

WARNING: OBEY THE REMOVAL PROCEDURE FOR THE DOOR LOCKS. THE DOOR OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) Remove the door locks (AMM 32-00-15/201).

(5) Remove the power from the center hydraulic system if it is not necessary (AMM 29-11-00/201).

(6) Remove electrical power if it is not necessary (AMM 24-22-00/201).



Tail Skid Hydraulic Fuse
Figure 501

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-041-51
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
ELECT	CREW CABIN		2C	12424	018	APR 22/03

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
OPERATIONAL	TAIL SKID WARNING SYSTEM		NOTE	ALL

ZONES	ACCESS PANELS
212 311 312	312AR

MECH	INSP	MPD ITEM NUMBER

OPERATIONALLY CHECK THE TAIL SKID WARNING SYSTEM. 32-61-00-5B

AIRPLANE NOTE: TASK APPLICABLE TO AIRPLANES WITH TAILSKID SYSTEM.

1. <u>767-300 AIRPLANES;</u>

<u>Do an Operational Test of the Tail Skid Warning System</u>

A. References

(1) AMM 06-41-00/201, Fuselage (Major Zones 100 and 200) Access Doors and Panels

(2) AMM 06-42-00/201, Empennage (Major Zone 300) Access Doors and Panels

(3) AMM 24-22-00/201, Electrical Power - Control

(4) AMM 29-11-00/201, Depressurize/Pressurize Main Hydraulic System

(5) AMM 32-00-20/201, Landing Gear Downlocks

B. Prepare for the Test

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

(2) Make sure the control lever for the landing gear on the P3 panel is in the DN position.

(3) Supply electrical power (AMM 24-22-00/201).

(4) Pressurize the center hydraulic system and reservoir (AMM 29-11-00/201).

MECH | INSP

(5) Make sure these circuit breakers on the overhead panel, P11, are closed:

(a) 11C30, LANDING GEAR POSITION AIR/GND SYS 1

(b) 11U23, POSITION AIR/GND SYS 2

(c) 11U26, TAIL SKID CONTROL

C. Procedure

(1) Make sure the TAIL SKID light on the P3 panel is not on and the EICAS message TAIL SKID is not shown on the upper display.

(2) Open this circuit breaker on the P11 panel and attach a DO-NOT-CLOSE tag:

(a) 11U26, TAIL SKID CONT

WARNING: STAY OFF OF THE ACCESS DOOR 312AR. THE WEIGHT OF A PERSON COULD CAUSE THE SPRING-LOADED LATCHES TO RELEASE, AND CAUSE INJURY TO PERSONS WHEN THEY FALL THROUGH THE OPEN DOOR.

(3) Open the access door for the stabilizer/trim jackscrew compartment, 312AR (AMM 06-42-00/201).

(4) Find the tail skid control module in the stabilizer/trim jackscrew compartment (Fig. 504).

WARNING: MAKE SURE THE TAIL SKID AREA IS CLEAR OF PERSONS AND EQUIPMENT BEFORE YOU MOVE THE MANUAL OVERRIDE LEVER ON THE TAIL SKID CONTROL MODULE TO POSITION 1. WHEN YOU PUT THE MANUAL OVERRIDE LEVER IN POSITION 1 THE TAIL SKID WILL RETRACT AND THIS CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(5) Move the manual override lever on the tail skid control module to POSITION 1.

(6) Make sure the tail skid retracts.

(7) Make sure the TAIL SKID light comes on.

MECH | INSP

(8) Move the EICAS computer select switch to the L position and make sure the EICAS message TAIL SKID shows on the upper display.

(9) Move the EICAS computer select switch to the R position and make sure the EICAS message TAIL SKID shows on the upper display.

(10) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:

(a) 11U26, TAIL SKID CONT

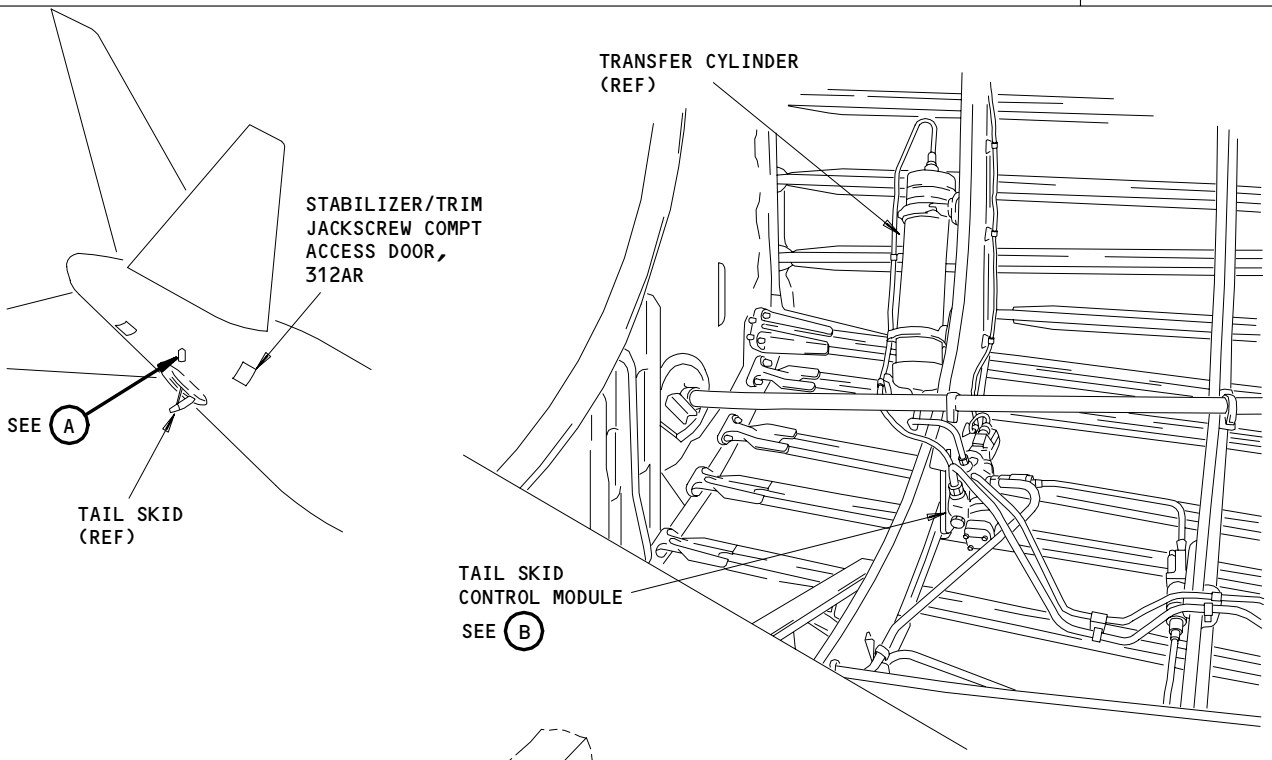
(11) Make sure the TAIL SKID light is not on and the EICAS message TAIL SKID does not show when the tail skid is fully extended.

D. Put the Airplane Back to Its Usual Condition

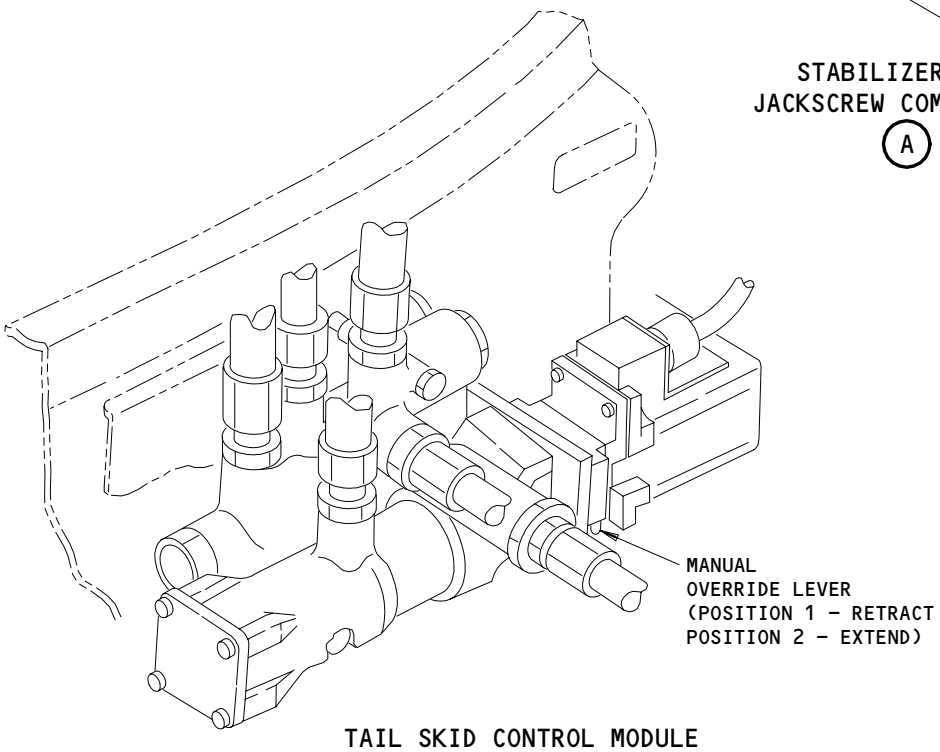
(1) Close the access door for the stabilizer/trim jackscrew compartment, 312AR.

(2) Remove the power from the center hydraulic system (AMM 29-11-00/201), if it is not necessary.

(3) Remove electrical power if it is not necessary (AMM 24-22-00/201).



STABILIZER/TRIM
JACKSCREW COMPARTMENT
A



TAIL SKID CONTROL MODULE
B

Tail Skid Control Module Manual Override
Figure 504

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-042-51
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	EMPENNAGE		1C	11212	007	DEC 22/03

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
OPERATIONAL	TAIL SKID WARNING PSEU BITE TEST		NOTE	ALL

ZONES	ACCESS PANELS
119 312	119AL 312AR

MECH | INSP

MPD ITEM NUMBER

OPERATIONALLY CHECK THE TAIL SKID WARNING SYSTEM USING THE PSEU BITE TEST. 32-61-00-5A

AIRPLANE NOTE: TASK APPLICABLE TO AIRPLANES WITH TAILSKID SYSTEM.

1. 767-300 AIRPLANES;

Use the PSEU BITE Test to Do an Operational Test of the Tail Skid Warning System

A. References

(1) AMM 06-41-00/201, Fuselage (Major Zones 100 and 200) Access Doors and Panels

(2) AMM 06-42-00/201, Empennage (Major Zone 300) Access Doors and Panels

(3) AMM 24-22-00/201, Electrical Power - Control

(4) AMM 29-11-00/201, Depressurize/Pressurize Main Hydraulic System

(5) AMM 32-00-20/201, Landing Gear Downlocks

B. Prepare for the Test

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

(2) Make sure the control lever for the landing gear on the P3 panel is in the DN position.

(3) Supply electrical power (AMM 24-22-00/201).

(4) Pressurize the center hydraulic system and reservoir (AMM 29-11-00/201).

(5) Make sure these circuit breakers on the overhead panel, P11, are closed:

(a) 11C30, LANDING GEAR POSITION AIR/GND SYS 1

(b) 11U23, POSITION AIR/GND SYS 2

(c) 11U26, TAIL SKID CONTROL

C. Procedure

(1) Open the access door for the main equipment center, 119AL (AMM 06-41-00/201) and find the PSEU on the E1 equipment rack.

(2) Make sure the control lever for the landing gear on the P3 panel is in the DN position.

(3) Make sure the tail skid is extended.

(4) Push the PRESS/TEST switch on the BITE controls of the PSEU.

NOTE: A number 888 will show on the LED display. All the lights will be on until you release the switch.

(5) Use the SENSOR CHANNEL SELECT thumb switches on PSEU BITE control panel to put in the code 247 (for S247, tail skid extended).

(6) Push the TARGET TEST switch and hold for 1 second.

(7) Make sure the sensor code is on the LED display and that after 4 seconds, the TARGET NEAR light is on.

(8) Put in the code 248 (for S248, tail skid retracted) on the PSEU BITE control panel.

(9) Push the TARGET TEST switch and hold for 1 second.

(10) Make sure the sensor code is on the LED display and that after 4 seconds, the TARGET FAR light is on.

(11) Open this circuit breaker on the overhead panel, P11, and attach a DO-NOT-CLOSE tag:

(a) 11U26, TAIL SKID CONT

MECH	INSP

WARNING: STAY OFF OF THE ACCESS DOOR 312AR. THE WEIGHT OF A PERSON COULD CAUSE THE SPRING-LOADED LATCHES TO RELEASE, AND CAUSE INJURY TO PERSONS WHEN THEY FALL THROUGH THE OPEN DOOR.

(12) Open the access door for the stabilizer/trim jackscrew compartment, 312AR (AMM 06-42-00/201).

(13) Find the tail skid control module in the stabilizer/trim jackscrew compartment (Fig. 504).

WARNING: MAKE SURE THE TAIL SKID AREA IS CLEAR OF PERSONS AND EQUIPMENT BEFORE YOU MOVE THE MANUAL OVERRIDE LEVER ON THE TAIL SKID CONTROL MODULE TO POSITION 1. WHEN YOU PUT THE MANUAL OVERRIDE LEVER IN POSITION 1 THE TAIL SKID WILL RETRACT AND THIS CAN CAUSE INJURY TO PERSONS.

(14) Move the manual override lever on the tail skid control module to POSITION 1.

(15) Make sure the tail skid is retracted.

(16) Put in the code 247 (for S247, tail skid extended) on the PSEU BITE control panel.

(17) Push the TARGET TEST switch and hold for 1 second.

(18) Make sure the sensor code is on the LED display and that after 4 seconds, the TARGET FAR light is on.

(19) Put in the code 248 (for S248, tail skid retracted) on the PSEU BITE control panel.

(20) Push the TARGET TEST switch and hold for 1 second.

(21) Make sure the sensor code is on the LED display and that after 4 seconds, the TARGET NEAR light is on.

WARNING: MAKE SURE THE TAIL SKID AREA IS CLEAR OF PERSONS AND EQUIPMENT BEFORE YOU CLOSE THE TAIL SKID CONTROL CIRCUIT BREAKER. THE TAIL SKID WILL EXTEND AND THIS CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

MECH | INSP

(22) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:

(a) 11U26, TAIL SKID CONT

(23) Make sure the tail skid is extended.

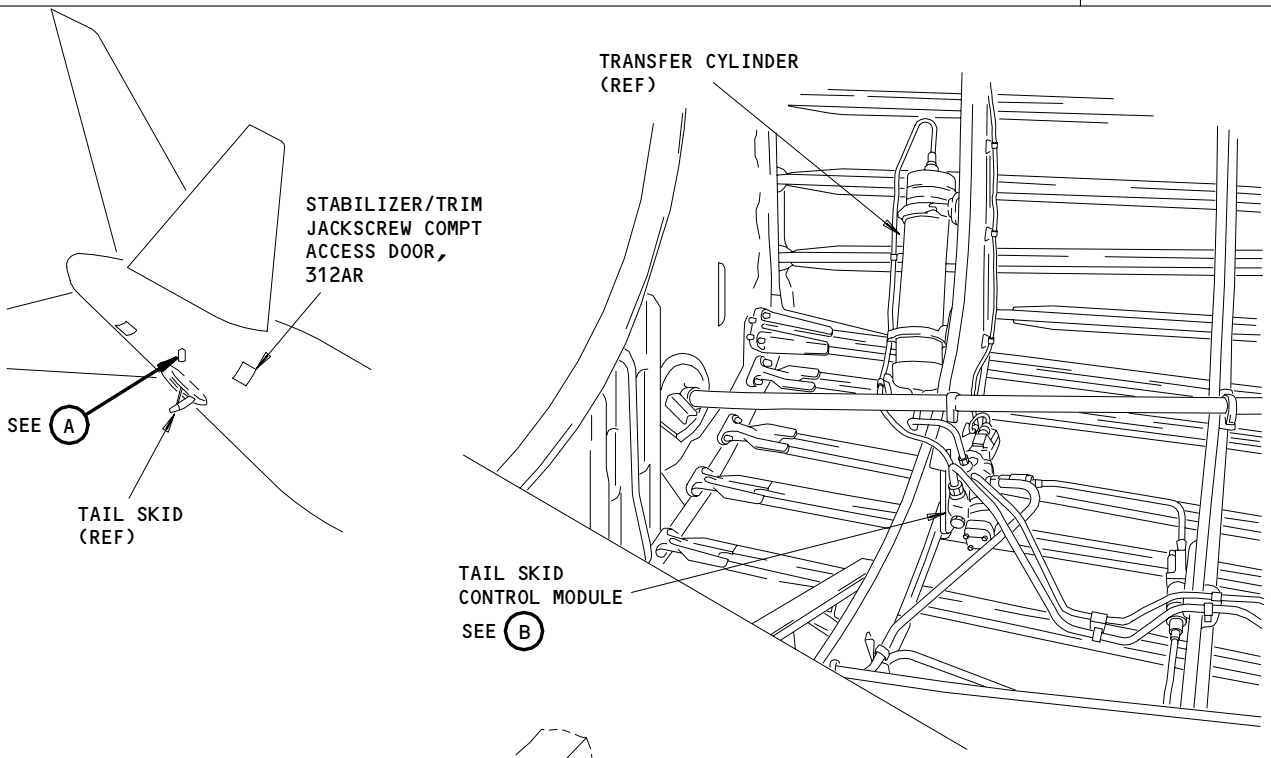
D. Put the Airplane Back to Its Usual Condition

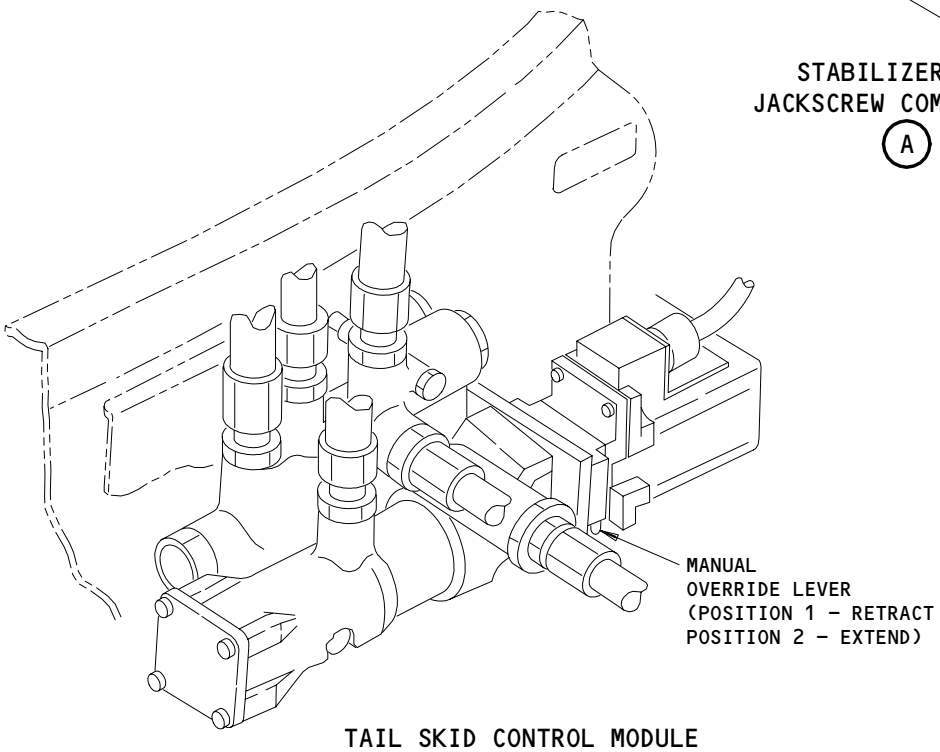
(1) Close the access door for the main equipment center, 119AL.

(2) Close the access door for the stabilizer/trim jackscrew compartment, 312AR.

(3) Remove the power from the center hydraulic system (AMM 29-11-00/201), if it is not necessary.

(4) Remove electrical power if it is not necessary (AMM 24-22-00/201).





Tail Skid Control Module Manual Override
Figure 504

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-043-01
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL		PHASE	MPD REV	TASK CARD REVISION
AIRPL	NOSE GEAR		18000 CYC	NOTE	242XX	012	AUG 22/07

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
RESTORE	NOSE LANDING GEAR		ALL	ALL

ZONES	ACCESS PANELS
711	1004

MECH | INSP

MPD ITEM NUMBER

EACH OPERATOR MUST PERFORM A RESTORATION OF THE NOSE LANDING GEAR ON ONE AIRPLANE OF THE OPERATOR'S FLEET WITHIN THE INITIAL THRESHOLD INTERVAL RANGE. 32-21-01-A

INTERVAL NOTE: THE INITIAL THRESHOLD RANGE FOR THIS RESTORATION IS BETWEEN 12,000 AND 18,000 CYCLES OR 10 YEARS WHICHEVER OCCURS FIRST. THE INSPECTION RESULTS WILL BE USED TO ESTABLISH EACH OPERATOR'S REPEAT INTERVAL.

NOTE: SERVICE LETTER 767-SL-32-55 SUMMARIZES THE RESULTS OF A SURVEY OF OPERATORS PERFORMING THE LANDING GEAR RESTORATION TASK. THE STRUCTURAL SAFE LIFE LIMIT IS SPECIFIED IN SECTION 9 OF THE MPD.

ACCESS NOTE: SPECIAL ACCESS 1004 REQUIRES OPENING OF THE NOSE LANDING GEAR DOORS AND INSTALLING SAFETY LOCKS IN ACCORDANCE WITH MAINTENANCE MANUAL PROCEDURE 32-00-15.

EFFECTIVITY

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-044-01
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	NOSE GEAR		80000 CYC	916XX	008	APR 22/08

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
REPLACE	NOSE LANDING GEAR		ALL	ALL

ZONES	ACCESS PANELS
211 711	

MECH	INSP	MPD ITEM NUMBER

REPLACE THE NOSE LANDING GEAR AT MANUFACTURER'S LIFE LIMIT (CURRENTLY 80,000 CYCLES). REFER TO BOEING SERVICE LETTER 767-SL-32-92 FOR A LIST OF LANDING GEAR LIFE LIMITED PARTS. 32-21-01-4A

1. Remove the Nose Landing Gear

A. Equipment

(1) Trunnion Pin Puller, NLG - A32011-1

(2) Inner Cylinder Retention Strap, NLG - A32028-6

(3) Hoist Equipment, NLG - A32036-57

(4) Sling - EE2-201-95 inch or Equivalent
(1 inch wide 2 Ply nylon Web rated for
Work Load Limit (WLL) at 8000.0 Lbs @
V-basket hitch)
Lift-All Company, Inc.
Landisville, PA.

(5) Transportation Dolly, NLG - A32038-1

B. References

(1) 07-11-02/201, Jacking Airplane Nose

(2) 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(3) 32-00-20/201, Landing Gear Downlocks

C. Prepare to Remove the Nose Landing Gear

(1) Make sure the downlocks are installed on the nose and main landing gear (Ref 32-00-20).

MECH | INSP

(2) Remove the pressure from the center hydraulic system and reservoir (Ref 29-11-00).

(3) Open this circuit breaker on the main power distribution panel, P6, and attach a DO-NOT-CLOSE tag:

(a) 6G1, FIRE EXT APU 1

(4) Open these circuit breakers on the overhead circuit breaker panel, P11, and attach DO-NOT-CLOSE tags:

(a) 11B6, LIGHTS EMER CHARGER PORTABLE

(b) 11B34, APU REMOTE FIRE IND

(c) 11B35, APU ALTN CONT

(d) 11C23, INTERPHONE CABIN SERVICE

(e) 11C25, INTERPHONE DUAL PWR CAPT OBS FLT AMPL

(f) AIRPLANES WITH THE "LANDING GEAR POSITION AIR/GND SYS 2 ALT" CIRCUIT BREAKER INSTALLED AT PANEL GRID LOCATION 11C29;
11C29, LANDING GEAR POSITION AIR/GND SYS 2 ALT

(g) 11C30, LANDING GEAR POSITION AIR/GND SYS 1

(h) 11G29, INTERPHONE DUAL PWR CAPT OBS FLT AMPL

(i) 11G30, INTERPHONE DUAL PWR F/O SEC OBS

(j) 11H32, GND CALL

(k) 11N1, LIGHTING NOSE GEAR CONT

(l) 11N3, LIGHTING LANDING NOSE GEAR L

(m) 11N4, LIGHTING LANDING NOSE GEAR R

(n) 11N8, LIGHTING TAXI

(o) 11P35, EMER CHGR OFF WING ESC L

(p) 11P36, EMER CHGR OFF WING ESC R

(q) 11U15, AIR/GND SYS 1

MECH | INSP

(r) MTH 275-276 POST-SB 32-85;
MTH 277-999;
SAS 050-149, 155-999;

11U17, TIRE PRESS IND 1

(s) 11U23 or 11U24, POSITION AIR/GND SYS 2

(5) Open this circuit breaker on the forward miscellaneous electrical equipment panel, P33, and attach a DO-NOT-CLOSE tag:

(a) 33J4, LIGHTS NLG/WW SVCE

(6) MTH 275-276 POST-SB 32-85;
MTH 277-999;
SAS 050-149, 155-999;

Open this circuit breaker on the APU external power panel, and attach a DO-NOT-CLOSE tag:

(a) 34M11, TIRE PRESS IND 2

(7) To open the forward door of the nose landing gear, release the lock on ROD 2 of the operating mechanisms.

(8) Remove the bolts (1) to disconnect the operating mechanisms for the forward door from the shock strut of the nose landing gear (Fig. 401).

(9) Remove the bolts (4) to disconnect the operator struts for the aft door from the shock strut for the nose landing gear.

NOTE: Do not change the length of the operating rods when you remove the nose landing gear.

(10) Use a rope to hold the doors out of the work area.

(11) Remove the bolts (8) to disconnect the pivot links for the nose wheel steering from the trunnion drum (View A-A, Fig. 402).

(12) Use a rope to hold the pivot links clear of the structure.

(13) Disconnect the electrical connectors from the junction box in the wheel well for the nose landing gear (Detail B, Fig. 403).

(14) Put a cap on the connectors.

MECH | INSP

(15) Remove the screws (38) to disconnect the electrical adapter box from the bulkhead.

(16) Attach the electrical conduit to the top of the shock strut trunnion.

(17) Disconnect the hydraulic lines on the left swivel bracket of the trunnion.

(18) Put a plug on the hydraulic fittings.

D. Remove the Nose Landing Gear

(1) Remove the pressure from the shock strut.

WARNING: MAKE SURE THE STRUT IS FULLY DEPRESSURIZED BEFORE JACKING. FAILURE TO DO THIS CAN LET THE STRUT MOVE UNDER PRESSURE AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) Install the shock strut retention strap to lock the shock strut in the compressed position.

(3) Lift the nose of the airplane (Ref 07-11-02).

(4) Remove the lower pin (13) to disconnect the rod end of the retract actuator from the drag strut (View B-B, Fig. 402).

(5) Move the retract actuator forward and use a rope to hold it out of the work area.

(6) Hold the lock link assembly.

(7) Hold the upper drag strut.

(8) Remove the bolt (35) to disconnect the piston end of the steering spring cartridge from the drive crank (Detail C, Fig. 402).

CAUTION: APPLY A FORWARD FORCE TO THE AFT SIDE OF THE SHOCK STRUT. IF THE SHOCK STRUT MOVES AFT, IT CAN CAUSE DAMAGE TO THE PROXIMITY SENSORS.

(9) Remove the apex pin (19) to disconnect the lower drag strut from the forward lock link and the upper drag strut (View C-C, Fig. 402).

MECH | INSP

(10) Remove the universal pin (27) to disconnect the universal from the shock strut (View D-D, Fig. 402).

(11) Remove the lower drag strut (26) and the universal (33).

(12) Remove the lock link assembly and the steering spring cartridge.

(a) Disconnect the electrical line connectors for the proximity sensor from the junction box.

(b) Remove the pin (43) to disconnect the rod end of the lock actuator from the aft lock link (View A-A, Fig. 403).

(c) Use a rope to hold the lock actuator out of the work area.

(d) Remove the lock pin (49) to disconnect the aft lock link from the support fitting (View B-B, Fig. 403).

(e) Remove the forward lock link (20).

(f) Remove the aft lock link (51).

(g) Remove the steering spring cartridge (34).

WARNING: FOLLOW THE SLING INSTALLATION EXACTLY AS SHOWN IN FIGURE 404. OTHERWISE THE STRAP WILL BE TOO SHORT. THIS CAN RESULT IN POSSIBLE OVERLOAD, FAILURE OF THE SLING, AND/OR INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(13) Install the hoist equipment on the nose landing gear (Fig. 404)

(a) Use the upper pin (59) to attach the post (60) to the upper drag strut.

NOTE: The upper pin (59) is approximately 2.75 inches in diameter. The upper pin (59) goes through the hole in the upper drag strut that held the lower drag strut.

(b) Lift the upper drag strut until you can use the lower pin (62) to attach the post (60) to the support fitting (37A).

NOTE: The lower pin (62) is approximately 1.5 inches in diameter.

(c) Attach the spreader (68) to the upper drag strut.

(d) Use the middle pin (61) to attach the track (67) to the post (60).

NOTE: The middle pin (61) is approximately 1 inch in diameter.

(e) Align the hole in the bracket on the end of the track (67) with the hole in the middle of the spreader (68).

(f) Install the quick release pin (69) through the holes.

(g) Put the trolley (65) on the track (67).

(h) Install the trolley stop pin (70).

CAUTION: MAKE SURE THAT THE TENSION IN THE STRAP IS EQUAL ON BOTH SIDES OF THE SLING. IF THE WEIGHT OF THE GEAR IS NOT DISTRIBUTED EVENLY ON THE SLING, DAMAGE TO EQUIPMENT MAY OCCUR.

(i) Install the sling (66) on the shock strut (Detail A, Fig. 404).

NOTE: If you use the 108-inch strap then make sure that you loop the strap around the lug on the left side of the trunnion (Detail B, Fig. 404).

(j) Lift the nose landing gear with the hoist (64) until there is no weight from the landing gear on the trunnion pins (56).

(14) Do these steps to remove the trunnion pins (56) and disconnect the nose landing gear (53) from the wheel well side walls (View C-C, Fig. 403). Use the trunnion pin puller if necessary to remove the pins.

(a) Remove the lockbolt (57), washers (55 and 58) and nut (54) from the trunnion pin (56), (View C-C, Fig. 403).

(b) Remove the hydraulic swivel bracket (41) from the left trunnion pin (Detail B, Fig. 403).

(c) Remove the trunnion pins (56).

(15) Move the nose landing gear forward in the wheel well.

(16) Turn the nose landing gear approximately 90 degrees to be clear of the supports.

(17) Lower the nose landing gear on the transportation dolly.

(18) Attach the dolly restraints. Use the instructions supplied with the tool.

(19) Remove the sling.

(20) Remove the nose landing gear.

2. Install the Nose Landing Gear

NOTE: The wear limits for this component are supplied in 32-21-01/601.

A. Equipment

(1) Strut Inflation Tool - F70200-14

(2) Inner Cylinder Retention Strap, NLG - A32028-6

(3) Dry Air or Nitrogen Bottle, Charged to 2000 psi - Commercially Available

(4) Hoist Equipment, NLG - A32036-57

(5) Sling - EE2-201-95 inch or Equivalent
(1 inch wide 2 Ply nylon Web rated for
Work Load Limit (WLL) at 8000.0 Lbs @
V-basket hitch)
Lift-All Company, Inc.
Landisville, PA.

(6) Transportation Dolly, NLG - A32038-1

B. Consumable Materials

(1) D00633 Grease - BMS 3-33 (Recommended)

(2) D00013 Grease - MIL-G-23827 (Alternative)

(3) D00106 Fluid - MIL-H-6083, Hydraulic

C. Parts

AMM		NOMENCLATURE	AIPC		
FIG	ITEM		SUBJECT	FIG	ITEM
401	1	Bolt	32-22-02	01	350
	2	Bushing			360
	3	Nut			355
	4	Bolt	32-21-01	01	260
	5	Washer			275
	6	Nut			280

MECH | INSP

AMM		NOMENCLATURE	AIPC		
FIG	ITEM		SUBJECT	FIG	ITEM
402	7	Washer	32-51-54	01	15
	8	Bolt			5
	9	Bearing			25
	10	Nut			20
	11	Retract Actuator Nut	32-21-01	01	115
	12	Alignment Washer			100
	13	Lower Pin			90
	14	Alignment Washer			95
	15	Tang Washer			110
	16	Nut			80
	17	Washer			75
	18	Lockbolt			70
	19	Apex Pin	32-21-03	01	165
	20	Forward Lock Link			355
	21	Apex Nut			175
	22	Antirotation Bolt			150
	23	Washer			155
	24	Nut			160
	25	Tang Washer			170
	26	Lower Drag Strut			185
	27	Universal Pin			65
	28	Tang Washer			70
	29	Nut			75
	30	Nut			60
	31	Lockbolt			50
	32	Washer			55
	33	Universal			115
	34	Spring Cartridge	32-34-06	01	40
	35	Bolt			10
	36	Washer			25
	37	Nut			35

AMM			AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
403	38	Screw	32-61-61	01	890
	39	Washer			895
	40	Nut			900
	41	Bracket	32-34-52	01	35
	42	Alignment Washer	32-21-01	01	220
	43	Pin			200
	44	Alignment Washer			215
	45	Tang Washer			225
	46	Nut			230
	47	Nut	32-21-03	01	197
	48	Tang Washer			135
	49	Lock Pin			130
	50	Steering Arm			255
	51	Aft Lock Link			445
	52	Washer			198
	53	Gear Assy.	32-21-01	01	285
	54	Nut	32-21-02	01	475
	55	Washer			470
	56	Trunnion Pin			480
	57	Lockbolt			460
	58	Washer			465

D. References

(1) 07-11-02/201, Jacking Airplane Nose

(2) 12-12-01/301, Hydraulic Systems

(3) 12-15-02/301, Nose Gear Shock Strut

(4) 12-21-12/301, Nose Gear and Actuating Mechanisms

(5) 26-15-00/501, APU Fire Detection

(6) 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(7) 32-00-20/201, Landing Gear Downlocks

(8) 32-09-08/201, Nose Gear Not Compressed Sensor

MECH | INSP

(9) 32-21-01/601, Nose Gear

(10) 32-21-09/401, Nose Gear Lock Spring

(11) 32-34-00/501, Nose Gear Extension and Retraction

(12) MTH 275-276 POST-SB 32-85;
SAS 050-149, 155-999;

AMM 32-45-00/501, Wheels and Tires

(13) 32-51-00/501, Nose Gear Steering System

(14) 33-31-00/201, Service Lights

(15) 33-42-00/501, Landing, Runway Turnoff and Taxi Lights

E. Prepare to Install the Nose Landing Gear

(1) Make sure the inner cylinder retention strap is installed.

F. Install the Nose Landing Gear

(1) Move the transportation dolly with the nose landing attached below the forward end of the hoist track.

(2) Install the sling.

(3) Tighten the hoist cable.

(4) Remove the restraints from the transportation dolly.

(5) Lift the nose landing gear into the wheel well.

NOTE: The trunnion must be aligned forward and aft to move up into the wheel well.

(6) Remove the transportation dolly from the work area.

(7) Turn the nose landing gear such that it is pointed forwards, and move it aft until the trunnion is above the wheel well trunnion fittings.

(8) Adjust the hoist to align the holes of the trunnion pin.

MECH | INSP

CAUTION: APPLY A FORWARD FORCE TO THE AFT SIDE OF THE SHOCK STRUT. IF THE SHOCK STRUT MOVES AFT, IT CAN CAUSE DAMAGE TO THE PROXIMITY SENSORS.

(9) Apply grease to and install these parts to connect the nose landing gear (53) to the wheel well (View C-C, Fig. 403).

NOTE: Install the hydraulic swivel bracket (41) on the left trunnion pin (Detail B, Fig. 403).

(a) Trunnion pins (56)

(b) Lock bolts (57)

(c) Washers (55 and 58)

(d) Nuts (54)

(10) Measure total axial gap (Detail C, Fig. 403).

NOTE: If the axial gap is not in the limits, this will not cause any damage to the landing gear structure, but there may be a loud noise during landing gear extension/retraction.

(11) If the total axial gap is not in the limits of 0.008 to 0.040 inch then do these steps:

(a) Remove the trunnion pins, lock bolts, washers and nuts.

(b) Install a thrust ring (P/N 141T9946-(X)) or a combination of thrust rings to obtain the proper axial gap.

(c) Install the trunnion pins, lock bolts, washers and nuts.

(d) Make sure the total axial gap is in limit.

(12) Lower the hoist.

(13) Remove the sling.

(14) Remove the hoist equipment.

(15) Let the upper drag strut move down.

MECH | INSP

(16) To install the lock link assembly, do the steps that follow:

NOTE: The steering spring cartridge is connected to the steering arm (50).

(a) Apply grease to and install these parts to connect the aft lock link (51) to the steering arm (50) (View B-B, Fig. 403):

CAUTION: INSTALL LOCK PIN (49) WITH HEAD ORIENTED AS SHOWN (FIG. 403, VIEW B-B). IMPROPER ORIENTATION OF THE PIN WILL CAUSE DAMAGE TO THE SPRING CARTRIDGE DURING GEAR RETRACTION.

1) Lock pin (49)

2) Washers (48 and 52)

3) Nut (47)

4) Cotter pin (52A)

(b) Apply grease to and install these parts to connect the rod end of the lock actuator to the aft lock link (View A-A, Fig. 403):

1) Pin (43)

2) Washers (42, 44 and 45)

3) Nut (46)

4) Cotter pin (46A)

CAUTION: WHEN YOU INSTALL THE LOWER DRAG STRUT, MAKE SURE THAT THE HEAD OF THE DRAG BRACE-TO-UNIVERSAL CONNECTING PIN IS FACING UP. IF THE PIN IS NOT INSTALLED CORRECTLY, DAMAGE CAN OCCUR TO THE OUTER CYLINDER OF THE SHOCK STRUT WHEN THE NOSE LANDING GEAR RETRACTS.

(17) Apply grease to and install these parts to connect the universal (33) to the shock strut (View D-D, Fig. 402):

(a) Pin (27)

(b) Washers (28 and 32)

(c) Nuts (29 and 30)

1) Tighten the nut to 60-80 pound-feet. Loosen to the nearest lock position to install the lockbolt.

(d) Lockbolt (31)

(e) Cotter pin

(18) Apply grease to and install these parts to connect the lower drag strut (26) to the forward lock link and the upper drag strut (View C-C, Fig. 402):

(a) Apex pin (19)

(b) Washers (23 and 25)

(c) Apex nut (21)

1) Tighten to a maximum of 100 pound-feet. Loosen to the nearest lock position to install the lockbolts.

(d) Nut (24)

(e) Lockbolts

(19) Install these parts to connect the piston end of the spring cartridge to the drive crank (Detail C, Fig. 402):

(a) Bolt (35)

(b) Washer (36)

(c) Nut (37)

(20) Apply grease to and install these parts to connect the rod end of the retract actuator to the upper drag strut (View B-B, Fig. 402):

(a) Lower pin (13)

(b) Washers (12, 14, 15, and 17)

(c) Lockbolt (18)

(d) Retract actuator nut (11)

1) Tighten to 60-80 pound-feet. Loosen to the nearest lock position to install the lockbolt.

(e) Nut (16)

(f) Cotter pin

(21) Apply grease to and install these parts to connect the steering pivot links to the trunnion drum (View A-A, Fig. 402):

NOTE: The movement of the bearing in the trunnion fitting after the installation is normal and acceptable.

(a) Bolts (8)

(b) Bearings (9)

(c) Washers (7)

(d) Nuts (10)

(22) Install these parts to connect the electrical adapter box to the bulkhead (Detail B, Fig. 403).

(a) Screws (38)

(b) Washers (39)

(c) Nuts (40)

(23) Connect the electrical connectors to the junction box in the wheel well for the nose landing gear (Detail B, Fig. 403).

(24) Connect the hydraulic lines to the hydraulic swivel bracket on the left trunnion pin.

(25) Lubricate the nose landing gear at the grease fittings (Ref 12-21-12).

(26) Install these parts to connect the operator struts for the aft door to the nose landing gear (Fig. 401):

(a) Bolts (4)

(b) Washers (5)

MECH | INSP

(c) Nuts (6)

(d) Cotter pins

(e) Bolts (1)

(f) Bushing (2)

(g) Nuts (3)

1) Tighten the nut to 50-80 pound-feet.

(h) Cotter pins

(27) Remove the shock strut retention strap.

(28) Let the shock strut extend.

NOTE: Make sure the shock strut is fully extended and the wheels do not touch the ground.

(29) Do this task "Adjustment of the Nose Wheel Steering System" (AMM 32-51-00/501).

G. Put the Airplane Back to Its Usual Condition

(1) Do the servicing for the hydraulic reservoir if it is necessary (Ref 12-12-01).

(2) Connect the strut inflation tool to the air valve.

(3) Inflate the shock strut with dry air or nitrogen to 200 psig.

(4) Manually close the forward doors for the nose landing gear.

(5) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the main power distribution panel, P6:

(a) 6G1, FIRE EXT APU 1

(6) Remove the DO-NOT CLOSE tags and close these circuit breakers on the overhead circuit breaker panel, P11:

(a) 11B6, LIGHTS EMER CHARGER PORTABLE

(b) 11B34, APU REMOTE FIRE IND

MECH | INSP

(c) 11B35, APU ALTN CONT

(d) 11C23, INTERPHONE CABIN SERVICE

(e) 11C25, INTERPHONE DUAL PWR CAPT OBS FLT AMPL

(f) AIRPLANES WITH THE "LANDING GEAR POSITION AIR/GND SYS 2 ALT" CIRCUIT BREAKER INSTALLED AT PANEL GRID LOCATION 11C29;
11C29, LANDING GEAR POSITION AIR/GND SYS 2 ALT

(g) 11C30, LANDING GEAR POSITION AIR/GND SYS 1

(h) 11G29, INTERPHONE DUAL PWR CAPT OBS FLT AMPL

(i) 11G30, INTERPHONE DUAL PWR F/O SEC OBS

(j) 11H32, GND CALL

(k) 11N1, LIGHTING NOSE GEAR CONT

(l) 11N3, LIGHTING LANDING NOSE GEAR L

(m) 11N4, LIGHTING LANDING NOSE GEAR R

(n) 11N8, LIGHTING TAXI

(o) 11P35, EMER CHGR OFF WING ESC L

(p) 11P36, EMER CHGR OFF WING ESC R

(q) 11U15, AIR/GND SYS 1

(r) MTH 275-276 POST-SB 32-85;
MTH 277-999;
SAS 050-149, 155-999;

11U17, TIRE PRESS IND 1

(s) 11U23 or 11U24, POSITION AIR/GND SYS 2

(7) MTH 275-276 POST-SB 32-85;
SAS 050-149, 155-999;

Remove the DO-NOT-CLOSE tag and close this circuit breaker on the APU external power panel, P34:

(a) 34M11, TIRE PRESS IND 2

MECH | INSP

(8) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the forward miscellaneous electrical equipment panel, P33:

(a) 33J4, LIGHTS NLG/WW SVCE

(9) Do the operational test of APU fire detection system (Ref 26-15-00/501).

(10) Do the test for the not compressed sensor of the nose landing gear (Ref 32-09-08/201).

(11) Do the operational test of the nose gear wheel well lights (Ref 33-31-00/201).

(12) Do the operational test of the landing lights and taxi lights (AMM 33-42-00/501).

NOTE: If you removed the landing light assembly when you overhauled the landing gear or you installed a new landing gear, then do this task: Nose Gear Landing Light/Light Beam Adjustment (AMM 33-42-01/201).

(13) Remove the downlocks on the nose and main landing gear (Ref 32-00-20).

(14) Pressurize the center hydraulic system (Ref 29-11-00).

WARNING: MAKE SURE THERE ARE NO PERSONS OR EQUIPMENT IN THE AREA WHERE THE NOSE AND MAIN LANDING GEAR AND DOORS OPERATE. THE LANDING GEAR MOVES AND THE DOOR OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(15) Do a test for the operation of the nose landing gear (Ref 32-34-00).

(16) Lower the nose of the airplane and remove the jacks (Ref 07-11-02).

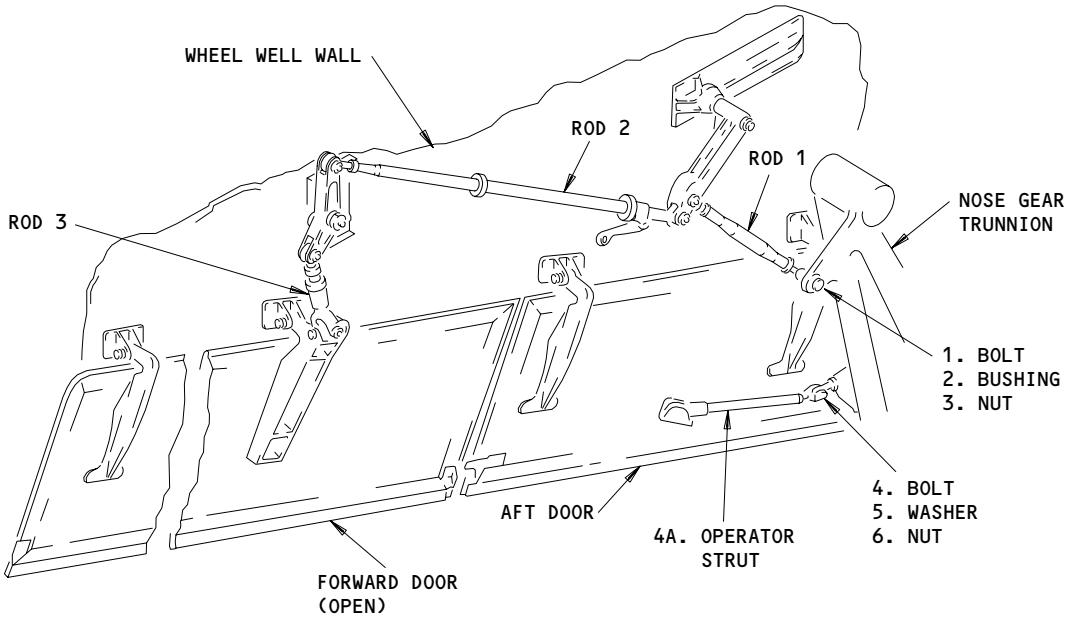
(17) MTH 275, 276 POST-SB 32-85;
MTH 277-999;
SAS 050-149, 155-999;

Do a test of the tire pressure indicating system (Ref 32-45-00).

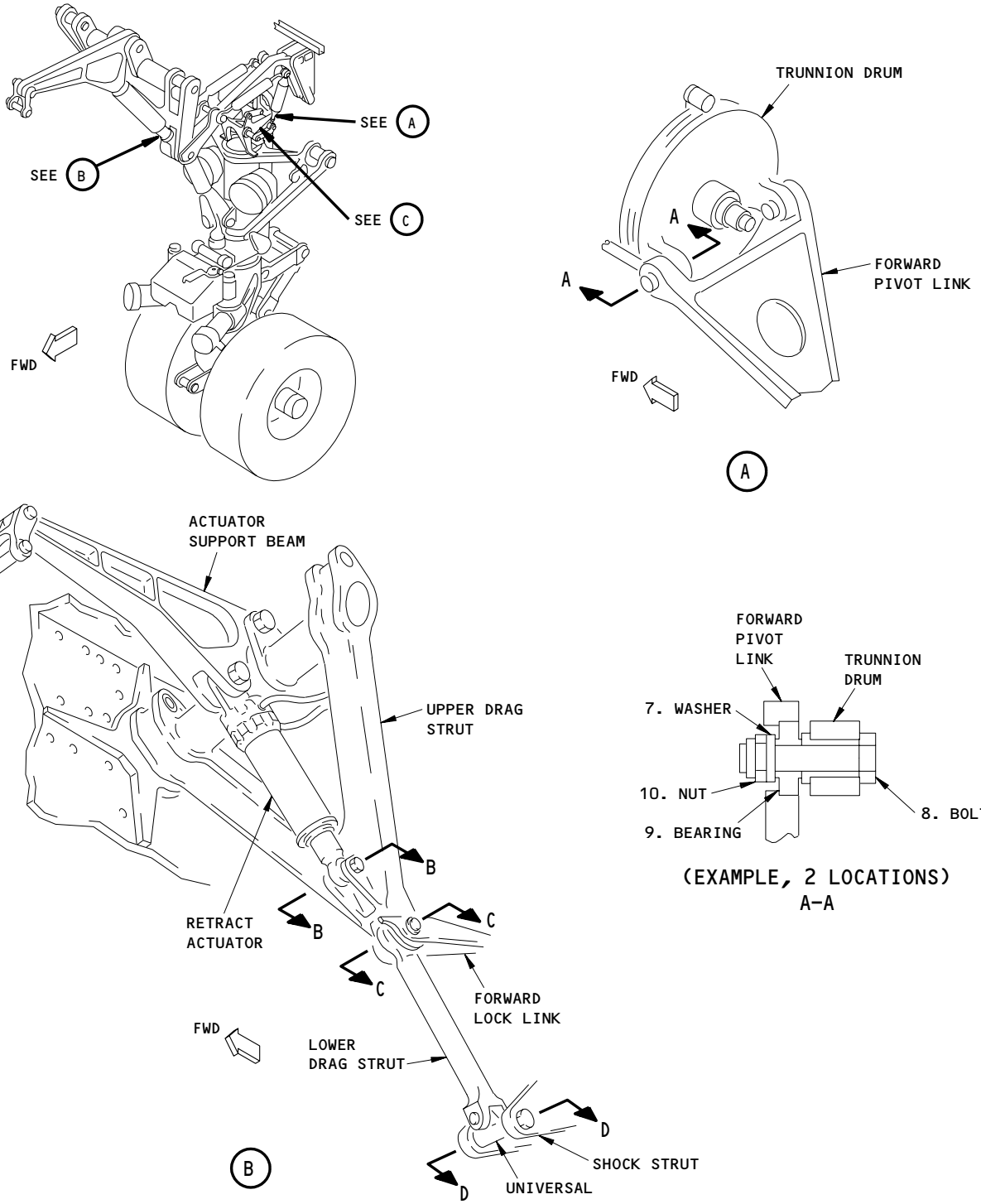
(18) Do the servicing of the shock strut for the nose landing gear (AMM 12-15-02).

MECH	INSP

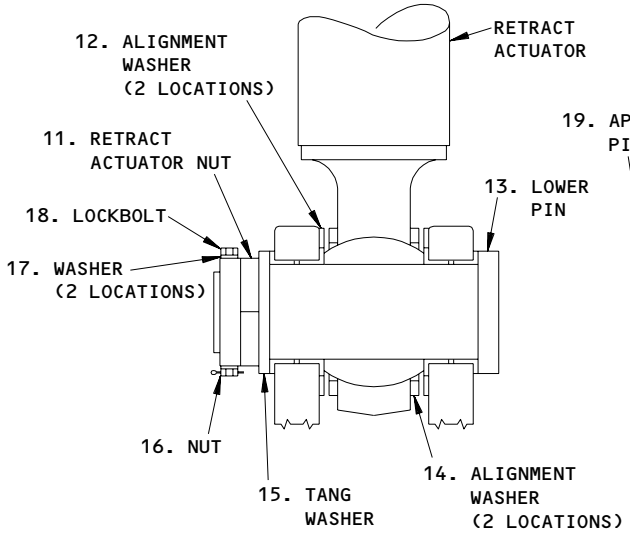
(19) Remove the hydraulic power if it is not necessary (Ref 29-11-00).



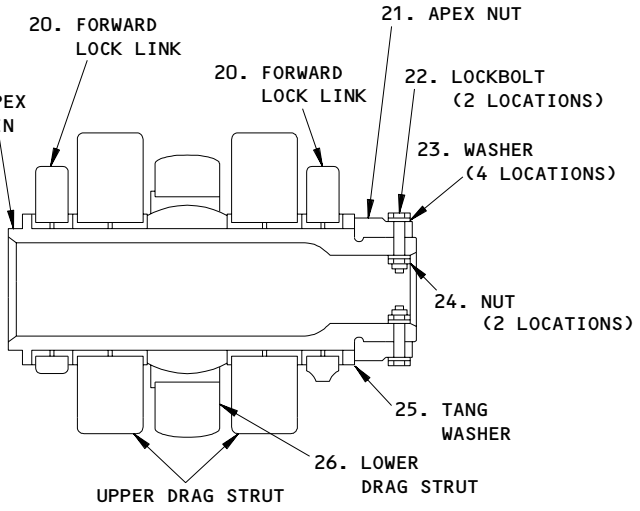
Nose Landing Gear Forward and Aft Door Operator Rod Locations
Figure 401



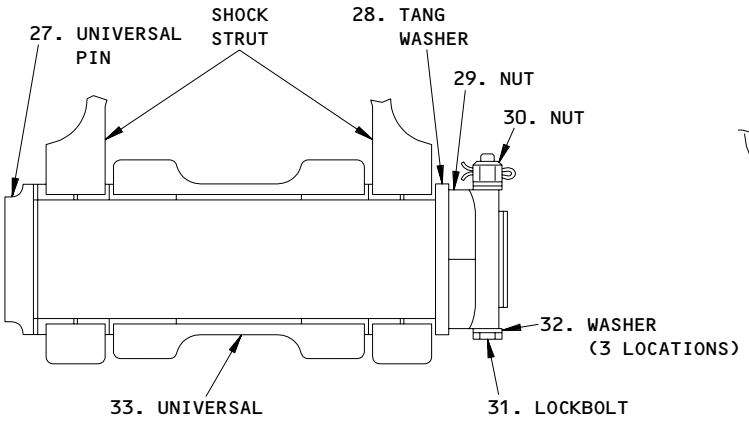
Nose Landing Gear Installation
Figure 402 (Sheet 1)



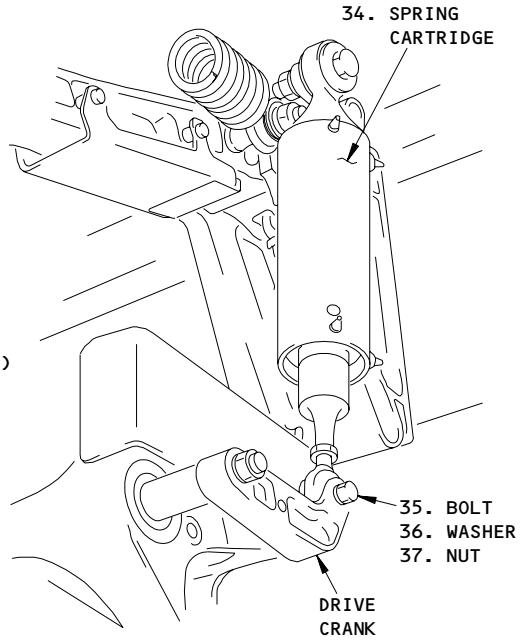
(VIEW IN THE AFT DIRECTION)
B-B



(VIEW IN THE AFT DIRECTION)
C-C

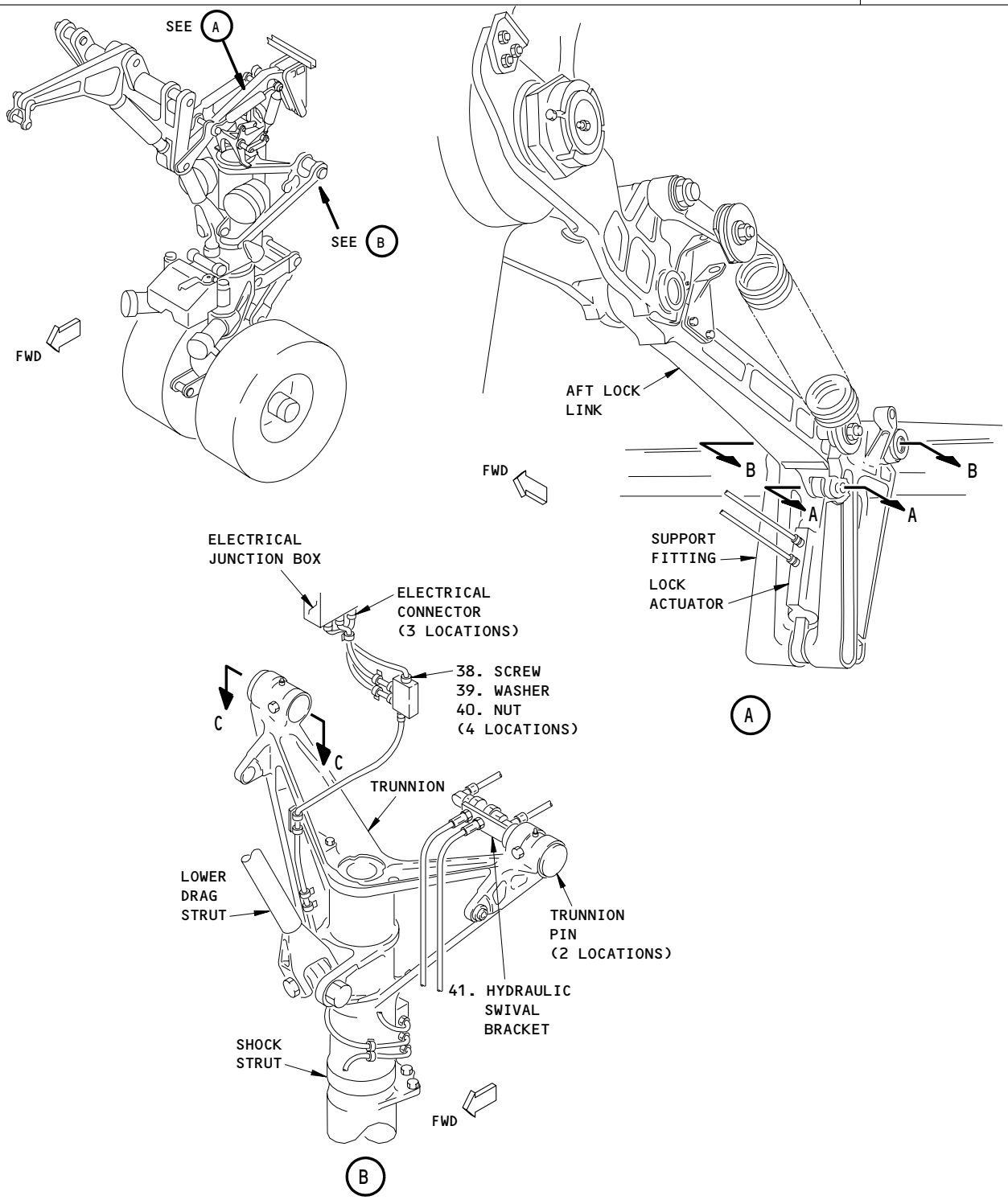


(VIEW IN THE AFT DIRECTION)
D-D

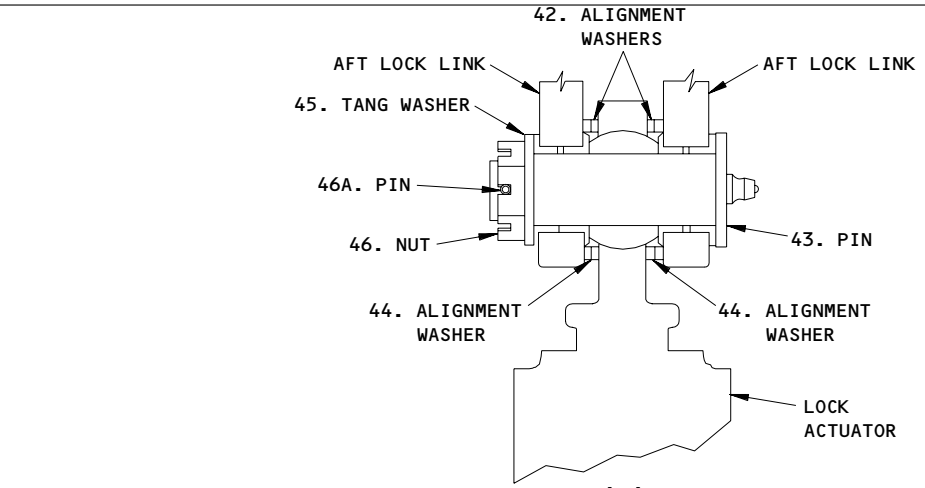


C

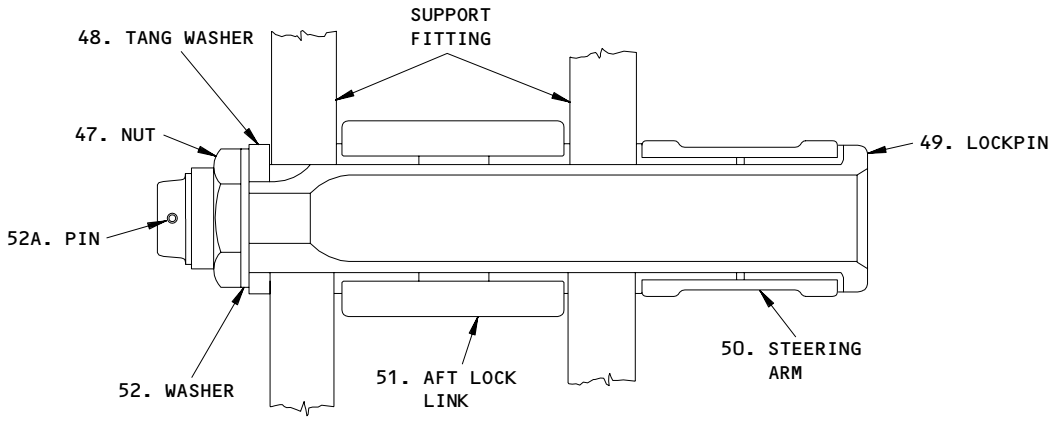
Nose Landing Gear Installation
Figure 402 (Sheet 2)



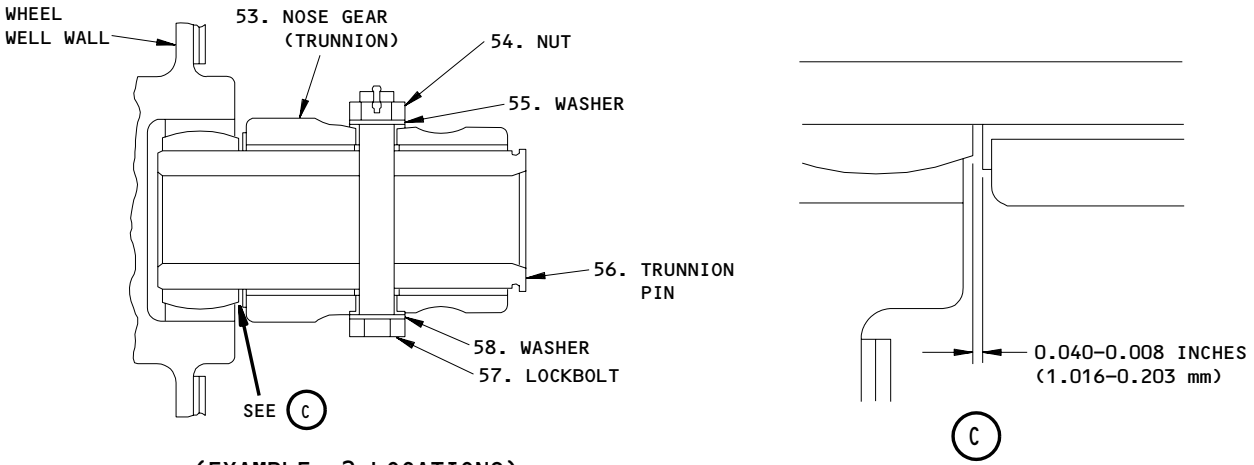
Nose Landing Gear Installation
Figure 403 (Sheet 1)



A-A

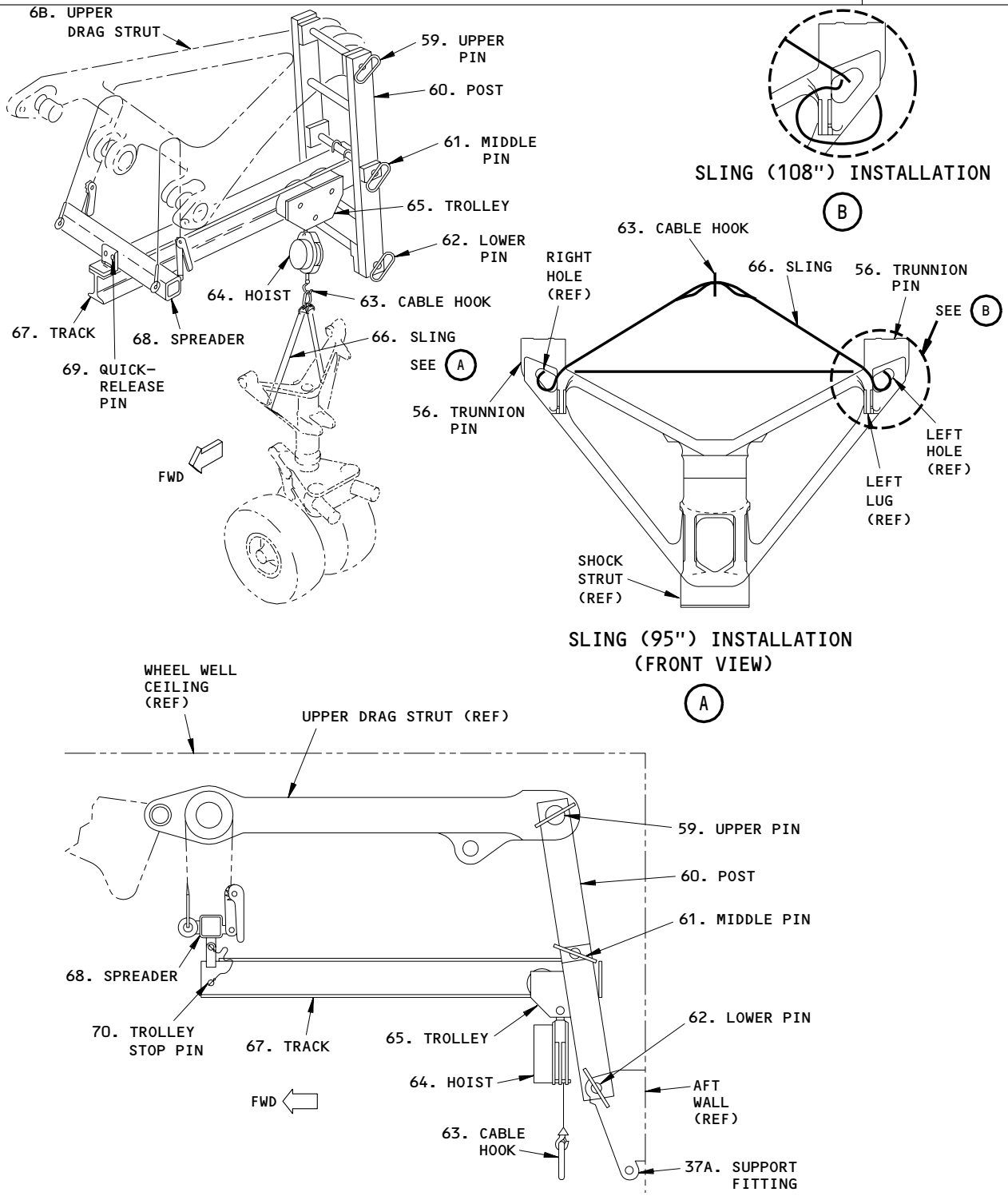


B-B



(EXAMPLE, 2 LOCATIONS)
C-C

Nose Landing Gear Installation
Figure 403 (Sheet 2)



Hoist Equipment for the Removal/Installation of the Nose Landing Gear
Figure 404

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-044-51
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL		PHASE	MPD REV	TASK CARD REVISION
AIRPL	MAIN GEAR		18000 CYC	NOTE	242XX	012	AUG 22/07

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
RESTORE	MAIN LANDING GEAR (LEFT OR RIGHT)		ALL	ALL

ZONES	ACCESS PANELS
731 741	1004

MECH	INSP	MPD ITEM NUMBER

EACH OPERATOR MUST PERFORM A RESTORATION OF EITHER THE LEFT OR RIGHT MAIN LANDING GEAR ON ONE AIRPLANE OF THE OPERATOR'S FLEET WITHIN THE INITIAL THRESHOLD INTERVAL RANGE. 32-11-01-A

INTERVAL NOTE: THE INITIAL THRESHOLD RANGE FOR THIS RESTORATION IS BETWEEN 12,000 AND 18,000 CYCLES OR 10 YEARS, WHICHEVER OCCURS FIRST. THE INSPECTION RESULTS WILL BE USED TO ESTABLISH EACH OPERATOR'S REPEAT INTERVAL.

NOTE: SERVICE LETTER 767-SL-32-55 SUMMARIZES THE RESULTS OF A SURVEY OF OPERATORS PERFORMING THE LANDING GEAR RESTORATION TASK (SL DOES NOT APPLY TO 767-400ER). THE STRUCTURAL SAFE LIFE LIMIT IS SPECIFIED IN SECTION 9 OF THE MPD.

NOTE: MRB CATEGORY 0 APPLIES TO ALL MODELS EXCEPT 767-400ER. MRB CATEGORY 8 APPLIES TO 767-400ER.

ACCESS NOTE: SPECIAL ACCESS 1004 REQUIRES OPENING OF THE MAIN LANDING GEAR DOORS AND INSTALLING SAFETY LOCKS IN ACCORDANCE WITH MAINTENANCE MANUAL PROCEDURE 32-00-15.

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-045-01-1
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	L MAIN GEAR		70000 CYC	814XX	018	DEC 22/08

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
REPLACE	LEFT MAIN LANDING GEAR		200	ALL

ZONES	ACCESS PANELS
211 731	551FT 551LT 551MT 551PT 551QB 551SB 551TB 551VB

MECH | INSP

MPD ITEM NUMBER

REPLACE THE LEFT MAIN LANDING GEAR AT MANUFACTURER'S LIFE LIMIT (CURRENTLY 70,000 CYCLES). REFER TO BOEING SERVICE LETTER 767-SL-32-92 FOR A LIST OF 767 LANDING GEAR LIFE LIMITED PARTS. 32-11-01-4A

1. Remove the Main Landing Gear

A. General

(1) There are two different procedures given to remove the main landing gear. One procedure uses jacks for the removal of the main landing gear. The other procedure uses an overhead sling to remove the main landing gear.

B. Equipment

(1) A32006-77 MLG Retract Actuator Sling

(2) A32017-1 MLG Forward Trunnion Support
Fuse Bolt Puller

(3) A32026-60 MLG Trunnion Pin Removal/Installation Equipment

(4) A32027-53 Retraction/Extension Landing Gear Actuator Pump

(5) A32028-6 Shock Strut Retention Strap
(2 straps are necessary)

(6) A32031-5 MLG Truck Positioner Turnbuckle
(Recommended)

(7) A32031-4 MLG Truck Positioner Turnbuckle
(Alternative) Make from A32031-1

(8) A32032-65 MLG Removal/Installation Sling
(A32032-39 Alternative)

(9) A32032-64 MLG Jacking Equipment
(Upgraded -52 kit that includes a
new -68 tiny collar for IGW A/Ps)

(10) A32095-1 Forward Trunnion Bearing Bolt Wrench

(11) Fishpole Hoist (Commercially available)

(12) Automotive type axle jacks (2 to 4 ton
capacity) - commercially available

C. References

(1) AMM 06-44-00/201, Wings (Major Zones 500 and 600) Access Doors and Panels

(2) AMM 07-11-01/201, Jacking Airplane

(3) AMM 27-51-00/201, Trailing Edge Flap System

(4) AMM 27-81-00/201, Leading Edge Slat System

(5) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(6) AMM 32-00-15/201, Landing Gear Door Locks

(7) AMM 32-00-20/201, Landing Gear Downlocks

(8) AMM 32-11-01/601, Main Gear

(9) AMM 32-11-03/401, Main Gear Side Brace

(10) AMM 32-11-10/401, Main Gear Drag Brace

(11) AMM 32-12-06/401, Shock Strut Door and Linkage

(12) AMM 32-12-08/401, Drag Brace Door and Linkage

(13) AMM 32-12-11/401, Trunnion Door and Linkage

(14) AMM 32-32-02/401, Main Gear Lock Actuators

(15) AMM 32-32-05/401, Main Gear Jury Strut Spring

MECH | INSP

(16) AMM 32-32-18/401, Main Gear Truck Positioner

D. Prepare to Remove the Main Landing Gear

WARNING: MAKE SURE THE DOWNLOCKS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCKS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

WARNING: OBEY THE INSTALLATION PROCEDURE FOR THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) Open the doors for the landing gear and install the door locks (AMM 32-00-15/201).

(3) Extend the trailing edge flaps to 20 units. Set the trailing edge flap system to off (AMM 27-51-00/201).

(4) Set the leading edge slat system to off (AMM 27-81-00/201).

(5) Remove the pressure from the right and the center hydraulic systems and reservoirs (AMM 29-11-00/201).

(6) Make sure that this circuit breaker on the main power distribution panel, P6, is closed:

(a) 6F4, LANDING GEAR PARKING BRAKE VLV

(7) Push the brake pedals a minimum of seven times to remove the pressure from the brake lines.

(8) Remove power from the cooling packs, open these circuit breakers on the overhead circuit breaker panel, P11, and attach DO-NOT-CLOSE tags:

(a) 11N19, RIGHT PACK AUTO PWR

(b) 11N20, RIGHT PACK AUTO CONT

(c) 11N10, LEFT PACK AUTO PWR

MECH | INSP

(d) 11N11, LEFT PACK AUTO CONT

(e) 11R21, CARGO HEAT OVERRIDE FWD

(f) 11R22, CARGO HEAT OVERRIDE AFT

(9) Open these circuit breakers and attach DO-NOT-CLOSE tags for the removal of the left or right main landing gear:

(a) AIRPLANES WITH THE "LANDING GEAR POSITION AIR/GND SYS 2 ALT" CIRCUIT BREAKER INSTALLED AT PANEL GRID LOCATION 11C29;
11C29, LANDING GEAR POSITION AIR/GND SYS 2 ALT

(b) 11C30, LANDING GEAR POSITION AIR/GND SYS 1

(c) 11C31, LANDING GEAR ANTISKID 2-6

(d) 11C32, LANDING GEAR ANTISKID 3-7

(e) 11H15, FLT CONT SHUTOFF WING LEFT

(f) 11H16, FLT CONT SHUTOFF WING CTR

(g) 11H26, FLT CONT SHUTOFF WING RIGHT

(h) 11R30, RIGHT IND LTS 3

(i) 11U12, AUTOBRKS ANTISKID TEST/IND 1

(j) 11U15, AIR/GND SYS 1

(k) 11U16, BRAKE TEMP

(l) SAS 050-149, 155-999;

11U17, TIRE PRESS IND 1

(m) 11U18, ANTISKID 1-5

(n) 11U20, LANDING GEAR LEVER LOCK

(o) 11U21, AUTOBRKS ANTISKID TEST/IND 2

(p) 767-200 AIRPLANES;

11U23, POSITION AIR/GND SYS 2

MECH | INSP

(q) 767-300 AIRPLANES;

11U24, POSITION AIR/GND SYS 2

(r) 11U27, ANTISKID 4-8

(s) Open this circuit breaker on the main power distribution panel, P6, and attach a DO-NOT-CLOSE tag:

1) 6J21, F/O SEAT

(10) MTH 275-276 WITH SB 32-85 AND MTH 277-999, SAS 050-149, 155-999;

Open this circuit breaker on the APU external power panel, P34, and install a DO-NOT-CLOSE tag:

(a) 34M11, TIRE PRESS IND 2

WARNING: CLEAR THE AREA BELOW THE WING BEFORE YOU DEFLATE THE SHOCK STRUT. IF YOU DEFLATE ONE SHOCK STRUT THE WING TIP CAN MOVE DOWN AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(11) Deflate the shock strut of the main landing gear.

(a) Remove the cap for the air valve (14) from the top of the shock strut (21).

WARNING: LOOSEN THE OUTER NUT A MAXIMUM OF TWO TURNS. AIR PRESSURE CAN BLOW THE VALVE OUT AND CAUSE INJURY TO PERSONS.

(b) Loosen the outer nut (16) a maximum of two turns.

(12) Remove the bolts (30) to disconnect the upper junction box (6) from the brackets.

(13) Disconnect the two electrical connectors (26) from the forward side of the upper junction box (6).

(14) AIRPLANES WITH GROUND STRAP;
Disconnect the ground strap (27) at the junction box (6).

(15) Attach the wire harness (31) for the upper junction box to the trunnion (Fig. 402).

MECH	INSP

(16) Disconnect the 6 hydraulic lines from the outboard side of the upper shock strut.

(a) Put a cap on the hydraulic ports.

(b) Put a plug on the lines.

(c) Put a tag on the lines to make installation easier.

(d) Hold the lines out of the work area.

(17) Remove the truck positioner (AMM 32-32-18/401).

(18) Install the turnbuckle (118) for the truck positioner (Fig. 404).

(a) Put one of the rod ends of the turnbuckle (118) into a bracket for the truck positioner (121).

(b) Install the retaining pin (119) for the turnbuckle.

(c) Adjust the turnbuckle (118) until the other rod end attaches into the other bracket for the truck positioner (121).

(d) Install the other retaining pin for the turnbuckle (119).

(19) Disconnect the drag brace door (5) from the drag brace (AMM 32-12-08/401).

(20) Hold the door (5) out of the work area (Fig. 401).

(21) Remove the shock strut door (4) and the linkage (AMM 32-12-06/401).

(22) Remove the trunnion door (3) and the linkage from the shock strut (21) (AMM 32-12-11/401).

(23) Remove the applicable access panels (Table 401) (AMM 06-44-00/201):

TABLE 401	
WHEN YOU REMOVE THE LEFT GEAR	WHEN YOU REMOVE THE RIGHT GEAR
551FT	651FT
551LT	651LT
551MT	651MT
551QB	651QB
551PT	651PT
551SB	651SB
551TB	651TB

(24) Remove the bolts (8, 12, and 22) to disconnect the chord (24).

(25) Remove the screws (17) to disconnect the seal (20).

(26) Remove the seal (20).

(27) If you use the jack assembly (131) do the steps that follow (Fig. 404):

NOTE: The jack assembly is part of the main landing gear removal/installation equipment.

WARNING: MAKE SURE THE STRUT IS FULLY DEPRESSURIZED BEFORE JACKING. FAILURE TO DO THIS CAN LET THE STRUT MOVE UNDER PRESSURE AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) Install the jack equipment and lift the airplane until the wheels are above the ground 6.0 inches (AMM 07-11-01/201).

(b) Install the axle jacks under the truck assembly (120) for the main landing gear.

(c) Lift the truck assembly (120) until you can put the cart assembly under the truck wheels.

(d) Put the cart assembly under the truck wheels and remove the jacks.

(e) Install the jack assembly (131) on the torsion link for the shock strut (128) (Fig. 404).

(f) Disconnect and remove the bolt which holds the upper torsion link to the shock strut.

1) Align the holes in the upper scissor of the jack assembly (131) and the outer cylinder of the shock strut (21).

2) Install the upper retention bolt (129).

3) Disconnect and remove the bolt which hold the lower torsion link to the shock strut.

4) Align the holes in the lower scissor of the jack assembly (131) and the inner cylinder of the shock strut (130).

5) Install the lower retention bolt (132).

(g) Lift the airplane 20 inches more.

(h) Use the jack assembly (131) to keep the wheels on the cart assembly.

(i) Do not let the shock strut fully extend.

(j) Lift the outer cylinder (21) with the jack assembly to remove the weight from the forward and aft trunnion bearings (1, 2).

(28) If you use the sling (138), do the steps that follow:

NOTE: The sling is part of the main landing gear removal/installation equipment.

(a) Install the two retention straps (116) on the torsion link of the shock strut (128) (Fig. 404).

1) Make a loop with the retention straps (116) through the upper and lower hinges of the torsion link (128). Use one strap on each side of the torsion link.

2) Move the end of each strap (116) through the slot in the buckle shaft (117).

3) Operate the buckle until the strap (116) is tight.

NOTE: Make sure each strap has a minimum of two loops around the shaft of the buckle before you apply a load.

(b) Lift the airplane until the wheels are 24 inches above the cart assembly (AMM 07-11-01/201).

(c) Make sure the retention straps (116) do not move.

(d) Install the sling (138) (Fig. 405).

1) Put the sling (138) around the outer cylinder (21).

a) Put the sling around the upper inboard area of the strut.

b) Move the two ends of the sling outboard of the trunnion to the hoist point.

2) Install the bolt to hold both ends of the sling (138) to the hoist point.

3) Attach the sling (138) and the hoist point to the overhead hoist.

(29) Disconnect the retract actuator (97) from the trunnion arm of the main landing gear (96) (Fig. 401, View A-A).

(a) Install the sling equipment for the retract actuator on the retract actuator (97) (Fig. 405, Detail A).

1) Put the support structure (139) on the wing structure.

2) Put the actuator clamp (134) on the retract actuator (97).

(b) Tighten the clamp nut (136) until the actuator clamp (134) is tight against the retract actuator (97).

1) Connect the cable of the fishpole hoist (137) to the support structure (139) and the clamp arm (133).

2) Tighten the cable (137).

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(c) Do the steps that follow to disconnect the rod end of the retract actuator (97) from the trunnion arm (96).

1) Remove the antirotation bolt (93).

2) Remove the nut (94) and the spline washer (95).

3) Remove the bolt (98).

4) Use the sling equipment for the retract actuator to lift the retract actuator (97) away from the trunnion arm (96).

(30) Remove the lock actuators for the drag brace and the side brace (AMM 32-32-02/401).

(31) Remove the lock springs for the side brace (AMM 32-32-03/401).

(32) Remove the jury strut springs (AMM 32-32-05/401).

WARNING: BE CAREFUL WHEN YOU PUSH UP ON THE JURY STRUT. THE JURY STRUT WILL MOVE SUDDENLY WHEN RELEASED AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(33) Push up on the jury strut to release it from the overcenter position.

(34) Disconnect the side brace and the lock link from the shock strut (AMM 32-11-03/401).

(35) Disconnect the drag brace and the jury strut from the shock strut (AMM 32-11-10/401).

(36) Remove the bolts (30) to disconnect the upper junction box (6) from the support bracket for the upper junction box (45) (Fig. 402).

(37) Remove the bolts (34 and 40) to disconnect the support bracket for the upper junction box (45) from the lower strap (33) (Fig. 402).

(38) Remove the bolts (51, 56, 61) to disconnect the lower strap (33) (Fig. 402, Detail A).

E. Remove the Main Landing Gear

(1) Lift the main landing gear until there is no weight on the forward and aft trunnion bearings (1, 2).

(2) Remove the lockbolts (86) from the clamp nut (84) (Fig. 403, Detail A).

(3) Remove the clamp nut (84), the splined washer (83), the lock ring (88), and the adjusting collar (87).

(4) Remove the crossbolt (75) from the aft trunnion (90).

(5) Do the steps that follow to remove the trunnion pin (85).

(a) Install the removal and installation equipment for the trunnion pin on the trunnion pin (85).

NOTE: If you do not install the stop assembly for the trunnion pin, the pin can go too far into the trunnion.

(b) Install the slide hammer on the puller assembly.

(c) Use the slide hammer to move the trunnion pin (85) out of the trunnion bearing (2) and into the trunnion (90). The end of the trunnion pin (85) must be aligned with the aft trunnion (90).

(d) Disconnect the slide hammer and the puller assembly from the trunnion pin (85).

(6) Move the aft end of the trunnion (90) approximately 15 degrees inboard.

(7) Remove the 2 retaining pins (107) from each of the 4 fuse pins (110).

(8) Use the bearing-fuse-bolt (pin) puller (123) to remove the fuse pins (110) from the housing assembly (66) and the supports (114, 115).

(a) Recommended procedure

1) Put the puller assembly (123) over the outer end of the fuse pin (110). The bolt will come out through the fuse pin (110).

2) Install the stop on the bolt of the puller assembly (123).

3) Install the spring pin into the stop to lock the stop into position on the bolt.

4) Put the wrench on the nut of the puller assembly.

5) Turn the nut on the fuse bolt until the bolt (110) is removed.

(b) Optional procedure.

1) Use this procedure if the hydraulic lines cause a problem with the installation of the puller assembly.

2) Put the wrenching surface of the jack screw (127) thru the fuse bolt (110) last.

3) Turn the plug (125) on the jack screw (127) until there is sufficient clearance to install the pad (126) on the jack screw.

4) Install the pad (126).

5) Use a wrench at the wrenching surface to turn the jack screw (127) counterclockwise. This will push the fuse bolt (110) out of the bearing housing.

6) Remove the jack screw assembly.

(9) Do these steps if you use jack equipment:

(a) Lower the shock strut until the shock strut is fully compressed.

(b) The housing assembly (66) and the plates (111, 113) will move out of the rear spar supports as the shock strut is lowered.

NOTE: Keep the shims (112) to make the new main landing gear installation easier.

(c) Remove the axle jacks and the adapters.

(d) Remove the jacking equipment (131) from the shock strut (21, 130).

(e) Install the retention straps (116) on the shock strut (21).

1) Make a loop with the retention straps (116) through the upper and lower hinges of the torsion link (128). Use one strap on each side of the torsion link.

2) Move the end of each strap through the slot in the buckle shaft (117).

3) Operate the buckle until the strap (116) is tight.

NOTE: Make sure each strap has a minimum of two loops around the shaft of the buckle before you apply a load.

(10) If you use the sling (138), do the steps that follow:

(a) Lower the shock strut (21) with the sling (138) on the wheel carts. The housing assembly (66) and the plates (111, 113) will move out of the rear spar supports when the main landing gear is lowered.

NOTE: Keep the shims (112) to make the main landing gear installation easier.

(b) Remove the sling (138).

(11) Remove the assembly for the forward trunnion bearing (1) from the main landing gear (Fig. 402, View B-B).

(a) Remove the bolts (72).

(b) Remove the retaining bolt (73).

(c) Move the assembly for the forward trunnion bearing (1) off of the forward trunnion (32).

(d) Examine the forward trunnion bearing (AMM 32-11-01/601).

(e) If you replace the forward trunnion bearings, do the steps that follow:

1) Remove the nut (67).

2) Remove the inner and outer races (69, 70) with the housing (68) from the housing assembly (66).

3) Move the bearings (69, 70) out of the housing (68).

4) Keep these parts for installation on the new main landing gear.

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(12) Examine the aft trunnion bearings (AMM 32-11-01/601).

(13) If you replace the aft trunnion bearings (2), do the steps that follow (Fig. 403, View A-A):

(a) Remove the bolts (81) to disconnect the lock tab (80) from the lockplate (79).

(b) Remove the nut (89) from the housing for the aft bearing.

(c) Move the bearing inner and outer races (77, 78) forward, out of the support structure.

(14) Put the main landing gear on wheel carts and move away from the work area.

2. Install the Main Landing Gear (Fig. 401, Fig. 402, Fig. 403)

NOTE: Wear Limits for the main landing gear trunnions are supplied in AMM 32-11-01/601.

A. General

(1) There are two different procedures given to install the main landing gear. One procedure uses jacks to install the main landing gear. The other procedure uses an overhead sling to install the main landing gear.

B. Equipment

(1) A32006-77 MLG Retract Actuator Sling

(2) A32026-60 MLG Trunnion Pin Removal/Installation Equipment

(3) A32027-53 MLG Retraction/Extension Actuator Pump

(4) A32028-6 Shock Strut Retention Strap (2 straps are necessary)

(5) A32031-5 MLG Truck Positioner Turnbuckle (Recommended)

(6) A32031-4 MLG Truck Positioner Turnbuckle (Alternative) Make from A32031-1

(7) A32032-65 MLG Removal/Installation Sling (A32032-39 Alternative)

(8) A32032-64 MLG Jacking Equipment (Upgraded -52 kit that includes a new -68 tiny collar for IGW A/Ps)

(9) A32045-12, -34 Spanner Wrench

(10) A32095-1 Forward Trunnion Bearing Bolt Wrench

(11) Fishpole Hoist (Commercially available)

(12) Automotive type axle jacks (2 to 4 ton capacity) - commercially available

C. Consumable Materials

(1) AOO247 Sealant, Chromate - BMS 5-95

(2) DOO633 Grease - BMS 3-33 (Recommended)

(3) DOOO13 Grease - MIL-G-23827 (Alternative)

(4) G5O136 Corrosion Inhibiting Compound - BMS 3-38

D. Parts

AMM		NOMENCLATURE	AIPC		
FIG	ITEM		SUBJECT	FIG	ITEM
401 Thru 403	1A 2A	Main Landing Gear Wing Structure	32-00-00 57-00-00	01 01	1 1

E. References

(1) AMM 06-44-00/201, Wings (Major Zones 500 and 600) Access Doors and Panels

(2) AMM 07-11-01/201, Jacking Airplane

(3) AMM 12-15-01/301, Main Gear Shock Strut

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(4) AMM 12-21-14/301, Main Gear and Actuating Mechanisms

(5) AMM 20-10-23/401, Standard Practices, Lockwire

(6) AMM 27-51-00/201, Trailing Edge Flap System

(7) AMM 27-62-00/501, Auto-Speedbrake Control System

(8) AMM 27-81-00/201, Leading Edge Slat System

(9) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(10) AMM 32-00-15/201, Landing Gear Door Locks

(11) AMM 32-00-20/201, Landing Gear Downlocks

(12) AMM 32-09-07/201, Main Gear Tilt Sensors

(13) AMM 32-11-01/601, Main Gear

(14) AMM 32-11-03/401, Main Gear Side Brace

(15) AMM 32-12-00/501, Main Landing Gear Doors

(16) AMM 32-12-06/401, Shock Strut Door and Linkage

(17) AMM 32-12-08/401, Drag Brace Door and Linkage

(18) AMM 32-12-11/401, Trunnion Door and Linkage

(19) AMM 32-32-00/501, Main Gear Extension and Retraction

(20) AMM 32-32-02/401, Main Gear Lock Actuators

(21) AMM 32-32-03/401, Main Gear Side Brace Lock Spring

(22) AMM 32-32-18/401, Main Gear Truck Positioner

(23) AMM 32-41-00/201, Hydraulic Brake System

(24) AMM 32-42-00/501, Antiskid/Autobrake System

(25) MTH 275-276 WITH SB 32-85 AND MTH 277-999, SAS 050-149, 155-999;

(26) AMM 32-46-00/501, Brake Temperature Monitoring System

(27) AMM 32-61-02/201, Main Gear Proximity Sensor

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F. Install the Main Landing Gear

(1) Make sure the turnbuckle (118) for the truck positioner is installed on the replacement main landing gear (Fig. 404).

(2) Install the forward trunnion bearing (1) on the new main landing gear (Fig. 402, View B-B).

(a) Apply grease to the outer race (69). Butter lubricate the bushing faces and the inside diameter of the inner race (70) with grease. Apply a thin layer of corrosion inhibiting compound to the full length of the inside diameter of the housing (68). Make sure you fill all gaps and fillet radius on the housing. Apply a thin layer of compound on the retaining bolt (73) to cover the threads and the outside diameter below the flange, to include the adjacent fillet radius and the flange face. Fill all gaps and fillet radius. Wipe off excess grease and compound after installation of the parts.

(b) If you install new inner and outer races (69, 70) do the steps that follow:

1) Move the inner and outer races (69, 70) into the housing (68).

2) Put the inner (70) and outer races (69, 70) with the housing (68) into the housing assembly (66).

NOTE: The grease fittings on the housing (68) must be on the inboard side of the trunnion (32).

3) Use the spanner wrench to install the nut (67).

a) Tighten the nut (67) to 95-120 pound-feet.

4) Install a lockwire on the nut.

(3) FORWARD TRUNNION WITHOUT SHEAR PIN;
To install the housing assembly (66) on the forward trunnion (32), Do the steps that follow (Fig. 402, View B-B):

(a) Apply a thin layer of compound on the inside diameter and the end part of the outside diameter of the trunnion (32). Make sure you apply it to the threads and thread reliefs.

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(b) Put the forward trunnion bearing (1) on the forward trunnion. Use a grease pencil to put a mark on the forward trunnion (32) at the flange of the housing (68), to show if the bearing moves off the trunnion during installation.

(c) Apply a thin layer of compound to all the surfaces of the retaining ring (65). Include the four notches and the inside diameter of the six bolt holes.

CAUTION: MAKE SURE THE RETAINING RING TEETH ENGAGE WITH THE SLOTS OF THE HOUSING ASSEMBLY. IF THE RETAINING RING (65) IS NOT ENGAGED WITH THE HOUSING THE RETAINING BOLT WILL TURN AND BACK OUT OF THE FORWARD TRUNNION THREADS.

(d) Install the retaining ring (65).

(e) Install the retaining bolt (73).

CAUTION: MAKE SURE THE FORWARD BEARING HAS NOT MOVED OFF THE TRUNNION DURING INSTALLATION. IF THE BEARING HOUSING HAS MOVED DURING INSTALLATION, THIS CAN CAUSE DAMAGE TO THE HOUSING AND STRUCTURE WHEN THE LANDING GEAR IS RETRACTED.

(f) Use the bolt wrench for the forward trunnion bearing to tighten the retaining bolt (73) to 15-20 pound-feet. Loosen to align the lockbolts.

(g) Measure inner race/housing bushing gaps "A" and "B".

(h) If the sum of gap "A" and gap "B" is greater then 0.250 inch, then do the steps to install the retaining ring again.

NOTE: The retaining ring is not fully seated with the housing if the gap is greater then 0.250 inch.

(i) Apply a thin layer of compound to the bolts (72) and the washers (71).

(j) Install the bolts (72) and washers (71). Wipe off the excess compound after installation.

(k) Safety wire the bolts (72).

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(4) FORWARD TRUNNION WITH SHEAR PIN;
To install the housing assembly (66) on the forward trunnion (32), Do the steps that follow (Fig. 402, View B-B):

(a) Apply a thin layer of compound (BMS 3-38) to the threads, thread reliefs, bushing surfaces and fay surfaces of the pin assembly (73A), splined washer (65), retaining nut (73), washer (71) bolt (72) and the bushing of the housing (68).

NOTE: Make sure that you apply sufficient compound to fill the gaps between the assembled parts.

(b) Apply a layer of compound (MIL-C-11796 Class3) on the last 0.50 inch of the inner circumference of the forward trunnion bushing.

NOTE: Make sure that you apply sufficient compound so that the compound forms a fillet seal when the pin assembly (73A) is installed.

(c) Put the pin assembly (73A) in the forward trunnion (32).

(d) Apply a thin layer of compound (BMS 3-38) to all surfaces of the shear pin (68A).

(e) Install the shear pin (68A) in the forward trunnion (32) and pin assembly (73A).

(f) Fill the inner diameter of the shear pin (68A) with compound (BMS 3-38) until the compound is faired to the outer surface of the forward trunnion (32).

(g) Install the splined washer (65) on the housing (68).

(h) Tighten the splined washer (65) to 10-20 pound-feet.

(i) Move the housing assembly (66) and housing (68) into position on the forward trunnion (32) on the inboard or bottom side of the trunnion.

(j) Install the retaining nut (73).

(k) Tighten the retaining nut (73) to 10-20 pound-feet.

NOTE: Loosen the nut, if necessary, to align with the holes of the splined washer (65).

(l) Install the washers (71) and bolts (72).

(m) Safety wire the bolts (72).

(n) Remove the excess compound around the circumference of the aft end of the housing (68).

(o) Apply a continuous bead of sealant (BMS 5-95) to make a fillet seal between the aft end of the housing (68) and the forward trunnion (32).

(5) To install the new aft trunnion bearings (2), do the steps that follow (Fig. 403, View A-A):

(a) Put the inner and outer races (77, 78) into the support structure.

(b) If it is not installed, install the lockplate (79) with the bolts, bushings, nuts, and washers.

(c) Use the spanner wrench to tighten the nut (89) to 100-130 pound-feet.

(d) Loosen the nut (89) to install the lock tab (80).

(e) Install the bolts (81) and the washers (82) to connect the lock tab (80) to the lockplate (79).

(f) Install a lockwire.

(6) Move the main landing gear into the wheel well and put in the approximate position.

(7) If you use the jack assembly (131) (Fig. 404), do the steps that follow:

(a) Remove the retention straps (116) from the shock strut.

(b) Install the jack assembly (131) on the torsion link (128).

1) Remove the bolt that holds the torsion link (128) to the shock strut.

2) Align the bolt hole of the scissor for the jack assembly (131) with the bolt hole for the shock strut (21).

3) Install the bolt (129).

4) Tighten the bolt.

5) Disconnect and remove the bolt which holds the lower torsion link (128) to the shock strut (130).

6) Align the bolt hole for the lower jack scissor assembly (131) with the bolt hole for the shock strut (130).

7) Install the bolt (132).

8) Tighten the bolt.

(c) Put two automotive type jacks with adapters under the truck axles.

(d) Lift the truck until the wheels are above the ground.

(e) Put the wheel carts under the wheels.

(f) Lower the truck and remove the axle jacks and adapters.

(8) If you use the overhead sling (138), make sure the shock strut retention straps (116) are installed.

(a) Put the sling (138) around the shock strut (21) from the outboard side.

(b) Connect both ends of the sling to the overhead hoist (Fig. 405).

(c) Install the bolt to hold both ends of the sling (138) to the hoist point.

(d) Attach the sling (138) hoist point to the overhead hoist.

(9) Turn the aft end of the trunnion 15 degrees inboard to permit clearance for the main landing gear from the airplane structure.

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(10) Apply sealant between the bearing plates (111 and 113) and the supports (114, 115).

(11) Apply grease between the shims (112) and the inboard support (114) (Fig. 402, View A-A).

NOTE: You can use the shims from the removed main landing gear to make it easier to get the correct clearance (View A-A).

(12) Lift the outer cylinder (21) while you put the housing assembly (66), the plates (111 and 113), and the shims (112) into the support for the rear spar (Fig. 402, View A-A).

WARNING: INSTALL THE CORRECT FUSE PINS ONLY. MAKE SURE THAT YOU INSTALL THE SAME TYPE OF FUSE PIN THAT YOU REMOVED. THE INCORRECT FUSE PIN CAN CAUSE DANGEROUS CONDITIONS.

(13) Apply grease to the fuse pins (110).

(14) Install these parts to connect the housing assembly (66) to the inboard and outboard supports (114, 115) (Fig. 402, View A-A):

(a) Fuse pins (110).

(b) Retaining pins (107).

(c) Washers (108)

(15) Install the lockwire to the retaining pins (107) (Fig. 402).

NOTE: Lockwire installtion can be found: AMM 20-10-23/401.

(16) Turn the aft end of the trunnion outboard to align the trunnion with the aft bearing (2).

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(17) Apply a thin layer of BMS 3-38 Corrosion Inhibiting Compound to the outside diameter of the trunnion pin (85). Make sure it covers approximately 8.5 inches from the large (forward) end of the pin.

NOTE: If the compound makes it difficult for you to install the trunnion pin, you can apply a thin layer of grease (BMS 3-33) on the trunnion pin. After installation you will then need to lubricate the pin with compound.

(18) Use the trunnion pin equipment to pull the trunnion pin (85) from trunnion (90) through the aft bearing (2) (Fig. 403).

(19) Apply a thin layer of BMS 3-38 Corrosion Inhibiting Compound to the shank, threads and thread relief of the cross bolt (75), and to the bushing faces and faces of the washers (74 and 92).

(20) Install the crossbolt (75) for the trunnion pin, the washers (74 and 92), and the nut (91). Torque the nut (91) to 90-120 pound-feet.

(21) Install the cotter pin (91A).

(22) If you used grease on the trunnion pin (85) then lubricate the aft trunnion pin with compound (BMS 3-38) at the lube fitting (AMM 12-21-14/301).

(23) Remove the excess Corrosion Inhibiting Compound from the aft trunnion area.

(24) Adjust the aft bearing.

(a) Measure the dimension A between the shoulder (85) of the trunnion pin and the face of the bearing (78). Write down the dimension for later use.

(b) Turn the adjusting collar (87) on the trunnion pin (85) until the collar (87) touches the shoulder (85) of the trunnion pin.

NOTE: You can use a strap wrench if necessary.

(c) Measure the dimension B between the bearing face and the end of the adjusting collar. If the dimension A plus the dimension B is greater than 2.75 inches, the adjusting collar (87) is not correctly installed. Repeat the step above to install the adjusting collar (87).

1) If you cannot install the adjusting collar (87) correctly, remove the dry lubricant and use the procedure in SB 32-38.

(d) Move the lock ring (88) over the splines on the adjusting collar (87). Make sure the lugs in the lock ring (88) engage the slots in the bearing (78).

NOTE: It is recommended that the grease fitting on the lock ring (88) point outboard to permit the easiest access for lubrication.

(e) Install the washer (83) and the clamp nut (84).

(f) Tighten the nut (84) to 10-20 pound-feet. Loosen the nut to align the locking holes. Get a clearance of 0.003-0.010 inches.

(g) Fill all holes with grease.

NOTE: The clearance between the washer (83) and the lockring (88) is for the adjustment (Fig. 403, View A-A). After the main landing gear is operated and/or the jacks are removed a clearance of 0.00-0.05 inches is permitted.

(h) Install the lockbolts (86).

(i) Install the lockwires on the the lockbolts (86).

(25) Install these parts to connect the outboard end of the lower strap (33) to the housing assembly (Fig. 402, Detail A):

(a) Bolts (61)

(b) Bushings (62)

(c) Washers (63)

(d) Nuts (64)

(26) Install these parts to connect the rod fitting, the lower strap (33) and the support bracket (45) to the housing assembly (66):

(a) Bolts (34, 40)

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(b) Washers (35, 38, 41, 43)

(c) Bushings (37, 42)

(d) Nuts (39, 44)

(27) Do these steps to connect the upper junction box (6) to the brackets:

(a) Clean the faying surfaces.

(b) Install the bolts (30) to connect the upper junction box (6) to the brackets.

(c) Bond, and apply a fillet seal between the junction box (6) and the brackets (SWPM 20-20-00).

(d) Measure the resistance to make sure that the resistance across the interface is a maximum of 0.010 ohms.

(28) AIRPLANES WITH GROUND STRAP;
Do these steps to connect the ground strap (27) to the junction box (6):

(a) Connect the ground strap to the grounding stud on the junction box (6) (SWPM 20-20-00).

(b) Measure the resistance to make sure that the maximum resistance between ground studs is 0.005 ohm.

(29) Connect the electrical connectors to the upper junction box (6).

(30) Connect the six hydraulic lines to the upper shock strut on the outboard side of the shock strut.

(31) Install these parts to connect the door seal (20) and the retainer (19) of the shock strut to the support beam (Fig. 401):

(a) Screws (17)

(b) Washers (18)

(32) Install the parts to connect the chord (24) to the outboard structure (Fig. 401, Detail B):

(a) Bolts (22)

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(b) Nuts (23)

(33) Install these parts to connect the chord (24) to the inboard bracket:

(a) Clip (11)

(b) Splice Strap (7)

(c) Bolts (8, 12)

(d) Collars (9, 13)

(34) If you use the jack equipment, do these steps:

(a) Lower the truck until the wheels touch the ground.

(b) Remove the automotive type jacks and the adapters from below the truck axles.

(35) Use the jack equipment (131) to lower the outer cylinder (21).

(36) Remove the jacking equipment (131) from the shock strut (21, 130) (Fig. 404).

(a) Remove the bolts (129, 132) which hold the jack assembly (131) to the shock strut (21, 130).

(b) Install the bolts to hold the torsion link (128) to the shock strut (21, 130) and tighten.

(37) If you use the overhead sling (138), do these steps:

(a) Remove the overhead sling (138).

(b) Remove the shock strut retention straps (116).

G. Put the Airplane Back to Its Usual Condition (Fig. 401)

(1) Do the servicing of the shock strut for the main landing gear (AMM 12-15-01/301).

(2) Lift the airplane to extend the shock strut fully (AMM 07-11-01/201).

(3) Connect the drag brace and the jury strut to the shock strut (AMM 32-11-10/401).

(4) Connect the side brace and the lock link to the shock strut (AMM 32-11-03/401).

(5) Install the jury strut springs (AMM 32-32-05/401) and the side brace springs (AMM 32-32-03/401).

(6) Connect the rod end of the retract actuator to the main landing gear trunnion (Fig. 401, View A-A).

(a) Install the actuator sling equipment for the retract actuator on the retract actuator (97) (Fig. 405, Detail A).

1) Put the support structure (139) on the wing structure.

2) Put the actuator clamp (134) on the retract actuator (97).

(b) Tighten the clamp nut (136) until the actuator clamp (134) is tight against the retract actuator (97).

1) Connect the cable of the fishpole hoist (137) to the support structure (139) and the clamp arm (133).

2) Tighten the cable (137).

(c) Apply grease to the bolt (98), the nut (94), and the antirotation bolt (93) before installation.

(d) Install the new packings (100) on the lube retainer (99).

(e) Use the actuator sling equipment to lower the actuator to align the rod end with the lugs on the trunnion.

NOTE: Put the rod end of the actuator in position so the lube fittings are above the center line of the actuator. This will make sure you can get access to the fittings easily.

(f) Install the bolt (98) and the lube retainer (99) through these components in the sequnce below:

1) The actuator ring (101)

2) The antirotation washers (102, 103)

MECH | INSP

3) The retract actuator (97)

4) The spline washer (95)

5) And the nut (94).

(g) Tighten the nut (94) to 70-90 pound-feet. Loosen the nut to the subsequent lock position (Fig 401, View A-A).

(h) Install the antirotation bolt (93), the washer (105), the nut (104), and the cotter pin.

(i) Remove the tool (133, 134) and the support frame (139) from the area (Fig. 405).

(7) Install the lock actuators for the drag and side brace (AMM 32-32-02/401).

(8) Make sure the pressure is removed from the hydraulic systems (AMM 29-11-00/201).

(9) Connect the hydraulic lines to the actuators.

(10) Connect the door for the drag brace (5) to the drag brace (AMM 32-12-08/401).

(11) Install the door (4) and linkage for the shock strut (AMM 32-12-06/401).

(12) Install the door (3) and linkage for the trunnion (AMM 32-12-11/401).

(13) Remove the turnbuckle (118) for the truck positioner.

(14) Install the truck positioner (AMM 32-32-18/401).

(15) Close these circuit breakers on the overhead circuit breaker panel P11:

(a) AIRPLANES WITH THE "LANDING GEAR POSITION AIR/GND SYS 2 ALT" CIRCUIT BREAKER INSTALLED AT PANEL GRID LOCATION 11C29; 11C29, LANDING GEAR POSITION AIR/GND SYS 2 ALT

(b) 11C30, LANDING GEAR POSITION AIR/GND SYS 1

(c) 11C31, LANDING GEAR ANTISKID 2-6

MECH	INSP

(d) 11C32, LANDING GEAR ANTISKID 3-7

(e) 11H15, FLT CONT SHUTOFF WING LEFT

(f) 11H16, FLT CONT SHUTOFF WING CTR

(g) 11H26, FLT CONT SHUTOFF WING RIGHT

(h) 11R30, RIGHT IND LTS 3

(i) 11U12, AUTOBRKS ANTISKID TEST/IND 1

(j) 11U15, AIR/GND SYS 1

(k) 11U16, BRAKE TEMP

(l) SAS 275-276 POST SB 32-85;
SAS 277-281, 050-149, 155-167;

11U17, TIRE PRESS IND 1

(m) 11U18, ANTISKID 1-5

(n) 11U20, LANDING GEAR LEVER LOCK

(o) 11U21, AUTOBRKS ANTISKID TEST/IND 2

(p) 767-200 AIRPLANES;

11U23, POSITION AIR/GND SYS 2

(q) 767-300 AIRPLANES;

11U24, POSITION AIR/GND SYS 2

(r) 11U27, ANTISKID 4-8

(16) SAS 281;

Close this circuit breaker on the main power distribution panel, P6:

(a) 6J21, F/O SEAT

(17) SAS 275-276 WITH SB 32-85 AND SAS 277-281, SAS 050-149, 155-167;

Remove the DO-NOT-CLOSE identifier and close this circuit breaker on the APU external power panel, P34:

MECH | INSP

(a) 34M11, TIRE PRESS IND 2

(18) Put the WING FLIGHT CONTROL SHUTOFF switches L, C, and R on the P61 panel to OFF position.

(19) Lubricate the gear at the grease fittings (AMM 12-21-14/301).

(20) Do an adjustment check of the main landing gear doors (AMM 32-12-00/501).

(21) Do an adjustment check of the clearance for the main landing gear tilt sensors (AMM 32-09-07/201).

(22) Do a test of the tilt sensors for the main landing gear truck (AMM 32-09-07/201).

(23) For the right main landing gear only, do the gear truck tilt sensor failure test for the auto-speedbrake system (AMM 27-62-00/501).

(24) SAS 275-276 WITH SB 32-85 AND SAS 277-281, SAS 050-149, 155-167;

Do a test of the tire pressure indicating system (AMM 32-45-00/501).

(25) Do a test of the brake temperature monitoring system (AMM 32-46-00/501).

(26) Do the extension and retraction test for the main landing gear (AMM 32-32-00/501).

(27) Install the applicable access panels (Table 402) (AMM 06-44-00/201):

TABLE 402

WHEN YOU INSTALL THE LEFT GEAR	WHEN YOU INSTALL THE RIGHT GEAR
551FT	651FT
551LT	651LT
551MT	651MT
551QB	651QB
551PT	651PT
551SB	651SB
551TB	651TB

MECH	INSP

(28) Put the trailing edge flap system back to its usual condition (AMM 27-51-00/201).

(29) Put the leading edge slat system back to its usual condition (AMM 27-81-00/201).

(30) Lower the airplane (AMM 07-11-01/201).

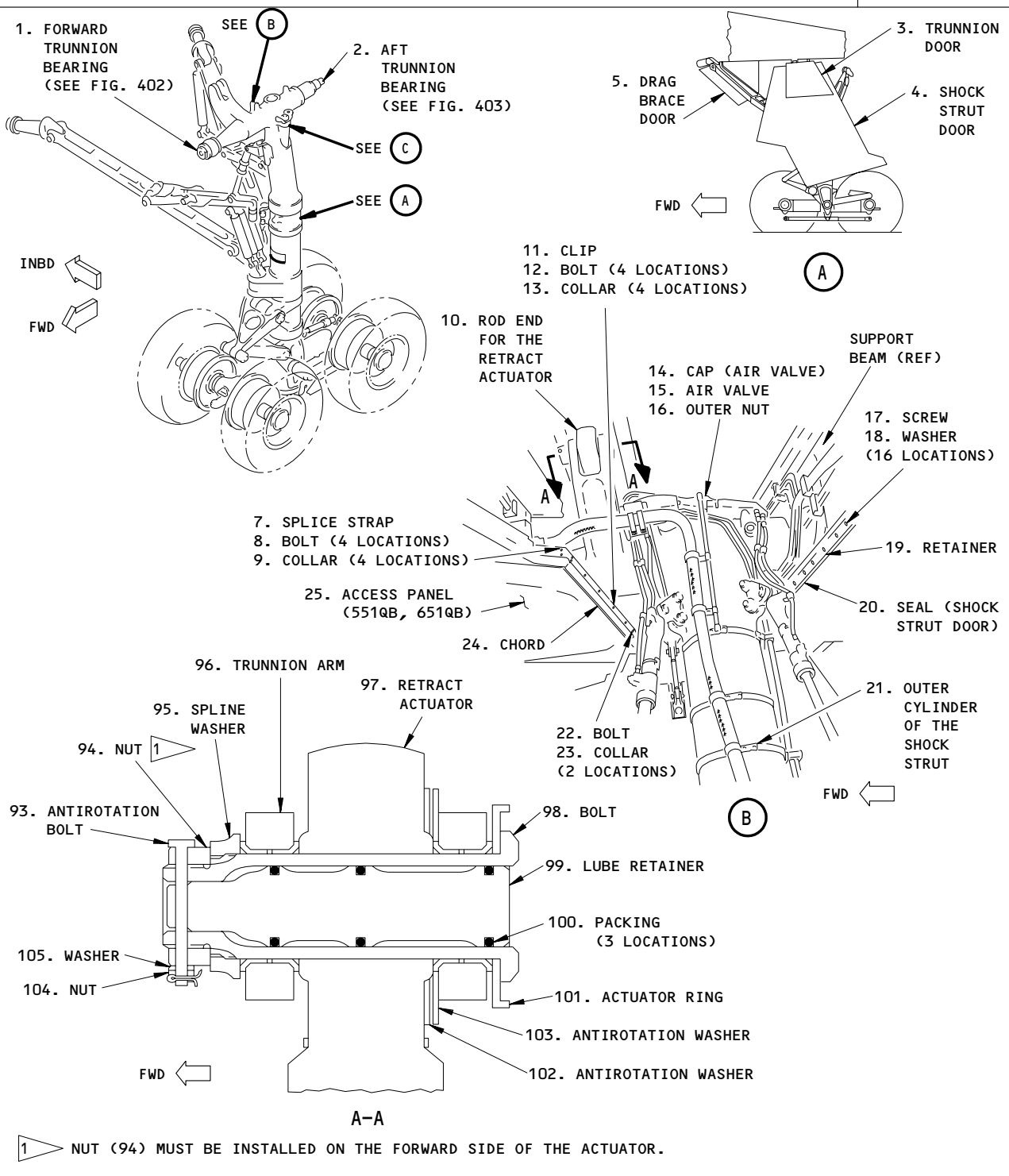
(31) Do the procedure to bleed the brakes (AMM 32-41-00/201).

(32) Do a test of the proximity sensors for the main landing gear (AMM 32-61-02/201).

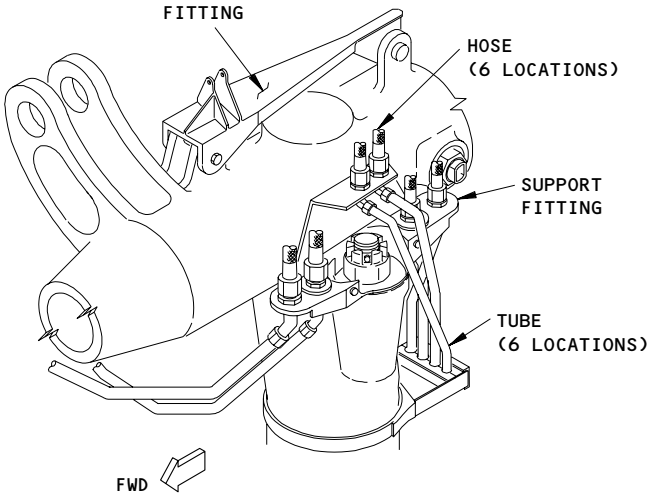
(33) Do the steps in the Antiskid System Test - Brake Release (AMM 32-42-00/501).

WARNING: OBEY THE REMOVAL PROCEDURE FOR THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

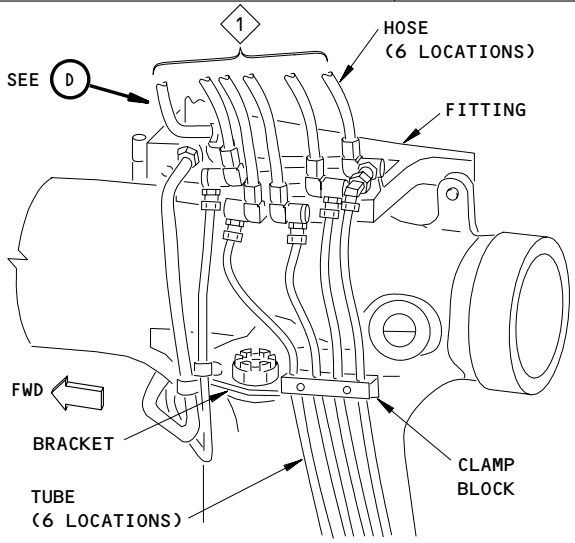
(34) Remove the door locks and close the doors (AMM 32-00-15/201).



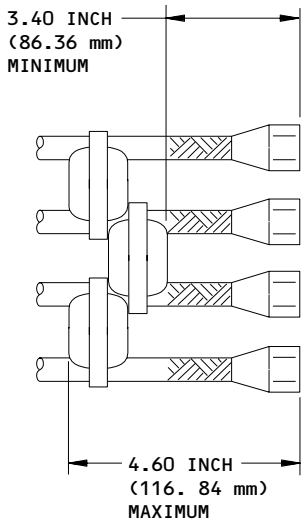
Main Gear Installation
Figure 401 (Sheet 1)



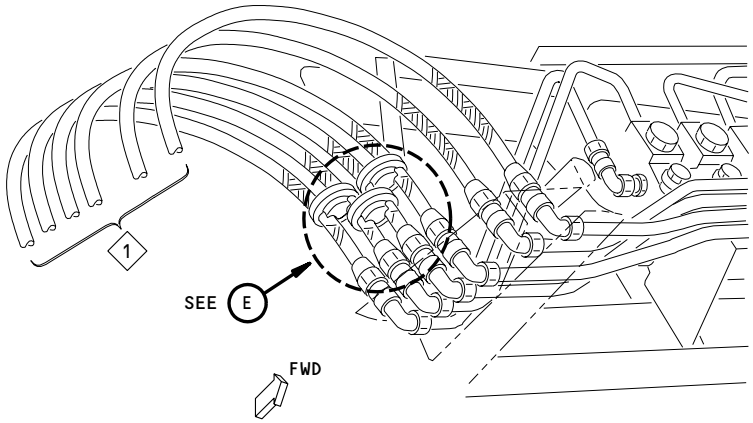
C 1



C 2



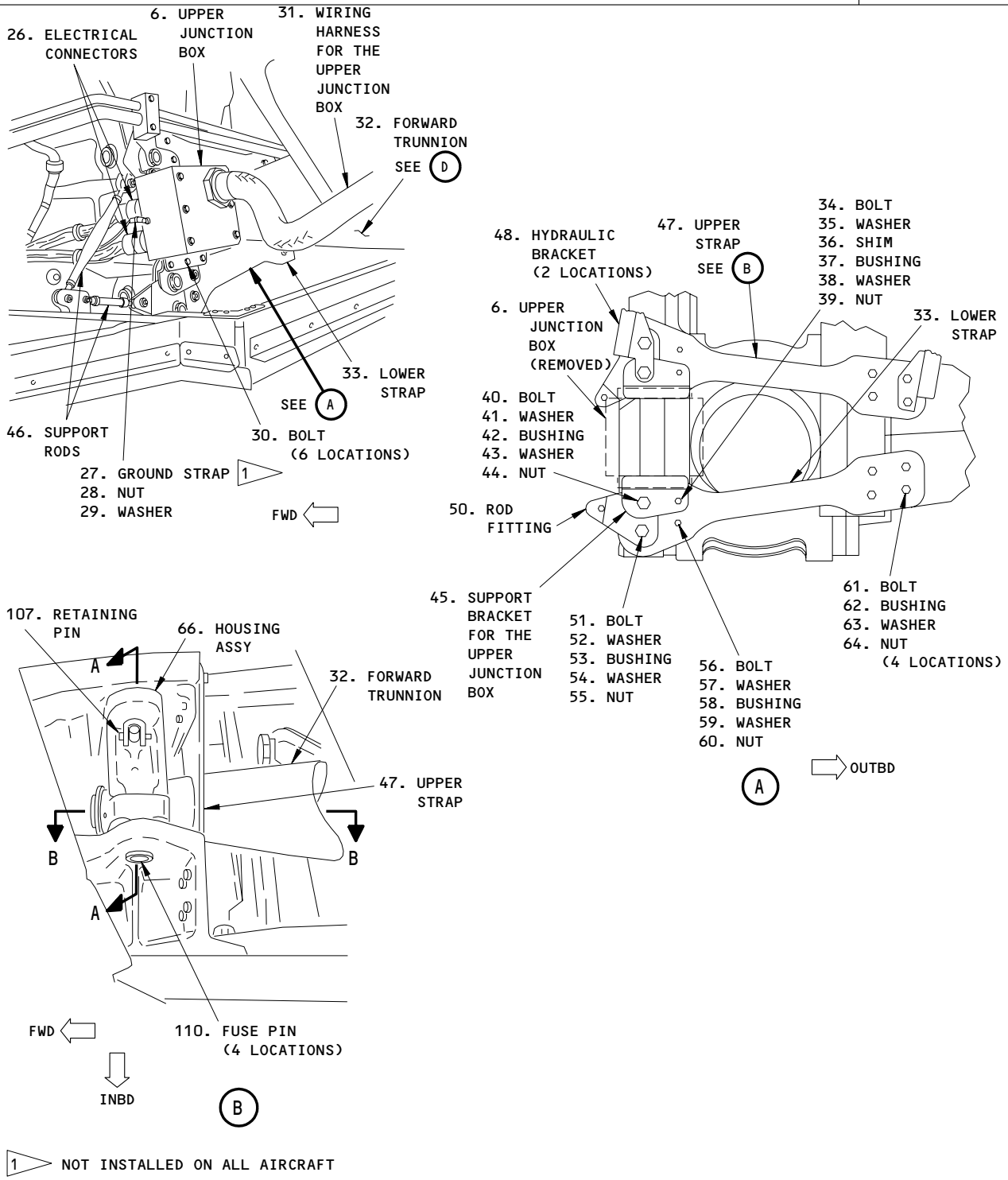
E



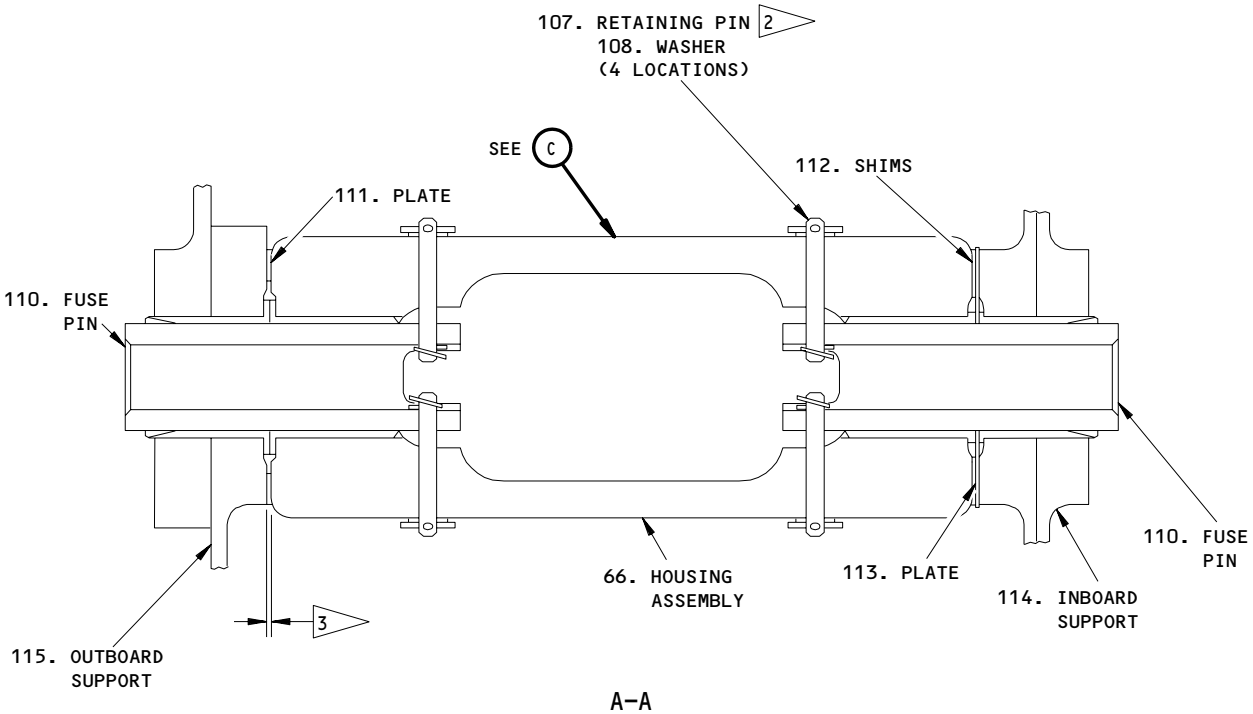
D 2

1 SHOCK STRUT WITHOUT HYDRAULIC HOSE SWIVEL CONNECTORS.
2 SHOCK STRUT WITH HYDRAULIC HOSE SWIVEL CONNECTORS.

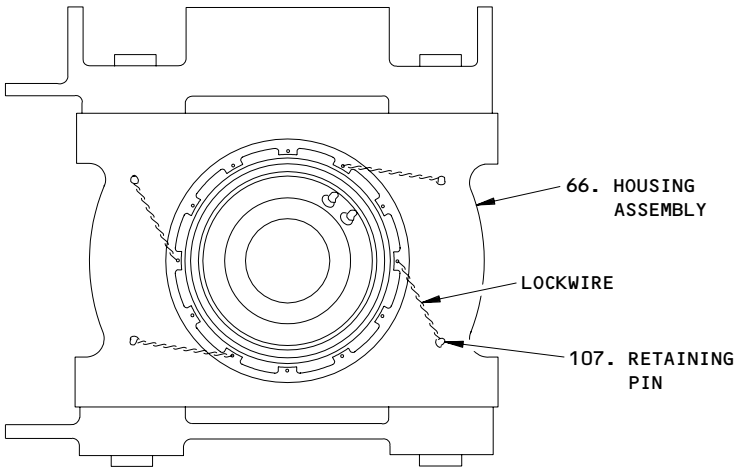
Main Gear Installation
Figure 401 (Sheet 2)



Installation of the Forward Trunnion Bearing
Figure 402 (Sheet 1)



A-A

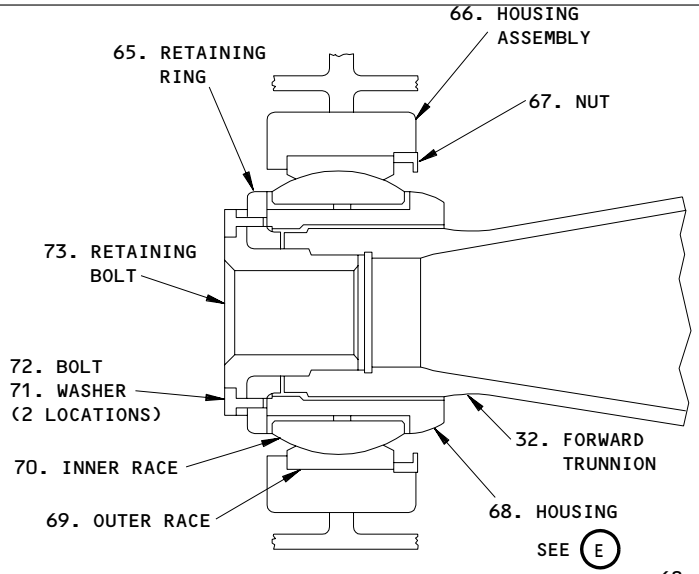


C

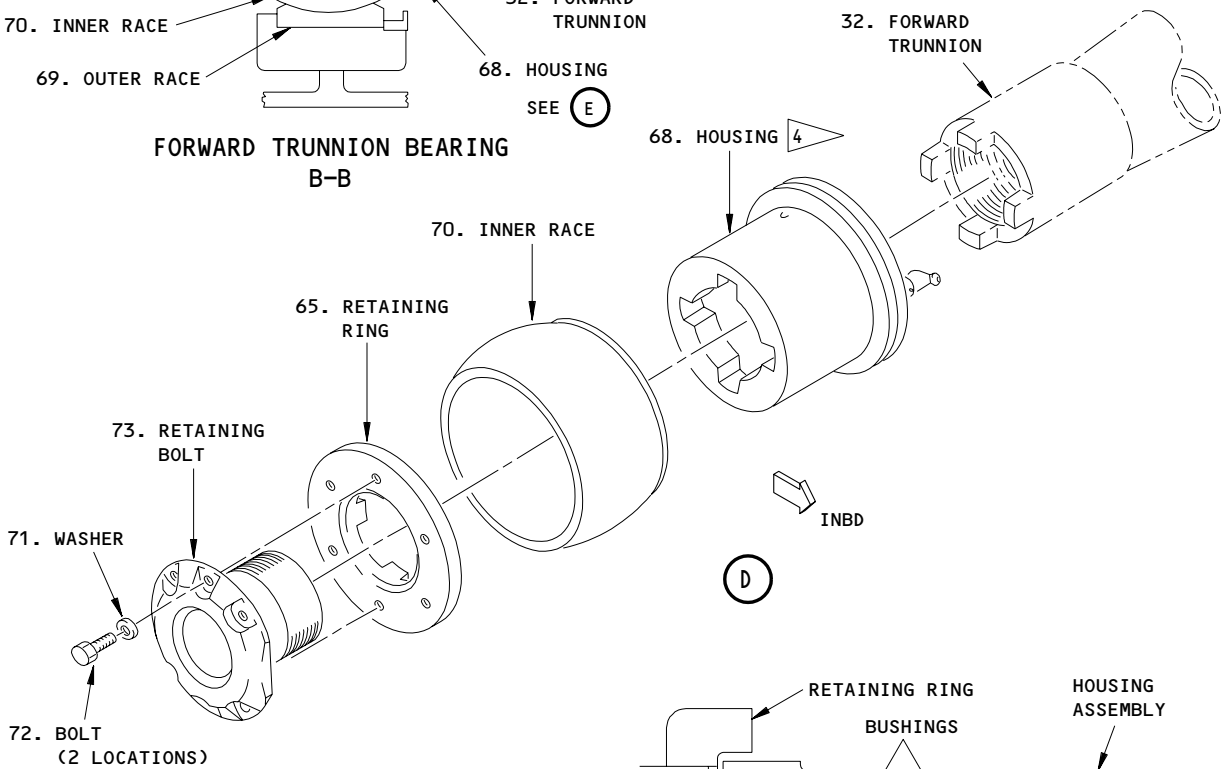
2 INSTALL THE LOCKWIRE

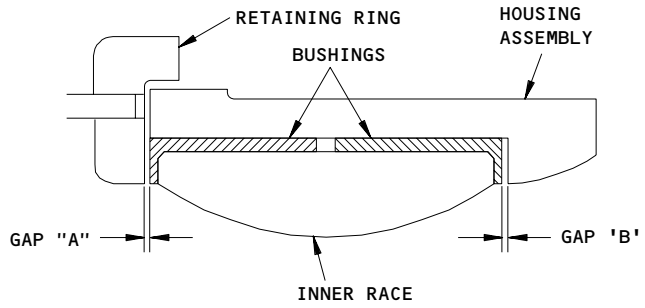
3 ADD OR REMOVE THE SHIMS (112) AT THE INBOARD SUPPORT. GET A MAXIMUM CLEARANCE OF 0.010 INCH BETWEEN THE PLATE (111) AND THE HOUSING ASSY OR THE OUTBOARD SUPPORT

Installation of the Forward Trunnion Bearing
Figure 402 (Sheet 2)



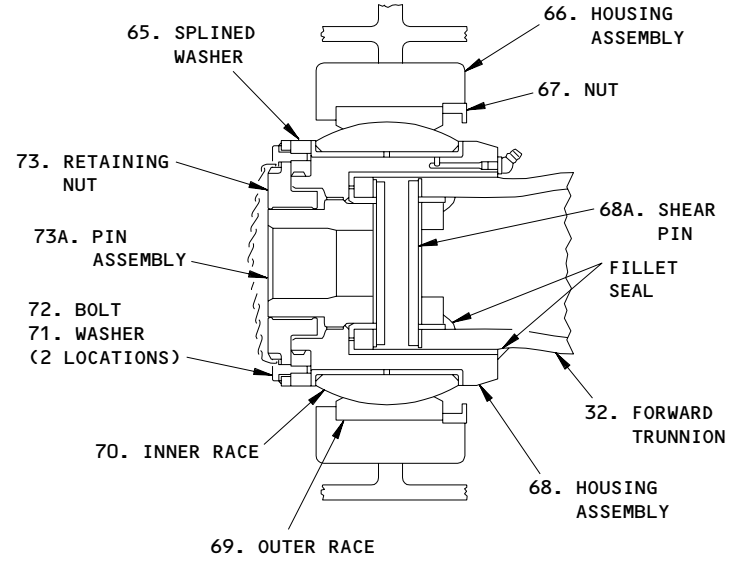
FORWARD TRUNNION BEARING
B-B



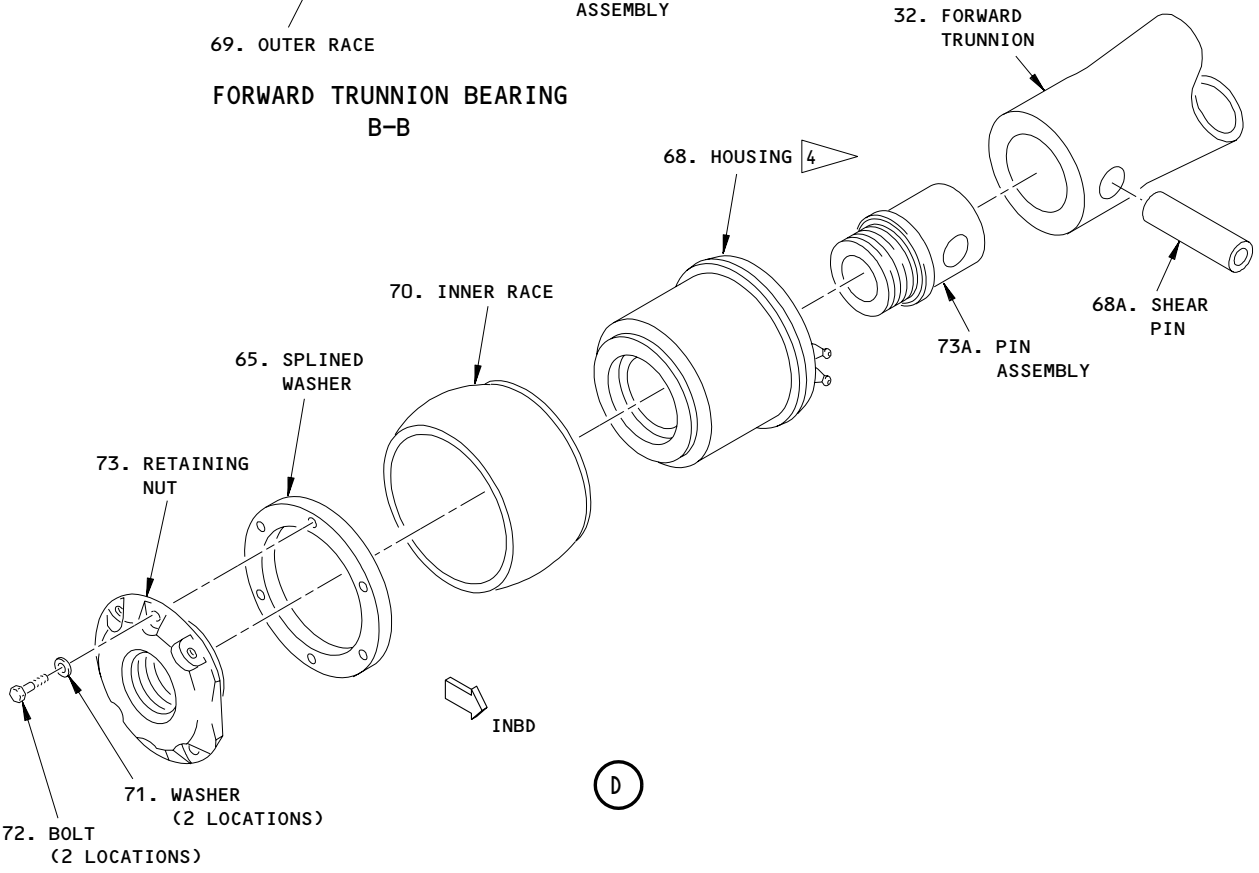


4 INSTALL THE HOUSING (68) WITH THE GREASE FITTING ON THE INBD SIDE OR BOTTOM OF THE TRUNNION (32). IT WILL MAKE THE LUBRICATION ACCESS EASIER.

Installation for the Forward Trunnion Bearing
Figure 402 (Sheet 3)

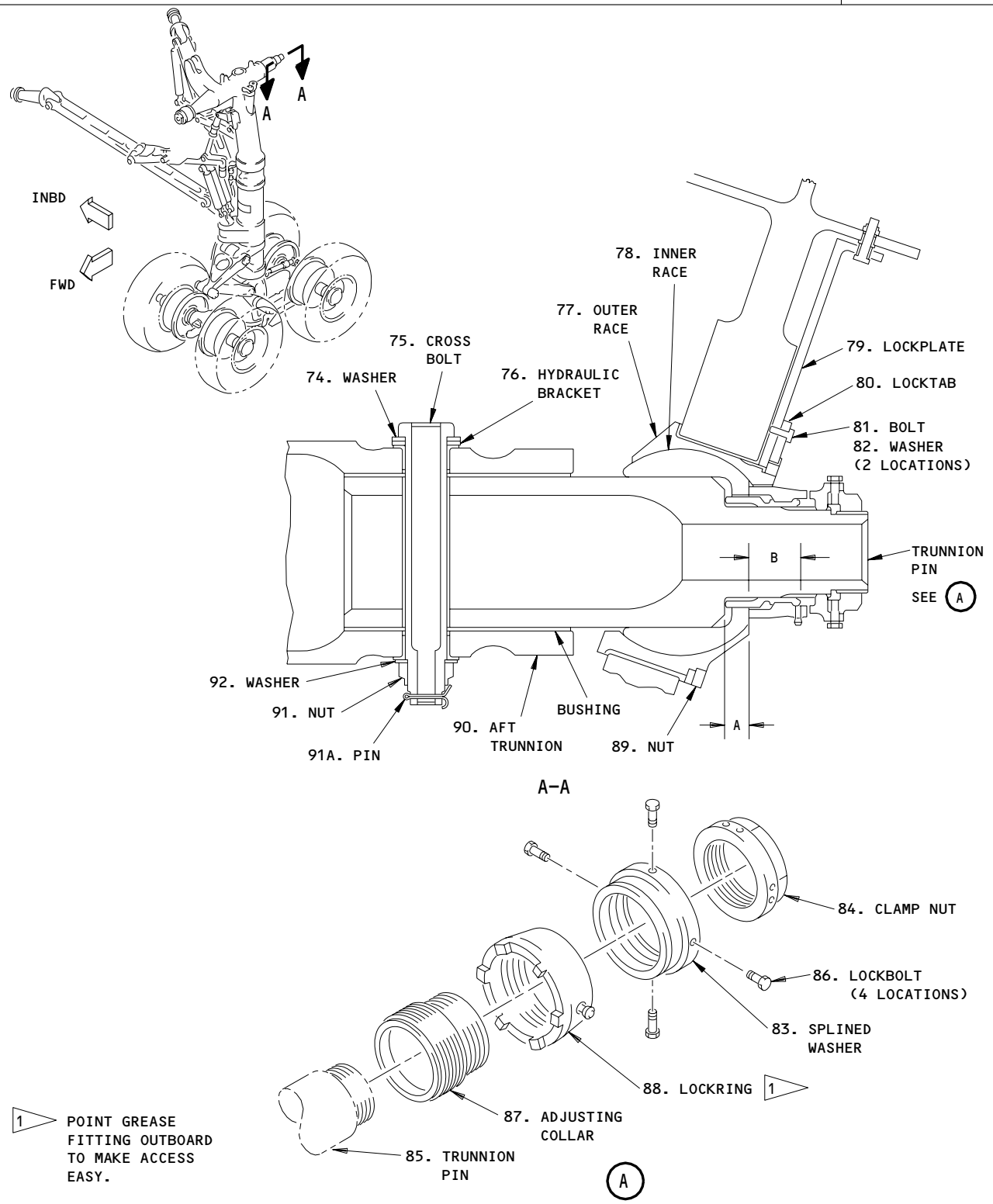


FORWARD TRUNNION BEARING
B-B

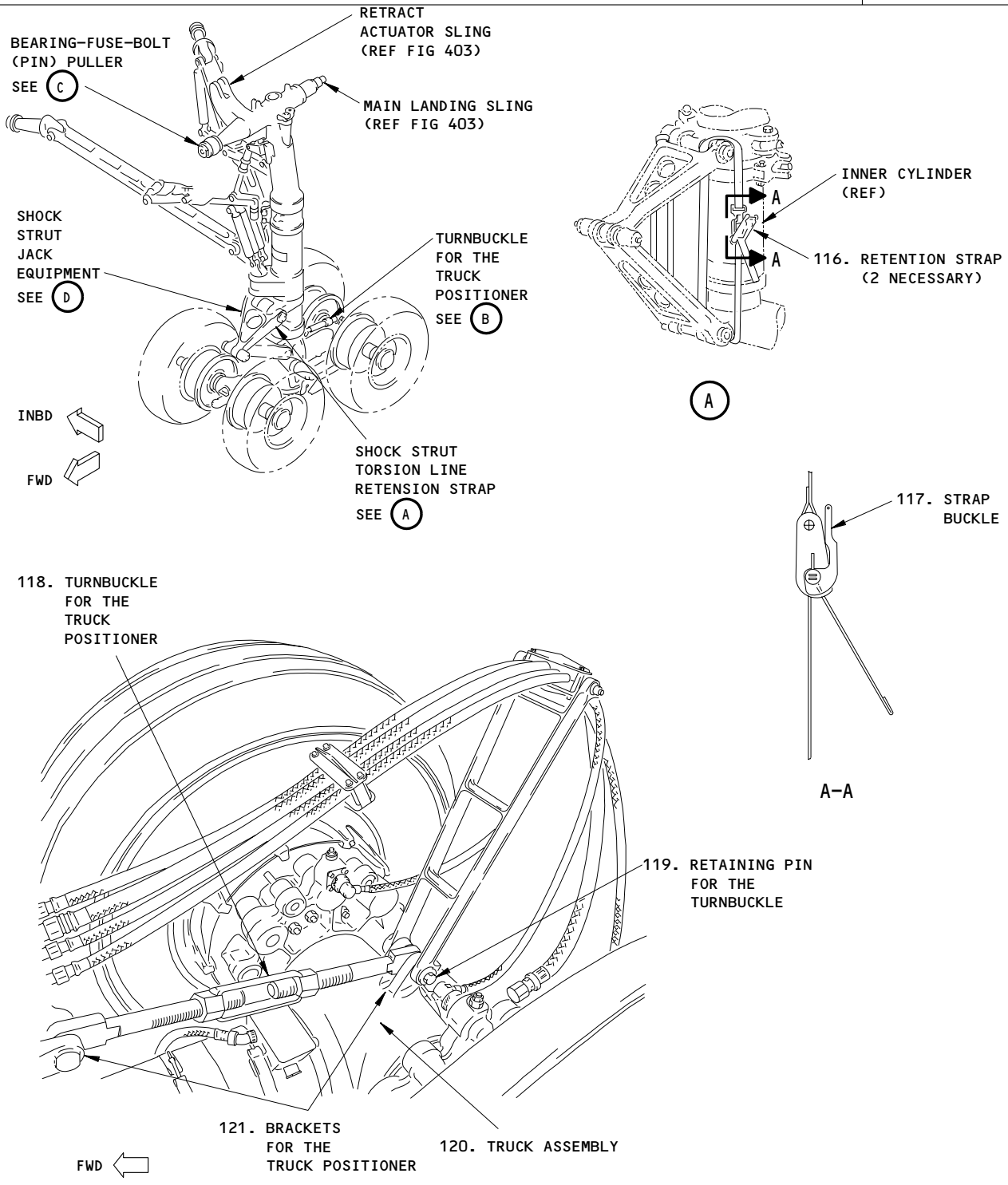


4 INSTALL THE HOUSING (68) WITH THE GREASE FITTING ON THE INBD SIDE OR BOTTOM OF THE TRUNNION (32). IT WILL MAKE THE LUBRICATION ACCESS EASIER.

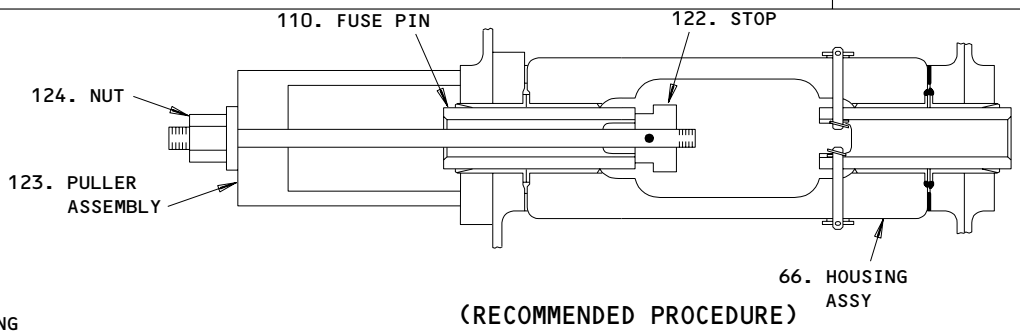
Installation for the Forward Trunnion Bearing
Figure 402 (Sheet 4)



Installation for the Aft Trunnion Bearing
Figure 403

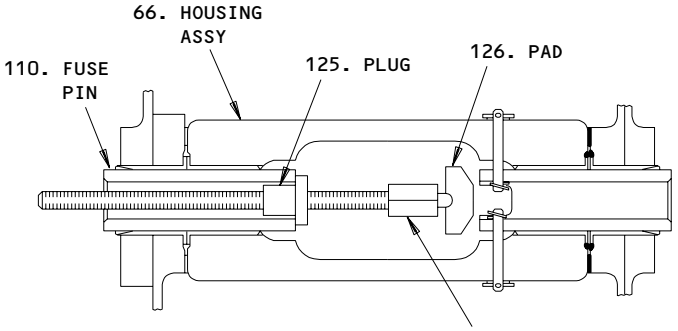


Special Tools for the Main Landing Gear Installation
Figure 404 (Sheet 1)



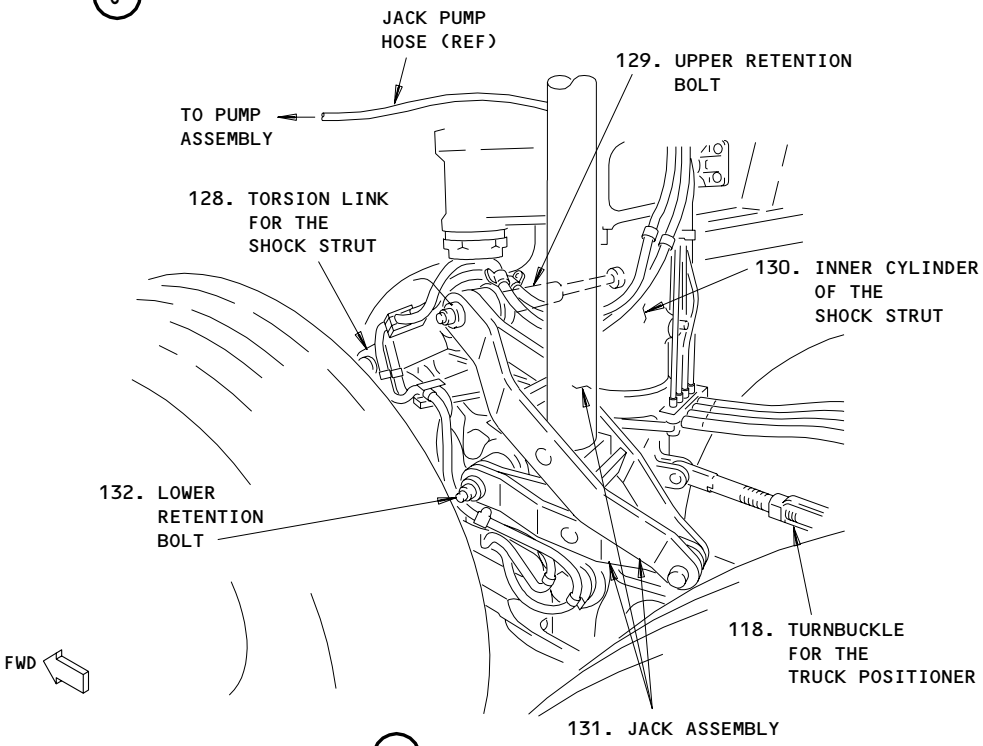
(RECOMMENDED PROCEDURE)

C



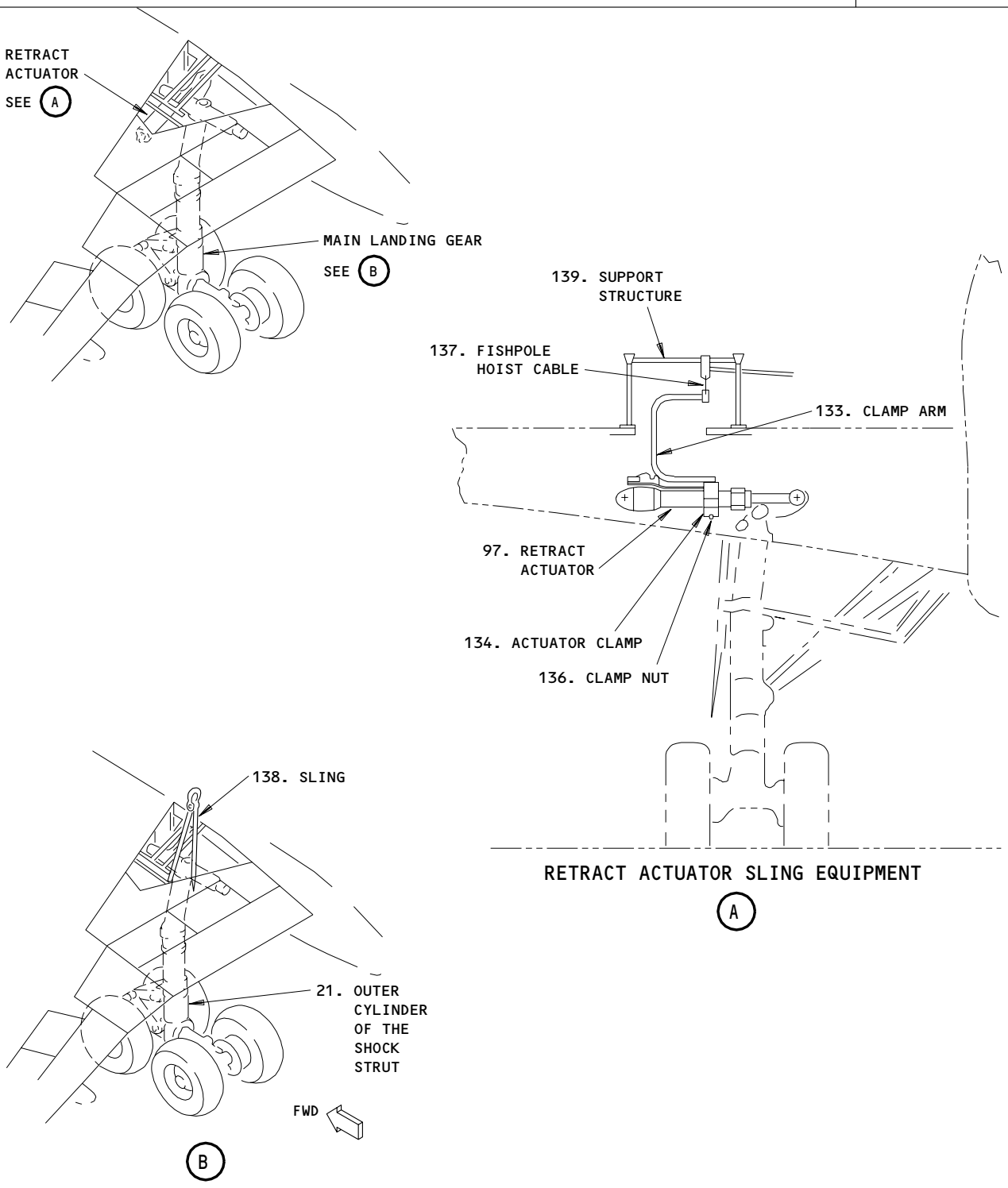
(OPTIONAL PROCEDURE)

C



D

Special Tools for the Main Landing Gear Installation
Figure 404 (Sheet 2)



RETRACT ACTUATOR SLING EQUIPMENT

A

Support Equipment for the Main Landing Gear Installation
Figure 405

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-045-01-2
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	R MAIN GEAR		70000 CYC	814XX	018	DEC 22/08

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
REPLACE	RIGHT MAIN LANDING GEAR		200	ALL

ZONES	ACCESS PANELS
211 741	651FT 651LT 651MT 651PT 651QB 651SB 651TB 651VB

MECH | INSP

MPD ITEM NUMBER

REPLACE THE RIGHT MAIN LANDING GEAR AT MANUFACTURER'S LIFE LIMIT (CURRENTLY 70,000 CYCLES). REFER TO BOEING SERVICE LETTER 767-SL-32-92 FOR A LIST OF 767 LANDING GEAR LIFE LIMITED PARTS. 32-11-01-4A

1. Remove the Main Landing Gear

A. General

(1) There are two different procedures given to remove the main landing gear. One procedure uses jacks for the removal of the main landing gear. The other procedure uses an overhead sling to remove the main landing gear.

B. Equipment

(1) A32006-77 MLG Retract Actuator Sling

(2) A32017-1 MLG Forward Trunnion Support
Fuse Bolt Puller

(3) A32026-60 MLG Trunnion Pin Removal/Installation Equipment

(4) A32027-53 Retraction/Extension Landing Gear Actuator Pump

(5) A32028-6 Shock Strut Retention Strap
(2 straps are necessary)

(6) A32031-5 MLG Truck Positioner Turnbuckle
(Recommended)

(7) A32031-4 MLG Truck Positioner Turnbuckle
(Alternative) Make from A32031-1

(8) A32032-65 MLG Removal/Installation Sling
(A32032-39 Alternative)

(9) A32032-64 MLG Jacking Equipment
(Upgraded -52 kit that includes a
new -68 tiny collar for IGW A/Ps)

(10) A32095-1 Forward Trunnion Bearing Bolt Wrench

(11) Fishpole Hoist (Commercially available)

(12) Automotive type axle jacks (2 to 4 ton
capacity) - commercially available

C. References

(1) AMM 06-44-00/201, Wings (Major Zones 500 and 600) Access Doors and Panels

(2) AMM 07-11-01/201, Jacking Airplane

(3) AMM 27-51-00/201, Trailing Edge Flap System

(4) AMM 27-81-00/201, Leading Edge Slat System

(5) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(6) AMM 32-00-15/201, Landing Gear Door Locks

(7) AMM 32-00-20/201, Landing Gear Downlocks

(8) AMM 32-11-01/601, Main Gear

(9) AMM 32-11-03/401, Main Gear Side Brace

(10) AMM 32-11-10/401, Main Gear Drag Brace

(11) AMM 32-12-06/401, Shock Strut Door and Linkage

(12) AMM 32-12-08/401, Drag Brace Door and Linkage

(13) AMM 32-12-11/401, Trunnion Door and Linkage

(14) AMM 32-32-02/401, Main Gear Lock Actuators

(15) AMM 32-32-05/401, Main Gear Jury Strut Spring

MECH | INSP

(16) AMM 32-32-18/401, Main Gear Truck Positioner

D. Prepare to Remove the Main Landing Gear

WARNING: MAKE SURE THE DOWNLOCKS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCKS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

WARNING: OBEY THE INSTALLATION PROCEDURE FOR THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) Open the doors for the landing gear and install the door locks (AMM 32-00-15/201).

(3) Extend the trailing edge flaps to 20 units. Set the trailing edge flap system to off (AMM 27-51-00/201).

(4) Set the leading edge slat system to off (AMM 27-81-00/201).

(5) Remove the pressure from the right and the center hydraulic systems and reservoirs (AMM 29-11-00/201).

(6) Make sure that this circuit breaker on the main power distribution panel, P6, is closed:

(a) 6F4, LANDING GEAR PARKING BRAKE VLV

(7) Push the brake pedals a minimum of seven times to remove the pressure from the brake lines.

(8) Remove power from the cooling packs, open these circuit breakers on the overhead circuit breaker panel, P11, and attach DO-NOT-CLOSE tags:

(a) 11N19, RIGHT PACK AUTO PWR

(b) 11N20, RIGHT PACK AUTO CONT

(c) 11N10, LEFT PACK AUTO PWR

MECH | INSP

(d) 11N11, LEFT PACK AUTO CONT

(e) 11R21, CARGO HEAT OVERRIDE FWD

(f) 11R22, CARGO HEAT OVERRIDE AFT

(9) Open these circuit breakers and attach DO-NOT-CLOSE tags for the removal of the left or right main landing gear:

(a) AIRPLANES WITH THE "LANDING GEAR POSITION AIR/GND SYS 2 ALT" CIRCUIT BREAKER INSTALLED AT PANEL GRID LOCATION 11C29;
11C29, LANDING GEAR POSITION AIR/GND SYS 2 ALT

(b) 11C30, LANDING GEAR POSITION AIR/GND SYS 1

(c) 11C31, LANDING GEAR ANTISKID 2-6

(d) 11C32, LANDING GEAR ANTISKID 3-7

(e) 11H15, FLT CONT SHUTOFF WING LEFT

(f) 11H16, FLT CONT SHUTOFF WING CTR

(g) 11H26, FLT CONT SHUTOFF WING RIGHT

(h) 11R30, RIGHT IND LTS 3

(i) 11U12, AUTOBRKS ANTISKID TEST/IND 1

(j) 11U15, AIR/GND SYS 1

(k) 11U16, BRAKE TEMP

(l) SAS 050-149, 155-999;

11U17, TIRE PRESS IND 1

(m) 11U18, ANTISKID 1-5

(n) 11U20, LANDING GEAR LEVER LOCK

(o) 11U21, AUTOBRKS ANTISKID TEST/IND 2

(p) 767-200 AIRPLANES;

11U23, POSITION AIR/GND SYS 2

MECH | INSP

(q) 767-300 AIRPLANES;

11U24, POSITION AIR/GND SYS 2

(r) 11U27, ANTISKID 4-8

(s) Open this circuit breaker on the main power distribution panel, P6, and attach a DO-NOT-CLOSE tag:

1) 6J21, F/O SEAT

(10) MTH 275-276 WITH SB 32-85 AND MTH 277-999, SAS 050-149, 155-999;

Open this circuit breaker on the APU external power panel, P34, and install a DO-NOT-CLOSE tag:

(a) 34M11, TIRE PRESS IND 2

WARNING: CLEAR THE AREA BELOW THE WING BEFORE YOU DEFLATE THE SHOCK STRUT. IF YOU DEFLATE ONE SHOCK STRUT THE WING TIP CAN MOVE DOWN AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(11) Deflate the shock strut of the main landing gear.

(a) Remove the cap for the air valve (14) from the top of the shock strut (21).

WARNING: LOOSEN THE OUTER NUT A MAXIMUM OF TWO TURNS. AIR PRESSURE CAN BLOW THE VALVE OUT AND CAUSE INJURY TO PERSONS.

(b) Loosen the outer nut (16) a maximum of two turns.

(12) Remove the bolts (30) to disconnect the upper junction box (6) from the brackets.

(13) Disconnect the two electrical connectors (26) from the forward side of the upper junction box (6).

(14) AIRPLANES WITH GROUND STRAP;
Disconnect the ground strap (27) at the junction box (6).

(15) Attach the wire harness (31) for the upper junction box to the trunnion (Fig. 402).

MECH | INSP

(16) Disconnect the 6 hydraulic lines from the outboard side of the upper shock strut.

(a) Put a cap on the hydraulic ports.

(b) Put a plug on the lines.

(c) Put a tag on the lines to make installation easier.

(d) Hold the lines out of the work area.

(17) Remove the truck positioner (AMM 32-32-18/401).

(18) Install the turnbuckle (118) for the truck positioner (Fig. 404).

(a) Put one of the rod ends of the turnbuckle (118) into a bracket for the truck positioner (121).

(b) Install the retaining pin (119) for the turnbuckle.

(c) Adjust the turnbuckle (118) until the other rod end attaches into the other bracket for the truck positioner (121).

(d) Install the other retaining pin for the turnbuckle (119).

(19) Disconnect the drag brace door (5) from the drag brace (AMM 32-12-08/401).

(20) Hold the door (5) out of the work area (Fig. 401).

(21) Remove the shock strut door (4) and the linkage (AMM 32-12-06/401).

(22) Remove the trunnion door (3) and the linkage from the shock strut (21) (AMM 32-12-11/401).

(23) Remove the applicable access panels (Table 401) (AMM 06-44-00/201):

TABLE 401	
WHEN YOU REMOVE THE LEFT GEAR	WHEN YOU REMOVE THE RIGHT GEAR
551FT	651FT
551LT	651LT
551MT	651MT
551QB	651QB
551PT	651PT
551SB	651SB
551TB	651TB

(24) Remove the bolts (8, 12, and 22) to disconnect the chord (24).

(25) Remove the screws (17) to disconnect the seal (20).

(26) Remove the seal (20).

(27) If you use the jack assembly (131) do the steps that follow (Fig. 404):

NOTE: The jack assembly is part of the main landing gear removal/installation equipment.

WARNING: MAKE SURE THE STRUT IS FULLY DEPRESSURIZED BEFORE JACKING. FAILURE TO DO THIS CAN LET THE STRUT MOVE UNDER PRESSURE AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) Install the jack equipment and lift the airplane until the wheels are above the ground 6.0 inches (AMM 07-11-01/201).

(b) Install the axle jacks under the truck assembly (120) for the main landing gear.

(c) Lift the truck assembly (120) until you can put the cart assembly under the truck wheels.

(d) Put the cart assembly under the truck wheels and remove the jacks.

MECH | INSP

(e) Install the jack assembly (131) on the torsion link for the shock strut (128) (Fig. 404).

(f) Disconnect and remove the bolt which holds the upper torsion link to the shock strut.

1) Align the holes in the upper scissor of the jack assembly (131) and the outer cylinder of the shock strut (21).

2) Install the upper retention bolt (129).

3) Disconnect and remove the bolt which hold the lower torsion link to the shock strut.

4) Align the holes in the lower scissor of the jack assembly (131) and the inner cylinder of the shock strut (130).

5) Install the lower retention bolt (132).

(g) Lift the airplane 20 inches more.

(h) Use the jack assembly (131) to keep the wheels on the cart assembly.

(i) Do not let the shock strut fully extend.

(j) Lift the outer cylinder (21) with the jack assembly to remove the weight from the forward and aft trunnion bearings (1, 2).

(28) If you use the sling (138), do the steps that follow:

NOTE: The sling is part of the main landing gear removal/installation equipment.

(a) Install the two retention straps (116) on the torsion link of the shock strut (128) (Fig. 404).

1) Make a loop with the retention straps (116) through the upper and lower hinges of the torsion link (128). Use one strap on each side of the torsion link.

2) Move the end of each strap (116) through the slot in the buckle shaft (117).

3) Operate the buckle until the strap (116) is tight.

NOTE: Make sure each strap has a minimum of two loops around the shaft of the buckle before you apply a load.

(b) Lift the airplane until the wheels are 24 inches above the cart assembly (AMM 07-11-01/201).

(c) Make sure the retention straps (116) do not move.

(d) Install the sling (138) (Fig. 405).

1) Put the sling (138) around the outer cylinder (21).

a) Put the sling around the upper inboard area of the strut.

b) Move the two ends of the sling outboard of the trunnion to the hoist point.

2) Install the bolt to hold both ends of the sling (138) to the hoist point.

3) Attach the sling (138) and the hoist point to the overhead hoist.

(29) Disconnect the retract actuator (97) from the trunnion arm of the main landing gear (96) (Fig. 401, View A-A).

(a) Install the sling equipment for the retract actuator on the retract actuator (97) (Fig. 405, Detail A).

1) Put the support structure (139) on the wing structure.

2) Put the actuator clamp (134) on the retract actuator (97).

(b) Tighten the clamp nut (136) until the actuator clamp (134) is tight against the retract actuator (97).

1) Connect the cable of the fishpole hoist (137) to the support structure (139) and the clamp arm (133).

2) Tighten the cable (137).

(c) Do the steps that follow to disconnect the rod end of the retract actuator (97) from the trunnion arm (96).

1) Remove the antirotation bolt (93).

2) Remove the nut (94) and the spline washer (95).

3) Remove the bolt (98).

4) Use the sling equipment for the retract actuator to lift the retract actuator (97) away from the trunnion arm (96).

(30) Remove the lock actuators for the drag brace and the side brace (AMM 32-32-02/401).

(31) Remove the lock springs for the side brace (AMM 32-32-03/401).

(32) Remove the jury strut springs (AMM 32-32-05/401).

WARNING: BE CAREFUL WHEN YOU PUSH UP ON THE JURY STRUT. THE JURY STRUT WILL MOVE SUDDENLY WHEN RELEASED AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(33) Push up on the jury strut to release it from the overcenter position.

(34) Disconnect the side brace and the lock link from the shock strut (AMM 32-11-03/401).

(35) Disconnect the drag brace and the jury strut from the shock strut (AMM 32-11-10/401).

(36) Remove the bolts (30) to disconnect the upper junction box (6) from the support bracket for the upper junction box (45) (Fig. 402).

(37) Remove the bolts (34 and 40) to disconnect the support bracket for the upper junction box (45) from the lower strap (33) (Fig. 402).

(38) Remove the bolts (51, 56, 61) to disconnect the lower strap (33) (Fig. 402, Detail A).

E. Remove the Main Landing Gear

(1) Lift the main landing gear until there is no weight on the forward and aft trunnion bearings (1, 2).

(2) Remove the lockbolts (86) from the clamp nut (84) (Fig. 403, Detail A).

(3) Remove the clamp nut (84), the splined washer (83), the lock ring (88), and the adjusting collar (87).

(4) Remove the crossbolt (75) from the aft trunnion (90).

(5) Do the steps that follow to remove the trunnion pin (85).

(a) Install the removal and installation equipment for the trunnion pin on the trunnion pin (85).

NOTE: If you do not install the stop assembly for the trunnion pin, the pin can go too far into the trunnion.

(b) Install the slide hammer on the puller assembly.

(c) Use the slide hammer to move the trunnion pin (85) out of the trunnion bearing (2) and into the trunnion (90). The end of the trunnion pin (85) must be aligned with the aft trunnion (90).

(d) Disconnect the slide hammer and the puller assembly from the trunnion pin (85).

(6) Move the aft end of the trunnion (90) approximately 15 degrees inboard.

(7) Remove the 2 retaining pins (107) from each of the 4 fuse pins (110).

(8) Use the bearing-fuse-bolt (pin) puller (123) to remove the fuse pins (110) from the housing assembly (66) and the supports (114, 115).

(a) Recommended procedure

1) Put the puller assembly (123) over the outer end of the fuse pin (110). The bolt will come out through the fuse pin (110).

2) Install the stop on the bolt of the puller assembly (123).

3) Install the spring pin into the stop to lock the stop into position on the bolt.

4) Put the wrench on the nut of the puller assembly.

5) Turn the nut on the fuse bolt until the bolt (110) is removed.

(b) Optional procedure.

1) Use this procedure if the hydraulic lines cause a problem with the installation of the puller assembly.

2) Put the wrenching surface of the jack screw (127) thru the fuse bolt (110) last.

3) Turn the plug (125) on the jack screw (127) until there is sufficient clearance to install the pad (126) on the jack screw.

4) Install the pad (126).

5) Use a wrench at the wrenching surface to turn the jack screw (127) counterclockwise. This will push the fuse bolt (110) out of the bearing housing.

6) Remove the jack screw assembly.

(9) Do these steps if you use jack equipment:

(a) Lower the shock strut until the shock strut is fully compressed.

(b) The housing assembly (66) and the plates (111, 113) will move out of the rear spar supports as the shock strut is lowered.

NOTE: Keep the shims (112) to make the new main landing gear installation easier.

(c) Remove the axle jacks and the adapters.

(d) Remove the jacking equipment (131) from the shock strut (21, 130).

(e) Install the retention straps (116) on the shock strut (21).

1) Make a loop with the retention straps (116) through the upper and lower hinges of the torsion link (128). Use one strap on each side of the torsion link.

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2) Move the end of each strap through the slot in the buckle shaft (117).

3) Operate the buckle until the strap (116) is tight.

NOTE: Make sure each strap has a minimum of two loops around the shaft of the buckle before you apply a load.

(10) If you use the sling (138), do the steps that follow:

(a) Lower the shock strut (21) with the sling (138) on the wheel carts. The housing assembly (66) and the plates (111, 113) will move out of the rear spar supports when the main landing gear is lowered.

NOTE: Keep the shims (112) to make the main landing gear installation easier.

(b) Remove the sling (138).

(11) Remove the assembly for the forward trunnion bearing (1) from the main landing gear (Fig. 402, View B-B).

(a) Remove the bolts (72).

(b) Remove the retaining bolt (73).

(c) Move the assembly for the forward trunnion bearing (1) off of the forward trunnion (32).

(d) Examine the forward trunnion bearing (AMM 32-11-01/601).

(e) If you replace the forward trunnion bearings, do the steps that follow:

1) Remove the nut (67).

2) Remove the inner and outer races (69, 70) with the housing (68) from the housing assembly (66).

3) Move the bearings (69, 70) out of the housing (68).

4) Keep these parts for installation on the new main landing gear.

(12) Examine the aft trunnion bearings (AMM 32-11-01/601).

(13) If you replace the aft trunnion bearings (2), do the steps that follow (Fig. 403, View A-A):

(a) Remove the bolts (81) to disconnect the lock tab (80) from the lockplate (79).

(b) Remove the nut (89) from the housing for the aft bearing.

(c) Move the bearing inner and outer races (77, 78) forward, out of the support structure.

(14) Put the main landing gear on wheel carts and move away from the work area.

2. Install the Main Landing Gear (Fig. 401, Fig. 402, Fig. 403)

NOTE: Wear Limits for the main landing gear trunnions are supplied in AMM 32-11-01/601.

A. General

(1) There are two different procedures given to install the main landing gear. One procedure uses jacks to install the main landing gear. The other procedure uses an overhead sling to install the main landing gear.

B. Equipment

(1) A32006-77 MLG Retract Actuator Sling

(2) A32026-60 MLG Trunnion Pin Removal/Installation Equipment

(3) A32027-53 MLG Retraction/Extension Actuator Pump

(4) A32028-6 Shock Strut Retention Strap (2 straps are necessary)

(5) A32031-5 MLG Truck Positioner Turnbuckle (Recommended)

(6) A32031-4 MLG Truck Positioner Turnbuckle (Alternative) Make from A32031-1

(7) A32032-65 MLG Removal/Installation Sling (A32032-39 Alternative)

(8) A32032-64 MLG Jacking Equipment (Upgraded -52 kit that includes a new -68 tiny collar for IGW A/Ps)

(9) A32045-12, -34 Spanner Wrench

(10) A32095-1 Forward Trunnion Bearing Bolt Wrench

(11) Fishpole Hoist (Commercially available)

(12) Automotive type axle jacks (2 to 4 ton capacity) - commercially available

C. Consumable Materials

(1) AOO247 Sealant, Chromate - BMS 5-95

(2) DOO633 Grease - BMS 3-33 (Recommended)

(3) DOOO13 Grease - MIL-G-23827 (Alternative)

(4) G5O136 Corrosion Inhibiting Compound - BMS 3-38

D. Parts

AMM		NOMENCLATURE	AIPC		
FIG	ITEM		SUBJECT	FIG	ITEM
401 Thru 403	1A 2A	Main Landing Gear Wing Structure	32-00-00 57-00-00	01 01	1 1

E. References

(1) AMM 06-44-00/201, Wings (Major Zones 500 and 600) Access Doors and Panels

(2) AMM 07-11-01/201, Jacking Airplane

(3) AMM 12-15-01/301, Main Gear Shock Strut

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(4) AMM 12-21-14/301, Main Gear and Actuating Mechanisms

(5) AMM 20-10-23/401, Standard Practices, Lockwire

(6) AMM 27-51-00/201, Trailing Edge Flap System

(7) AMM 27-62-00/501, Auto-Speedbrake Control System

(8) AMM 27-81-00/201, Leading Edge Slat System

(9) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(10) AMM 32-00-15/201, Landing Gear Door Locks

(11) AMM 32-00-20/201, Landing Gear Downlocks

(12) AMM 32-09-07/201, Main Gear Tilt Sensors

(13) AMM 32-11-01/601, Main Gear

(14) AMM 32-11-03/401, Main Gear Side Brace

(15) AMM 32-12-00/501, Main Landing Gear Doors

(16) AMM 32-12-06/401, Shock Strut Door and Linkage

(17) AMM 32-12-08/401, Drag Brace Door and Linkage

(18) AMM 32-12-11/401, Trunnion Door and Linkage

(19) AMM 32-32-00/501, Main Gear Extension and Retraction

(20) AMM 32-32-02/401, Main Gear Lock Actuators

(21) AMM 32-32-03/401, Main Gear Side Brace Lock Spring

(22) AMM 32-32-18/401, Main Gear Truck Positioner

(23) AMM 32-41-00/201, Hydraulic Brake System

(24) AMM 32-42-00/501, Antiskid/Autobrake System

(25) MTH 275-276 WITH SB 32-85 AND MTH 277-999, SAS 050-149, 155-999;

(26) AMM 32-46-00/501, Brake Temperature Monitoring System

(27) AMM 32-61-02/201, Main Gear Proximity Sensor

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F. Install the Main Landing Gear

(1) Make sure the turnbuckle (118) for the truck positioner is installed on the replacement main landing gear (Fig. 404).

(2) Install the forward trunnion bearing (1) on the new main landing gear (Fig. 402, View B-B).

(a) Apply grease to the outer race (69). Butter lubricate the bushing faces and the inside diameter of the inner race (70) with grease. Apply a thin layer of corrosion inhibiting compound to the full length of the inside diameter of the housing (68). Make sure you fill all gaps and fillet radius on the housing. Apply a thin layer of compound on the retaining bolt (73) to cover the threads and the outside diameter below the flange, to include the adjacent fillet radius and the flange face. Fill all gaps and fillet radius. Wipe off excess grease and compound after installation of the parts.

(b) If you install new inner and outer races (69, 70) do the steps that follow:

1) Move the inner and outer races (69, 70) into the housing (68).

2) Put the inner (70) and outer races (69, 70) with the housing (68) into the housing assembly (66).

NOTE: The grease fittings on the housing (68) must be on the inboard side of the trunnion (32).

3) Use the spanner wrench to install the nut (67).

a) Tighten the nut (67) to 95-120 pound-feet.

4) Install a lockwire on the nut.

(3) FORWARD TRUNNION WITHOUT SHEAR PIN;
To install the housing assembly (66) on the forward trunnion (32), Do the steps that follow (Fig. 402, View B-B):

(a) Apply a thin layer of compound on the inside diameter and the end part of the outside diameter of the trunnion (32). Make sure you apply it to the threads and thread reliefs.

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(b) Put the forward trunnion bearing (1) on the forward trunnion. Use a grease pencil to put a mark on the forward trunnion (32) at the flange of the housing (68), to show if the bearing moves off the trunnion during installation.

(c) Apply a thin layer of compound to all the surfaces of the retaining ring (65). Include the four notches and the inside diameter of the six bolt holes.

CAUTION: MAKE SURE THE RETAINING RING TEETH ENGAGE WITH THE SLOTS OF THE HOUSING ASSEMBLY. IF THE RETAINING RING (65) IS NOT ENGAGED WITH THE HOUSING THE RETAINING BOLT WILL TURN AND BACK OUT OF THE FORWARD TRUNNION THREADS.

(d) Install the retaining ring (65).

(e) Install the retaining bolt (73).

CAUTION: MAKE SURE THE FORWARD BEARING HAS NOT MOVED OFF THE TRUNNION DURING INSTALLATION. IF THE BEARING HOUSING HAS MOVED DURING INSTALLATION, THIS CAN CAUSE DAMAGE TO THE HOUSING AND STRUCTURE WHEN THE LANDING GEAR IS RETRACTED.

(f) Use the bolt wrench for the forward trunnion bearing to tighten the retaining bolt (73) to 15-20 pound-feet. Loosen to align the lockbolts.

(g) Measure inner race/housing bushing gaps "A" and "B".

(h) If the sum of gap "A" and gap "B" is greater then 0.250 inch, then do the steps to install the retaining ring again.

NOTE: The retaining ring is not fully seated with the housing if the gap is greater then 0.250 inch.

(i) Apply a thin layer of compound to the bolts (72) and the washers (71).

(j) Install the bolts (72) and washers (71). Wipe off the excess compound after installation.

(k) Safety wire the bolts (72).

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(4) FORWARD TRUNNION WITH SHEAR PIN;
To install the housing assembly (66) on the forward trunnion (32), Do the steps that follow (Fig. 402, View B-B):

(a) Apply a thin layer of compound (BMS 3-38) to the threads, thread reliefs, bushing surfaces and fay surfaces of the pin assembly (73A), splined washer (65), retaining nut (73), washer (71) bolt (72) and the bushing of the housing (68).

NOTE: Make sure that you apply sufficient compound to fill the gaps between the assembled parts.

(b) Apply a layer of compound (MIL-C-11796 Class3) on the last 0.50 inch of the inner circumference of the forward trunnion bushing.

NOTE: Make sure that you apply sufficient compound so that the compound forms a fillet seal when the pin assembly (73A) is installed.

(c) Put the pin assembly (73A) in the forward trunnion (32).

(d) Apply a thin layer of compound (BMS 3-38) to all surfaces of the shear pin (68A).

(e) Install the shear pin (68A) in the forward trunnion (32) and pin assembly (73A).

(f) Fill the inner diameter of the shear pin (68A) with compound (BMS 3-38) until the compound is faired to the outer surface of the forward trunnion (32).

(g) Install the splined washer (65) on the housing (68).

(h) Tighten the splined washer (65) to 10-20 pound-feet.

(i) Move the housing assembly (66) and housing (68) into position on the forward trunnion (32) on the inboard or bottom side of the trunnion.

(j) Install the retaining nut (73).

(k) Tighten the retaining nut (73) to 10-20 pound-feet.

NOTE: Loosen the nut, if necessary, to align with the holes of the splined washer (65).

(l) Install the washers (71) and bolts (72).

(m) Safety wire the bolts (72).

(n) Remove the excess compound around the circumference of the aft end of the housing (68).

(o) Apply a continuous bead of sealant (BMS 5-95) to make a fillet seal between the aft end of the housing (68) and the forward trunnion (32).

(5) To install the new aft trunnion bearings (2), do the steps that follow (Fig. 403, View A-A):

(a) Put the inner and outer races (77, 78) into the support structure.

(b) If it is not installed, install the lockplate (79) with the bolts, bushings, nuts, and washers.

(c) Use the spanner wrench to tighten the nut (89) to 100-130 pound-feet.

(d) Loosen the nut (89) to install the lock tab (80).

(e) Install the bolts (81) and the washers (82) to connect the lock tab (80) to the lockplate (79).

(f) Install a lockwire.

(6) Move the main landing gear into the wheel well and put in the approximate position.

(7) If you use the jack assembly (131) (Fig. 404), do the steps that follow:

(a) Remove the retention straps (116) from the shock strut.

(b) Install the jack assembly (131) on the torsion link (128).

1) Remove the bolt that holds the torsion link (128) to the shock strut.

2) Align the bolt hole of the scissor for the jack assembly (131) with the bolt hole for the shock strut (21).

3) Install the bolt (129).

4) Tighten the bolt.

5) Disconnect and remove the bolt which holds the lower torsion link (128) to the shock strut (130).

6) Align the bolt hole for the lower jack scissor assembly (131) with the bolt hole for the shock strut (130).

7) Install the bolt (132).

8) Tighten the bolt.

(c) Put two automotive type jacks with adapters under the truck axles.

(d) Lift the truck until the wheels are above the ground.

(e) Put the wheel carts under the wheels.

(f) Lower the truck and remove the axle jacks and adapters.

(8) If you use the overhead sling (138), make sure the shock strut retention straps (116) are installed.

(a) Put the sling (138) around the shock strut (21) from the outboard side.

(b) Connect both ends of the sling to the overhead hoist (Fig. 405).

(c) Install the bolt to hold both ends of the sling (138) to the hoist point.

(d) Attach the sling (138) hoist point to the overhead hoist.

(9) Turn the aft end of the trunnion 15 degrees inboard to permit clearance for the main landing gear from the airplane structure.

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(10) Apply sealant between the bearing plates (111 and 113) and the supports (114, 115).

(11) Apply grease between the shims (112) and the inboard support (114) (Fig. 402, View A-A).

NOTE: You can use the shims from the removed main landing gear to make it easier to get the correct clearance (View A-A).

(12) Lift the outer cylinder (21) while you put the housing assembly (66), the plates (111 and 113), and the shims (112) into the support for the rear spar (Fig. 402, View A-A).

WARNING: INSTALL THE CORRECT FUSE PINS ONLY. MAKE SURE THAT YOU INSTALL THE SAME TYPE OF FUSE PIN THAT YOU REMOVED. THE INCORRECT FUSE PIN CAN CAUSE DANGEROUS CONDITIONS.

(13) Apply grease to the fuse pins (110).

(14) Install these parts to connect the housing assembly (66) to the inboard and outboard supports (114, 115) (Fig. 402, View A-A):

(a) Fuse pins (110).

(b) Retaining pins (107).

(c) Washers (108)

(15) Install the lockwire to the retaining pins (107) (Fig. 402).

NOTE: Lockwire installtion can be found: AMM 20-10-23/401.

(16) Turn the aft end of the trunnion outboard to align the trunnion with the aft bearing (2).

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(17) Apply a thin layer of BMS 3-38 Corrosion Inhibiting Compound to the outside diameter of the trunnion pin (85). Make sure it covers approximately 8.5 inches from the large (forward) end of the pin.

NOTE: If the compound makes it difficult for you to install the trunnion pin, you can apply a thin layer of grease (BMS 3-33) on the trunnion pin. After installation you will then need to lubricate the pin with compound.

(18) Use the trunnion pin equipment to pull the trunnion pin (85) from trunnion (90) through the aft bearing (2) (Fig. 403).

(19) Apply a thin layer of BMS 3-38 Corrosion Inhibiting Compound to the shank, threads and thread relief of the cross bolt (75), and to the bushing faces and faces of the washers (74 and 92).

(20) Install the crossbolt (75) for the trunnion pin, the washers (74 and 92), and the nut (91). Torque the nut (91) to 90-120 pound-feet.

(21) Install the cotter pin (91A).

(22) If you used grease on the trunnion pin (85) then lubricate the aft trunnion pin with compound (BMS 3-38) at the lube fitting (AMM 12-21-14/301).

(23) Remove the excess Corrosion Inhibiting Compound from the aft trunnion area.

(24) Adjust the aft bearing.

(a) Measure the dimension A between the shoulder (85) of the trunnion pin and the face of the bearing (78). Write down the dimension for later use.

(b) Turn the adjusting collar (87) on the trunnion pin (85) until the collar (87) touches the shoulder (85) of the trunnion pin.

NOTE: You can use a strap wrench if necessary.

(c) Measure the dimension B between the bearing face and the end of the adjusting collar. If the dimension A plus the dimension B is greater than 2.75 inches, the adjusting collar (87) is not correctly installed. Repeat the step above to install the adjusting collar (87).

1) If you cannot install the adjusting collar (87) correctly, remove the dry lubricant and use the procedure in SB 32-38.

(d) Move the lock ring (88) over the splines on the adjusting collar (87). Make sure the lugs in the lock ring (88) engage the slots in the bearing (78).

NOTE: It is recommended that the grease fitting on the lock ring (88) point outboard to permit the easiest access for lubrication.

(e) Install the washer (83) and the clamp nut (84).

(f) Tighten the nut (84) to 10-20 pound-feet. Loosen the nut to align the locking holes. Get a clearance of 0.003-0.010 inches.

(g) Fill all holes with grease.

NOTE: The clearance between the washer (83) and the lockring (88) is for the adjustment (Fig. 403, View A-A). After the main landing gear is operated and/or the jacks are removed a clearance of 0.00-0.05 inches is permitted.

(h) Install the lockbolts (86).

(i) Install the lockwires on the the lockbolts (86).

(25) Install these parts to connect the outboard end of the lower strap (33) to the housing assembly (Fig. 402, Detail A):

(a) Bolts (61)

(b) Bushings (62)

(c) Washers (63)

(d) Nuts (64)

(26) Install these parts to connect the rod fitting, the lower strap (33) and the support bracket (45) to the housing assembly (66):

(a) Bolts (34, 40)

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(b) Washers (35, 38, 41, 43)

(c) Bushings (37, 42)

(d) Nuts (39, 44)

(27) Do these steps to connect the upper junction box (6) to the brackets:

(a) Clean the faying surfaces.

(b) Install the bolts (30) to connect the upper junction box (6) to the brackets.

(c) Bond, and apply a fillet seal between the junction box (6) and the brackets (SWPM 20-20-00).

(d) Measure the resistance to make sure that the resistance across the interface is a maximum of 0.010 ohms.

(28) AIRPLANES WITH GROUND STRAP;
Do these steps to connect the ground strap (27) to the junction box (6):

(a) Connect the ground strap to the grounding stud on the junction box (6) (SWPM 20-20-00).

(b) Measure the resistance to make sure that the maximum resistance between ground studs is 0.005 ohm.

(29) Connect the electrical connectors to the upper junction box (6).

(30) Connect the six hydraulic lines to the upper shock strut on the outboard side of the shock strut.

(31) Install these parts to connect the door seal (20) and the retainer (19) of the shock strut to the support beam (Fig. 401):

(a) Screws (17)

(b) Washers (18)

(32) Install the parts to connect the chord (24) to the outboard structure (Fig. 401, Detail B):

(a) Bolts (22)

(b) Nuts (23)

(33) Install these parts to connect the chord (24) to the inboard bracket:

(a) Clip (11)

(b) Splice Strap (7)

(c) Bolts (8, 12)

(d) Collars (9, 13)

(34) If you use the jack equipment, do these steps:

(a) Lower the truck until the wheels touch the ground.

(b) Remove the automotive type jacks and the adapters from below the truck axles.

(35) Use the jack equipment (131) to lower the outer cylinder (21).

(36) Remove the jacking equipment (131) from the shock strut (21, 130) (Fig. 404).

(a) Remove the bolts (129, 132) which hold the jack assembly (131) to the shock strut (21, 130).

(b) Install the bolts to hold the torsion link (128) to the shock strut (21, 130) and tighten.

(37) If you use the overhead sling (138), do these steps:

(a) Remove the overhead sling (138).

(b) Remove the shock strut retention straps (116).

G. Put the Airplane Back to Its Usual Condition (Fig. 401)

(1) Do the servicing of the shock strut for the main landing gear (AMM 12-15-01/301).

(2) Lift the airplane to extend the shock strut fully (AMM 07-11-01/201).

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(3) Connect the drag brace and the jury strut to the shock strut (AMM 32-11-10/401).

(4) Connect the side brace and the lock link to the shock strut (AMM 32-11-03/401).

(5) Install the jury strut springs (AMM 32-32-05/401) and the side brace springs (AMM 32-32-03/401).

(6) Connect the rod end of the retract actuator to the main landing gear trunnion (Fig. 401, View A-A).

(a) Install the actuator sling equipment for the retract actuator on the retract actuator (97) (Fig. 405, Detail A).

1) Put the support structure (139) on the wing structure.

2) Put the actuator clamp (134) on the retract actuator (97).

(b) Tighten the clamp nut (136) until the actuator clamp (134) is tight against the retract actuator (97).

1) Connect the cable of the fishpole hoist (137) to the support structure (139) and the clamp arm (133).

2) Tighten the cable (137).

(c) Apply grease to the bolt (98), the nut (94), and the antirotation bolt (93) before installation.

(d) Install the new packings (100) on the lube retainer (99).

(e) Use the actuator sling equipment to lower the actuator to align the rod end with the lugs on the trunnion.

NOTE: Put the rod end of the actuator in position so the lube fittings are above the center line of the actuator. This will make sure you can get access to the fittings easily.

(f) Install the bolt (98) and the lube retainer (99) through these components in the sequnce below:

1) The actuator ring (101)

2) The antirotation washers (102, 103)

MECH | INSP

3) The retract actuator (97)

4) The spline washer (95)

5) And the nut (94).

(g) Tighten the nut (94) to 70-90 pound-feet. Loosen the nut to the subsequent lock position (Fig 401, View A-A).

(h) Install the antirotation bolt (93), the washer (105), the nut (104), and the cotter pin.

(i) Remove the tool (133, 134) and the support frame (139) from the area (Fig. 405).

(7) Install the lock actuators for the drag and side brace (AMM 32-32-02/401).

(8) Make sure the pressure is removed from the hydraulic systems (AMM 29-11-00/201).

(9) Connect the hydraulic lines to the actuators.

(10) Connect the door for the drag brace (5) to the drag brace (AMM 32-12-08/401).

(11) Install the door (4) and linkage for the shock strut (AMM 32-12-06/401).

(12) Install the door (3) and linkage for the trunnion (AMM 32-12-11/401).

(13) Remove the turnbuckle (118) for the truck positioner.

(14) Install the truck positioner (AMM 32-32-18/401).

(15) Close these circuit breakers on the overhead circuit breaker panel P11:

(a) AIRPLANES WITH THE "LANDING GEAR POSITION AIR/GND SYS 2 ALT" CIRCUIT BREAKER INSTALLED AT PANEL GRID LOCATION 11C29; 11C29, LANDING GEAR POSITION AIR/GND SYS 2 ALT

(b) 11C30, LANDING GEAR POSITION AIR/GND SYS 1

(c) 11C31, LANDING GEAR ANTISKID 2-6

MECH | INSP

(d) 11C32, LANDING GEAR ANTISKID 3-7

(e) 11H15, FLT CONT SHUTOFF WING LEFT

(f) 11H16, FLT CONT SHUTOFF WING CTR

(g) 11H26, FLT CONT SHUTOFF WING RIGHT

(h) 11R30, RIGHT IND LTS 3

(i) 11U12, AUTOBRKS ANTISKID TEST/IND 1

(j) 11U15, AIR/GND SYS 1

(k) 11U16, BRAKE TEMP

(l) SAS 275-276 POST SB 32-85;
SAS 277-281, 050-149, 155-167;

11U17, TIRE PRESS IND 1

(m) 11U18, ANTISKID 1-5

(n) 11U20, LANDING GEAR LEVER LOCK

(o) 11U21, AUTOBRKS ANTISKID TEST/IND 2

(p) 767-200 AIRPLANES;

11U23, POSITION AIR/GND SYS 2

(q) 767-300 AIRPLANES;

11U24, POSITION AIR/GND SYS 2

(r) 11U27, ANTISKID 4-8

(16) SAS 281;

Close this circuit breaker on the main power distribution panel, P6:

(a) 6J21, F/O SEAT

(17) SAS 275-276 WITH SB 32-85 AND SAS 277-281, SAS 050-149, 155-167;

Remove the DO-NOT-CLOSE identifier and close this circuit breaker on the APU external power panel, P34:

MECH | INSP

(a) 34M11, TIRE PRESS IND 2

(18) Put the WING FLIGHT CONTROL SHUTOFF switches L, C, and R on the P61 panel to OFF position.

(19) Lubricate the gear at the grease fittings (AMM 12-21-14/301).

(20) Do an adjustment check of the main landing gear doors (AMM 32-12-00/501).

(21) Do an adjustment check of the clearance for the main landing gear tilt sensors (AMM 32-09-07/201).

(22) Do a test of the tilt sensors for the main landing gear truck (AMM 32-09-07/201).

(23) For the right main landing gear only, do the gear truck tilt sensor failure test for the auto-speedbrake system (AMM 27-62-00/501).

(24) SAS 275-276 WITH SB 32-85 AND SAS 277-281, SAS 050-149, 155-167;

Do a test of the tire pressure indicating system (AMM 32-45-00/501).

(25) Do a test of the brake temperature monitoring system (AMM 32-46-00/501).

(26) Do the extension and retraction test for the main landing gear (AMM 32-32-00/501).

(27) Install the applicable access panels (Table 402) (AMM 06-44-00/201):

TABLE 402

WHEN YOU INSTALL THE LEFT GEAR	WHEN YOU INSTALL THE RIGHT GEAR
551FT	651FT
551LT	651LT
551MT	651MT
551QB	651QB
551PT	651PT
551SB	651SB
551TB	651TB

MECH	INSP

(28) Put the trailing edge flap system back to its usual condition (AMM 27-51-00/201).

(29) Put the leading edge slat system back to its usual condition (AMM 27-81-00/201).

(30) Lower the airplane (AMM 07-11-01/201).

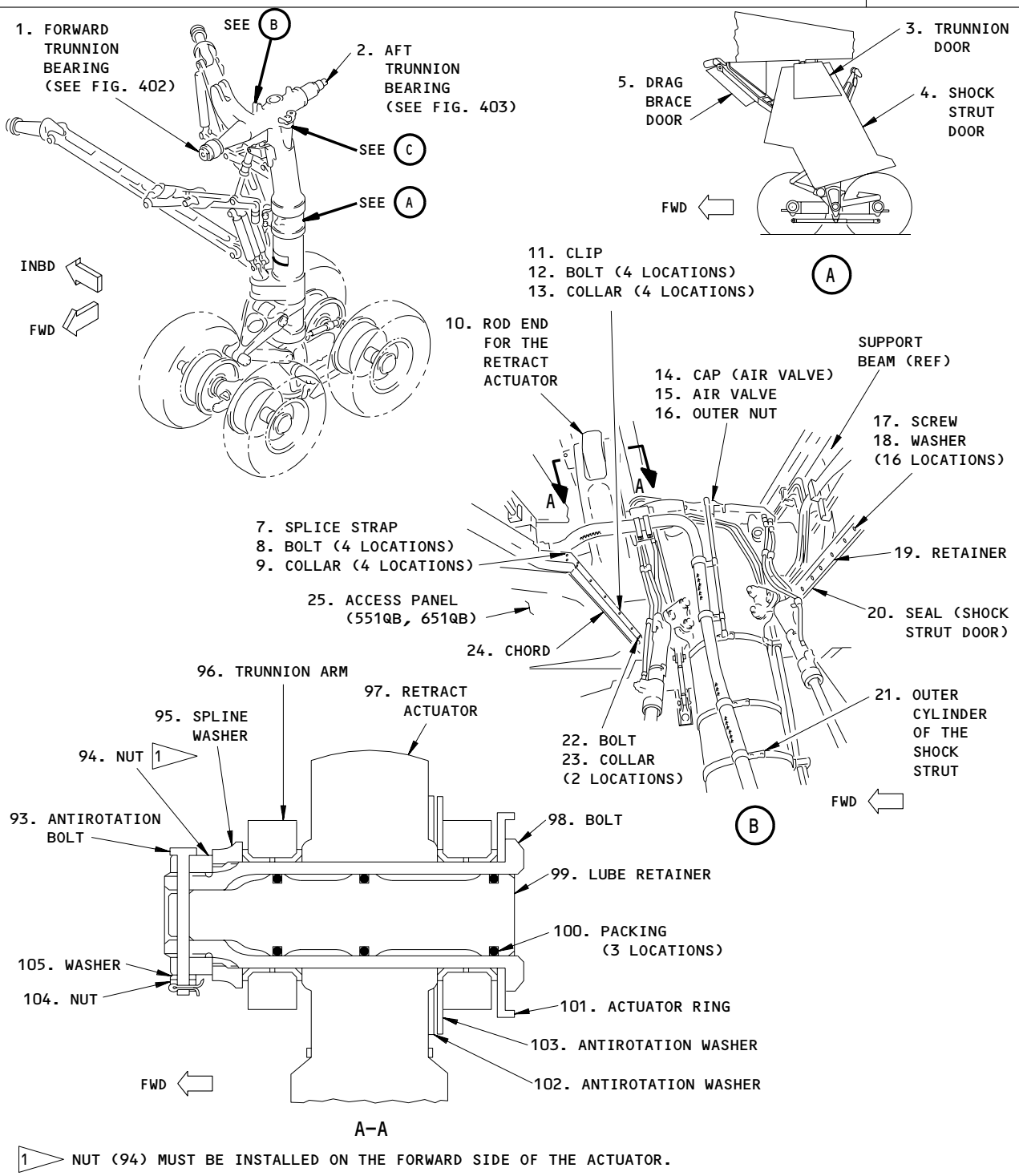
(31) Do the procedure to bleed the brakes (AMM 32-41-00/201).

(32) Do a test of the proximity sensors for the main landing gear (AMM 32-61-02/201).

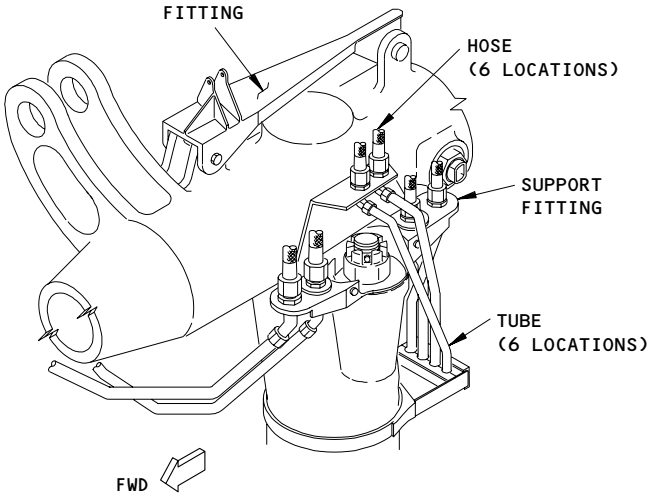
(33) Do the steps in the Antiskid System Test - Brake Release (AMM 32-42-00/501).

WARNING: OBEY THE REMOVAL PROCEDURE FOR THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

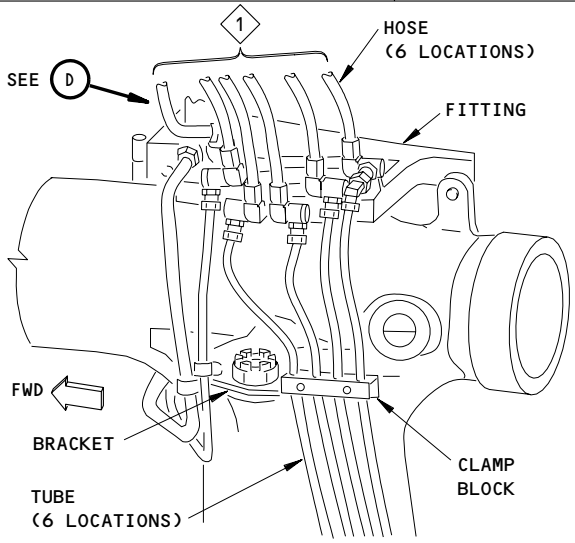
(34) Remove the door locks and close the doors (AMM 32-00-15/201).



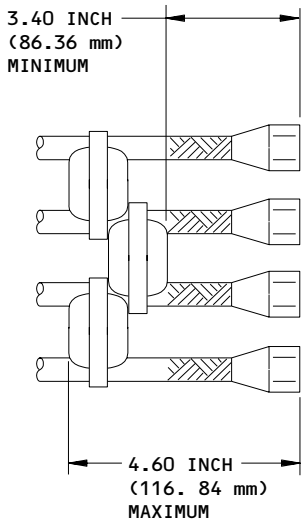
Main Gear Installation
Figure 401 (Sheet 1)



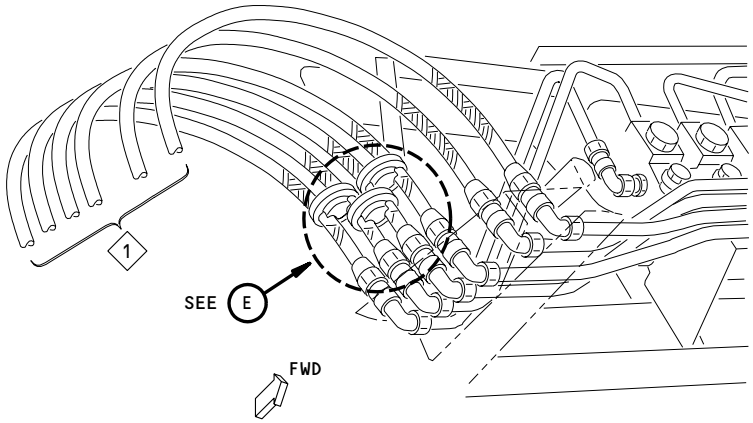
C 1



C 2



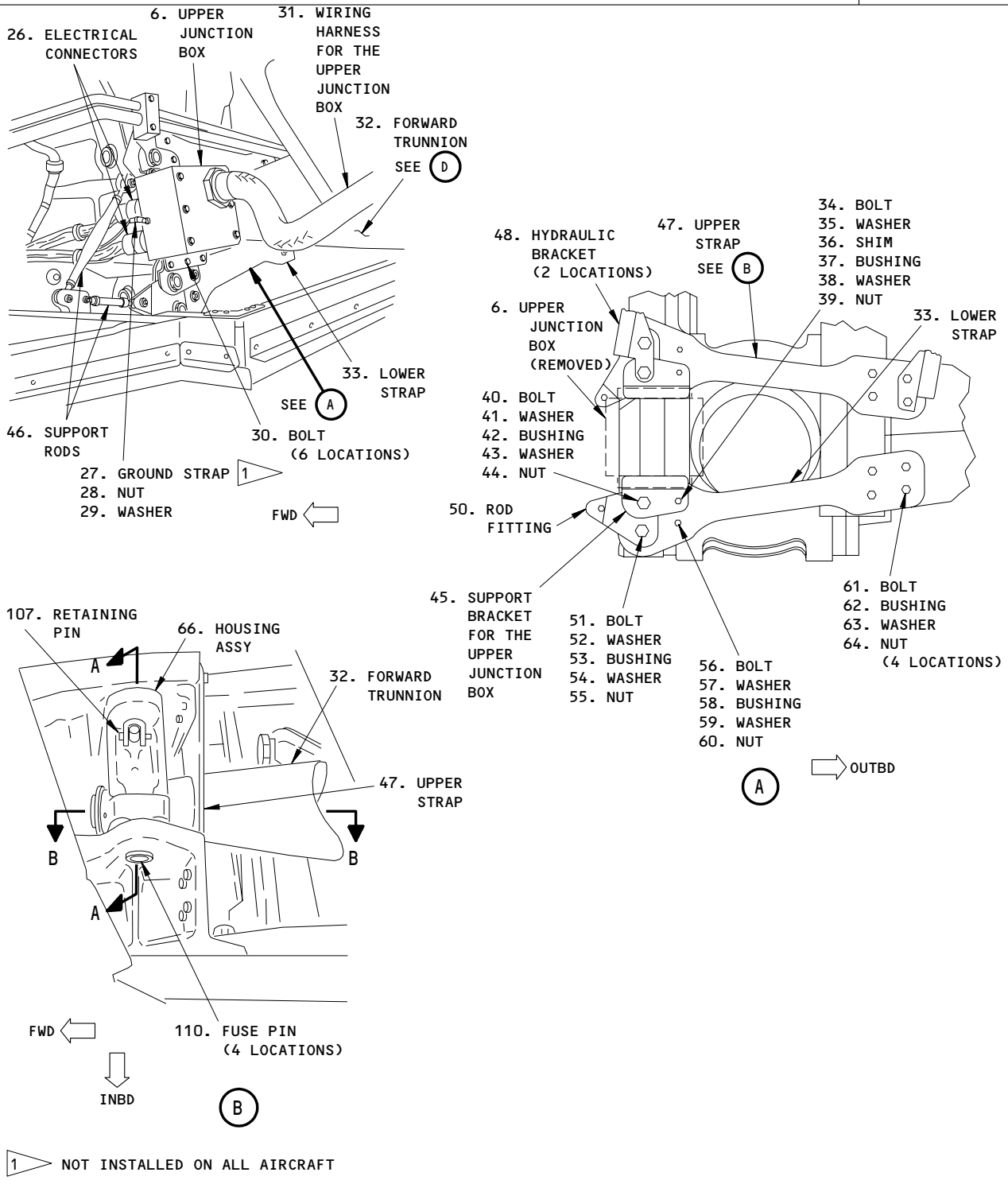
E



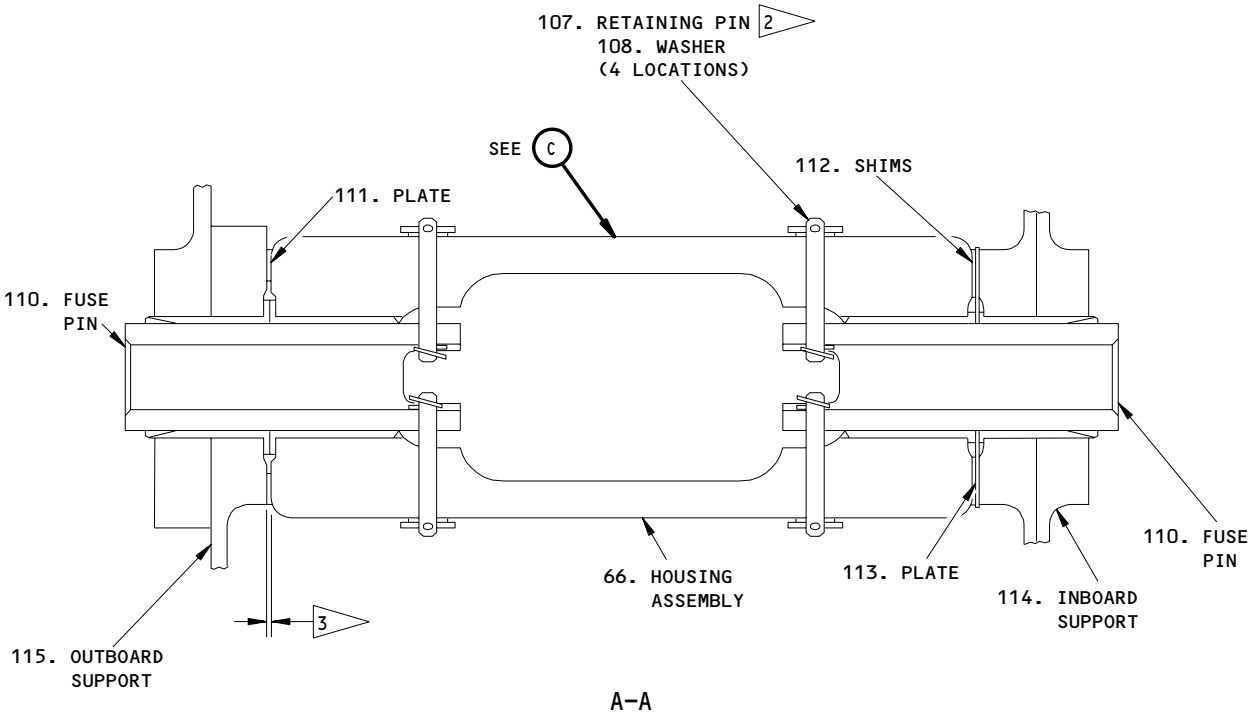
D 2

1 SHOCK STRUT WITHOUT HYDRAULIC HOSE SWIVEL CONNECTORS.
2 SHOCK STRUT WITH HYDRAULIC HOSE SWIVEL CONNECTORS.

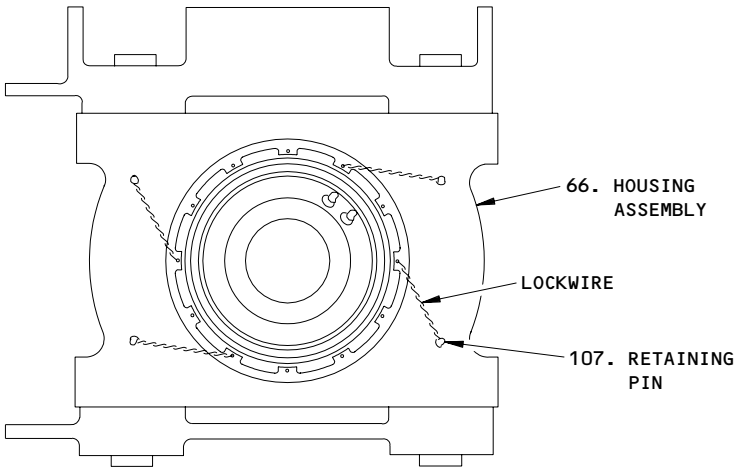
Main Gear Installation
Figure 401 (Sheet 2)



Installation of the Forward Trunnion Bearing
Figure 402 (Sheet 1)



A-A

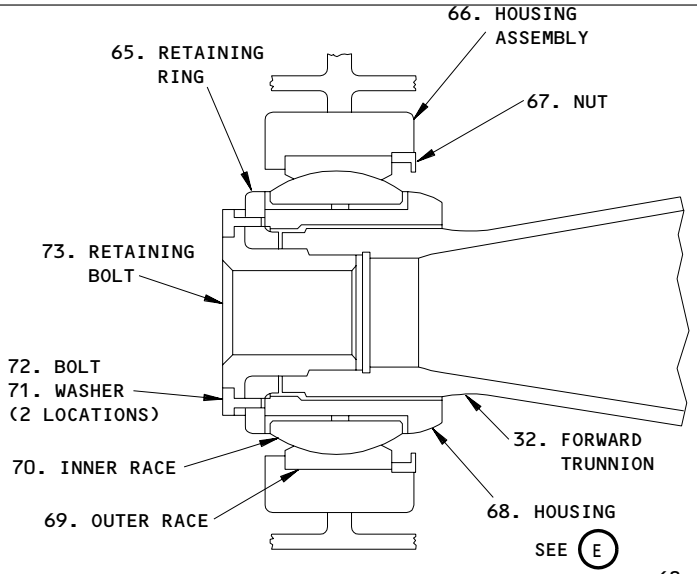


C

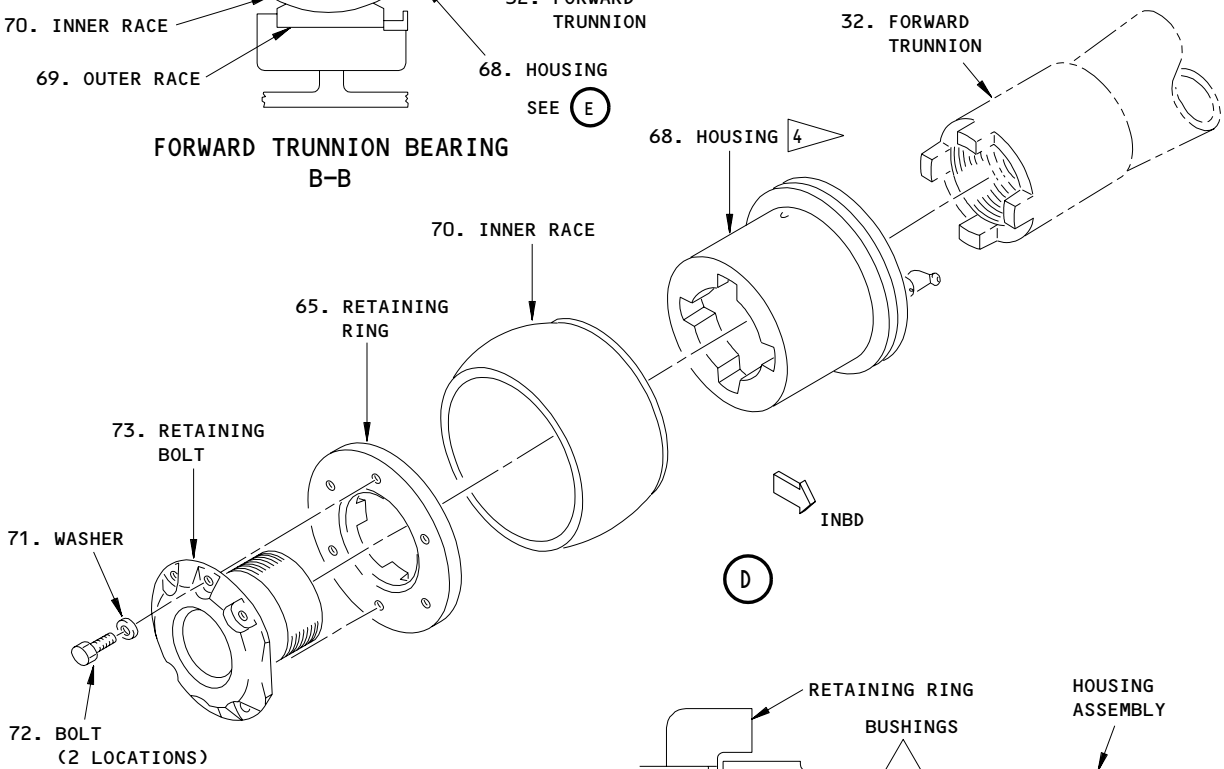
2 INSTALL THE LOCKWIRE

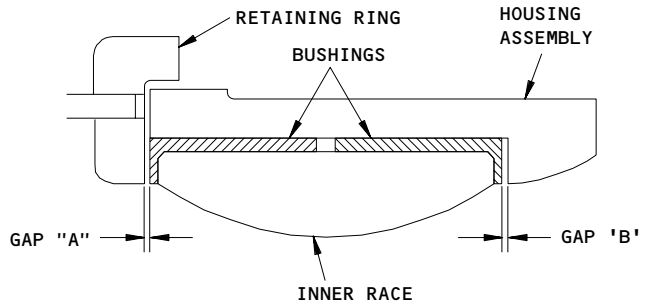
3 ADD OR REMOVE THE SHIMS (112) AT THE INBOARD SUPPORT. GET A MAXIMUM CLEARANCE OF 0.010 INCH BETWEEN THE PLATE (111) AND THE HOUSING ASSY OR THE OUTBOARD SUPPORT

Installation of the Forward Trunnion Bearing
Figure 402 (Sheet 2)



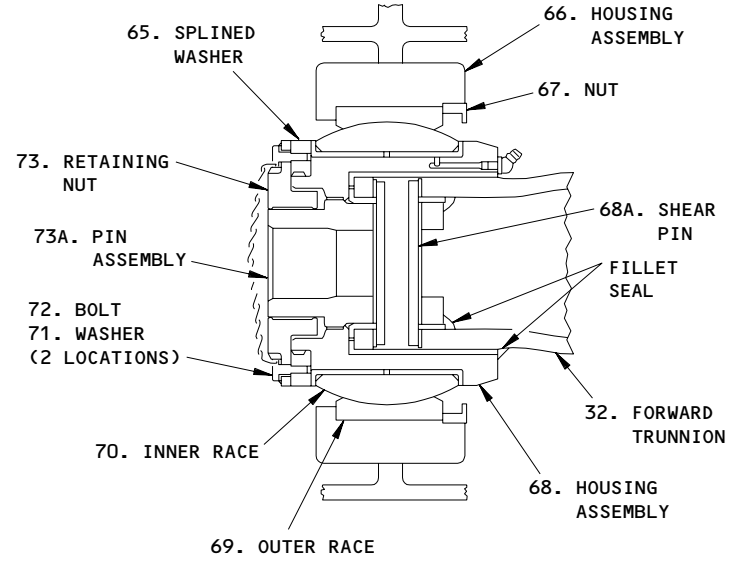
FORWARD TRUNNION BEARING
B-B



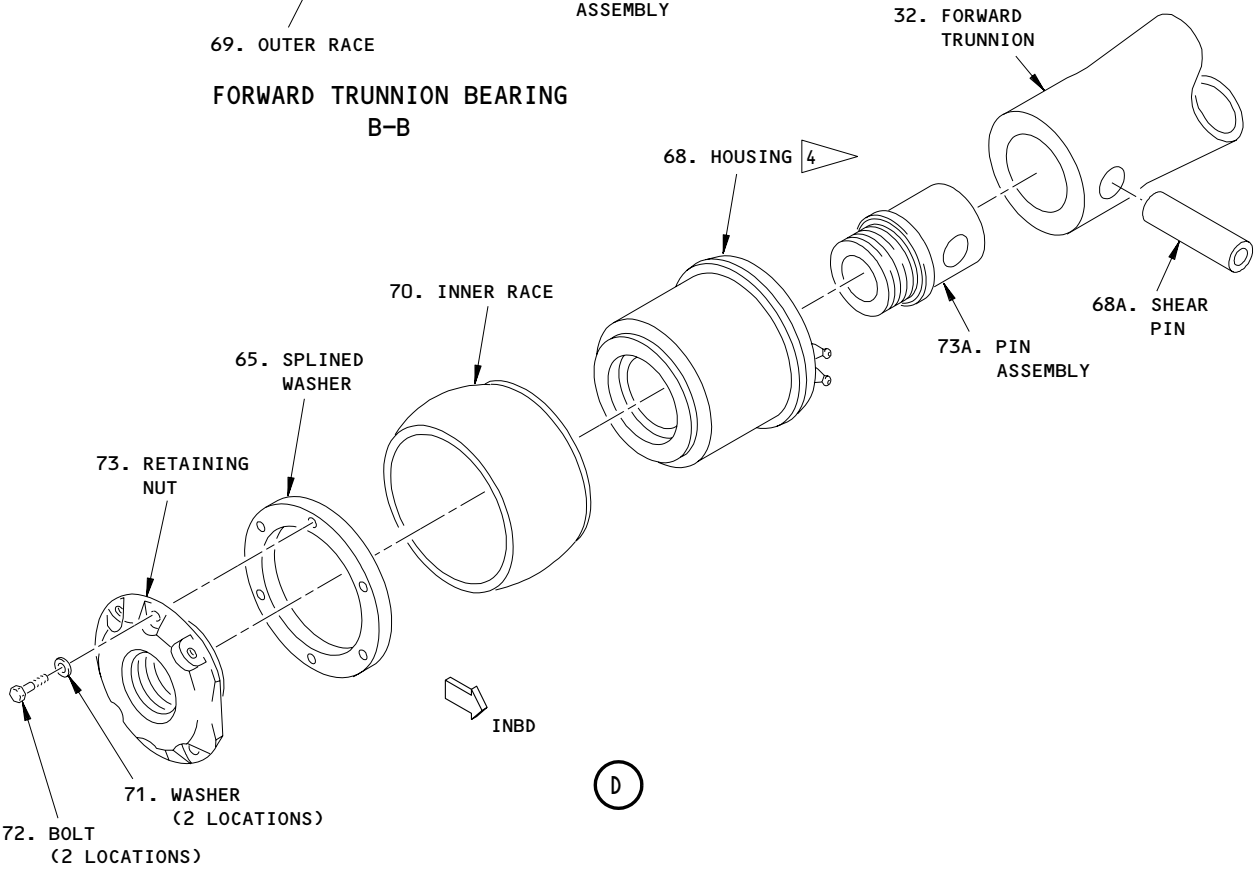


4 INSTALL THE HOUSING (68) WITH THE GREASE FITTING ON THE INBD SIDE OR BOTTOM OF THE TRUNNION (32). IT WILL MAKE THE LUBRICATION ACCESS EASIER.

Installation for the Forward Trunnion Bearing
Figure 402 (Sheet 3)

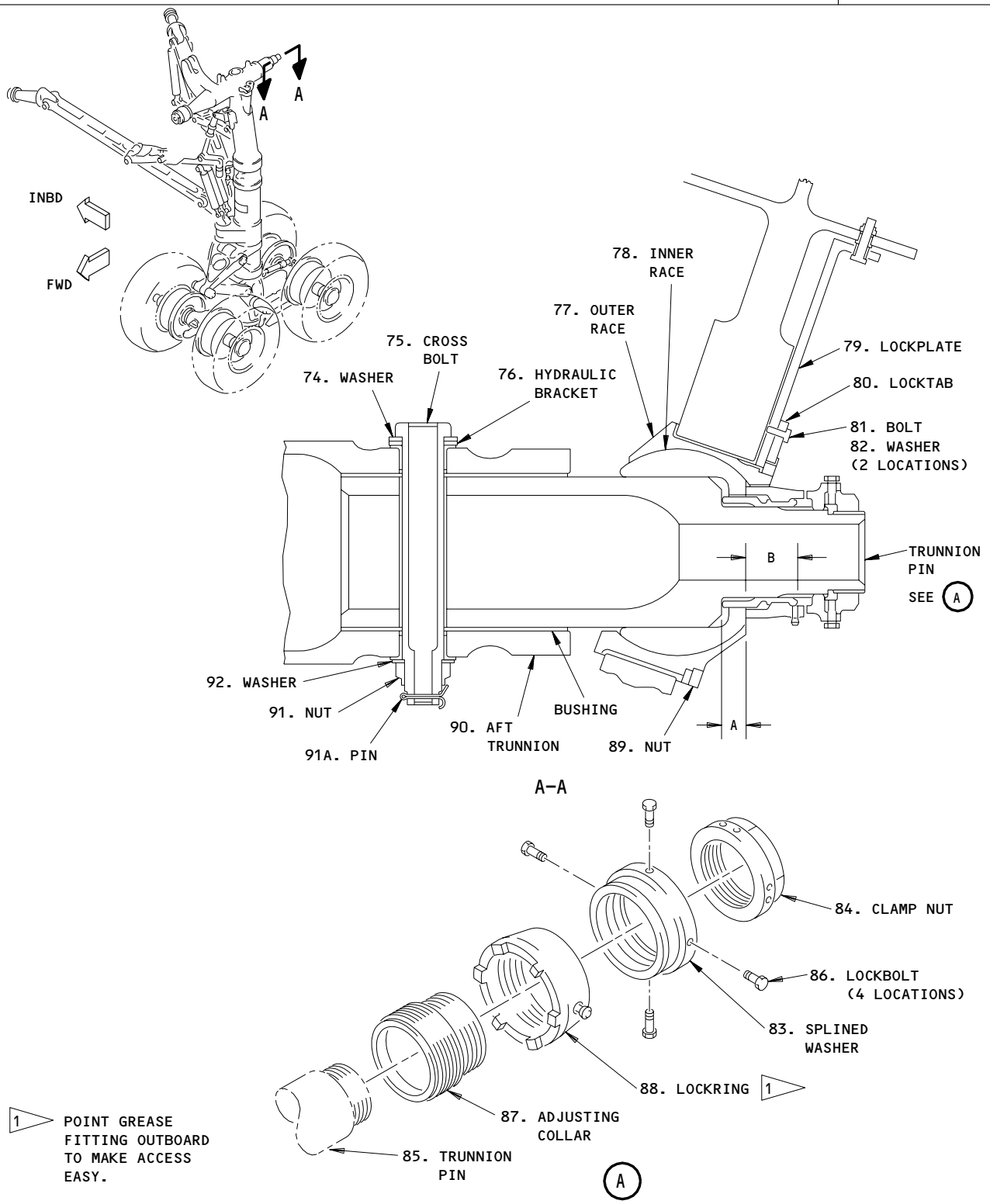


FORWARD TRUNNION BEARING
B-B

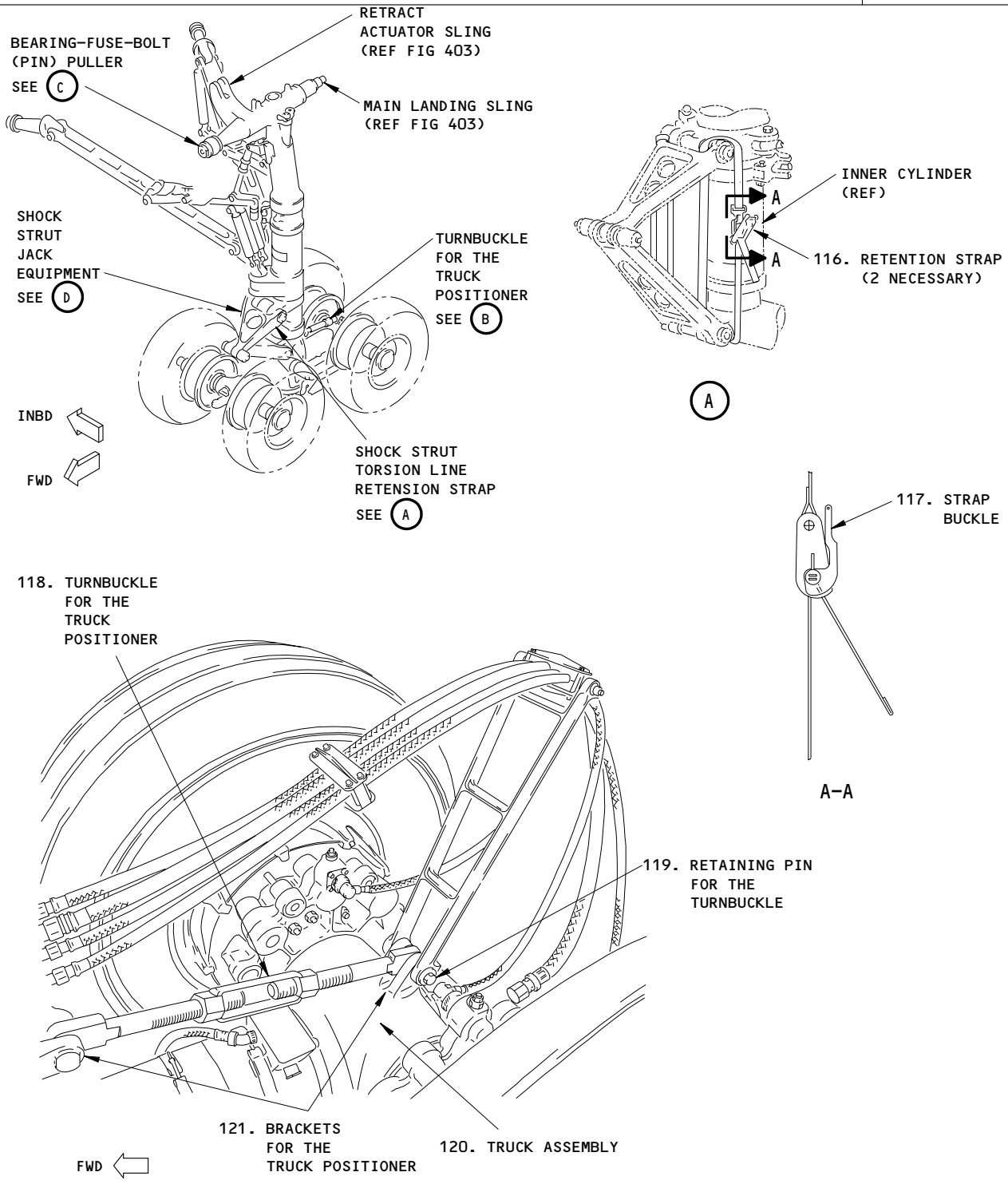


4 INSTALL THE HOUSING (68) WITH THE GREASE FITTING ON THE INBD SIDE OR BOTTOM OF THE TRUNNION (32). IT WILL MAKE THE LUBRICATION ACCESS EASIER.

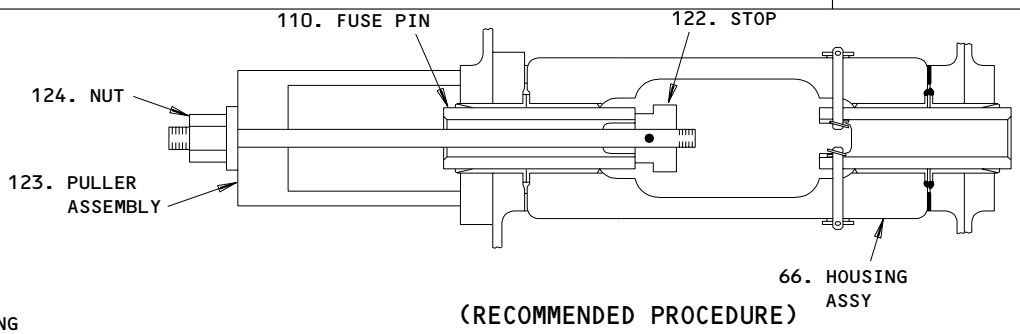
Installation for the Forward Trunnion Bearing
Figure 402 (Sheet 4)



Installation for the Aft Trunnion Bearing
Figure 403

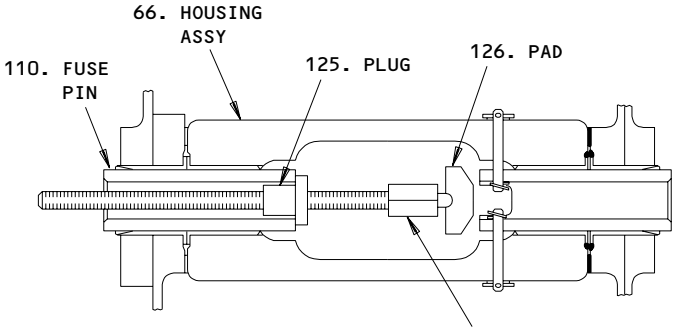


Special Tools for the Main Landing Gear Installation
Figure 404 (Sheet 1)



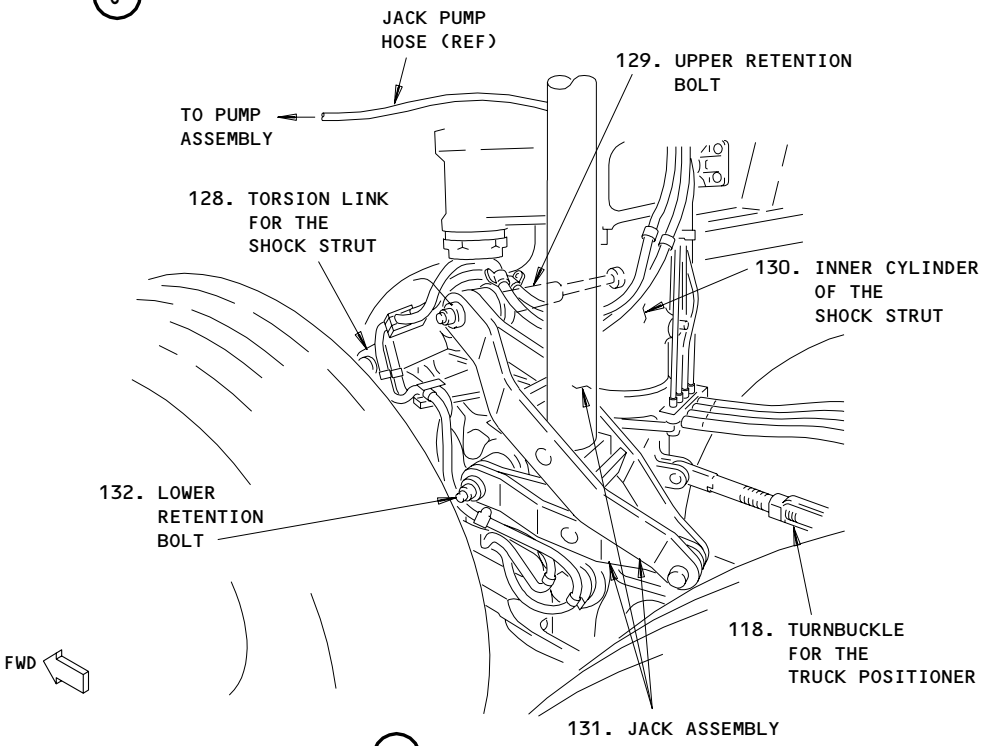
(RECOMMENDED PROCEDURE)

C



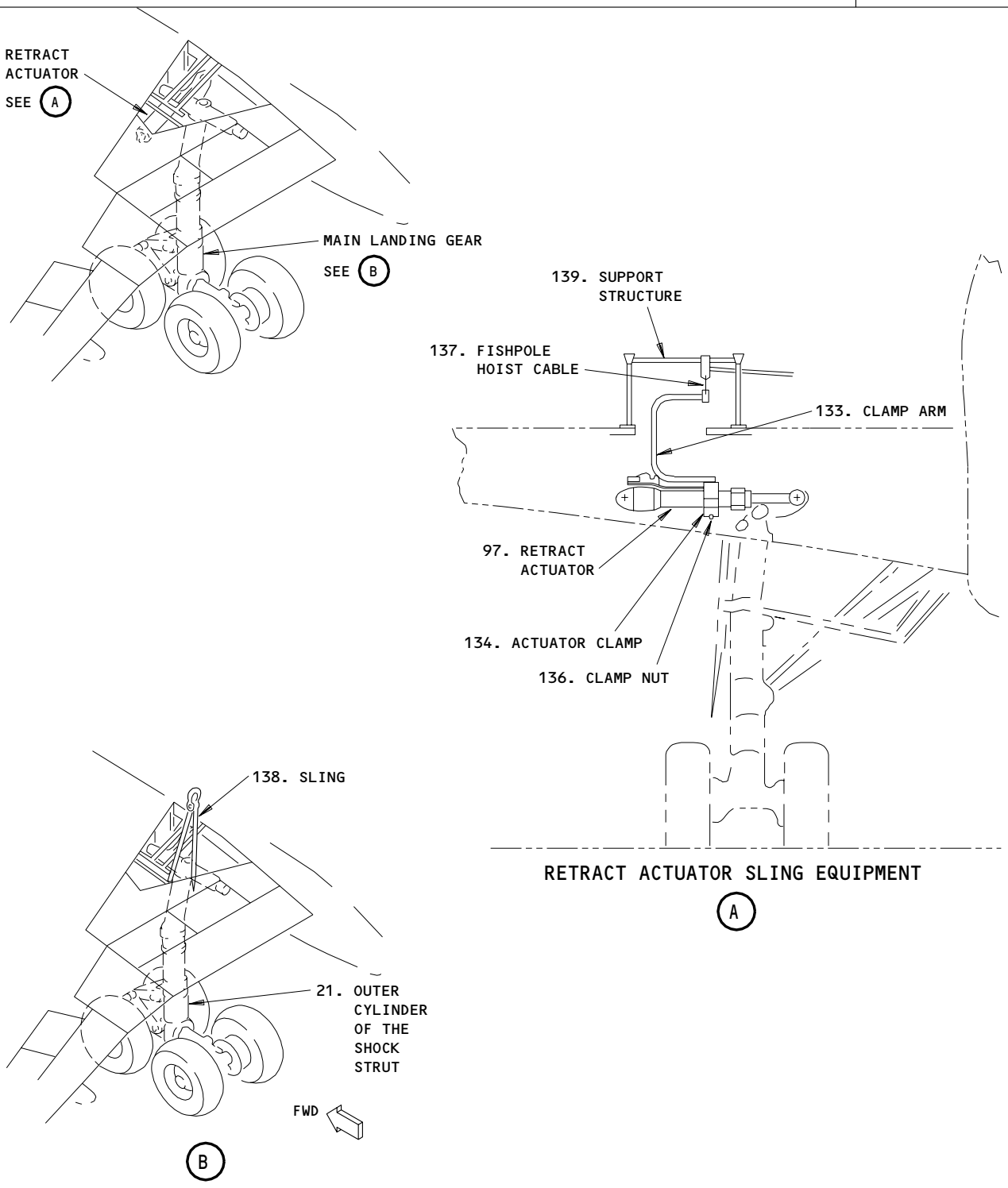
(OPTIONAL PROCEDURE)

C



D

Special Tools for the Main Landing Gear Installation
Figure 404 (Sheet 2)



RETRACT ACTUATOR SLING EQUIPMENT

A

Support Equipment for the Main Landing Gear Installation
Figure 405

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-045-02-1
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	L MAIN GEAR		50000 CYC	610XX	018	DEC 22/08

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
REPLACE	LEFT MAIN LANDING GEAR		300	ALL

ZONES	ACCESS PANELS
211 731	551FT 551LT 551MT 551PT 551QB 551SB 551TB 551VB

MECH | INSP

MPD ITEM NUMBER

REPLACE THE LEFT MAIN LANDING GEAR AT MANUFACTURER'S LIFE LIMIT (CURRENTLY 50,000 CYCLES). REFER TO BOEING SERVICE LETTER 767-SL-32-92 FOR A LIST OF 767 LANDING GEAR LIFE LIMITED PARTS. 32-11-01-4A

1. Remove the Main Landing Gear

A. General

(1) There are two different procedures given to remove the main landing gear. One procedure uses jacks for the removal of the main landing gear. The other procedure uses an overhead sling to remove the main landing gear.

B. Equipment

(1) A32006-77 MLG Retract Actuator Sling

(2) A32017-1 MLG Forward Trunnion Support
Fuse Bolt Puller

(3) A32026-60 MLG Trunnion Pin Removal/Installation Equipment

(4) A32027-53 Retraction/Extension Landing Gear Actuator Pump

(5) A32028-6 Shock Strut Retention Strap
(2 straps are necessary)

(6) A32031-5 MLG Truck Positioner Turnbuckle
(Recommended)

(7) A32031-4 MLG Truck Positioner Turnbuckle
(Alternative) Make from A32031-1

MECH | INSP

(8) A32032-65 MLG Removal/Installation Sling
(A32032-39 Alternative)

(9) A32032-64 MLG Jacking Equipment
(Upgraded -52 kit that includes a
new -68 tiny collar for IGW A/Ps)

(10) A32095-1 Forward Trunnion Bearing Bolt Wrench

(11) Fishpole Hoist (Commercially available)

(12) Automotive type axle jacks (2 to 4 ton
capacity) - commercially available

C. References

(1) AMM 06-44-00/201, Wings (Major Zones 500 and 600) Access Doors and Panels

(2) AMM 07-11-01/201, Jacking Airplane

(3) AMM 27-51-00/201, Trailing Edge Flap System

(4) AMM 27-81-00/201, Leading Edge Slat System

(5) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(6) AMM 32-00-15/201, Landing Gear Door Locks

(7) AMM 32-00-20/201, Landing Gear Downlocks

(8) AMM 32-11-01/601, Main Gear

(9) AMM 32-11-03/401, Main Gear Side Brace

(10) AMM 32-11-10/401, Main Gear Drag Brace

(11) AMM 32-12-06/401, Shock Strut Door and Linkage

(12) AMM 32-12-08/401, Drag Brace Door and Linkage

(13) AMM 32-12-11/401, Trunnion Door and Linkage

(14) AMM 32-32-02/401, Main Gear Lock Actuators

(15) AMM 32-32-05/401, Main Gear Jury Strut Spring

MECH | INSP

(16) AMM 32-32-18/401, Main Gear Truck Positioner

D. Prepare to Remove the Main Landing Gear

WARNING: MAKE SURE THE DOWNLOCKS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCKS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

WARNING: OBEY THE INSTALLATION PROCEDURE FOR THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) Open the doors for the landing gear and install the door locks (AMM 32-00-15/201).

(3) Extend the trailing edge flaps to 20 units. Set the trailing edge flap system to off (AMM 27-51-00/201).

(4) Set the leading edge slat system to off (AMM 27-81-00/201).

(5) Remove the pressure from the right and the center hydraulic systems and reservoirs (AMM 29-11-00/201).

(6) Make sure that this circuit breaker on the main power distribution panel, P6, is closed:

(a) 6F4, LANDING GEAR PARKING BRAKE VLV

(7) Push the brake pedals a minimum of seven times to remove the pressure from the brake lines.

(8) Remove power from the cooling packs, open these circuit breakers on the overhead circuit breaker panel, P11, and attach DO-NOT-CLOSE tags:

(a) 11N19, RIGHT PACK AUTO PWR

(b) 11N20, RIGHT PACK AUTO CONT

(c) 11N10, LEFT PACK AUTO PWR

MECH | INSP

(d) 11N11, LEFT PACK AUTO CONT

(e) 11R21, CARGO HEAT OVERRIDE FWD

(f) 11R22, CARGO HEAT OVERRIDE AFT

(9) Open these circuit breakers and attach DO-NOT-CLOSE tags for the removal of the left or right main landing gear:

(a) AIRPLANES WITH THE "LANDING GEAR POSITION AIR/GND SYS 2 ALT" CIRCUIT BREAKER INSTALLED AT PANEL GRID LOCATION 11C29;
11C29, LANDING GEAR POSITION AIR/GND SYS 2 ALT

(b) 11C30, LANDING GEAR POSITION AIR/GND SYS 1

(c) 11C31, LANDING GEAR ANTISKID 2-6

(d) 11C32, LANDING GEAR ANTISKID 3-7

(e) 11H15, FLT CONT SHUTOFF WING LEFT

(f) 11H16, FLT CONT SHUTOFF WING CTR

(g) 11H26, FLT CONT SHUTOFF WING RIGHT

(h) 11R30, RIGHT IND LTS 3

(i) 11U12, AUTOBRKS ANTISKID TEST/IND 1

(j) 11U15, AIR/GND SYS 1

(k) 11U16, BRAKE TEMP

(l) SAS 050-149, 155-999;

11U17, TIRE PRESS IND 1

(m) 11U18, ANTISKID 1-5

(n) 11U20, LANDING GEAR LEVER LOCK

(o) 11U21, AUTOBRKS ANTISKID TEST/IND 2

(p) 767-200 AIRPLANES;

11U23, POSITION AIR/GND SYS 2

MECH | INSP

(q) 767-300 AIRPLANES;

11U24, POSITION AIR/GND SYS 2

(r) 11U27, ANTISKID 4-8

(s) Open this circuit breaker on the main power distribution panel, P6, and attach a DO-NOT-CLOSE tag:

1) 6J21, F/O SEAT

(10) MTH 275-276 WITH SB 32-85 AND MTH 277-999, SAS 050-149, 155-999;

Open this circuit breaker on the APU external power panel, P34, and install a DO-NOT-CLOSE tag:

(a) 34M11, TIRE PRESS IND 2

WARNING: CLEAR THE AREA BELOW THE WING BEFORE YOU DEFLATE THE SHOCK STRUT. IF YOU DEFLATE ONE SHOCK STRUT THE WING TIP CAN MOVE DOWN AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(11) Deflate the shock strut of the main landing gear.

(a) Remove the cap for the air valve (14) from the top of the shock strut (21).

WARNING: LOOSEN THE OUTER NUT A MAXIMUM OF TWO TURNS. AIR PRESSURE CAN BLOW THE VALVE OUT AND CAUSE INJURY TO PERSONS.

(b) Loosen the outer nut (16) a maximum of two turns.

(12) Remove the bolts (30) to disconnect the upper junction box (6) from the brackets.

(13) Disconnect the two electrical connectors (26) from the forward side of the upper junction box (6).

(14) AIRPLANES WITH GROUND STRAP;
Disconnect the ground strap (27) at the junction box (6).

(15) Attach the wire harness (31) for the upper junction box to the trunnion (Fig. 402).

MECH | INSP

(16) Disconnect the 6 hydraulic lines from the outboard side of the upper shock strut.

(a) Put a cap on the hydraulic ports.

(b) Put a plug on the lines.

(c) Put a tag on the lines to make installation easier.

(d) Hold the lines out of the work area.

(17) Remove the truck positioner (AMM 32-32-18/401).

(18) Install the turnbuckle (118) for the truck positioner (Fig. 404).

(a) Put one of the rod ends of the turnbuckle (118) into a bracket for the truck positioner (121).

(b) Install the retaining pin (119) for the turnbuckle.

(c) Adjust the turnbuckle (118) until the other rod end attaches into the other bracket for the truck positioner (121).

(d) Install the other retaining pin for the turnbuckle (119).

(19) Disconnect the drag brace door (5) from the drag brace (AMM 32-12-08/401).

(20) Hold the door (5) out of the work area (Fig. 401).

(21) Remove the shock strut door (4) and the linkage (AMM 32-12-06/401).

(22) Remove the trunnion door (3) and the linkage from the shock strut (21) (AMM 32-12-11/401).

(23) Remove the applicable access panels (Table 401) (AMM 06-44-00/201):

TABLE 401	
WHEN YOU REMOVE THE LEFT GEAR	WHEN YOU REMOVE THE RIGHT GEAR
551FT	651FT
551LT	651LT
551MT	651MT
551QB	651QB
551PT	651PT
551SB	651SB
551TB	651TB

(24) Remove the bolts (8, 12, and 22) to disconnect the chord (24).

(25) Remove the screws (17) to disconnect the seal (20).

(26) Remove the seal (20).

(27) If you use the jack assembly (131) do the steps that follow (Fig. 404):

NOTE: The jack assembly is part of the main landing gear removal/installation equipment.

WARNING: MAKE SURE THE STRUT IS FULLY DEPRESSURIZED BEFORE JACKING. FAILURE TO DO THIS CAN LET THE STRUT MOVE UNDER PRESSURE AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) Install the jack equipment and lift the airplane until the wheels are above the ground 6.0 inches (AMM 07-11-01/201).

(b) Install the axle jacks under the truck assembly (120) for the main landing gear.

(c) Lift the truck assembly (120) until you can put the cart assembly under the truck wheels.

(d) Put the cart assembly under the truck wheels and remove the jacks.

MECH | INSP

(e) Install the jack assembly (131) on the torsion link for the shock strut (128) (Fig. 404).

(f) Disconnect and remove the bolt which holds the upper torsion link to the shock strut.

1) Align the holes in the upper scissor of the jack assembly (131) and the outer cylinder of the shock strut (21).

2) Install the upper retention bolt (129).

3) Disconnect and remove the bolt which hold the lower torsion link to the shock strut.

4) Align the holes in the lower scissor of the jack assembly (131) and the inner cylinder of the shock strut (130).

5) Install the lower retention bolt (132).

(g) Lift the airplane 20 inches more.

(h) Use the jack assembly (131) to keep the wheels on the cart assembly.

(i) Do not let the shock strut fully extend.

(j) Lift the outer cylinder (21) with the jack assembly to remove the weight from the forward and aft trunnion bearings (1, 2).

(28) If you use the sling (138), do the steps that follow:

NOTE: The sling is part of the main landing gear removal/installation equipment.

(a) Install the two retention straps (116) on the torsion link of the shock strut (128) (Fig. 404).

1) Make a loop with the retention straps (116) through the upper and lower hinges of the torsion link (128). Use one strap on each side of the torsion link.

2) Move the end of each strap (116) through the slot in the buckle shaft (117).

3) Operate the buckle until the strap (116) is tight.

NOTE: Make sure each strap has a minimum of two loops around the shaft of the buckle before you apply a load.

(b) Lift the airplane until the wheels are 24 inches above the cart assembly (AMM 07-11-01/201).

(c) Make sure the retention straps (116) do not move.

(d) Install the sling (138) (Fig. 405).

1) Put the sling (138) around the outer cylinder (21).

a) Put the sling around the upper inboard area of the strut.

b) Move the two ends of the sling outboard of the trunnion to the hoist point.

2) Install the bolt to hold both ends of the sling (138) to the hoist point.

3) Attach the sling (138) and the hoist point to the overhead hoist.

(29) Disconnect the retract actuator (97) from the trunnion arm of the main landing gear (96) (Fig. 401, View A-A).

(a) Install the sling equipment for the retract actuator on the retract actuator (97) (Fig. 405, Detail A).

1) Put the support structure (139) on the wing structure.

2) Put the actuator clamp (134) on the retract actuator (97).

(b) Tighten the clamp nut (136) until the actuator clamp (134) is tight against the retract actuator (97).

1) Connect the cable of the fishpole hoist (137) to the support structure (139) and the clamp arm (133).

2) Tighten the cable (137).

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(c) Do the steps that follow to disconnect the rod end of the retract actuator (97) from the trunnion arm (96).

1) Remove the antirotation bolt (93).

2) Remove the nut (94) and the spline washer (95).

3) Remove the bolt (98).

4) Use the sling equipment for the retract actuator to lift the retract actuator (97) away from the trunnion arm (96).

(30) Remove the lock actuators for the drag brace and the side brace (AMM 32-32-02/401).

(31) Remove the lock springs for the side brace (AMM 32-32-03/401).

(32) Remove the jury strut springs (AMM 32-32-05/401).

WARNING: BE CAREFUL WHEN YOU PUSH UP ON THE JURY STRUT. THE JURY STRUT WILL MOVE SUDDENLY WHEN RELEASED AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(33) Push up on the jury strut to release it from the overcenter position.

(34) Disconnect the side brace and the lock link from the shock strut (AMM 32-11-03/401).

(35) Disconnect the drag brace and the jury strut from the shock strut (AMM 32-11-10/401).

(36) Remove the bolts (30) to disconnect the upper junction box (6) from the support bracket for the upper junction box (45) (Fig. 402).

(37) Remove the bolts (34 and 40) to disconnect the support bracket for the upper junction box (45) from the lower strap (33) (Fig. 402).

(38) Remove the bolts (51, 56, 61) to disconnect the lower strap (33) (Fig. 402, Detail A).

E. Remove the Main Landing Gear

(1) Lift the main landing gear until there is no weight on the forward and aft trunnion bearings (1, 2).

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(2) Remove the lockbolts (86) from the clamp nut (84) (Fig. 403, Detail A).

(3) Remove the clamp nut (84), the splined washer (83), the lock ring (88), and the adjusting collar (87).

(4) Remove the crossbolt (75) from the aft trunnion (90).

(5) Do the steps that follow to remove the trunnion pin (85).

(a) Install the removal and installation equipment for the trunnion pin on the trunnion pin (85).

NOTE: If you do not install the stop assembly for the trunnion pin, the pin can go too far into the trunnion.

(b) Install the slide hammer on the puller assembly.

(c) Use the slide hammer to move the trunnion pin (85) out of the trunnion bearing (2) and into the trunnion (90). The end of the trunnion pin (85) must be aligned with the aft trunnion (90).

(d) Disconnect the slide hammer and the puller assembly from the trunnion pin (85).

(6) Move the aft end of the trunnion (90) approximately 15 degrees inboard.

(7) Remove the 2 retaining pins (107) from each of the 4 fuse pins (110).

(8) Use the bearing-fuse-bolt (pin) puller (123) to remove the fuse pins (110) from the housing assembly (66) and the supports (114, 115).

(a) Recommended procedure

1) Put the puller assembly (123) over the outer end of the fuse pin (110). The bolt will come out through the fuse pin (110).

2) Install the stop on the bolt of the puller assembly (123).

3) Install the spring pin into the stop to lock the stop into position on the bolt.

4) Put the wrench on the nut of the puller assembly.

5) Turn the nut on the fuse bolt until the bolt (110) is removed.

(b) Optional procedure.

1) Use this procedure if the hydraulic lines cause a problem with the installation of the puller assembly.

2) Put the wrenching surface of the jack screw (127) thru the fuse bolt (110) last.

3) Turn the plug (125) on the jack screw (127) until there is sufficient clearance to install the pad (126) on the jack screw.

4) Install the pad (126).

5) Use a wrench at the wrenching surface to turn the jack screw (127) counterclockwise. This will push the fuse bolt (110) out of the bearing housing.

6) Remove the jack screw assembly.

(9) Do these steps if you use jack equipment:

(a) Lower the shock strut until the shock strut is fully compressed.

(b) The housing assembly (66) and the plates (111, 113) will move out of the rear spar supports as the shock strut is lowered.

NOTE: Keep the shims (112) to make the new main landing gear installation easier.

(c) Remove the axle jacks and the adapters.

(d) Remove the jacking equipment (131) from the shock strut (21, 130).

(e) Install the retention straps (116) on the shock strut (21).

1) Make a loop with the retention straps (116) through the upper and lower hinges of the torsion link (128). Use one strap on each side of the torsion link.

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2) Move the end of each strap through the slot in the buckle shaft (117).

3) Operate the buckle until the strap (116) is tight.

NOTE: Make sure each strap has a minimum of two loops around the shaft of the buckle before you apply a load.

(10) If you use the sling (138), do the steps that follow:

(a) Lower the shock strut (21) with the sling (138) on the wheel carts. The housing assembly (66) and the plates (111, 113) will move out of the rear spar supports when the main landing gear is lowered.

NOTE: Keep the shims (112) to make the main landing gear installation easier.

(b) Remove the sling (138).

(11) Remove the assembly for the forward trunnion bearing (1) from the main landing gear (Fig. 402, View B-B).

(a) Remove the bolts (72).

(b) Remove the retaining bolt (73).

(c) Move the assembly for the forward trunnion bearing (1) off of the forward trunnion (32).

(d) Examine the forward trunnion bearing (AMM 32-11-01/601).

(e) If you replace the forward trunnion bearings, do the steps that follow:

1) Remove the nut (67).

2) Remove the inner and outer races (69, 70) with the housing (68) from the housing assembly (66).

3) Move the bearings (69, 70) out of the housing (68).

4) Keep these parts for installation on the new main landing gear.

(12) Examine the aft trunnion bearings (AMM 32-11-01/601).

(13) If you replace the aft trunnion bearings (2), do the steps that follow (Fig. 403, View A-A):

(a) Remove the bolts (81) to disconnect the lock tab (80) from the lockplate (79).

(b) Remove the nut (89) from the housing for the aft bearing.

(c) Move the bearing inner and outer races (77, 78) forward, out of the support structure.

(14) Put the main landing gear on wheel carts and move away from the work area.

2. Install the Main Landing Gear (Fig. 401, Fig. 402, Fig. 403)

NOTE: Wear Limits for the main landing gear trunnions are supplied in AMM 32-11-01/601.

A. General

(1) There are two different procedures given to install the main landing gear. One procedure uses jacks to install the main landing gear. The other procedure uses an overhead sling to install the main landing gear.

B. Equipment

(1) A32006-77 MLG Retract Actuator Sling

(2) A32026-60 MLG Trunnion Pin Removal/Installation Equipment

(3) A32027-53 MLG Retraction/Extension Actuator Pump

(4) A32028-6 Shock Strut Retention Strap (2 straps are necessary)

(5) A32031-5 MLG Truck Positioner Turnbuckle (Recommended)

(6) A32031-4 MLG Truck Positioner Turnbuckle (Alternative) Make from A32031-1

(7) A32032-65 MLG Removal/Installation Sling (A32032-39 Alternative)

(8) A32032-64 MLG Jacking Equipment (Upgraded -52 kit that includes a new -68 tiny collar for IGW A/Ps)

(9) A32045-12, -34 Spanner Wrench

(10) A32095-1 Forward Trunnion Bearing Bolt Wrench

(11) Fishpole Hoist (Commercially available)

(12) Automotive type axle jacks (2 to 4 ton capacity) - commercially available

C. Consumable Materials

(1) A00247 Sealant, Chromate - BMS 5-95

(2) D00633 Grease - BMS 3-33 (Recommended)

(3) D00013 Grease - MIL-G-23827 (Alternative)

(4) G50136 Corrosion Inhibiting Compound - BMS 3-38

D. Parts

AMM		NOMENCLATURE	AIPC		
FIG	ITEM		SUBJECT	FIG	ITEM
401 Thru 403	1A 2A	Main Landing Gear Wing Structure	32-00-00 57-00-00	01 01	1 1

E. References

(1) AMM 06-44-00/201, Wings (Major Zones 500 and 600) Access Doors and Panels

(2) AMM 07-11-01/201, Jacking Airplane

(3) AMM 12-15-01/301, Main Gear Shock Strut

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(4) AMM 12-21-14/301, Main Gear and Actuating Mechanisms

(5) AMM 20-10-23/401, Standard Practices, Lockwire

(6) AMM 27-51-00/201, Trailing Edge Flap System

(7) AMM 27-62-00/501, Auto-Speedbrake Control System

(8) AMM 27-81-00/201, Leading Edge Slat System

(9) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(10) AMM 32-00-15/201, Landing Gear Door Locks

(11) AMM 32-00-20/201, Landing Gear Downlocks

(12) AMM 32-09-07/201, Main Gear Tilt Sensors

(13) AMM 32-11-01/601, Main Gear

(14) AMM 32-11-03/401, Main Gear Side Brace

(15) AMM 32-12-00/501, Main Landing Gear Doors

(16) AMM 32-12-06/401, Shock Strut Door and Linkage

(17) AMM 32-12-08/401, Drag Brace Door and Linkage

(18) AMM 32-12-11/401, Trunnion Door and Linkage

(19) AMM 32-32-00/501, Main Gear Extension and Retraction

(20) AMM 32-32-02/401, Main Gear Lock Actuators

(21) AMM 32-32-03/401, Main Gear Side Brace Lock Spring

(22) AMM 32-32-18/401, Main Gear Truck Positioner

(23) AMM 32-41-00/201, Hydraulic Brake System

(24) AMM 32-42-00/501, Antiskid/Autobrake System

(25) MTH 275-276 WITH SB 32-85 AND MTH 277-999, SAS 050-149, 155-999;

(26) AMM 32-46-00/501, Brake Temperature Monitoring System

(27) AMM 32-61-02/201, Main Gear Proximity Sensor

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F. Install the Main Landing Gear

(1) Make sure the turnbuckle (118) for the truck positioner is installed on the replacement main landing gear (Fig. 404).

(2) Install the forward trunnion bearing (1) on the new main landing gear (Fig. 402, View B-B).

(a) Apply grease to the outer race (69). Butter lubricate the bushing faces and the inside diameter of the inner race (70) with grease. Apply a thin layer of corrosion inhibiting compound to the full length of the inside diameter of the housing (68). Make sure you fill all gaps and fillet radius on the housing. Apply a thin layer of compound on the retaining bolt (73) to cover the threads and the outside diameter below the flange, to include the adjacent fillet radius and the flange face. Fill all gaps and fillet radius. Wipe off excess grease and compound after installation of the parts.

(b) If you install new inner and outer races (69, 70) do the steps that follow:

1) Move the inner and outer races (69, 70) into the housing (68).

2) Put the inner (70) and outer races (69, 70) with the housing (68) into the housing assembly (66).

NOTE: The grease fittings on the housing (68) must be on the inboard side of the trunnion (32).

3) Use the spanner wrench to install the nut (67).

a) Tighten the nut (67) to 95-120 pound-feet.

4) Install a lockwire on the nut.

(3) FORWARD TRUNNION WITHOUT SHEAR PIN;
To install the housing assembly (66) on the forward trunnion (32), Do the steps that follow (Fig. 402, View B-B):

(a) Apply a thin layer of compound on the inside diameter and the end part of the outside diameter of the trunnion (32). Make sure you apply it to the threads and thread reliefs.

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(b) Put the forward trunnion bearing (1) on the forward trunnion. Use a grease pencil to put a mark on the forward trunnion (32) at the flange of the housing (68), to show if the bearing moves off the trunnion during installation.

(c) Apply a thin layer of compound to all the surfaces of the retaining ring (65). Include the four notches and the inside diameter of the six bolt holes.

CAUTION: MAKE SURE THE RETAINING RING TEETH ENGAGE WITH THE SLOTS OF THE HOUSING ASSEMBLY. IF THE RETAINING RING (65) IS NOT ENGAGED WITH THE HOUSING THE RETAINING BOLT WILL TURN AND BACK OUT OF THE FORWARD TRUNNION THREADS.

(d) Install the retaining ring (65).

(e) Install the retaining bolt (73).

CAUTION: MAKE SURE THE FORWARD BEARING HAS NOT MOVED OFF THE TRUNNION DURING INSTALLATION. IF THE BEARING HOUSING HAS MOVED DURING INSTALLATION, THIS CAN CAUSE DAMAGE TO THE HOUSING AND STRUCTURE WHEN THE LANDING GEAR IS RETRACTED.

(f) Use the bolt wrench for the forward trunnion bearing to tighten the retaining bolt (73) to 15-20 pound-feet. Loosen to align the lockbolts.

(g) Measure inner race/housing bushing gaps "A" and "B".

(h) If the sum of gap "A" and gap "B" is greater then 0.250 inch, then do the steps to install the retaining ring again.

NOTE: The retaining ring is not fully seated with the housing if the gap is greater then 0.250 inch.

(i) Apply a thin layer of compound to the bolts (72) and the washers (71).

(j) Install the bolts (72) and washers (71). Wipe off the excess compound after installation.

(k) Safety wire the bolts (72).

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(4) FORWARD TRUNNION WITH SHEAR PIN;
To install the housing assembly (66) on the forward trunnion (32), Do the steps that follow (Fig. 402, View B-B):

(a) Apply a thin layer of compound (BMS 3-38) to the threads, thread reliefs, bushing surfaces and fay surfaces of the pin assembly (73A), splined washer (65), retaining nut (73), washer (71) bolt (72) and the bushing of the housing (68).

NOTE: Make sure that you apply sufficient compound to fill the gaps between the assembled parts.

(b) Apply a layer of compound (MIL-C-11796 Class3) on the last 0.50 inch of the inner circumference of the forward trunnion bushing.

NOTE: Make sure that you apply sufficient compound so that the compound forms a fillet seal when the pin assembly (73A) is installed.

(c) Put the pin assembly (73A) in the forward trunnion (32).

(d) Apply a thin layer of compound (BMS 3-38) to all surfaces of the shear pin (68A).

(e) Install the shear pin (68A) in the forward trunnion (32) and pin assembly (73A).

(f) Fill the inner diameter of the shear pin (68A) with compound (BMS 3-38) until the compound is faired to the outer surface of the forward trunnion (32).

(g) Install the splined washer (65) on the housing (68).

(h) Tighten the splined washer (65) to 10-20 pound-feet.

(i) Move the housing assembly (66) and housing (68) into position on the forward trunnion (32) on the inboard or bottom side of the trunnion.

(j) Install the retaining nut (73).

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(k) Tighten the retaining nut (73) to 10-20 pound-feet.

NOTE: Loosen the nut, if necessary, to align with the holes of the splined washer (65).

(l) Install the washers (71) and bolts (72).

(m) Safety wire the bolts (72).

(n) Remove the excess compound around the circumference of the aft end of the housing (68).

(o) Apply a continuous bead of sealant (BMS 5-95) to make a fillet seal between the aft end of the housing (68) and the forward trunnion (32).

(5) To install the new aft trunnion bearings (2), do the steps that follow (Fig. 403, View A-A):

(a) Put the inner and outer races (77, 78) into the support structure.

(b) If it is not installed, install the lockplate (79) with the bolts, bushings, nuts, and washers.

(c) Use the spanner wrench to tighten the nut (89) to 100-130 pound-feet.

(d) Loosen the nut (89) to install the lock tab (80).

(e) Install the bolts (81) and the washers (82) to connect the lock tab (80) to the lockplate (79).

(f) Install a lockwire.

(6) Move the main landing gear into the wheel well and put in the approximate position.

(7) If you use the jack assembly (131) (Fig. 404), do the steps that follow:

(a) Remove the retention straps (116) from the shock strut.

(b) Install the jack assembly (131) on the torsion link (128).

1) Remove the bolt that holds the torsion link (128) to the shock strut.

2) Align the bolt hole of the scissor for the jack assembly (131) with the bolt hole for the shock strut (21).

3) Install the bolt (129).

4) Tighten the bolt.

5) Disconnect and remove the bolt which holds the lower torsion link (128) to the shock strut (130).

6) Align the bolt hole for the lower jack scissor assembly (131) with the bolt hole for the shock strut (130).

7) Install the bolt (132).

8) Tighten the bolt.

(c) Put two automotive type jacks with adapters under the truck axles.

(d) Lift the truck until the wheels are above the ground.

(e) Put the wheel carts under the wheels.

(f) Lower the truck and remove the axle jacks and adapters.

(8) If you use the overhead sling (138), make sure the shock strut retention straps (116) are installed.

(a) Put the sling (138) around the shock strut (21) from the outboard side.

(b) Connect both ends of the sling to the overhead hoist (Fig. 405).

(c) Install the bolt to hold both ends of the sling (138) to the hoist point.

(d) Attach the sling (138) hoist point to the overhead hoist.

(9) Turn the aft end of the trunnion 15 degrees inboard to permit clearance for the main landing gear from the airplane structure.

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(10) Apply sealant between the bearing plates (111 and 113) and the supports (114, 115).

(11) Apply grease between the shims (112) and the inboard support (114) (Fig. 402, View A-A).

NOTE: You can use the shims from the removed main landing gear to make it easier to get the correct clearance (View A-A).

(12) Lift the outer cylinder (21) while you put the housing assembly (66), the plates (111 and 113), and the shims (112) into the support for the rear spar (Fig. 402, View A-A).

WARNING: INSTALL THE CORRECT FUSE PINS ONLY. MAKE SURE THAT YOU INSTALL THE SAME TYPE OF FUSE PIN THAT YOU REMOVED. THE INCORRECT FUSE PIN CAN CAUSE DANGEROUS CONDITIONS.

(13) Apply grease to the fuse pins (110).

(14) Install these parts to connect the housing assembly (66) to the inboard and outboard supports (114, 115) (Fig. 402, View A-A):

(a) Fuse pins (110).

(b) Retaining pins (107).

(c) Washers (108)

(15) Install the lockwire to the retaining pins (107) (Fig. 402).

NOTE: Lockwire installtion can be found: AMM 20-10-23/401.

(16) Turn the aft end of the trunnion outboard to align the trunnion with the aft bearing (2).

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(17) Apply a thin layer of BMS 3-38 Corrosion Inhibiting Compound to the outside diameter of the trunnion pin (85). Make sure it covers approximately 8.5 inches from the large (forward) end of the pin.

NOTE: If the compound makes it difficult for you to install the trunnion pin, you can apply a thin layer of grease (BMS 3-33) on the trunnion pin. After installation you will then need to lubricate the pin with compound.

(18) Use the trunnion pin equipment to pull the trunnion pin (85) from trunnion (90) through the aft bearing (2) (Fig. 403).

(19) Apply a thin layer of BMS 3-38 Corrosion Inhibiting Compound to the shank, threads and thread relief of the cross bolt (75), and to the bushing faces and faces of the washers (74 and 92).

(20) Install the crossbolt (75) for the trunnion pin, the washers (74 and 92), and the nut (91). Torque the nut (91) to 90-120 pound-feet.

(21) Install the cotter pin (91A).

(22) If you used grease on the trunnion pin (85) then lubricate the aft trunnion pin with compound (BMS 3-38) at the lube fitting (AMM 12-21-14/301).

(23) Remove the excess Corrosion Inhibiting Compound from the aft trunnion area.

(24) Adjust the aft bearing.

(a) Measure the dimension A between the shoulder (85) of the trunnion pin and the face of the bearing (78). Write down the dimension for later use.

(b) Turn the adjusting collar (87) on the trunnion pin (85) until the collar (87) touches the shoulder (85) of the trunnion pin.

NOTE: You can use a strap wrench if necessary.

(c) Measure the dimension B between the bearing face and the end of the adjusting collar. If the dimension A plus the dimension B is greater than 2.75 inches, the adjusting collar (87) is not correctly installed. Repeat the step above to install the adjusting collar (87).

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1) If you cannot install the adjusting collar (87) correctly, remove the dry lubricant and use the procedure in SB 32-38.

(d) Move the lock ring (88) over the splines on the adjusting collar (87). Make sure the lugs in the lock ring (88) engage the slots in the bearing (78).

NOTE: It is recommended that the grease fitting on the lock ring (88) point outboard to permit the easiest access for lubrication.

(e) Install the washer (83) and the clamp nut (84).

(f) Tighten the nut (84) to 10-20 pound-feet. Loosen the nut to align the locking holes. Get a clearance of 0.003-0.010 inches.

(g) Fill all holes with grease.

NOTE: The clearance between the washer (83) and the lockring (88) is for the adjustment (Fig. 403, View A-A). After the main landing gear is operated and/or the jacks are removed a clearance of 0.00-0.05 inches is permitted.

(h) Install the lockbolts (86).

(i) Install the lockwires on the the lockbolts (86).

(25) Install these parts to connect the outboard end of the lower strap (33) to the housing assembly (Fig. 402, Detail A):

(a) Bolts (61)

(b) Bushings (62)

(c) Washers (63)

(d) Nuts (64)

(26) Install these parts to connect the rod fitting, the lower strap (33) and the support bracket (45) to the housing assembly (66):

(a) Bolts (34, 40)

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(b) Washers (35, 38, 41, 43)

(c) Bushings (37, 42)

(d) Nuts (39, 44)

(27) Do these steps to connect the upper junction box (6) to the brackets:

(a) Clean the faying surfaces.

(b) Install the bolts (30) to connect the upper junction box (6) to the brackets.

(c) Bond, and apply a fillet seal between the junction box (6) and the brackets (SWPM 20-20-00).

(d) Measure the resistance to make sure that the resistance across the interface is a maximum of 0.010 ohms.

(28) AIRPLANES WITH GROUND STRAP;
Do these steps to connect the ground strap (27) to the junction box (6):

(a) Connect the ground strap to the grounding stud on the junction box (6) (SWPM 20-20-00).

(b) Measure the resistance to make sure that the maximum resistance between ground studs is 0.005 ohm.

(29) Connect the electrical connectors to the upper junction box (6).

(30) Connect the six hydraulic lines to the upper shock strut on the outboard side of the shock strut.

(31) Install these parts to connect the door seal (20) and the retainer (19) of the shock strut to the support beam (Fig. 401):

(a) Screws (17)

(b) Washers (18)

(32) Install the parts to connect the chord (24) to the outboard structure (Fig. 401, Detail B):

(a) Bolts (22)

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(b) Nuts (23)

(33) Install these parts to connect the chord (24) to the inboard bracket:

(a) Clip (11)

(b) Splice Strap (7)

(c) Bolts (8, 12)

(d) Collars (9, 13)

(34) If you use the jack equipment, do these steps:

(a) Lower the truck until the wheels touch the ground.

(b) Remove the automotive type jacks and the adapters from below the truck axles.

(35) Use the jack equipment (131) to lower the outer cylinder (21).

(36) Remove the jacking equipment (131) from the shock strut (21, 130) (Fig. 404).

(a) Remove the bolts (129, 132) which hold the jack assembly (131) to the shock strut (21, 130).

(b) Install the bolts to hold the torsion link (128) to the shock strut (21, 130) and tighten.

(37) If you use the overhead sling (138), do these steps:

(a) Remove the overhead sling (138).

(b) Remove the shock strut retention straps (116).

G. Put the Airplane Back to Its Usual Condition (Fig. 401)

(1) Do the servicing of the shock strut for the main landing gear (AMM 12-15-01/301).

(2) Lift the airplane to extend the shock strut fully (AMM 07-11-01/201).

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(3) Connect the drag brace and the jury strut to the shock strut (AMM 32-11-10/401).

(4) Connect the side brace and the lock link to the shock strut (AMM 32-11-03/401).

(5) Install the jury strut springs (AMM 32-32-05/401) and the side brace springs (AMM 32-32-03/401).

(6) Connect the rod end of the retract actuator to the main landing gear trunnion (Fig. 401, View A-A).

(a) Install the actuator sling equipment for the retract actuator on the retract actuator (97) (Fig. 405, Detail A).

1) Put the support structure (139) on the wing structure.

2) Put the actuator clamp (134) on the retract actuator (97).

(b) Tighten the clamp nut (136) until the actuator clamp (134) is tight against the retract actuator (97).

1) Connect the cable of the fishpole hoist (137) to the support structure (139) and the clamp arm (133).

2) Tighten the cable (137).

(c) Apply grease to the bolt (98), the nut (94), and the antirotation bolt (93) before installation.

(d) Install the new packings (100) on the lube retainer (99).

(e) Use the actuator sling equipment to lower the actuator to align the rod end with the lugs on the trunnion.

NOTE: Put the rod end of the actuator in position so the lube fittings are above the center line of the actuator. This will make sure you can get access to the fittings easily.

(f) Install the bolt (98) and the lube retainer (99) through these components in the sequnce below:

1) The actuator ring (101)

2) The antirotation washers (102, 103)

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3) The retract actuator (97)

4) The spline washer (95)

5) And the nut (94).

(g) Tighten the nut (94) to 70-90 pound-feet. Loosen the nut to the subsequent lock position (Fig 401, View A-A).

(h) Install the antirotation bolt (93), the washer (105), the nut (104), and the cotter pin.

(i) Remove the tool (133, 134) and the support frame (139) from the area (Fig. 405).

(7) Install the lock actuators for the drag and side brace (AMM 32-32-02/401).

(8) Make sure the pressure is removed from the hydraulic systems (AMM 29-11-00/201).

(9) Connect the hydraulic lines to the actuators.

(10) Connect the door for the drag brace (5) to the drag brace (AMM 32-12-08/401).

(11) Install the door (4) and linkage for the shock strut (AMM 32-12-06/401).

(12) Install the door (3) and linkage for the trunnion (AMM 32-12-11/401).

(13) Remove the turnbuckle (118) for the truck positioner.

(14) Install the truck positioner (AMM 32-32-18/401).

(15) Close these circuit breakers on the overhead circuit breaker panel P11:

(a) AIRPLANES WITH THE "LANDING GEAR POSITION AIR/GND SYS 2 ALT" CIRCUIT BREAKER INSTALLED AT PANEL GRID LOCATION 11C29; 11C29, LANDING GEAR POSITION AIR/GND SYS 2 ALT

(b) 11C30, LANDING GEAR POSITION AIR/GND SYS 1

(c) 11C31, LANDING GEAR ANTISKID 2-6

MECH | INSP

(d) 11C32, LANDING GEAR ANTISKID 3-7

(e) 11H15, FLT CONT SHUTOFF WING LEFT

(f) 11H16, FLT CONT SHUTOFF WING CTR

(g) 11H26, FLT CONT SHUTOFF WING RIGHT

(h) 11R30, RIGHT IND LTS 3

(i) 11U12, AUTOBRKS ANTISKID TEST/IND 1

(j) 11U15, AIR/GND SYS 1

(k) 11U16, BRAKE TEMP

(l) SAS 275-276 POST SB 32-85;
SAS 277-281, 050-149, 155-167;

11U17, TIRE PRESS IND 1

(m) 11U18, ANTISKID 1-5

(n) 11U20, LANDING GEAR LEVER LOCK

(o) 11U21, AUTOBRKS ANTISKID TEST/IND 2

(p) 767-200 AIRPLANES;

11U23, POSITION AIR/GND SYS 2

(q) 767-300 AIRPLANES;

11U24, POSITION AIR/GND SYS 2

(r) 11U27, ANTISKID 4-8

(16) SAS 281;

Close this circuit breaker on the main power distribution panel, P6:

(a) 6J21, F/O SEAT

(17) SAS 275-276 WITH SB 32-85 AND SAS 277-281, SAS 050-149, 155-167;

Remove the DO-NOT-CLOSE identifier and close this circuit breaker on the APU external power panel, P34:

(a) 34M11, TIRE PRESS IND 2

(18) Put the WING FLIGHT CONTROL SHUTOFF switches L, C, and R on the P61 panel to OFF position.

(19) Lubricate the gear at the grease fittings (AMM 12-21-14/301).

(20) Do an adjustment check of the main landing gear doors (AMM 32-12-00/501).

(21) Do an adjustment check of the clearance for the main landing gear tilt sensors (AMM 32-09-07/201).

(22) Do a test of the tilt sensors for the main landing gear truck (AMM 32-09-07/201).

(23) For the right main landing gear only, do the gear truck tilt sensor failure test for the auto-speedbrake system (AMM 27-62-00/501).

(24) SAS 275-276 WITH SB 32-85 AND SAS 277-281, SAS 050-149, 155-167;

Do a test of the tire pressure indicating system (AMM 32-45-00/501).

(25) Do a test of the brake temperature monitoring system (AMM 32-46-00/501).

(26) Do the extension and retraction test for the main landing gear (AMM 32-32-00/501).

(27) Install the applicable access panels (Table 402) (AMM 06-44-00/201):

TABLE 402

WHEN YOU INSTALL THE LEFT GEAR	WHEN YOU INSTALL THE RIGHT GEAR
551FT	651FT
551LT	651LT
551MT	651MT
551QB	651QB
551PT	651PT
551SB	651SB
551TB	651TB

MECH	INSP

(28) Put the trailing edge flap system back to its usual condition (AMM 27-51-00/201).

(29) Put the leading edge slat system back to its usual condition (AMM 27-81-00/201).

(30) Lower the airplane (AMM 07-11-01/201).

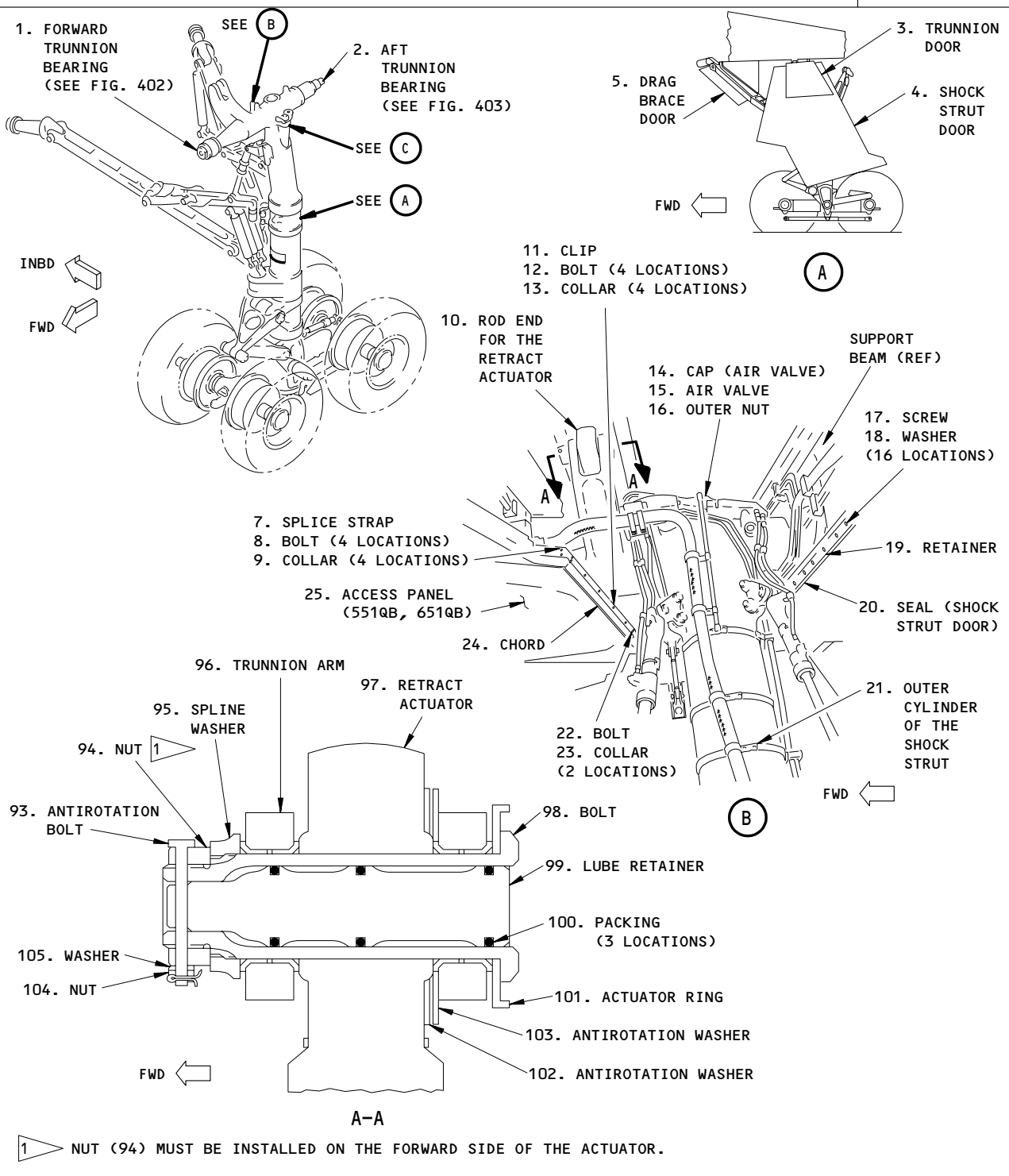
(31) Do the procedure to bleed the brakes (AMM 32-41-00/201).

(32) Do a test of the proximity sensors for the main landing gear (AMM 32-61-02/201).

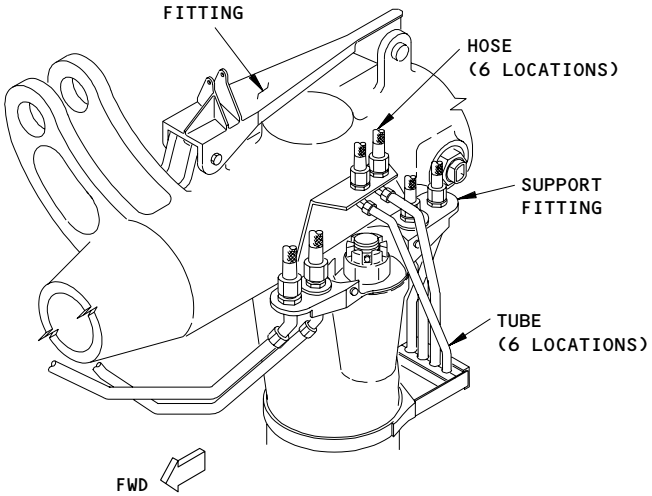
(33) Do the steps in the Antiskid System Test - Brake Release (AMM 32-42-00/501).

WARNING: OBEY THE REMOVAL PROCEDURE FOR THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

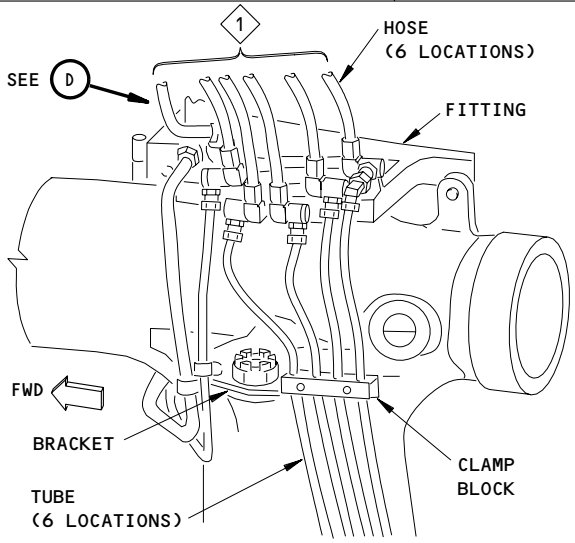
(34) Remove the door locks and close the doors (AMM 32-00-15/201).



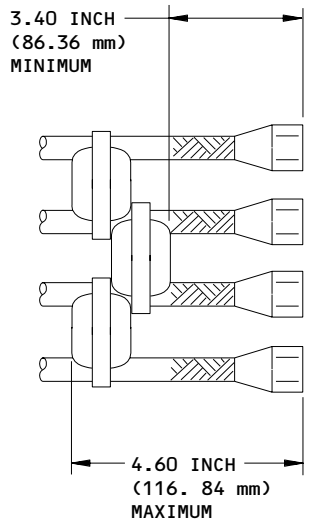
Main Gear Installation
Figure 401 (Sheet 1)



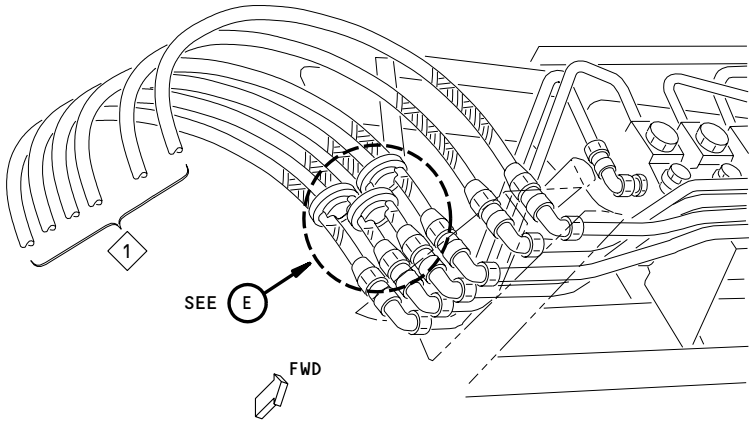
C 1



C 2



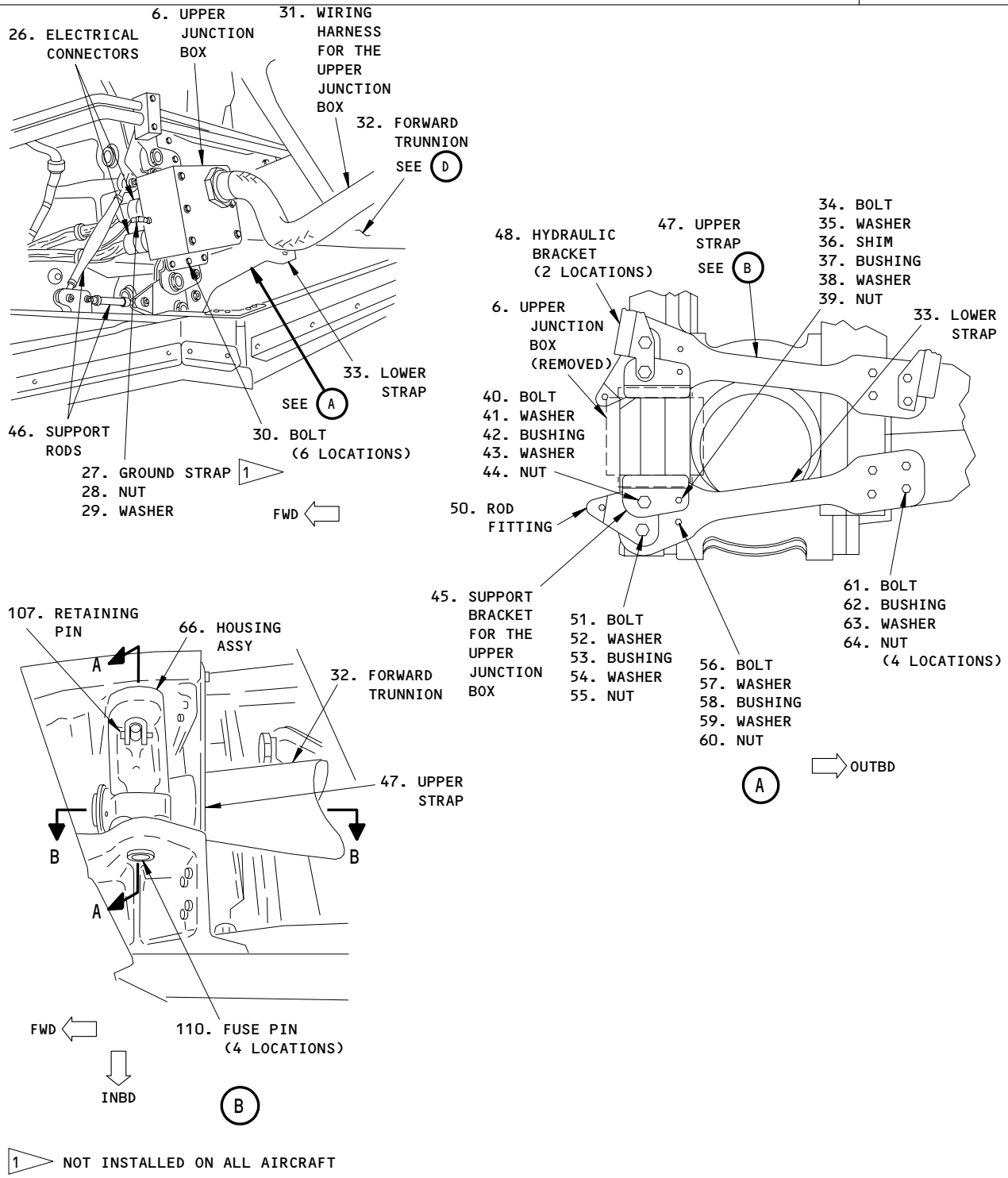
E



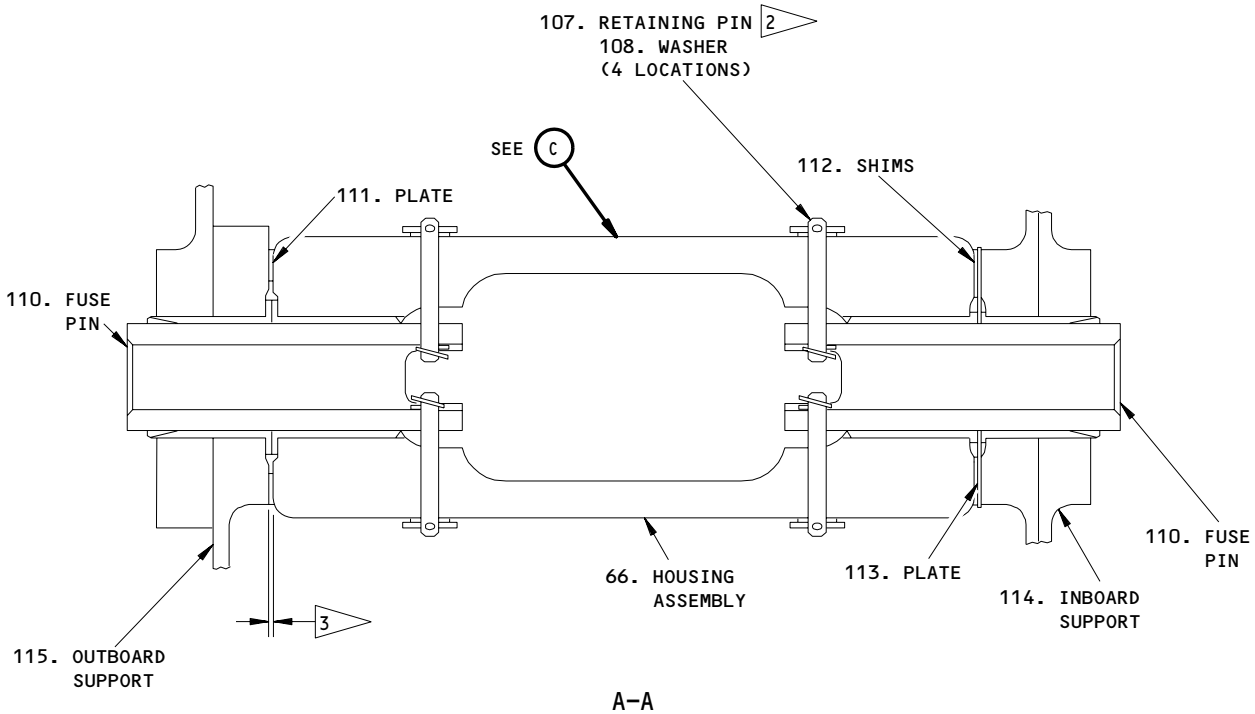
D 2

1 SHOCK STRUT WITHOUT HYDRAULIC HOSE SWIVEL CONNECTORS.
2 SHOCK STRUT WITH HYDRAULIC HOSE SWIVEL CONNECTORS.

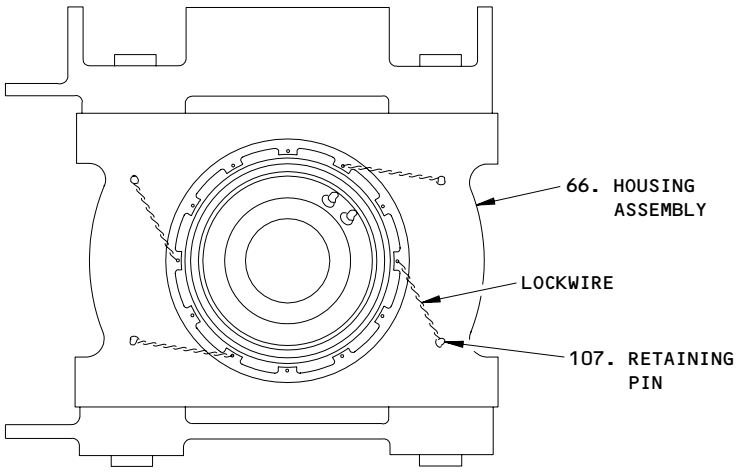
Main Gear Installation
Figure 401 (Sheet 2)



Installation of the Forward Trunnion Bearing
Figure 402 (Sheet 1)



A-A

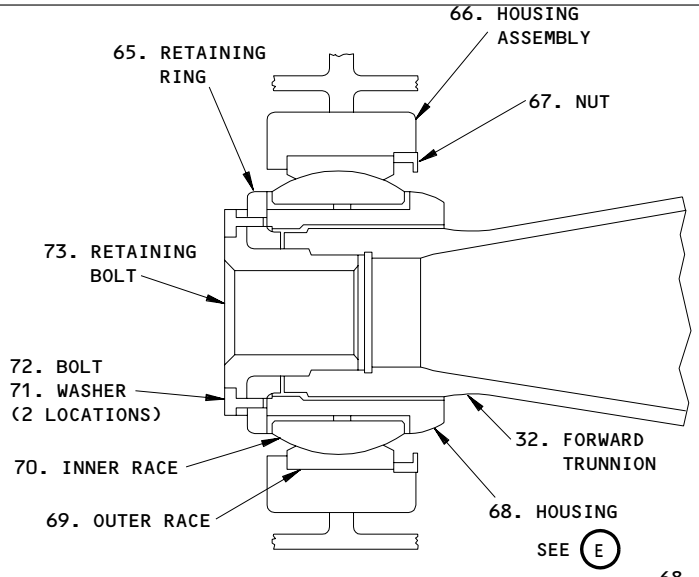


C

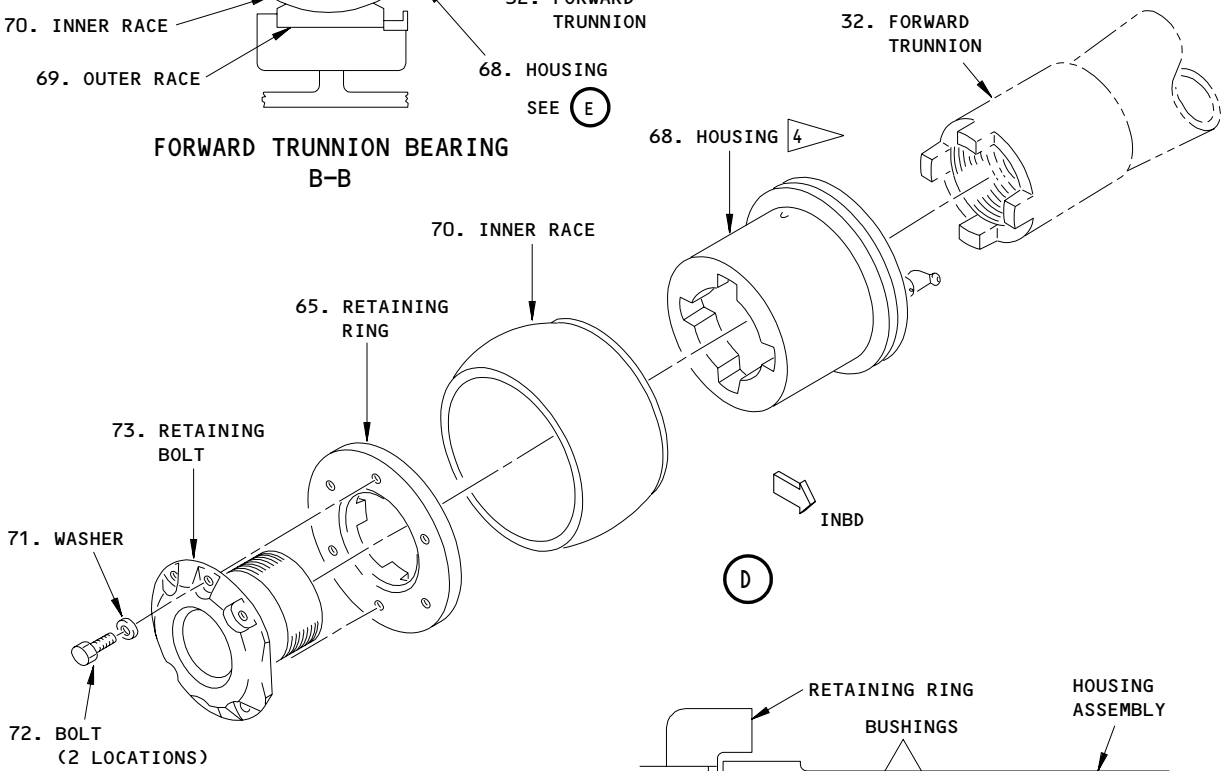
2 INSTALL THE LOCKWIRE

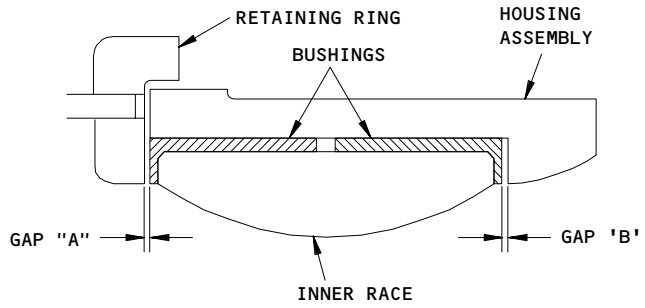
3 ADD OR REMOVE THE SHIMS (112) AT THE INBOARD SUPPORT. GET A MAXIMUM CLEARANCE OF 0.010 INCH BETWEEN THE PLATE (111) AND THE HOUSING ASSY OR THE OUTBOARD SUPPORT

Installation of the Forward Trunnion Bearing
Figure 402 (Sheet 2)



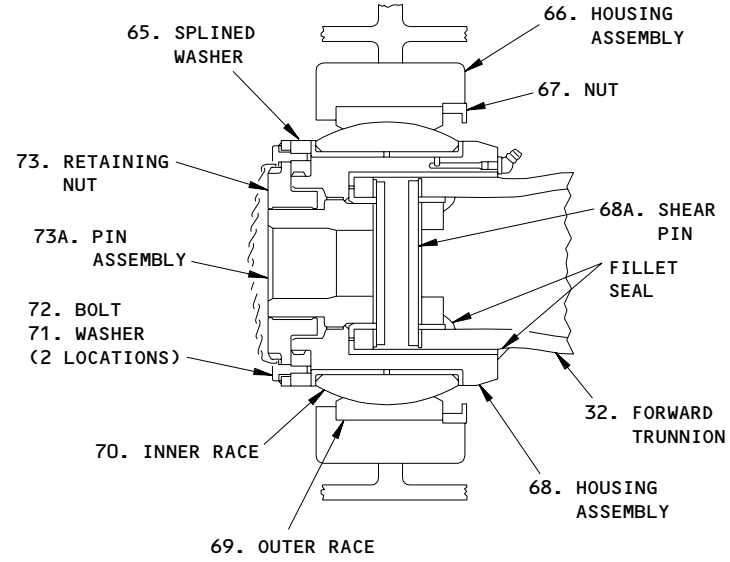
FORWARD TRUNNION BEARING
B-B



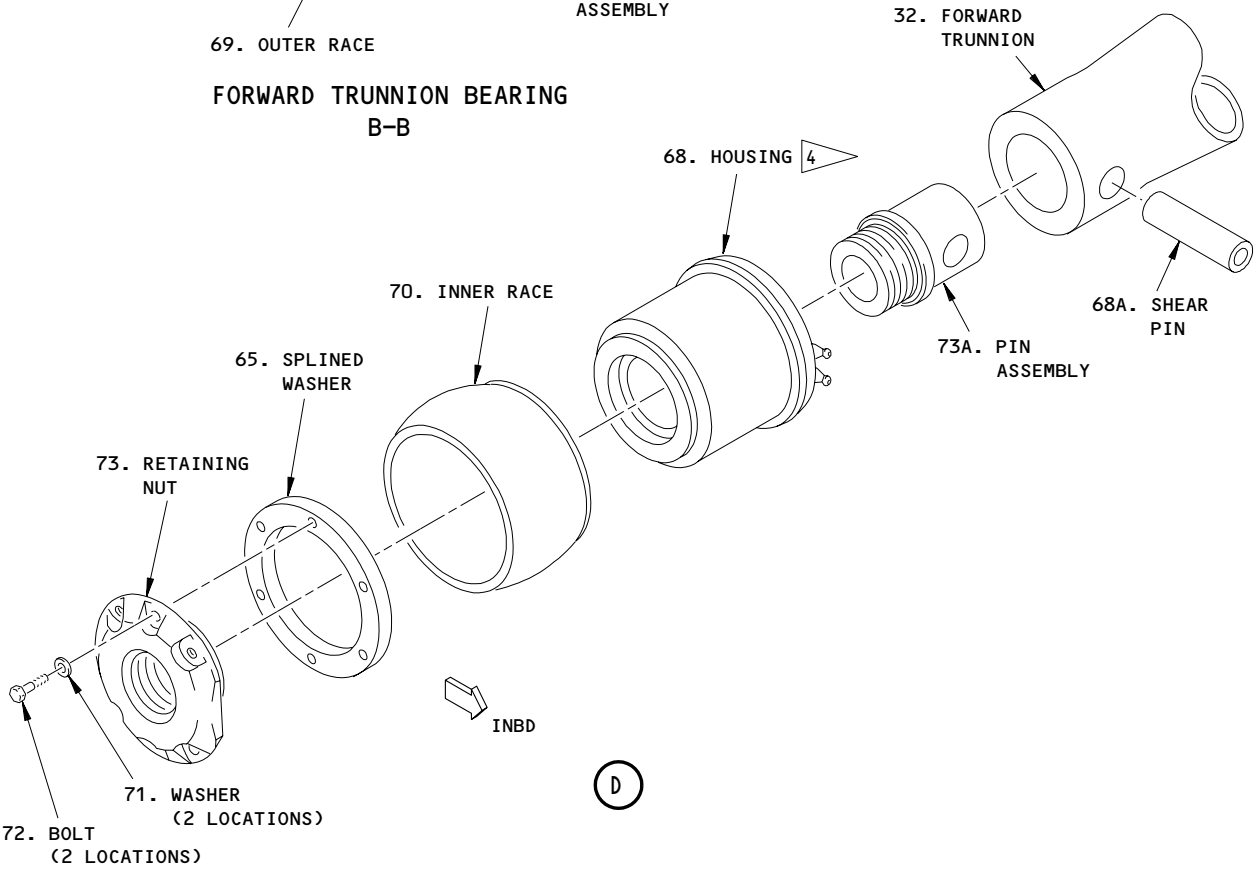


4 INSTALL THE HOUSING (68) WITH THE GREASE FITTING ON THE INBD SIDE OR BOTTOM OF THE TRUNNION (32). IT WILL MAKE THE LUBRICATION ACCESS EASIER.

Installation for the Forward Trunnion Bearing
Figure 402 (Sheet 3)

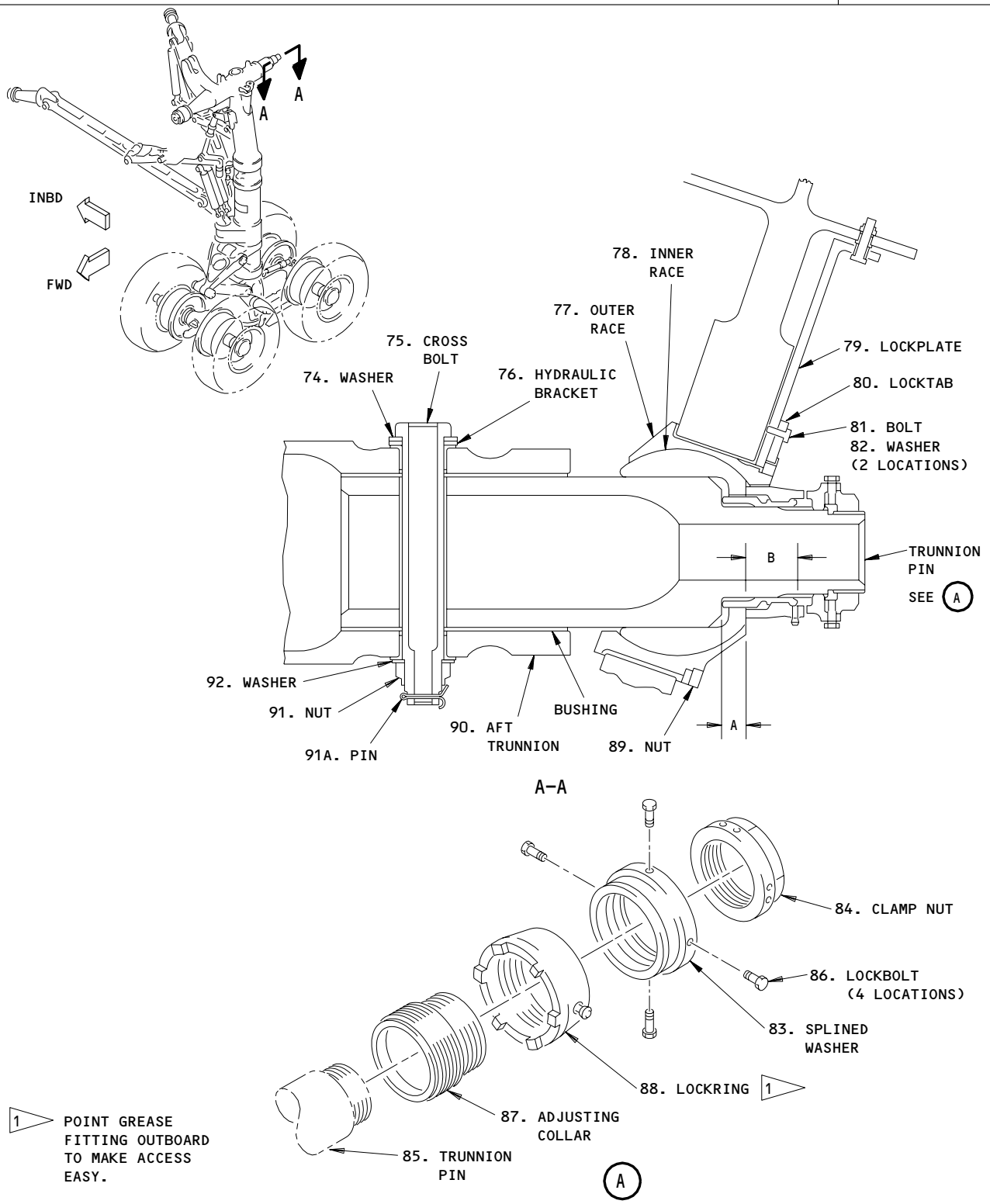


FORWARD TRUNNION BEARING
B-B

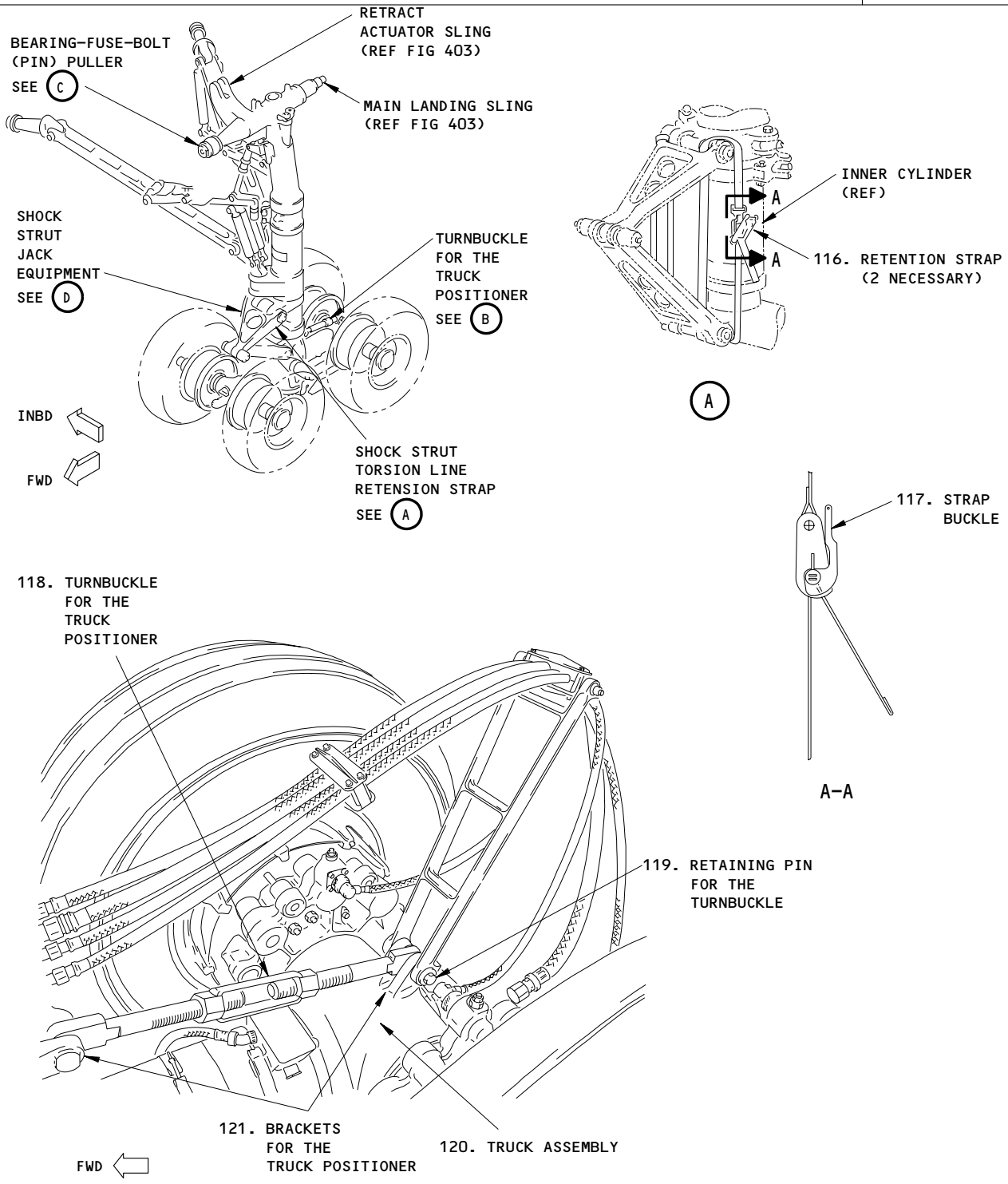


4 INSTALL THE HOUSING (68) WITH THE GREASE FITTING ON THE INBD SIDE OR BOTTOM OF THE TRUNNION (32). IT WILL MAKE THE LUBRICATION ACCESS EASIER.

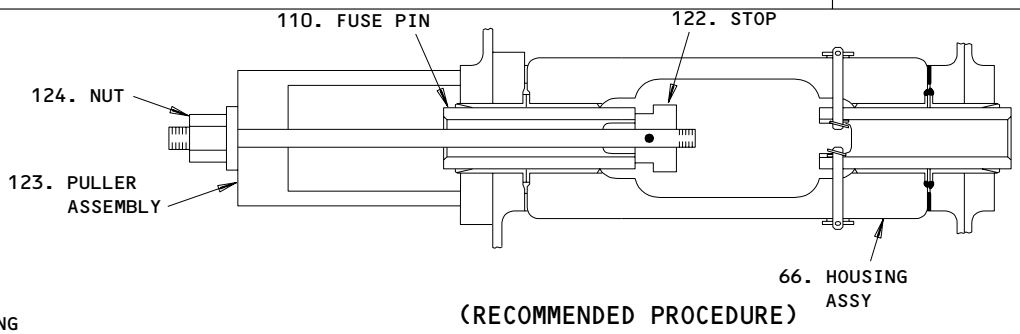
Installation for the Forward Trunnion Bearing
Figure 402 (Sheet 4)



Installation for the Aft Trunnion Bearing
Figure 403

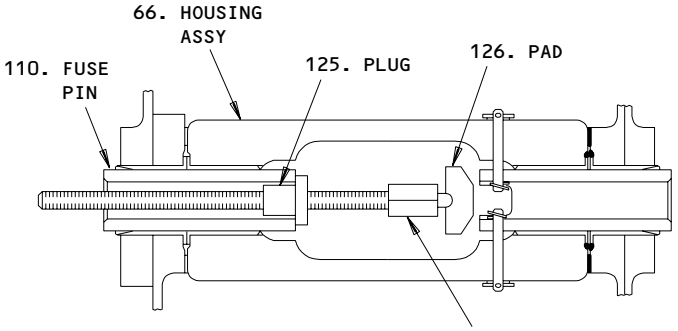


Special Tools for the Main Landing Gear Installation
Figure 404 (Sheet 1)



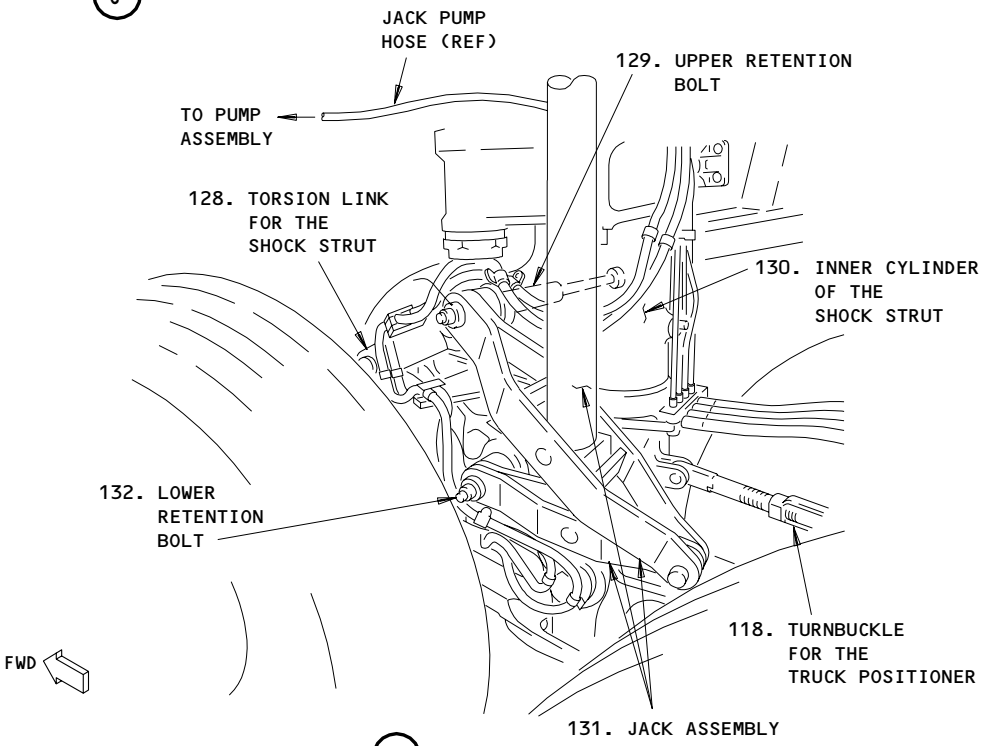
(RECOMMENDED PROCEDURE)

C



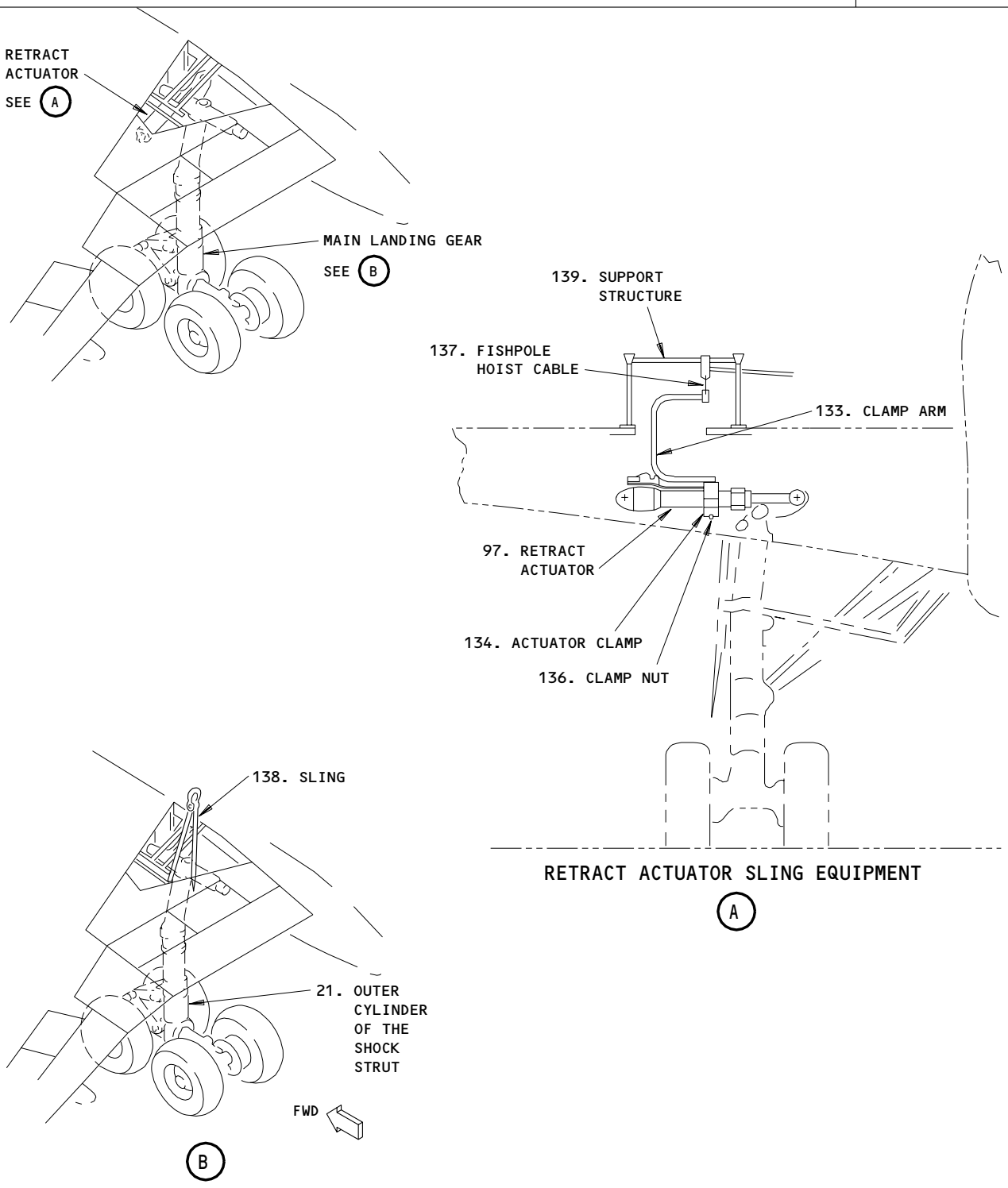
(OPTIONAL PROCEDURE)

C



D

Special Tools for the Main Landing Gear Installation
Figure 404 (Sheet 2)



RETRACT ACTUATOR SLING EQUIPMENT

A

Support Equipment for the Main Landing Gear Installation
Figure 405

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-045-02-2
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	R MAIN GEAR		50000 CYC	610XX	018	DEC 22/08

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
REPLACE	RIGHT MAIN LANDING GEAR		300	ALL

ZONES	ACCESS PANELS
211 741	651FT 651LT 651MT 651PT 651QB 651SB 651TB 651VB

MECH | INSP

MPD ITEM NUMBER

REPLACE THE RIGHT MAIN LANDING GEAR AT MANUFACTURER'S LIFE LIMIT (CURRENTLY 50,000 CYCLES). REFER TO BOEING SERVICE LETTER 767-SL-32-92 FOR A LIST OF 767 LANDING GEAR LIFE LIMITED PARTS. 32-11-01-4A

1. Remove the Main Landing Gear

A. General

(1) There are two different procedures given to remove the main landing gear. One procedure uses jacks for the removal of the main landing gear. The other procedure uses an overhead sling to remove the main landing gear.

B. Equipment

(1) A32006-77 MLG Retract Actuator Sling

(2) A32017-1 MLG Forward Trunnion Support
Fuse Bolt Puller

(3) A32026-60 MLG Trunnion Pin Removal/Installation Equipment

(4) A32027-53 Retraction/Extension Landing Gear Actuator Pump

(5) A32028-6 Shock Strut Retention Strap
(2 straps are necessary)

(6) A32031-5 MLG Truck Positioner Turnbuckle
(Recommended)

(7) A32031-4 MLG Truck Positioner Turnbuckle
(Alternative) Make from A32031-1

MECH | INSP

(8) A32032-65 MLG Removal/Installation Sling
(A32032-39 Alternative)

(9) A32032-64 MLG Jacking Equipment
(Upgraded -52 kit that includes a
new -68 tiny collar for IGW A/Ps)

(10) A32095-1 Forward Trunnion Bearing Bolt Wrench

(11) Fishpole Hoist (Commercially available)

(12) Automotive type axle jacks (2 to 4 ton
capacity) - commercially available

C. References

(1) AMM 06-44-00/201, Wings (Major Zones 500 and 600) Access Doors and Panels

(2) AMM 07-11-01/201, Jacking Airplane

(3) AMM 27-51-00/201, Trailing Edge Flap System

(4) AMM 27-81-00/201, Leading Edge Slat System

(5) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(6) AMM 32-00-15/201, Landing Gear Door Locks

(7) AMM 32-00-20/201, Landing Gear Downlocks

(8) AMM 32-11-01/601, Main Gear

(9) AMM 32-11-03/401, Main Gear Side Brace

(10) AMM 32-11-10/401, Main Gear Drag Brace

(11) AMM 32-12-06/401, Shock Strut Door and Linkage

(12) AMM 32-12-08/401, Drag Brace Door and Linkage

(13) AMM 32-12-11/401, Trunnion Door and Linkage

(14) AMM 32-32-02/401, Main Gear Lock Actuators

(15) AMM 32-32-05/401, Main Gear Jury Strut Spring

MECH | INSP

(16) AMM 32-32-18/401, Main Gear Truck Positioner

D. Prepare to Remove the Main Landing Gear

WARNING: MAKE SURE THE DOWNLOCKS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCKS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

WARNING: OBEY THE INSTALLATION PROCEDURE FOR THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) Open the doors for the landing gear and install the door locks (AMM 32-00-15/201).

(3) Extend the trailing edge flaps to 20 units. Set the trailing edge flap system to off (AMM 27-51-00/201).

(4) Set the leading edge slat system to off (AMM 27-81-00/201).

(5) Remove the pressure from the right and the center hydraulic systems and reservoirs (AMM 29-11-00/201).

(6) Make sure that this circuit breaker on the main power distribution panel, P6, is closed:

(a) 6F4, LANDING GEAR PARKING BRAKE VLV

(7) Push the brake pedals a minimum of seven times to remove the pressure from the brake lines.

(8) Remove power from the cooling packs, open these circuit breakers on the overhead circuit breaker panel, P11, and attach DO-NOT-CLOSE tags:

(a) 11N19, RIGHT PACK AUTO PWR

(b) 11N20, RIGHT PACK AUTO CONT

(c) 11N10, LEFT PACK AUTO PWR

MECH | INSP

(d) 11N11, LEFT PACK AUTO CONT

(e) 11R21, CARGO HEAT OVERRIDE FWD

(f) 11R22, CARGO HEAT OVERRIDE AFT

(9) Open these circuit breakers and attach DO-NOT-CLOSE tags for the removal of the left or right main landing gear:

(a) AIRPLANES WITH THE "LANDING GEAR POSITION AIR/GND SYS 2 ALT" CIRCUIT BREAKER INSTALLED AT PANEL GRID LOCATION 11C29;
11C29, LANDING GEAR POSITION AIR/GND SYS 2 ALT

(b) 11C30, LANDING GEAR POSITION AIR/GND SYS 1

(c) 11C31, LANDING GEAR ANTISKID 2-6

(d) 11C32, LANDING GEAR ANTISKID 3-7

(e) 11H15, FLT CONT SHUTOFF WING LEFT

(f) 11H16, FLT CONT SHUTOFF WING CTR

(g) 11H26, FLT CONT SHUTOFF WING RIGHT

(h) 11R30, RIGHT IND LTS 3

(i) 11U12, AUTOBRKS ANTISKID TEST/IND 1

(j) 11U15, AIR/GND SYS 1

(k) 11U16, BRAKE TEMP

(l) SAS 050-149, 155-999;

11U17, TIRE PRESS IND 1

(m) 11U18, ANTISKID 1-5

(n) 11U20, LANDING GEAR LEVER LOCK

(o) 11U21, AUTOBRKS ANTISKID TEST/IND 2

(p) 767-200 AIRPLANES;

11U23, POSITION AIR/GND SYS 2

MECH | INSP

(q) 767-300 AIRPLANES;

11U24, POSITION AIR/GND SYS 2

(r) 11U27, ANTISKID 4-8

(s) Open this circuit breaker on the main power distribution panel, P6, and attach a DO-NOT-CLOSE tag:

1) 6J21, F/O SEAT

(10) MTH 275-276 WITH SB 32-85 AND MTH 277-999, SAS 050-149, 155-999;

Open this circuit breaker on the APU external power panel, P34, and install a DO-NOT-CLOSE tag:

(a) 34M11, TIRE PRESS IND 2

WARNING: CLEAR THE AREA BELOW THE WING BEFORE YOU DEFLATE THE SHOCK STRUT. IF YOU DEFLATE ONE SHOCK STRUT THE WING TIP CAN MOVE DOWN AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(11) Deflate the shock strut of the main landing gear.

(a) Remove the cap for the air valve (14) from the top of the shock strut (21).

WARNING: LOOSEN THE OUTER NUT A MAXIMUM OF TWO TURNS. AIR PRESSURE CAN BLOW THE VALVE OUT AND CAUSE INJURY TO PERSONS.

(b) Loosen the outer nut (16) a maximum of two turns.

(12) Remove the bolts (30) to disconnect the upper junction box (6) from the brackets.

(13) Disconnect the two electrical connectors (26) from the forward side of the upper junction box (6).

(14) AIRPLANES WITH GROUND STRAP;
Disconnect the ground strap (27) at the junction box (6).

(15) Attach the wire harness (31) for the upper junction box to the trunnion (Fig. 402).

MECH	INSP

(16) Disconnect the 6 hydraulic lines from the outboard side of the upper shock strut.

(a) Put a cap on the hydraulic ports.

(b) Put a plug on the lines.

(c) Put a tag on the lines to make installation easier.

(d) Hold the lines out of the work area.

(17) Remove the truck positioner (AMM 32-32-18/401).

(18) Install the turnbuckle (118) for the truck positioner (Fig. 404).

(a) Put one of the rod ends of the turnbuckle (118) into a bracket for the truck positioner (121).

(b) Install the retaining pin (119) for the turnbuckle.

(c) Adjust the turnbuckle (118) until the other rod end attaches into the other bracket for the truck positioner (121).

(d) Install the other retaining pin for the turnbuckle (119).

(19) Disconnect the drag brace door (5) from the drag brace (AMM 32-12-08/401).

(20) Hold the door (5) out of the work area (Fig. 401).

(21) Remove the shock strut door (4) and the linkage (AMM 32-12-06/401).

(22) Remove the trunnion door (3) and the linkage from the shock strut (21) (AMM 32-12-11/401).

(23) Remove the applicable access panels (Table 401) (AMM 06-44-00/201):

TABLE 401	
WHEN YOU REMOVE THE LEFT GEAR	WHEN YOU REMOVE THE RIGHT GEAR
551FT	651FT
551LT	651LT
551MT	651MT
551QB	651QB
551PT	651PT
551SB	651SB
551TB	651TB

(24) Remove the bolts (8, 12, and 22) to disconnect the chord (24).

(25) Remove the screws (17) to disconnect the seal (20).

(26) Remove the seal (20).

(27) If you use the jack assembly (131) do the steps that follow (Fig. 404):

NOTE: The jack assembly is part of the main landing gear removal/installation equipment.

WARNING: MAKE SURE THE STRUT IS FULLY DEPRESSURIZED BEFORE JACKING. FAILURE TO DO THIS CAN LET THE STRUT MOVE UNDER PRESSURE AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) Install the jack equipment and lift the airplane until the wheels are above the ground 6.0 inches (AMM 07-11-01/201).

(b) Install the axle jacks under the truck assembly (120) for the main landing gear.

(c) Lift the truck assembly (120) until you can put the cart assembly under the truck wheels.

(d) Put the cart assembly under the truck wheels and remove the jacks.

MECH | INSP

(e) Install the jack assembly (131) on the torsion link for the shock strut (128) (Fig. 404).

(f) Disconnect and remove the bolt which holds the upper torsion link to the shock strut.

1) Align the holes in the upper scissor of the jack assembly (131) and the outer cylinder of the shock strut (21).

2) Install the upper retention bolt (129).

3) Disconnect and remove the bolt which hold the lower torsion link to the shock strut.

4) Align the holes in the lower scissor of the jack assembly (131) and the inner cylinder of the shock strut (130).

5) Install the lower retention bolt (132).

(g) Lift the airplane 20 inches more.

(h) Use the jack assembly (131) to keep the wheels on the cart assembly.

(i) Do not let the shock strut fully extend.

(j) Lift the outer cylinder (21) with the jack assembly to remove the weight from the forward and aft trunnion bearings (1, 2).

(28) If you use the sling (138), do the steps that follow:

NOTE: The sling is part of the main landing gear removal/installation equipment.

(a) Install the two retention straps (116) on the torsion link of the shock strut (128) (Fig. 404).

1) Make a loop with the retention straps (116) through the upper and lower hinges of the torsion link (128). Use one strap on each side of the torsion link.

2) Move the end of each strap (116) through the slot in the buckle shaft (117).

3) Operate the buckle until the strap (116) is tight.

NOTE: Make sure each strap has a minimum of two loops around the shaft of the buckle before you apply a load.

(b) Lift the airplane until the wheels are 24 inches above the cart assembly (AMM 07-11-01/201).

(c) Make sure the retention straps (116) do not move.

(d) Install the sling (138) (Fig. 405).

1) Put the sling (138) around the outer cylinder (21).

a) Put the sling around the upper inboard area of the strut.

b) Move the two ends of the sling outboard of the trunnion to the hoist point.

2) Install the bolt to hold both ends of the sling (138) to the hoist point.

3) Attach the sling (138) and the hoist point to the overhead hoist.

(29) Disconnect the retract actuator (97) from the trunnion arm of the main landing gear (96) (Fig. 401, View A-A).

(a) Install the sling equipment for the retract actuator on the retract actuator (97) (Fig. 405, Detail A).

1) Put the support structure (139) on the wing structure.

2) Put the actuator clamp (134) on the retract actuator (97).

(b) Tighten the clamp nut (136) until the actuator clamp (134) is tight against the retract actuator (97).

1) Connect the cable of the fishpole hoist (137) to the support structure (139) and the clamp arm (133).

2) Tighten the cable (137).

(c) Do the steps that follow to disconnect the rod end of the retract actuator (97) from the trunnion arm (96).

1) Remove the antirotation bolt (93).

2) Remove the nut (94) and the spline washer (95).

3) Remove the bolt (98).

4) Use the sling equipment for the retract actuator to lift the retract actuator (97) away from the trunnion arm (96).

(30) Remove the lock actuators for the drag brace and the side brace (AMM 32-32-02/401).

(31) Remove the lock springs for the side brace (AMM 32-32-03/401).

(32) Remove the jury strut springs (AMM 32-32-05/401).

WARNING: BE CAREFUL WHEN YOU PUSH UP ON THE JURY STRUT. THE JURY STRUT WILL MOVE SUDDENLY WHEN RELEASED AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(33) Push up on the jury strut to release it from the overcenter position.

(34) Disconnect the side brace and the lock link from the shock strut (AMM 32-11-03/401).

(35) Disconnect the drag brace and the jury strut from the shock strut (AMM 32-11-10/401).

(36) Remove the bolts (30) to disconnect the upper junction box (6) from the support bracket for the upper junction box (45) (Fig. 402).

(37) Remove the bolts (34 and 40) to disconnect the support bracket for the upper junction box (45) from the lower strap (33) (Fig. 402).

(38) Remove the bolts (51, 56, 61) to disconnect the lower strap (33) (Fig. 402, Detail A).

E. Remove the Main Landing Gear

(1) Lift the main landing gear until there is no weight on the forward and aft trunnion bearings (1, 2).

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(2) Remove the lockbolts (86) from the clamp nut (84) (Fig. 403, Detail A).

(3) Remove the clamp nut (84), the splined washer (83), the lock ring (88), and the adjusting collar (87).

(4) Remove the crossbolt (75) from the aft trunnion (90).

(5) Do the steps that follow to remove the trunnion pin (85).

(a) Install the removal and installation equipment for the trunnion pin on the trunnion pin (85).

NOTE: If you do not install the stop assembly for the trunnion pin, the pin can go too far into the trunnion.

(b) Install the slide hammer on the puller assembly.

(c) Use the slide hammer to move the trunnion pin (85) out of the trunnion bearing (2) and into the trunnion (90). The end of the trunnion pin (85) must be aligned with the aft trunnion (90).

(d) Disconnect the slide hammer and the puller assembly from the trunnion pin (85).

(6) Move the aft end of the trunnion (90) approximately 15 degrees inboard.

(7) Remove the 2 retaining pins (107) from each of the 4 fuse pins (110).

(8) Use the bearing-fuse-bolt (pin) puller (123) to remove the fuse pins (110) from the housing assembly (66) and the supports (114, 115).

(a) Recommended procedure

1) Put the puller assembly (123) over the outer end of the fuse pin (110). The bolt will come out through the fuse pin (110).

2) Install the stop on the bolt of the puller assembly (123).

3) Install the spring pin into the stop to lock the stop into position on the bolt.

4) Put the wrench on the nut of the puller assembly.

5) Turn the nut on the fuse bolt until the bolt (110) is removed.

(b) Optional procedure.

1) Use this procedure if the hydraulic lines cause a problem with the installation of the puller assembly.

2) Put the wrenching surface of the jack screw (127) thru the fuse bolt (110) last.

3) Turn the plug (125) on the jack screw (127) until there is sufficient clearance to install the pad (126) on the jack screw.

4) Install the pad (126).

5) Use a wrench at the wrenching surface to turn the jack screw (127) counterclockwise. This will push the fuse bolt (110) out of the bearing housing.

6) Remove the jack screw assembly.

(9) Do these steps if you use jack equipment:

(a) Lower the shock strut until the shock strut is fully compressed.

(b) The housing assembly (66) and the plates (111, 113) will move out of the rear spar supports as the shock strut is lowered.

NOTE: Keep the shims (112) to make the new main landing gear installation easier.

(c) Remove the axle jacks and the adapters.

(d) Remove the jacking equipment (131) from the shock strut (21, 130).

(e) Install the retention straps (116) on the shock strut (21).

1) Make a loop with the retention straps (116) through the upper and lower hinges of the torsion link (128). Use one strap on each side of the torsion link.

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2) Move the end of each strap through the slot in the buckle shaft (117).

3) Operate the buckle until the strap (116) is tight.

NOTE: Make sure each strap has a minimum of two loops around the shaft of the buckle before you apply a load.

(10) If you use the sling (138), do the steps that follow:

(a) Lower the shock strut (21) with the sling (138) on the wheel carts. The housing assembly (66) and the plates (111, 113) will move out of the rear spar supports when the main landing gear is lowered.

NOTE: Keep the shims (112) to make the main landing gear installation easier.

(b) Remove the sling (138).

(11) Remove the assembly for the forward trunnion bearing (1) from the main landing gear (Fig. 402, View B-B).

(a) Remove the bolts (72).

(b) Remove the retaining bolt (73).

(c) Move the assembly for the forward trunnion bearing (1) off of the forward trunnion (32).

(d) Examine the forward trunnion bearing (AMM 32-11-01/601).

(e) If you replace the forward trunnion bearings, do the steps that follow:

1) Remove the nut (67).

2) Remove the inner and outer races (69, 70) with the housing (68) from the housing assembly (66).

3) Move the bearings (69, 70) out of the housing (68).

4) Keep these parts for installation on the new main landing gear.

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(12) Examine the aft trunnion bearings (AMM 32-11-01/601).

(13) If you replace the aft trunnion bearings (2), do the steps that follow (Fig. 403, View A-A):

(a) Remove the bolts (81) to disconnect the lock tab (80) from the lockplate (79).

(b) Remove the nut (89) from the housing for the aft bearing.

(c) Move the bearing inner and outer races (77, 78) forward, out of the support structure.

(14) Put the main landing gear on wheel carts and move away from the work area.

2. Install the Main Landing Gear (Fig. 401, Fig. 402, Fig. 403)

NOTE: Wear Limits for the main landing gear trunnions are supplied in AMM 32-11-01/601.

A. General

(1) There are two different procedures given to install the main landing gear. One procedure uses jacks to install the main landing gear. The other procedure uses an overhead sling to install the main landing gear.

B. Equipment

(1) A32006-77 MLG Retract Actuator Sling

(2) A32026-60 MLG Trunnion Pin Removal/Installation Equipment

(3) A32027-53 MLG Retraction/Extension Actuator Pump

(4) A32028-6 Shock Strut Retention Strap (2 straps are necessary)

(5) A32031-5 MLG Truck Positioner Turnbuckle (Recommended)

(6) A32031-4 MLG Truck Positioner Turnbuckle (Alternative) Make from A32031-1

(7) A32032-65 MLG Removal/Installation Sling (A32032-39 Alternative)

(8) A32032-64 MLG Jacking Equipment (Upgraded -52 kit that includes a new -68 tiny collar for IGW A/Ps)

(9) A32045-12, -34 Spanner Wrench

(10) A32095-1 Forward Trunnion Bearing Bolt Wrench

(11) Fishpole Hoist (Commercially available)

(12) Automotive type axle jacks (2 to 4 ton capacity) - commercially available

C. Consumable Materials

(1) A00247 Sealant, Chromate - BMS 5-95

(2) D00633 Grease - BMS 3-33 (Recommended)

(3) D00013 Grease - MIL-G-23827 (Alternative)

(4) G50136 Corrosion Inhibiting Compound - BMS 3-38

D. Parts

AMM		NOMENCLATURE	AIPC		
FIG	ITEM		SUBJECT	FIG	ITEM
401 Thru 403	1A 2A	Main Landing Gear Wing Structure	32-00-00 57-00-00	01 01	1 1

E. References

(1) AMM 06-44-00/201, Wings (Major Zones 500 and 600) Access Doors and Panels

(2) AMM 07-11-01/201, Jacking Airplane

(3) AMM 12-15-01/301, Main Gear Shock Strut

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(4) AMM 12-21-14/301, Main Gear and Actuating Mechanisms

(5) AMM 20-10-23/401, Standard Practices, Lockwire

(6) AMM 27-51-00/201, Trailing Edge Flap System

(7) AMM 27-62-00/501, Auto-Speedbrake Control System

(8) AMM 27-81-00/201, Leading Edge Slat System

(9) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(10) AMM 32-00-15/201, Landing Gear Door Locks

(11) AMM 32-00-20/201, Landing Gear Downlocks

(12) AMM 32-09-07/201, Main Gear Tilt Sensors

(13) AMM 32-11-01/601, Main Gear

(14) AMM 32-11-03/401, Main Gear Side Brace

(15) AMM 32-12-00/501, Main Landing Gear Doors

(16) AMM 32-12-06/401, Shock Strut Door and Linkage

(17) AMM 32-12-08/401, Drag Brace Door and Linkage

(18) AMM 32-12-11/401, Trunnion Door and Linkage

(19) AMM 32-32-00/501, Main Gear Extension and Retraction

(20) AMM 32-32-02/401, Main Gear Lock Actuators

(21) AMM 32-32-03/401, Main Gear Side Brace Lock Spring

(22) AMM 32-32-18/401, Main Gear Truck Positioner

(23) AMM 32-41-00/201, Hydraulic Brake System

(24) AMM 32-42-00/501, Antiskid/Autobrake System

(25) MTH 275-276 WITH SB 32-85 AND MTH 277-999, SAS 050-149, 155-999;

(26) AMM 32-46-00/501, Brake Temperature Monitoring System

(27) AMM 32-61-02/201, Main Gear Proximity Sensor

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F. Install the Main Landing Gear

(1) Make sure the turnbuckle (118) for the truck positioner is installed on the replacement main landing gear (Fig. 404).

(2) Install the forward trunnion bearing (1) on the new main landing gear (Fig. 402, View B-B).

(a) Apply grease to the outer race (69). Butter lubricate the bushing faces and the inside diameter of the inner race (70) with grease. Apply a thin layer of corrosion inhibiting compound to the full length of the inside diameter of the housing (68). Make sure you fill all gaps and fillet radius on the housing. Apply a thin layer of compound on the retaining bolt (73) to cover the threads and the outside diameter below the flange, to include the adjacent fillet radius and the flange face. Fill all gaps and fillet radius. Wipe off excess grease and compound after installation of the parts.

(b) If you install new inner and outer races (69, 70) do the steps that follow:

1) Move the inner and outer races (69, 70) into the housing (68).

2) Put the inner (70) and outer races (69, 70) with the housing (68) into the housing assembly (66).

NOTE: The grease fittings on the housing (68) must be on the inboard side of the trunnion (32).

3) Use the spanner wrench to install the nut (67).

a) Tighten the nut (67) to 95-120 pound-feet.

4) Install a lockwire on the nut.

(3) FORWARD TRUNNION WITHOUT SHEAR PIN;
To install the housing assembly (66) on the forward trunnion (32), Do the steps that follow (Fig. 402, View B-B):

(a) Apply a thin layer of compound on the inside diameter and the end part of the outside diameter of the trunnion (32). Make sure you apply it to the threads and thread reliefs.

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(b) Put the forward trunnion bearing (1) on the forward trunnion. Use a grease pencil to put a mark on the forward trunnion (32) at the flange of the housing (68), to show if the bearing moves off the trunnion during installation.

(c) Apply a thin layer of compound to all the surfaces of the retaining ring (65). Include the four notches and the inside diameter of the six bolt holes.

CAUTION: MAKE SURE THE RETAINING RING TEETH ENGAGE WITH THE SLOTS OF THE HOUSING ASSEMBLY. IF THE RETAINING RING (65) IS NOT ENGAGED WITH THE HOUSING THE RETAINING BOLT WILL TURN AND BACK OUT OF THE FORWARD TRUNNION THREADS.

(d) Install the retaining ring (65).

(e) Install the retaining bolt (73).

CAUTION: MAKE SURE THE FORWARD BEARING HAS NOT MOVED OFF THE TRUNNION DURING INSTALLATION. IF THE BEARING HOUSING HAS MOVED DURING INSTALLATION, THIS CAN CAUSE DAMAGE TO THE HOUSING AND STRUCTURE WHEN THE LANDING GEAR IS RETRACTED.

(f) Use the bolt wrench for the forward trunnion bearing to tighten the retaining bolt (73) to 15-20 pound-feet. Loosen to align the lockbolts.

(g) Measure inner race/housing bushing gaps "A" and "B".

(h) If the sum of gap "A" and gap "B" is greater then 0.250 inch, then do the steps to install the retaining ring again.

NOTE: The retaining ring is not fully seated with the housing if the gap is greater then 0.250 inch.

(i) Apply a thin layer of compound to the bolts (72) and the washers (71).

(j) Install the bolts (72) and washers (71). Wipe off the excess compound after installation.

(k) Safety wire the bolts (72).

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(4) FORWARD TRUNNION WITH SHEAR PIN;
To install the housing assembly (66) on the forward trunnion (32), Do the steps that follow (Fig. 402, View B-B):

(a) Apply a thin layer of compound (BMS 3-38) to the threads, thread reliefs, bushing surfaces and fay surfaces of the pin assembly (73A), splined washer (65), retaining nut (73), washer (71) bolt (72) and the bushing of the housing (68).

NOTE: Make sure that you apply sufficient compound to fill the gaps between the assembled parts.

(b) Apply a layer of compound (MIL-C-11796 Class3) on the last 0.50 inch of the inner circumference of the forward trunnion bushing.

NOTE: Make sure that you apply sufficient compound so that the compound forms a fillet seal when the pin assembly (73A) is installed.

(c) Put the pin assembly (73A) in the forward trunnion (32).

(d) Apply a thin layer of compound (BMS 3-38) to all surfaces of the shear pin (68A).

(e) Install the shear pin (68A) in the forward trunnion (32) and pin assembly (73A).

(f) Fill the inner diameter of the shear pin (68A) with compound (BMS 3-38) until the compound is faired to the outer surface of the forward trunnion (32).

(g) Install the splined washer (65) on the housing (68).

(h) Tighten the splined washer (65) to 10-20 pound-feet.

(i) Move the housing assembly (66) and housing (68) into position on the forward trunnion (32) on the inboard or bottom side of the trunnion.

(j) Install the retaining nut (73).

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(k) Tighten the retaining nut (73) to 10-20 pound-feet.

NOTE: Loosen the nut, if necessary, to align with the holes of the splined washer (65).

(l) Install the washers (71) and bolts (72).

(m) Safety wire the bolts (72).

(n) Remove the excess compound around the circumference of the aft end of the housing (68).

(o) Apply a continuous bead of sealant (BMS 5-95) to make a fillet seal between the aft end of the housing (68) and the forward trunnion (32).

(5) To install the new aft trunnion bearings (2), do the steps that follow (Fig. 403, View A-A):

(a) Put the inner and outer races (77, 78) into the support structure.

(b) If it is not installed, install the lockplate (79) with the bolts, bushings, nuts, and washers.

(c) Use the spanner wrench to tighten the nut (89) to 100-130 pound-feet.

(d) Loosen the nut (89) to install the lock tab (80).

(e) Install the bolts (81) and the washers (82) to connect the lock tab (80) to the lockplate (79).

(f) Install a lockwire.

(6) Move the main landing gear into the wheel well and put in the approximate position.

(7) If you use the jack assembly (131) (Fig. 404), do the steps that follow:

(a) Remove the retention straps (116) from the shock strut.

(b) Install the jack assembly (131) on the torsion link (128).

1) Remove the bolt that holds the torsion link (128) to the shock strut.

2) Align the bolt hole of the scissor for the jack assembly (131) with the bolt hole for the shock strut (21).

3) Install the bolt (129).

4) Tighten the bolt.

5) Disconnect and remove the bolt which holds the lower torsion link (128) to the shock strut (130).

6) Align the bolt hole for the lower jack scissor assembly (131) with the bolt hole for the shock strut (130).

7) Install the bolt (132).

8) Tighten the bolt.

(c) Put two automotive type jacks with adapters under the truck axles.

(d) Lift the truck until the wheels are above the ground.

(e) Put the wheel carts under the wheels.

(f) Lower the truck and remove the axle jacks and adapters.

(8) If you use the overhead sling (138), make sure the shock strut retention straps (116) are installed.

(a) Put the sling (138) around the shock strut (21) from the outboard side.

(b) Connect both ends of the sling to the overhead hoist (Fig. 405).

(c) Install the bolt to hold both ends of the sling (138) to the hoist point.

(d) Attach the sling (138) hoist point to the overhead hoist.

(9) Turn the aft end of the trunnion 15 degrees inboard to permit clearance for the main landing gear from the airplane structure.

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(10) Apply sealant between the bearing plates (111 and 113) and the supports (114, 115).

(11) Apply grease between the shims (112) and the inboard support (114) (Fig. 402, View A-A).

NOTE: You can use the shims from the removed main landing gear to make it easier to get the correct clearance (View A-A).

(12) Lift the outer cylinder (21) while you put the housing assembly (66), the plates (111 and 113), and the shims (112) into the support for the rear spar (Fig. 402, View A-A).

WARNING: INSTALL THE CORRECT FUSE PINS ONLY. MAKE SURE THAT YOU INSTALL THE SAME TYPE OF FUSE PIN THAT YOU REMOVED. THE INCORRECT FUSE PIN CAN CAUSE DANGEROUS CONDITIONS.

(13) Apply grease to the fuse pins (110).

(14) Install these parts to connect the housing assembly (66) to the inboard and outboard supports (114, 115) (Fig. 402, View A-A):

(a) Fuse pins (110).

(b) Retaining pins (107).

(c) Washers (108)

(15) Install the lockwire to the retaining pins (107) (Fig. 402).

NOTE: Lockwire installtion can be found: AMM 20-10-23/401.

(16) Turn the aft end of the trunnion outboard to align the trunnion with the aft bearing (2).

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(17) Apply a thin layer of BMS 3-38 Corrosion Inhibiting Compound to the outside diameter of the trunnion pin (85). Make sure it covers approximately 8.5 inches from the large (forward) end of the pin.

NOTE: If the compound makes it difficult for you to install the trunnion pin, you can apply a thin layer of grease (BMS 3-33) on the trunnion pin. After installation you will then need to lubricate the pin with compound.

(18) Use the trunnion pin equipment to pull the trunnion pin (85) from trunnion (90) through the aft bearing (2) (Fig. 403).

(19) Apply a thin layer of BMS 3-38 Corrosion Inhibiting Compound to the shank, threads and thread relief of the cross bolt (75), and to the bushing faces and faces of the washers (74 and 92).

(20) Install the crossbolt (75) for the trunnion pin, the washers (74 and 92), and the nut (91). Torque the nut (91) to 90-120 pound-feet.

(21) Install the cotter pin (91A).

(22) If you used grease on the trunnion pin (85) then lubricate the aft trunnion pin with compound (BMS 3-38) at the lube fitting (AMM 12-21-14/301).

(23) Remove the excess Corrosion Inhibiting Compound from the aft trunnion area.

(24) Adjust the aft bearing.

(a) Measure the dimension A between the shoulder (85) of the trunnion pin and the face of the bearing (78). Write down the dimension for later use.

(b) Turn the adjusting collar (87) on the trunnion pin (85) until the collar (87) touches the shoulder (85) of the trunnion pin.

NOTE: You can use a strap wrench if necessary.

(c) Measure the dimension B between the bearing face and the end of the adjusting collar. If the dimension A plus the dimension B is greater than 2.75 inches, the adjusting collar (87) is not correctly installed. Repeat the step above to install the adjusting collar (87).

1) If you cannot install the adjusting collar (87) correctly, remove the dry lubricant and use the procedure in SB 32-38.

(d) Move the lock ring (88) over the splines on the adjusting collar (87). Make sure the lugs in the lock ring (88) engage the slots in the bearing (78).

NOTE: It is recommended that the grease fitting on the lock ring (88) point outboard to permit the easiest access for lubrication.

(e) Install the washer (83) and the clamp nut (84).

(f) Tighten the nut (84) to 10-20 pound-feet. Loosen the nut to align the locking holes. Get a clearance of 0.003-0.010 inches.

(g) Fill all holes with grease.

NOTE: The clearance between the washer (83) and the lockring (88) is for the adjustment (Fig. 403, View A-A). After the main landing gear is operated and/or the jacks are removed a clearance of 0.00-0.05 inches is permitted.

(h) Install the lockbolts (86).

(i) Install the lockwires on the the lockbolts (86).

(25) Install these parts to connect the outboard end of the lower strap (33) to the housing assembly (Fig. 402, Detail A):

(a) Bolts (61)

(b) Bushings (62)

(c) Washers (63)

(d) Nuts (64)

(26) Install these parts to connect the rod fitting, the lower strap (33) and the support bracket (45) to the housing assembly (66):

(a) Bolts (34, 40)

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(b) Washers (35, 38, 41, 43)

(c) Bushings (37, 42)

(d) Nuts (39, 44)

(27) Do these steps to connect the upper junction box (6) to the brackets:

(a) Clean the faying surfaces.

(b) Install the bolts (30) to connect the upper junction box (6) to the brackets.

(c) Bond, and apply a fillet seal between the junction box (6) and the brackets (SWPM 20-20-00).

(d) Measure the resistance to make sure that the resistance across the interface is a maximum of 0.010 ohms.

(28) AIRPLANES WITH GROUND STRAP;
Do these steps to connect the ground strap (27) to the junction box (6):

(a) Connect the ground strap to the grounding stud on the junction box (6) (SWPM 20-20-00).

(b) Measure the resistance to make sure that the maximum resistance between ground studs is 0.005 ohm.

(29) Connect the electrical connectors to the upper junction box (6).

(30) Connect the six hydraulic lines to the upper shock strut on the outboard side of the shock strut.

(31) Install these parts to connect the door seal (20) and the retainer (19) of the shock strut to the support beam (Fig. 401):

(a) Screws (17)

(b) Washers (18)

(32) Install the parts to connect the chord (24) to the outboard structure (Fig. 401, Detail B):

(a) Bolts (22)

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(b) Nuts (23)

(33) Install these parts to connect the chord (24) to the inboard bracket:

(a) Clip (11)

(b) Splice Strap (7)

(c) Bolts (8, 12)

(d) Collars (9, 13)

(34) If you use the jack equipment, do these steps:

(a) Lower the truck until the wheels touch the ground.

(b) Remove the automotive type jacks and the adapters from below the truck axles.

(35) Use the jack equipment (131) to lower the outer cylinder (21).

(36) Remove the jacking equipment (131) from the shock strut (21, 130) (Fig. 404).

(a) Remove the bolts (129, 132) which hold the jack assembly (131) to the shock strut (21, 130).

(b) Install the bolts to hold the torsion link (128) to the shock strut (21, 130) and tighten.

(37) If you use the overhead sling (138), do these steps:

(a) Remove the overhead sling (138).

(b) Remove the shock strut retention straps (116).

G. Put the Airplane Back to Its Usual Condition (Fig. 401)

(1) Do the servicing of the shock strut for the main landing gear (AMM 12-15-01/301).

(2) Lift the airplane to extend the shock strut fully (AMM 07-11-01/201).

(3) Connect the drag brace and the jury strut to the shock strut (AMM 32-11-10/401).

(4) Connect the side brace and the lock link to the shock strut (AMM 32-11-03/401).

(5) Install the jury strut springs (AMM 32-32-05/401) and the side brace springs (AMM 32-32-03/401).

(6) Connect the rod end of the retract actuator to the main landing gear trunnion (Fig. 401, View A-A).

(a) Install the actuator sling equipment for the retract actuator on the retract actuator (97) (Fig. 405, Detail A).

1) Put the support structure (139) on the wing structure.

2) Put the actuator clamp (134) on the retract actuator (97).

(b) Tighten the clamp nut (136) until the actuator clamp (134) is tight against the retract actuator (97).

1) Connect the cable of the fishpole hoist (137) to the support structure (139) and the clamp arm (133).

2) Tighten the cable (137).

(c) Apply grease to the bolt (98), the nut (94), and the antirotation bolt (93) before installation.

(d) Install the new packings (100) on the lube retainer (99).

(e) Use the actuator sling equipment to lower the actuator to align the rod end with the lugs on the trunnion.

NOTE: Put the rod end of the actuator in position so the lube fittings are above the center line of the actuator. This will make sure you can get access to the fittings easily.

(f) Install the bolt (98) and the lube retainer (99) through these components in the sequnce below:

1) The actuator ring (101)

2) The antirotation washers (102, 103)

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3) The retract actuator (97)

4) The spline washer (95)

5) And the nut (94).

(g) Tighten the nut (94) to 70-90 pound-feet. Loosen the nut to the subsequent lock position (Fig 401, View A-A).

(h) Install the antirotation bolt (93), the washer (105), the nut (104), and the cotter pin.

(i) Remove the tool (133, 134) and the support frame (139) from the area (Fig. 405).

(7) Install the lock actuators for the drag and side brace (AMM 32-32-02/401).

(8) Make sure the pressure is removed from the hydraulic systems (AMM 29-11-00/201).

(9) Connect the hydraulic lines to the actuators.

(10) Connect the door for the drag brace (5) to the drag brace (AMM 32-12-08/401).

(11) Install the door (4) and linkage for the shock strut (AMM 32-12-06/401).

(12) Install the door (3) and linkage for the trunnion (AMM 32-12-11/401).

(13) Remove the turnbuckle (118) for the truck positioner.

(14) Install the truck positioner (AMM 32-32-18/401).

(15) Close these circuit breakers on the overhead circuit breaker panel P11:

(a) AIRPLANES WITH THE "LANDING GEAR POSITION AIR/GND SYS 2 ALT" CIRCUIT BREAKER INSTALLED AT PANEL GRID LOCATION 11C29; 11C29, LANDING GEAR POSITION AIR/GND SYS 2 ALT

(b) 11C30, LANDING GEAR POSITION AIR/GND SYS 1

(c) 11C31, LANDING GEAR ANTISKID 2-6

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(d) 11C32, LANDING GEAR ANTISKID 3-7

(e) 11H15, FLT CONT SHUTOFF WING LEFT

(f) 11H16, FLT CONT SHUTOFF WING CTR

(g) 11H26, FLT CONT SHUTOFF WING RIGHT

(h) 11R30, RIGHT IND LTS 3

(i) 11U12, AUTOBRKS ANTISKID TEST/IND 1

(j) 11U15, AIR/GND SYS 1

(k) 11U16, BRAKE TEMP

(l) SAS 275-276 POST SB 32-85;
SAS 277-281, 050-149, 155-167;

11U17, TIRE PRESS IND 1

(m) 11U18, ANTISKID 1-5

(n) 11U20, LANDING GEAR LEVER LOCK

(o) 11U21, AUTOBRKS ANTISKID TEST/IND 2

(p) 767-200 AIRPLANES;

11U23, POSITION AIR/GND SYS 2

(q) 767-300 AIRPLANES;

11U24, POSITION AIR/GND SYS 2

(r) 11U27, ANTISKID 4-8

(16) SAS 281;

Close this circuit breaker on the main power distribution panel, P6:

(a) 6J21, F/O SEAT

(17) SAS 275-276 WITH SB 32-85 AND SAS 277-281, SAS 050-149, 155-167;

Remove the DO-NOT-CLOSE identifier and close this circuit breaker on the APU external power panel, P34:

MECH | INSP

(a) 34M11, TIRE PRESS IND 2

(18) Put the WING FLIGHT CONTROL SHUTOFF switches L, C, and R on the P61 panel to OFF position.

(19) Lubricate the gear at the grease fittings (AMM 12-21-14/301).

(20) Do an adjustment check of the main landing gear doors (AMM 32-12-00/501).

(21) Do an adjustment check of the clearance for the main landing gear tilt sensors (AMM 32-09-07/201).

(22) Do a test of the tilt sensors for the main landing gear truck (AMM 32-09-07/201).

(23) For the right main landing gear only, do the gear truck tilt sensor failure test for the auto-speedbrake system (AMM 27-62-00/501).

(24) SAS 275-276 WITH SB 32-85 AND SAS 277-281, SAS 050-149, 155-167;

Do a test of the tire pressure indicating system (AMM 32-45-00/501).

(25) Do a test of the brake temperature monitoring system (AMM 32-46-00/501).

(26) Do the extension and retraction test for the main landing gear (AMM 32-32-00/501).

(27) Install the applicable access panels (Table 402) (AMM 06-44-00/201):

TABLE 402

WHEN YOU INSTALL THE LEFT GEAR	WHEN YOU INSTALL THE RIGHT GEAR
551FT	651FT
551LT	651LT
551MT	651MT
551QB	651QB
551PT	651PT
551SB	651SB
551TB	651TB

MECH	INSP

(28) Put the trailing edge flap system back to its usual condition (AMM 27-51-00/201).

(29) Put the leading edge slat system back to its usual condition (AMM 27-81-00/201).

(30) Lower the airplane (AMM 07-11-01/201).

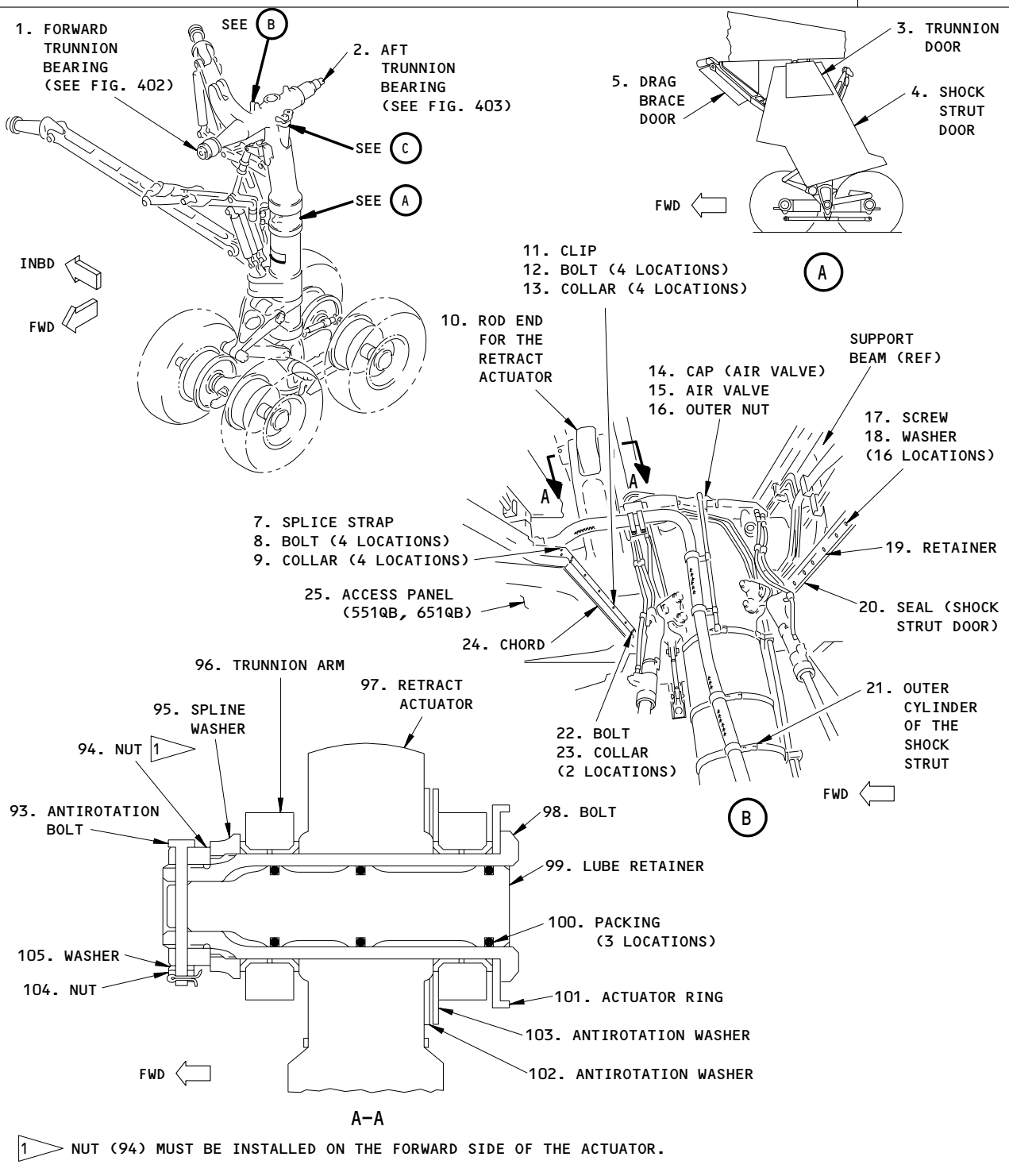
(31) Do the procedure to bleed the brakes (AMM 32-41-00/201).

(32) Do a test of the proximity sensors for the main landing gear (AMM 32-61-02/201).

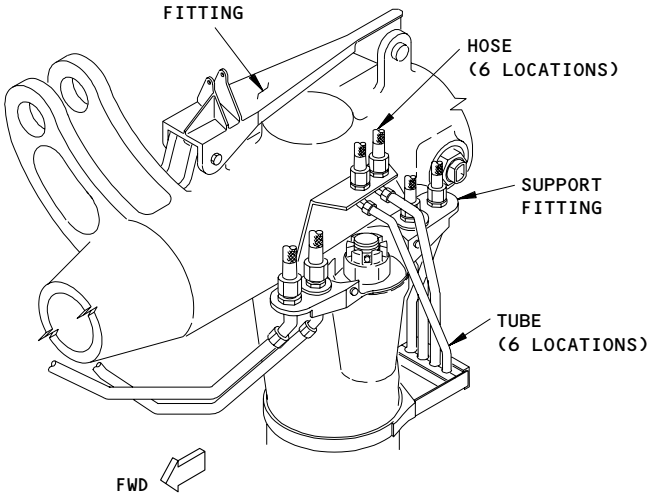
(33) Do the steps in the Antiskid System Test - Brake Release (AMM 32-42-00/501).

WARNING: OBEY THE REMOVAL PROCEDURE FOR THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

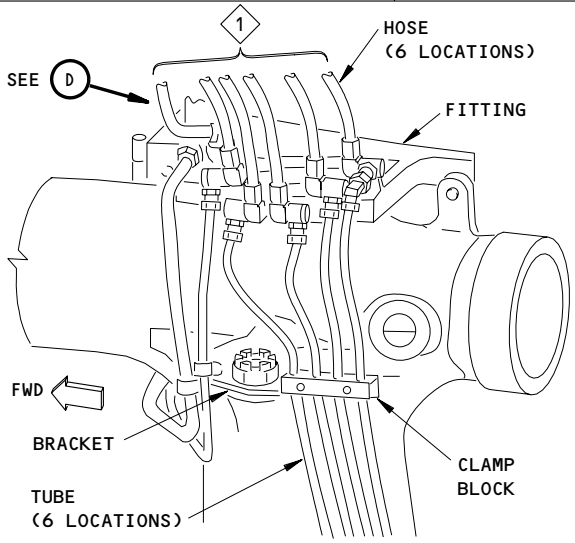
(34) Remove the door locks and close the doors (AMM 32-00-15/201).



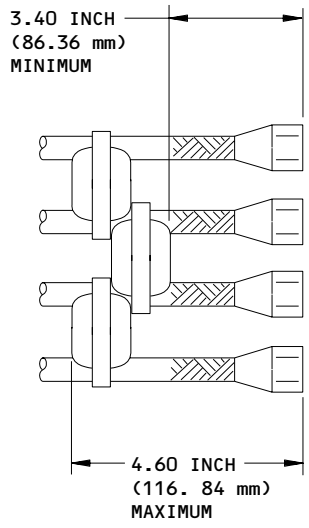
Main Gear Installation
Figure 401 (Sheet 1)



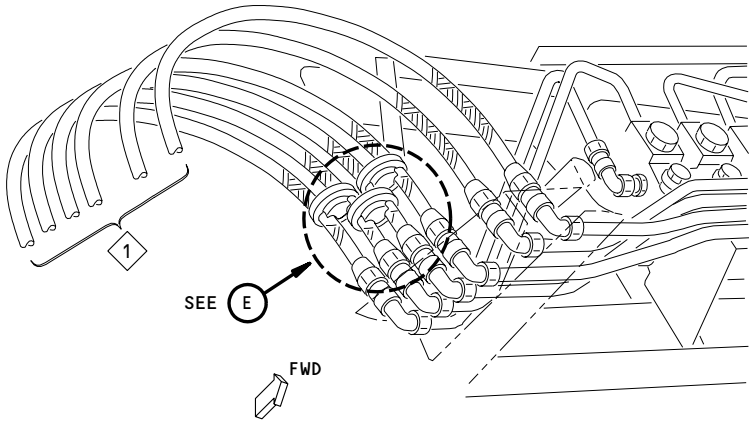
C 1



C 2



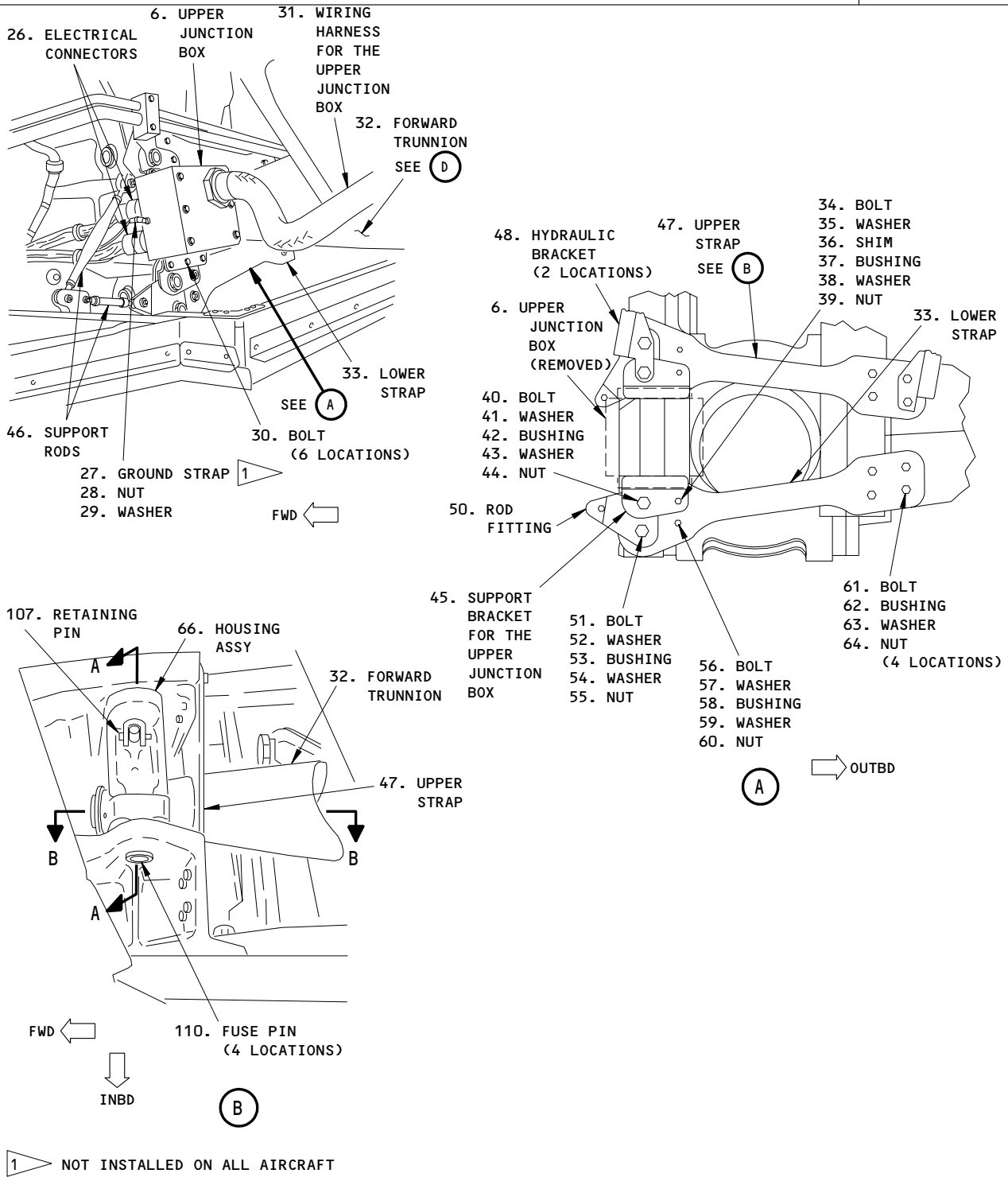
E



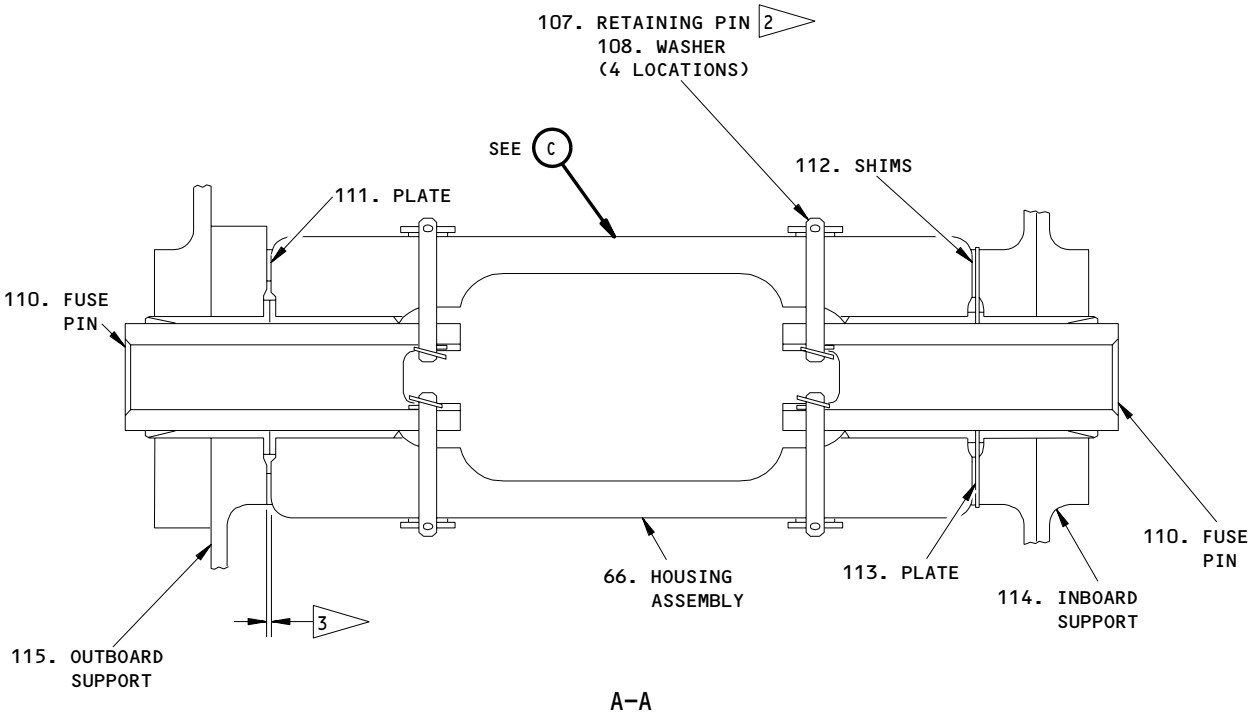
D 2

1 SHOCK STRUT WITHOUT HYDRAULIC HOSE SWIVEL CONNECTORS.
2 SHOCK STRUT WITH HYDRAULIC HOSE SWIVEL CONNECTORS.

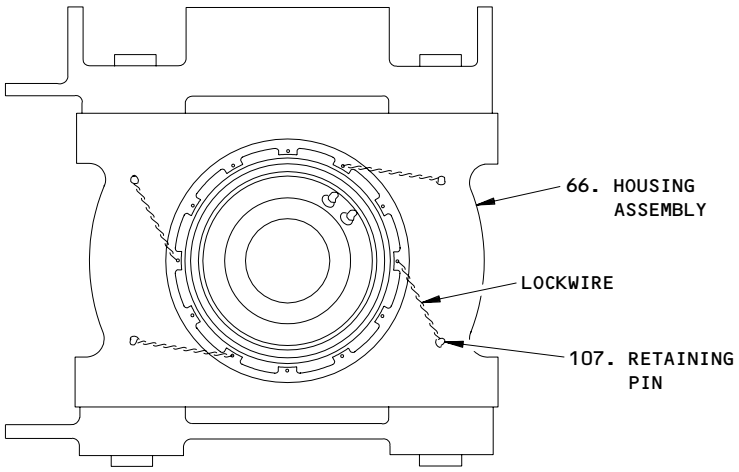
Main Gear Installation
Figure 401 (Sheet 2)



Installation of the Forward Trunnion Bearing
Figure 402 (Sheet 1)



A-A

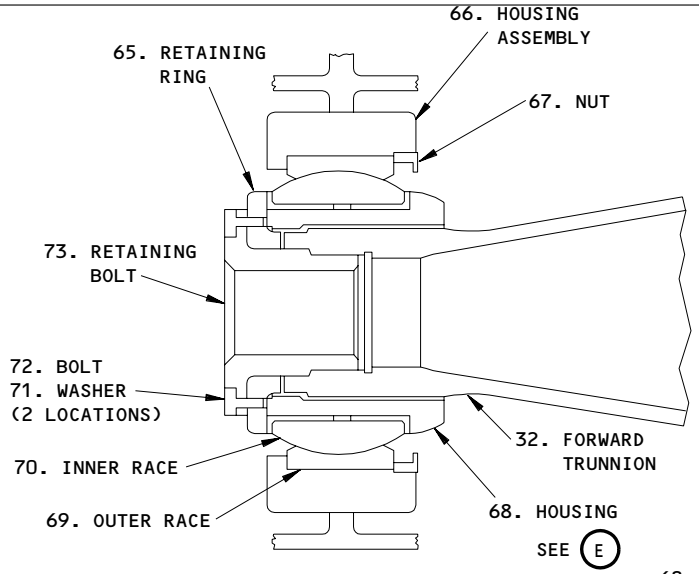


C

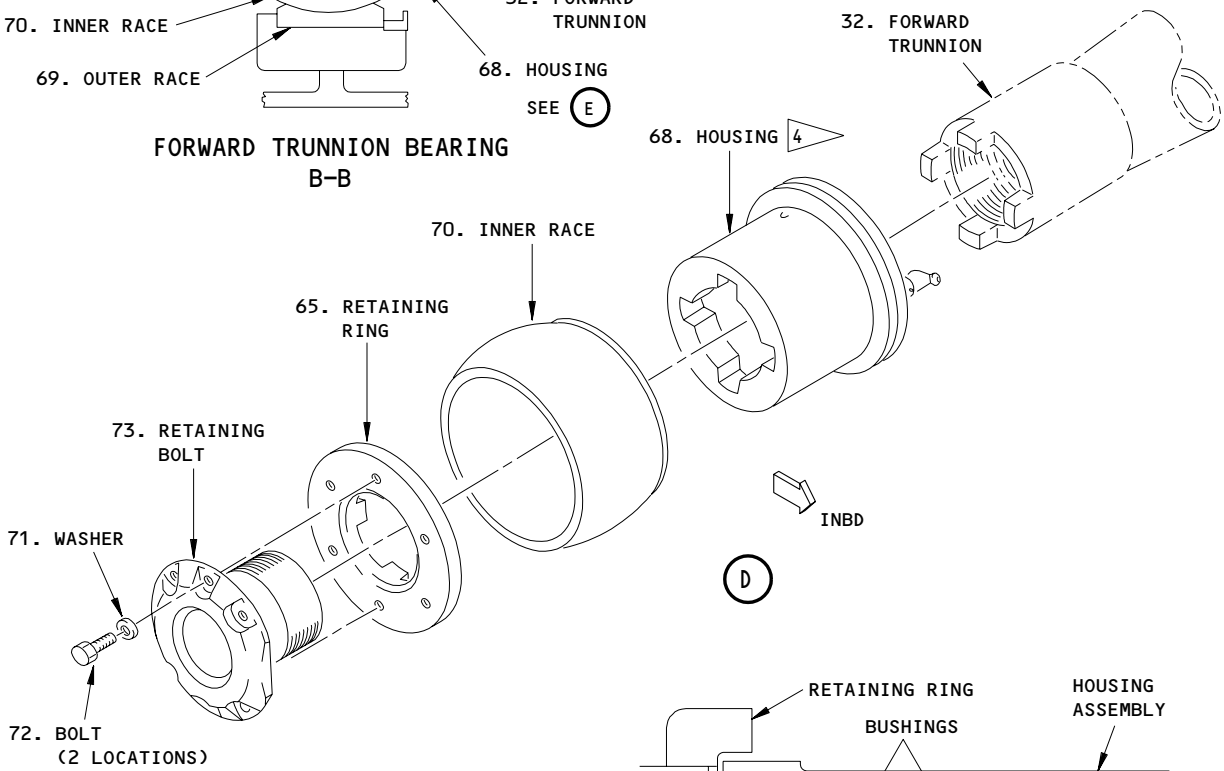
2 INSTALL THE LOCKWIRE

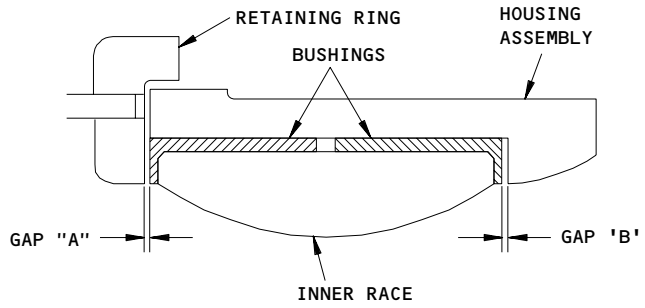
3 ADD OR REMOVE THE SHIMS (112) AT THE INBOARD SUPPORT. GET A MAXIMUM CLEARANCE OF 0.010 INCH BETWEEN THE PLATE (111) AND THE HOUSING ASSY OR THE OUTBOARD SUPPORT

Installation of the Forward Trunnion Bearing
Figure 402 (Sheet 2)



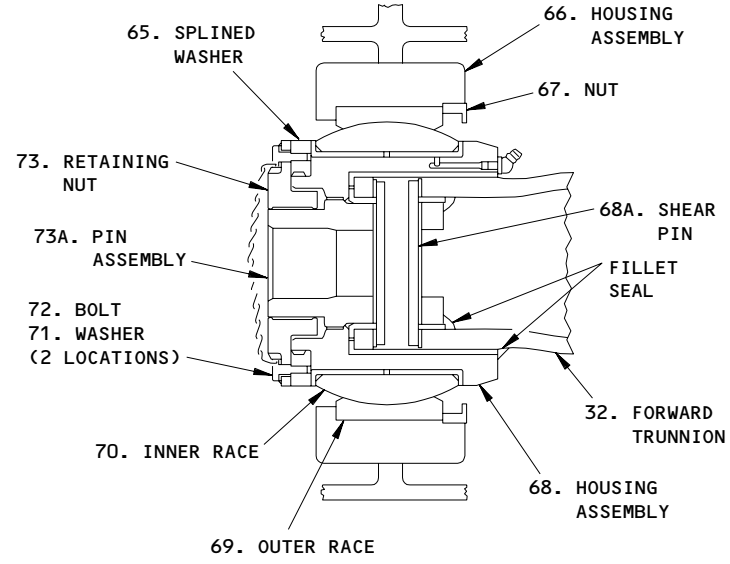
FORWARD TRUNNION BEARING
B-B



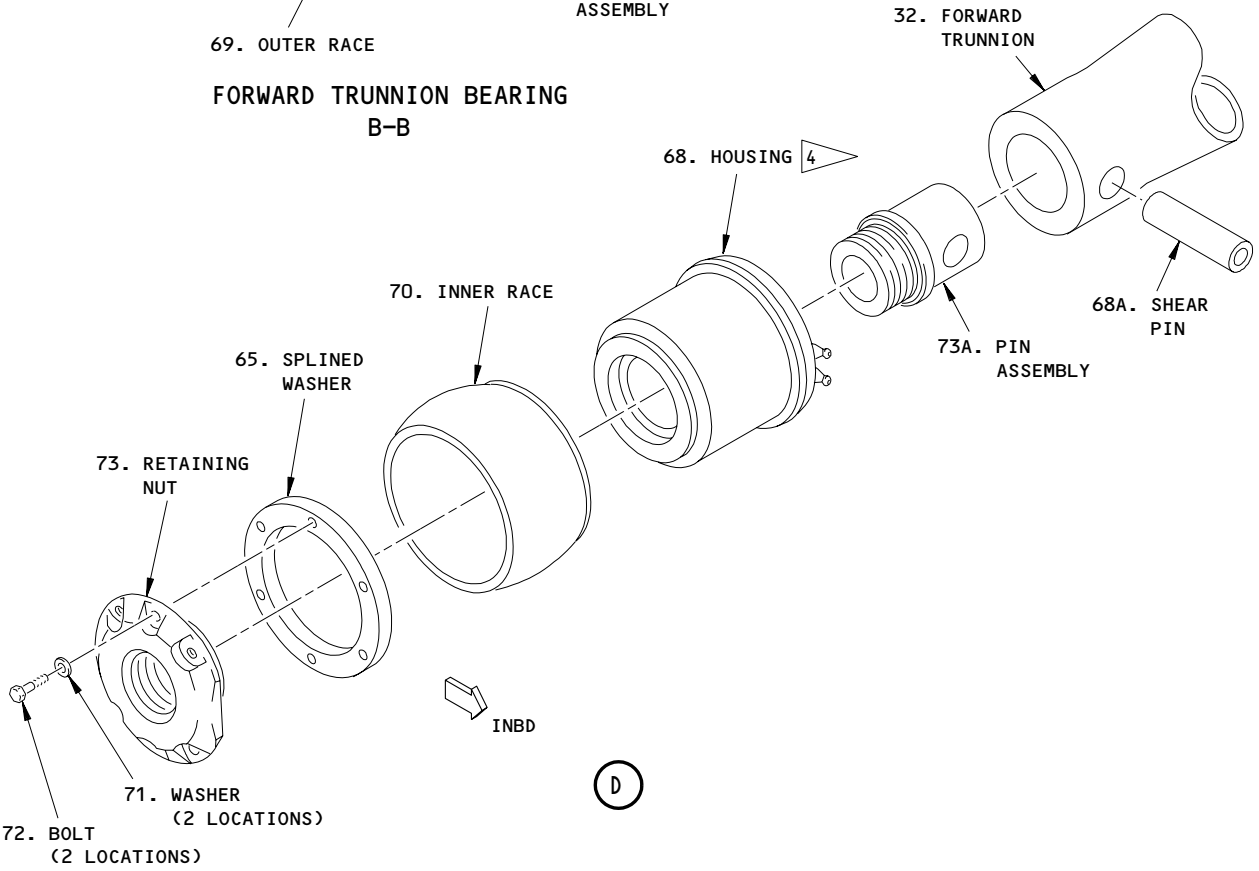


4 INSTALL THE HOUSING (68) WITH THE GREASE FITTING ON THE INBD SIDE OR BOTTOM OF THE TRUNNION (32). IT WILL MAKE THE LUBRICATION ACCESS EASIER.

Installation for the Forward Trunnion Bearing
Figure 402 (Sheet 3)

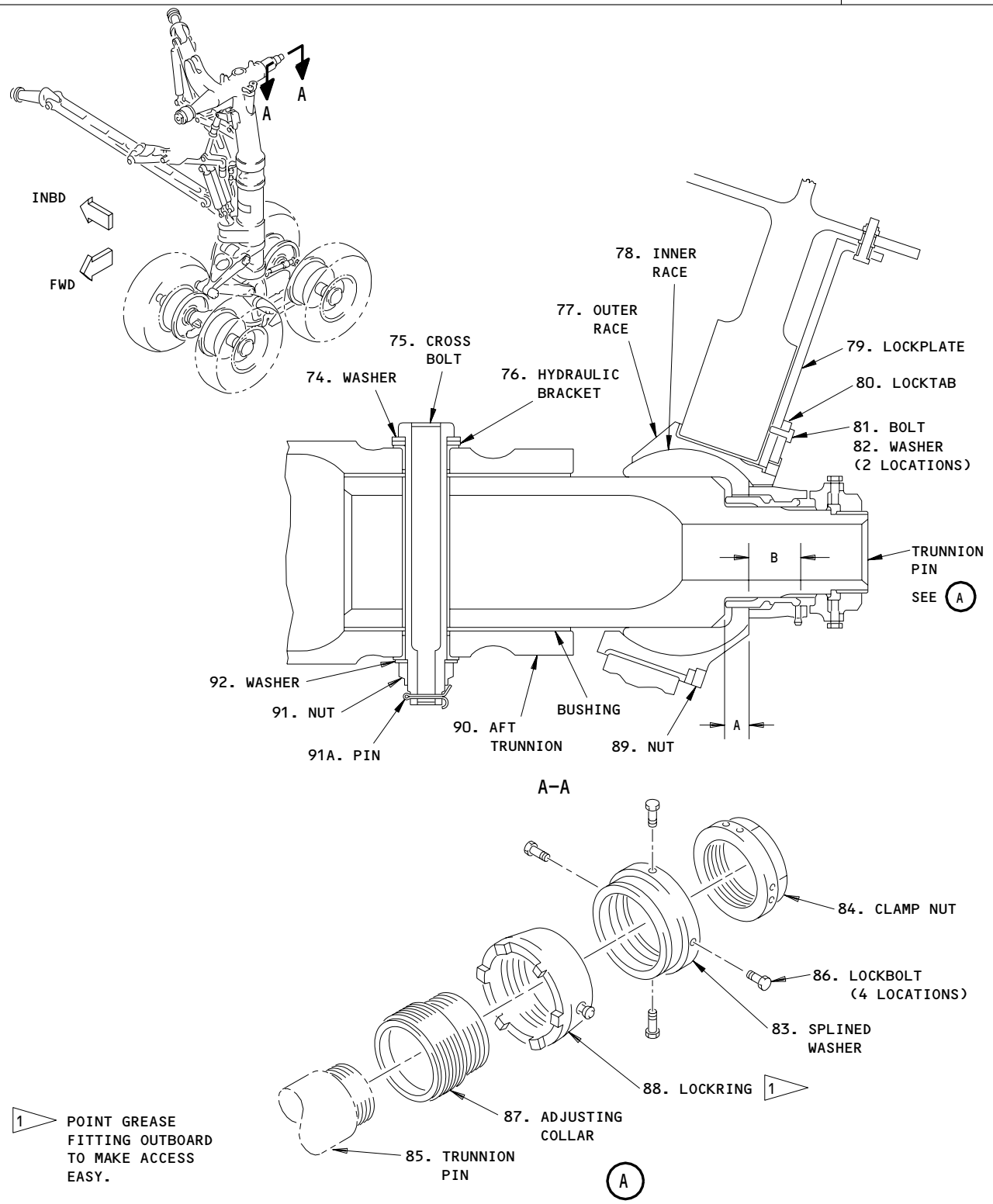


FORWARD TRUNNION BEARING
B-B

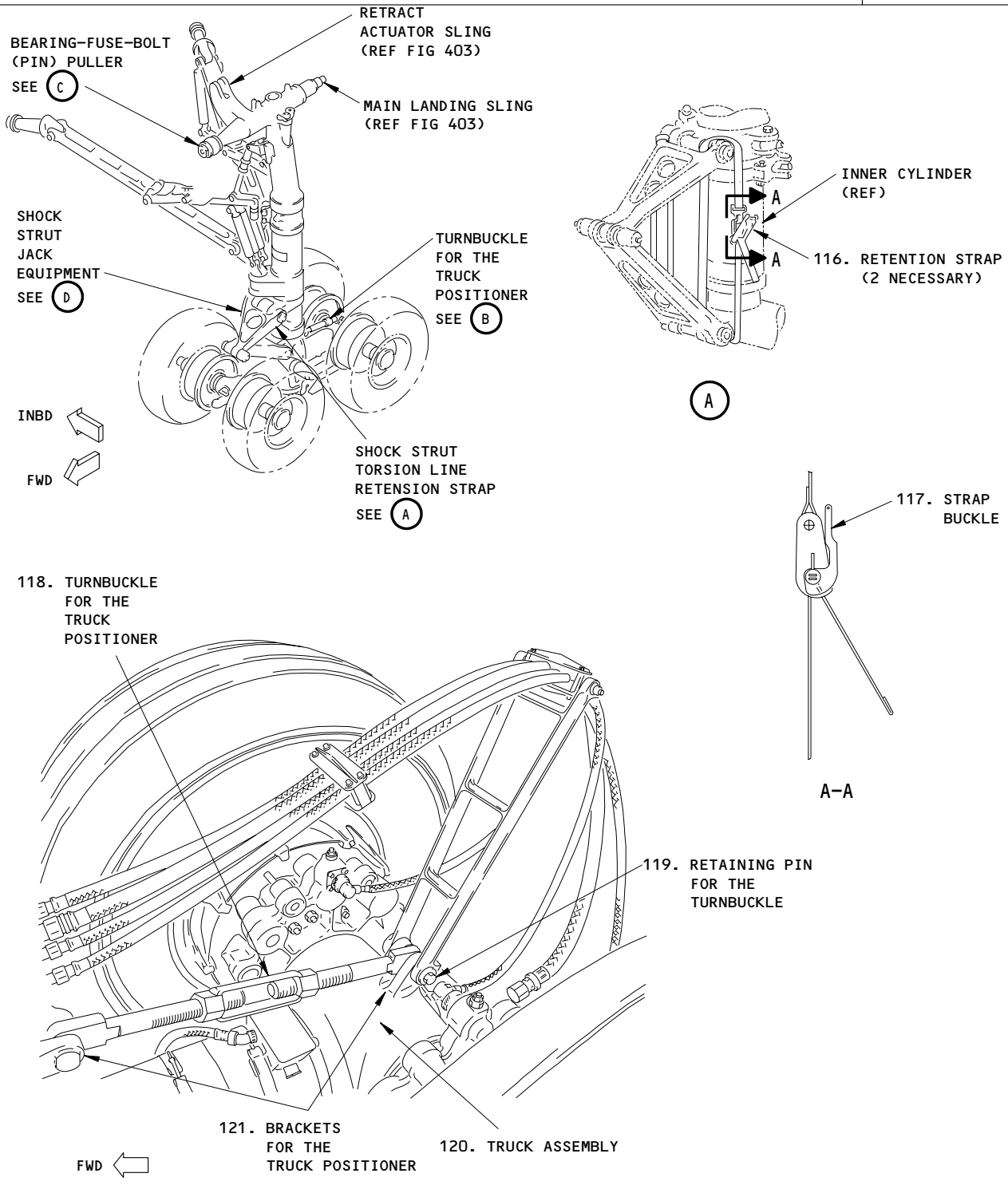


4 INSTALL THE HOUSING (68) WITH THE GREASE FITTING ON THE INBD SIDE OR BOTTOM OF THE TRUNNION (32). IT WILL MAKE THE LUBRICATION ACCESS EASIER.

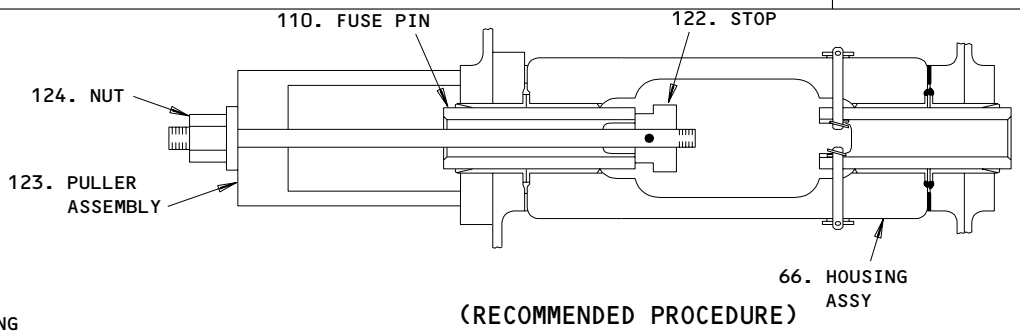
Installation for the Forward Trunnion Bearing
Figure 402 (Sheet 4)



Installation for the Aft Trunnion Bearing
Figure 403

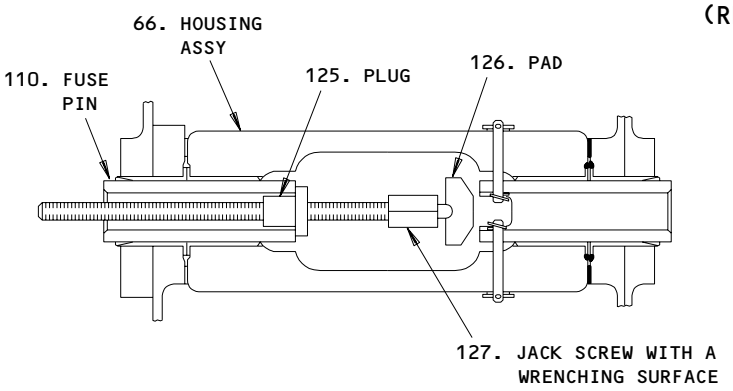


Special Tools for the Main Landing Gear Installation
Figure 404 (Sheet 1)



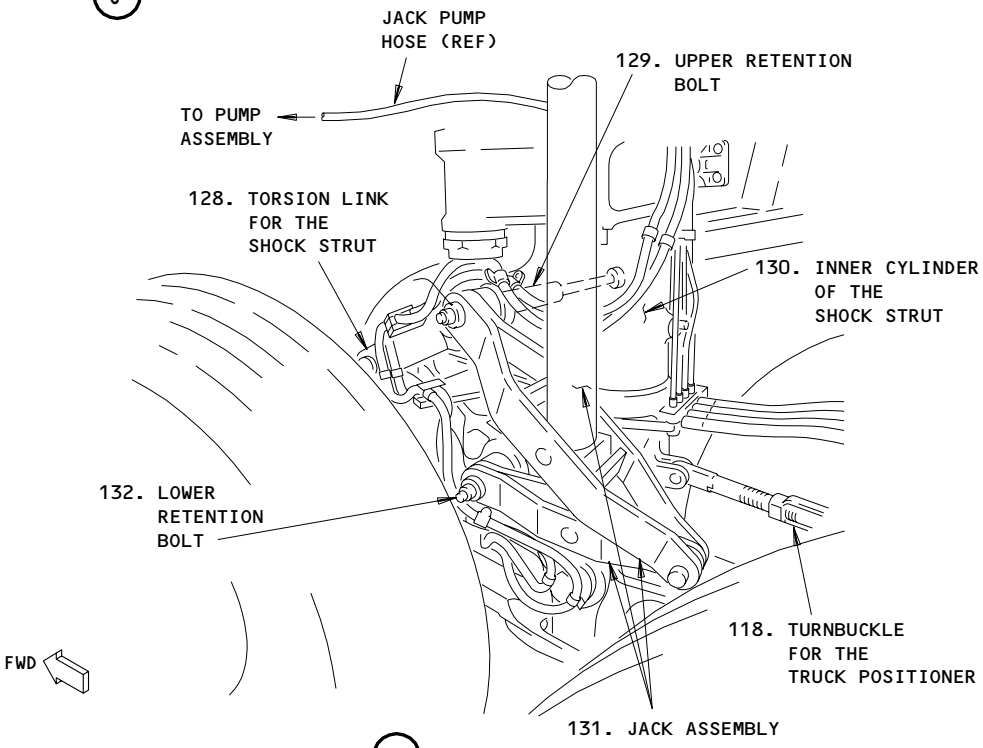
(RECOMMENDED PROCEDURE)

C



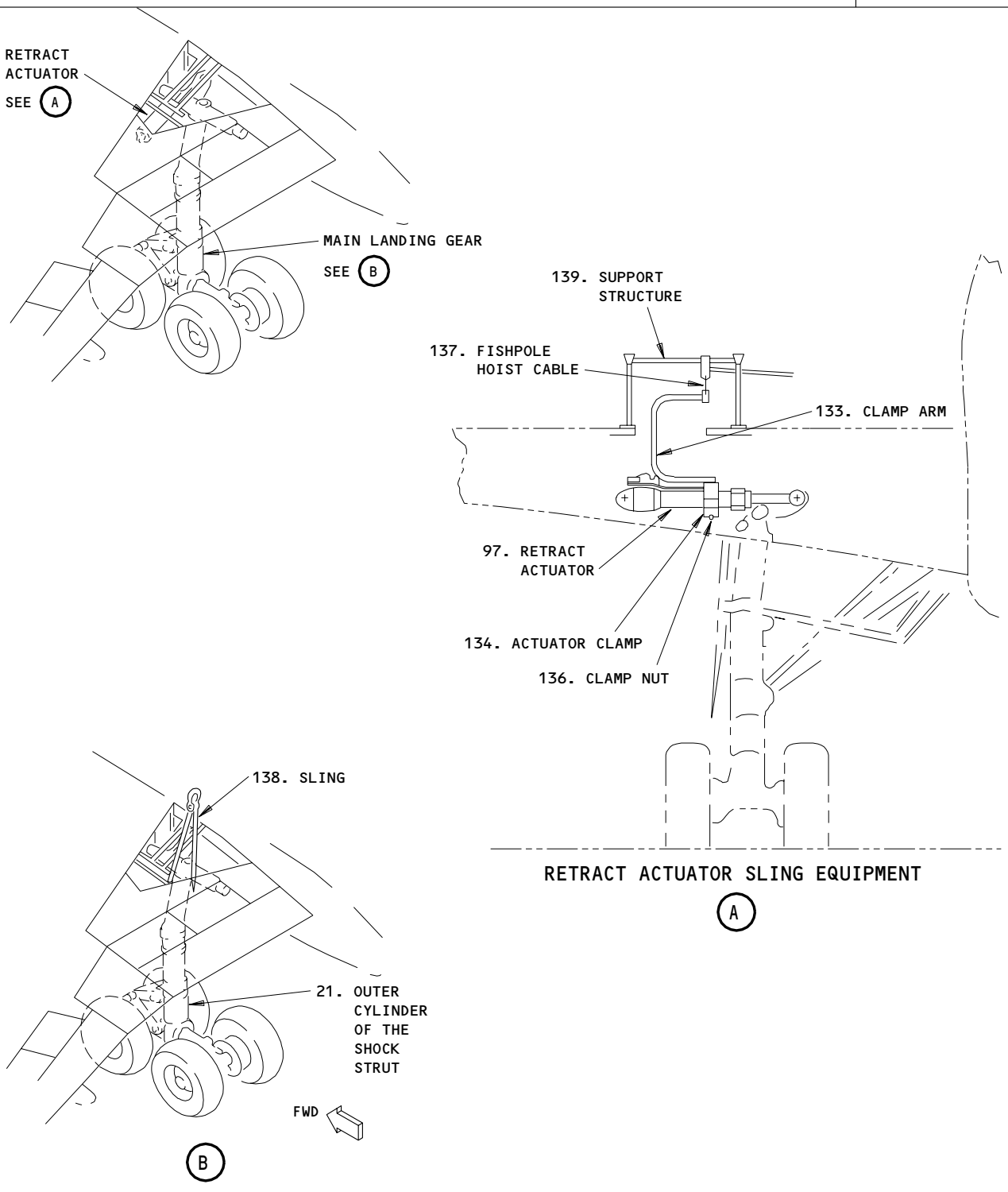
(OPTIONAL PROCEDURE)

C



D

Special Tools for the Main Landing Gear Installation
Figure 404 (Sheet 2)



Support Equipment for the Main Landing Gear Installation
Figure 405

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-046-01
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL		PHASE	MPD REV	TASK CARD REVISION
AIRPL	NOSE W/W		00900 CYC	NOTE	104XX	017	AUG 10/98

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
CHECK/INSP	NLG SPIN BRAKE SPRING ARM		NOTE	ALL

ZONES	ACCESS PANELS
115 116	1004

MECH	INSP	MPD ITEM NUMBER
		32-45-05-A

INSPECT THE NOSE LANDING GEAR SPIN BRAKE SPRING ARM FOR FRACTURE USING EDDY CURRENT TECHNIQUES PER THE RECOMMENDATIONS OF SERVICE LETTER 767-SL-32-48.

INTERVAL NOTE: SEE SERVICE LETTER FOR LIMITATIONS ON REPEAT INSPECTION INTERVAL.

AIRPLANE NOTE: SB 767-32-0137. APPLICABLE TO AIRPLANES PRIOR TO LINE NUMBER 510 AND THOSE USING SPRING ARM P/N 141T9911-2 THAT HAVE NOT HAD THE TERMINATING ACTION IN THE SERVICE BULLETIN INCORPORATED.

ACCESS NOTE: SPECIAL ACCESS 1004 REQUIRES OPENING OF THE LANDING GEAR DOORS AND INSTALLING SAFETY LOCKS IN ACCORDANCE WITH MAINTENANCE MANUAL PROCEDURE 32-00-15.

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-046-02-1
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	L WING TE		4C	14848	018	APR 22/04

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
FUNCTIONAL	TRUCK POSITIONER HYDRAULIC FUSES		ALL	ALL

ZONES	ACCESS PANELS
552	552CB

MECH	INSP	MPD ITEM NUMBER

FUNCTIONALLY CHECK THE LEFT LANDING GEAR TRUCK POSITIONER UPPER AND LOWER HYDRAULIC FUSES. 32-32-19-5A

1. Test of the Hydraulic Fuses for the Main Landing Gear (Fig. 501)

A. Equipment

(1) Hydraulic Service Cart, 0 to 3000 psi (0 to 21000 KPa), with hydraulic fluid, fire resistant, BMS 3-11

B. Consumable Materials

(1) D00153 Hydraulic Fluid, Fire Resistant - BMS 3-11

C. References

(1) AMM 06-44-00/201, Wings Access Doors and Panels

(2) AMM 12-12-01/301, Hydraulic Systems

(3) AMM 24-22-00/201, Electrical Power Control

(4) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(5) AMM 32-00-15/201, Landing Gear Door Locks

(6) AMM 32-00-20/201, Landing Gear Downlocks

D. Prepare for the Test

(1) Supply electrical power (AMM 24-22-00/201).

(2) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

WARNING: OBEY THE INSTALLATION PROCEDURE FOR THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(3) Open the doors for the landing gear and install the door locks (AMM 32-00-15/201).

(4) Open the panel 552CB or 652CB (AMM 06-44-00/201) to access the hydraulic fuse.

E. Test of the Gear Up Line Fuse

(1) Remove the pressure from the center hydraulic system and hydraulic reservoir (AMM 29-11-00/201).

(2) Disconnect the hydraulic line from the gear up line fuse port.

(3) Install a plug in the line.

(4) Put the control lever for the landing gear in the UP position.

(5) Put a container at the fuse port to catch hydraulic fluid. Fluid will flow from the fuse port when the hydraulic system is pressurized.

(6) If you attach a flexible hose to the connection on the fuse, then put the open end in a suitable fluid container.

WARNING: KEEP PERSONS CLEAR OF THE OPEN FUSE PORT WHILE THE HYDRAULIC LINE IS DISCONNECTED FROM THE PORT AND THE CENTER HYDRAULIC SYSTEM IS PRESSURIZED. HIGH PRESSURE HYDRAULIC FLUID CAN CAUSE INJURY TO PERSONS.

(7) Supply approximately 100 psi (688 KPa) to the center hydraulic system with a hydraulic ground cart (AMM 29-11-00/201).

(8) When the fuse closes, increase the applied pressure to 3,000 psi (21,000 KPa) and hold it for 5 minutes.

(9) Make sure that leakage from the fuse port is not more than one drop per minute for the last 3 minutes.

MECH | INSP

(10) Remove the power from the center hydraulic system (AMM 29-11-00/201).

(11) Remove the plug from the hydraulic line.

(12) Reconnect the hydraulic line.

(13) Reset the line fuse.

F. Test of the Gear Down Line Fuse

(1) Remove the pressure from the center hydraulic system and hydraulic reservoir (AMM 29-11-00/201).

(2) Disconnect the hydraulic line from the gear down line fuse port.

(3) Install a plug in the line.

(4) Put the control lever for the landing gear in the DN position.

(5) Put a container at the fuse port to catch hydraulic fluid. Fluid will flow from the fuse port when the hydraulic system is pressurized.

(6) If you attach a flexible hose to the connection on the fuse, then put the open end in a suitable fluid container.

WARNING: KEEP PERSONS CLEAR OF THE OPEN FUSE PORT WHILE THE HYDRAULIC LINE IS DISCONNECTED FROM THE PORT AND THE CENTER HYDRAULIC SYSTEM IS PRESSURIZED. HIGH PRESSURE HYDRAULIC FLUID CAN CAUSE INJURY TO PERSONS.

(7) Supply approximately 70 psi (482 KPa) to the center hydraulic system with a hydraulic ground cart (AMM 29-11-00/201).

(8) When the fuse closes, increase the applied pressure to 3,000 psi (21,000 KPa) and hold it for 5 minutes.

(9) Make sure that leakage from the fuse port is not more than one drop per minute for the last 3 minutes.

(10) Remove the power from the center hydraulic system (AMM 29-11-00/201).

(11) Remove the plug from the hydraulic line.

MECH | INSP

(12) Reconnect the hydraulic line.

(13) Reset the line fuse.

G. Procedure to Make Sure the Fuse is Reset

(1) 767-300 AIRPLANES;
Open this circuit breaker on the P11 panel and install a DO-NOT-CLOSE tag:

11U26, TAIL SKID CONT

WARNING: MAKE SURE THAT THE DOWNLOCKS ARE INSTALLED IN ALL OF THE LANDING GEAR BEFORE YOU MOVE THE CONTROL LEVER. WITHOUT THE DOWNLOCKS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

(3) Pressurize the center hydraulic system (AMM 29-11-00/201).

WARNING: MAKE SURE THE LANDING GEAR AREAS ARE CLEAR OF PERSONS AND EQUIPMENT. FAST MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) Move the landing gear control lever to UP. Move the lever to DN.

NOTE: Let the control lever stay in each position for 5-10 seconds. The fuse is usually automatically reset when there is zero differential pressure across the fuse. The fuse also has a manual reset. Hold the manual reset in the reset position for a minimum of 5 seconds when you use it.

(a) Look for a slight movement of the jury strut on the drag brace or the lock link of the side brace when you move the control lever to the UP and DN position.

(b) Look for leaks at the connector fitting.

H. Put the Airplane Back to Its Usual Condition

MECH	INSP

(1) Make sure the fluid in the hydraulic reservoir is at the correct level. Fill if it is necessary (AMM 12-12-01/301).

(2) Close the access panels for the hydraulic fuses.

WARNING: OBEY THE REMOVAL PROCEDURE FOR THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

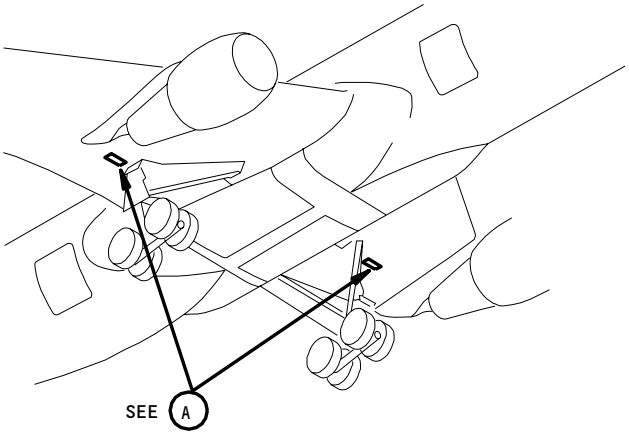
(3) Remove the door locks (AMM 32-00-15/201).

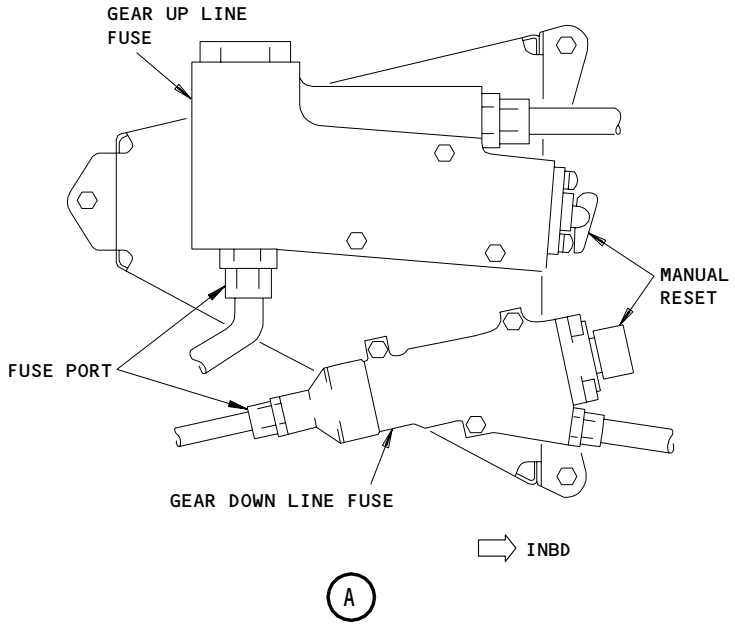
(4) 767-300 AIRPLANES;
Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:

11U26, TAIL SKID CONT

(5) Remove the pressure from the hydraulic system if it is not necessary (AMM 29-11-00/201).

(6) Remove electrical power if it is not necessary (AMM 24-22-00/201).





Main Gear Truck Positioner Fuses Test
Figure 501

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-046-02-2
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	R WING TE		4C	14848	018	APR 22/04

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
FUNCTIONAL	TRUCK POSITIONER HYDRAULIC FUSES		ALL	ALL

ZONES	ACCESS PANELS
652	652CB

MECH	INSP	MPD ITEM NUMBER

FUNCTIONALLY CHECK THE RIGHT LANDING GEAR TRUCK POSITIONER UPPER AND LOWER HYDRAULIC FUSES. 32-32-19-5A

1. Test of the Hydraulic Fuses for the Main Landing Gear (Fig. 501)

A. Equipment

(1) Hydraulic Service Cart, 0 to 3000 psi (0 to 21000 KPa), with hydraulic fluid, fire resistant, BMS 3-11

B. Consumable Materials

(1) D00153 Hydraulic Fluid, Fire Resistant - BMS 3-11

C. References

(1) AMM 06-44-00/201, Wings Access Doors and Panels

(2) AMM 12-12-01/301, Hydraulic Systems

(3) AMM 24-22-00/201, Electrical Power Control

(4) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(5) AMM 32-00-15/201, Landing Gear Door Locks

(6) AMM 32-00-20/201, Landing Gear Downlocks

D. Prepare for the Test

(1) Supply electrical power (AMM 24-22-00/201).

(2) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

MECH | INSP

WARNING: OBEY THE INSTALLATION PROCEDURE FOR THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(3) Open the doors for the landing gear and install the door locks (AMM 32-00-15/201).

(4) Open the panel 552CB or 652CB (AMM 06-44-00/201) to access the hydraulic fuse.

E. Test of the Gear Up Line Fuse

(1) Remove the pressure from the center hydraulic system and hydraulic reservoir (AMM 29-11-00/201).

(2) Disconnect the hydraulic line from the gear up line fuse port.

(3) Install a plug in the line.

(4) Put the control lever for the landing gear in the UP position.

(5) Put a container at the fuse port to catch hydraulic fluid. Fluid will flow from the fuse port when the hydraulic system is pressurized.

(6) If you attach a flexible hose to the connection on the fuse, then put the open end in a suitable fluid container.

WARNING: KEEP PERSONS CLEAR OF THE OPEN FUSE PORT WHILE THE HYDRAULIC LINE IS DISCONNECTED FROM THE PORT AND THE CENTER HYDRAULIC SYSTEM IS PRESSURIZED. HIGH PRESSURE HYDRAULIC FLUID CAN CAUSE INJURY TO PERSONS.

(7) Supply approximately 100 psi (688 KPa) to the center hydraulic system with a hydraulic ground cart (AMM 29-11-00/201).

(8) When the fuse closes, increase the applied pressure to 3,000 psi (21,000 KPa) and hold it for 5 minutes.

(9) Make sure that leakage from the fuse port is not more than one drop per minute for the last 3 minutes.

MECH	INSP

(10) Remove the power from the center hydraulic system (AMM 29-11-00/201).

(11) Remove the plug from the hydraulic line.

(12) Reconnect the hydraulic line.

(13) Reset the line fuse.

F. Test of the Gear Down Line Fuse

(1) Remove the pressure from the center hydraulic system and hydraulic reservoir (AMM 29-11-00/201).

(2) Disconnect the hydraulic line from the gear down line fuse port.

(3) Install a plug in the line.

(4) Put the control lever for the landing gear in the DN position.

(5) Put a container at the fuse port to catch hydraulic fluid. Fluid will flow from the fuse port when the hydraulic system is pressurized.

(6) If you attach a flexible hose to the connection on the fuse, then put the open end in a suitable fluid container.

WARNING: KEEP PERSONS CLEAR OF THE OPEN FUSE PORT WHILE THE HYDRAULIC LINE IS DISCONNECTED FROM THE PORT AND THE CENTER HYDRAULIC SYSTEM IS PRESSURIZED. HIGH PRESSURE HYDRAULIC FLUID CAN CAUSE INJURY TO PERSONS.

(7) Supply approximately 70 psi (482 KPa) to the center hydraulic system with a hydraulic ground cart (AMM 29-11-00/201).

(8) When the fuse closes, increase the applied pressure to 3,000 psi (21,000 KPa) and hold it for 5 minutes.

(9) Make sure that leakage from the fuse port is not more than one drop per minute for the last 3 minutes.

(10) Remove the power from the center hydraulic system (AMM 29-11-00/201).

(11) Remove the plug from the hydraulic line.

MECH | INSP

(12) Reconnect the hydraulic line.

(13) Reset the line fuse.

G. Procedure to Make Sure the Fuse is Reset

(1) 767-300 AIRPLANES;
Open this circuit breaker on the P11 panel and install a DO-NOT-CLOSE tag:

11U26, TAIL SKID CONT

WARNING: MAKE SURE THAT THE DOWNLOCKS ARE INSTALLED IN ALL OF THE LANDING GEAR BEFORE YOU MOVE THE CONTROL LEVER. WITHOUT THE DOWNLOCKS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

(3) Pressurize the center hydraulic system (AMM 29-11-00/201).

WARNING: MAKE SURE THE LANDING GEAR AREAS ARE CLEAR OF PERSONS AND EQUIPMENT. FAST MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) Move the landing gear control lever to UP. Move the lever to DN.

NOTE: Let the control lever stay in each position for 5-10 seconds. The fuse is usually automatically reset when there is zero differential pressure across the fuse. The fuse also has a manual reset. Hold the manual reset in the reset position for a minimum of 5 seconds when you use it.

(a) Look for a slight movement of the jury strut on the drag brace or the lock link of the side brace when you move the control lever to the UP and DN position.

(b) Look for leaks at the connector fitting.

H. Put the Airplane Back to Its Usual Condition

MECH	INSP

(1) Make sure the fluid in the hydraulic reservoir is at the correct level. Fill if it is necessary (AMM 12-12-01/301).

(2) Close the access panels for the hydraulic fuses.

WARNING: OBEY THE REMOVAL PROCEDURE FOR THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

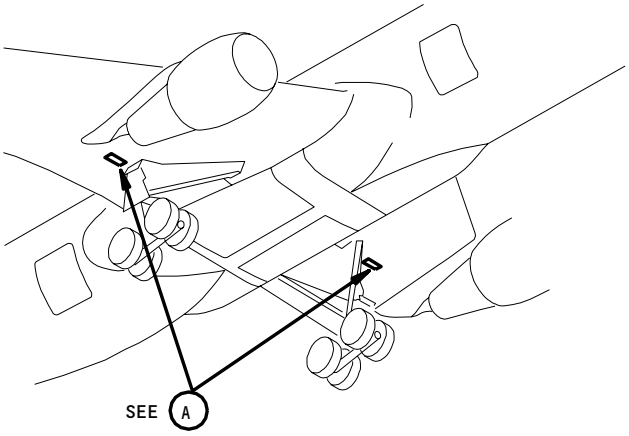
(3) Remove the door locks (AMM 32-00-15/201).

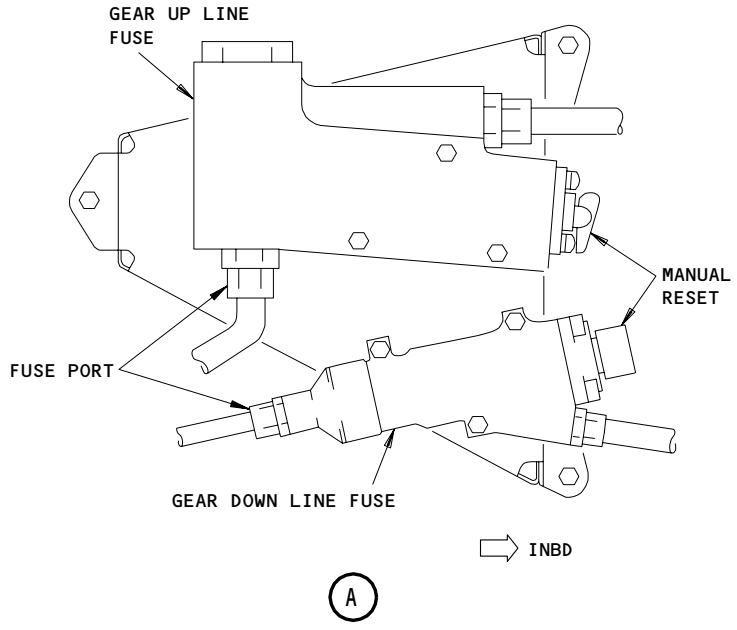
(4) 767-300 AIRPLANES;
Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:

11U26, TAIL SKID CONT

(5) Remove the pressure from the hydraulic system if it is not necessary (AMM 29-11-00/201).

(6) Remove electrical power if it is not necessary (AMM 24-22-00/201).





Main Gear Truck Positioner Fuses Test
Figure 501

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-046-05-1
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	L MAIN GEAR	W-32-046-06-1	00800 CYC	10404	019	AUG 22/01

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
RESTORE	BRAKE ROD BOLT		NOTE	ALL

ZONES	ACCESS PANELS
731	

MECH	INSP	MPD ITEM NUMBER
		32-11-20-A

RESTORE THE LEFT MAIN LANDING GEAR BRAKE ROD BOLT PER THE INSTRUCTIONS CONTAINED IN SERVICE BULLETIN 767-32A0116 AS REQUIRED BY AD 94-03-07.

AIRPLANE NOTE: APPLICABLE TO AIRPLANES WITH CARBON BRAKES. CARBON BRAKE EQUIPPED 767 AIRPLANES INCORPORATING SB767-32-0168 OR INCORPORATING SB767-32-0183; AND A FINAL ONE-TIME INSPECTION OR REPLACEMENT OF THE COMPONENTS IN SB767-32-A0116 ARE AN ALTERNATIVE MEANS OF COMPLIANCE FOR THIS TASK.
CARBON BRAKE EQUIPPED 767 AIRPLANES FROM PRODUCTION LINE NUMBER 737 AND ON ARE EXEMPT FROM THIS TASK.

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-046-05-2
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	R MAIN GEAR	W-32-046-06-2	00800 CYC	10404	019	AUG 22/01

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
RESTORE	BRAKE ROD BOLT		NOTE	ALL

ZONES	ACCESS PANELS
741	

MECH	INSP	MPD ITEM NUMBER
		32-11-20-A

RESTORE THE RIGHT MAIN LANDING GEAR BRAKE ROD BOLT PER THE INSTRUCTIONS CONTAINED IN SERVICE BULLETIN 767-32A0116 AS REQUIRED BY AD 94-03-07.

AIRPLANE NOTE: APPLICABLE TO AIRPLANES WITH CARBON BRAKES. CARBON BRAKE EQUIPPED 767 AIRPLANES INCORPORATING SB767-32-0168 OR INCORPORATING SB767-32-0183; AND A FINAL ONE-TIME INSPECTION OR REPLACEMENT OF THE COMPONENTS IN SB767-32-A0116 ARE AN ALTERNATIVE MEANS OF COMPLIANCE FOR THIS TASK.
CARBON BRAKE EQUIPPED 767 AIRPLANES FROM PRODUCTION LINE NUMBER 737 AND ON ARE EXEMPT FROM THIS TASK.

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-046-06-1
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	L MAIN GEAR	W-32-046-05-1	00800 CYC	10404	019	AUG 22/01

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
CHECK/INSP	BRAKE ROD BOLT BUSHINGS		NOTE	ALL

ZONES	ACCESS PANELS
731	

MECH	INSP	MPD ITEM NUMBER
		32-11-20-B

VISUALLY INSPECT THE LEFT MAIN GEAR INNER CYLINDER LUG BUSHINGS AND BRAKE ROD BUSHINGS AT THE INNER CYLINDER FORK LUG END FOR CRACKING PER THE INSTRUCTIONS CONTAINED IN SERVICE BULLETIN 767-32A0116 AS REQUIRED BY AD 94-03-07. SB 767-32-0129 CONTAINS INFORMATION ON BRAKE ROD BUSHING AND INNER CYLINDER FORK LUG BUSHING REPLACEMENT. THIS REPLACEMENT IS RECOMMENDED AFTER INSPECTION OF BRAKE ROD BUSHINGS AS RECOMMENDED BY SB 767-32A0116.

AIRPLANE NOTE: APPLICABLE TO AIRPLANES WITH CARBON BRAKES. CARBON BRAKE EQUIPPED 767 AIRPLANES INCORPORATING SB767-32-0168 OR INCORPORATING SB767-32-0183; AND A FINAL ONE-TIME INSPECTION OR REPLACEMENT OF THE COMPONENTS IN SB767-32-A0116 ARE AN ALTERNATIVE MEANS OF COMPLIANCE FOR THIS TASK.

CARBON BRAKE EQUIPPED 767 AIRPLANES FROM PRODUCTION LINE NUMBER 737 AND ON ARE EXEMPT FROM THIS TASK.

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-046-06-2
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	R MAIN GEAR	W-32-046-05-2	00800 CYC	10404	019	AUG 22/01

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
CHECK/INSP	BRAKE ROD BOLT BUSHINGS		NOTE	ALL

ZONES	ACCESS PANELS
741	

MECH	INSP	MPD ITEM NUMBER
		32-11-20-B

VISUALLY INSPECT THE RIGHT MAIN GEAR INNER CYLINDER LUG BUSHINGS AND BRAKE ROD BUSHINGS AT THE INNER CYLINDER FORK LUG END FOR CRACKING PER THE INSTRUCTIONS CONTAINED IN SERVICE BULLETIN 767-32A0116 AS REQUIRED BY AD 94-03-07. SB 767-32-0129 CONTAINS INFORMATION ON BRAKE ROD BUSHING AND INNER CYLINDER FORK LUG BUSHING REPLACEMENT. THIS REPLACEMENT IS RECOMMENDED AFTER INSPECTION OF BRAKE ROD BUSHINGS AS RECOMMENDED BY SB 767-32A0116.

AIRPLANE NOTE: APPLICABLE TO AIRPLANES WITH CARBON BRAKES. CARBON BRAKE EQUIPPED 767 AIRPLANES INCORPORATING SB767-32-0168 OR INCORPORATING SB767-32-0183; AND A FINAL ONE-TIME INSPECTION OR REPLACEMENT OF THE COMPONENTS IN SB767-32-A0116 ARE AN ALTERNATIVE MEANS OF COMPLIANCE FOR THIS TASK.

CARBON BRAKE EQUIPPED 767 AIRPLANES FROM PRODUCTION LINE NUMBER 737 AND ON ARE EXEMPT FROM THIS TASK.

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-048-01-1
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	L MAIN GEAR		1C	11212	011	APR 22/08

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
CHECK/INSP	MAIN GEAR SHOCK STRUT		NOTE	ALL

ZONES	ACCESS PANELS
731	1004

MECH	INSP	MPD ITEM NUMBER

CHECK THE LEFT MAIN GEAR SHOCK STRUT FLUID LEVEL AND SERVICE AS REQUIRED. 12-15-01-3A

AIRPLANE NOTE: THIS TASK IS APPLICABLE TO ALL AIRPLANE MODELS EXCEPT THE 767-400ER.

ACCESS NOTE: SPECIAL ACCESS 1004 REQUIRES OPENING OF THE LANDING GEAR DOORS AND INSTALLING SAFETY LOCKS IN ACCORDANCE WITH MAINTENANCE MANUAL PROCEDURE 32-00-15.

1. Examine the Fluid Level of the Shock Strut

A. General

(a) You can obtain the different shock strut extensions one of two ways:

1) You can take the shock strut measurements at two different airplane weights, for example, before and after fueling the airplane, or,

2) If the airplane is on jacks, you can use floor jacks or the airplane jacks to compress or extend the shock strut.

(b) You should have a difference of 2 - 4 inches (51 - 102 mm) between the two shock strut extensions to do the check.

B. Prepare to Check the Hydraulic Fluid Level

WARNING: MAKE SURE THE DOWNLOCKS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCKS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

MECH | INSP

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

WARNING: OBEY THE INSTALLATION PROCEDURE FOR THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) Open the doors for the landing gear and install the door locks (AMM 32-00-15/201).

C. Check the hydraulic fluid level of the shock strut for the main landing gear:

(1) Check the hydraulic fluid level with the airplane at the first shock strut extension:

(a) Remove the cap from the air valve.

(b) Install a pressure gage on the shock strut to measure the pressure. Use the instructions supplied with the tool.

WARNING: LOOSEN THE NUT FOR THE AIR VALVE A MAXIMUM OF TWO TURNS. DO NOT REMOVE THE VALVE BODY ON A PRESSURIZED STRUT. AIR PRESSURE CAN BLOW THE VALVE OUT AND INJURE PERSONNEL.

(c) Loosen the swivel nut for the air valve two turns and measure the pressure of the shock strut.

(d) Measure the actual "A" dimension on the strut as shown on Fig. 302.

(e) Use the chart on Fig. 302 to find the "A" dimension that corresponds to the pressure you measured.

(f) Compare the "A" dimension from the chart to the "A" dimension that you actually measured.

(g) If the actual measured "A" dimension is within the upper and lower limits of the "A" dimension from the chart, then do the steps for a pressure check at the second point.

MECH | INSP

(h) If the actual measured "A" dimension is not within the upper and lower limits of the "A" dimension from the chart, then do the Nitrogen Servicing Only to get the measured "A" dimension within the limits. Then do the steps for a pressure check at the second point.

(2) Check the hydraulic fluid level with the airplane at the second shock strut extension:

NOTE: To get a different shock strut extension, you can have the airplane at a different weight, or, if the airplane is lifted on jacks, you can use the airplane jacks or floor jacks to compress or extend the shock strut.

You should have a minimum difference of 2 - 4 inches between the two shock strut extensions to do the check.

(a) Remove the cap from the air valve.

(b) Install a pressure gage on the shock strut to measure the pressure. Use the instructions supplied with the tool.

WARNING: LOOSEN THE NUT FOR THE AIR VALVE A MAXIMUM OF TWO TURNS. DO NOT REMOVE THE VALVE BODY ON A PRESSURIZED STRUT. AIR PRESSURE CAN BLOW THE VALVE OUT AND INJURE PERSONNEL.

(c) Loosen the swivel nut for the air valve two turns and measure the pressure of the shock strut.

(d) Measure the actual "A" dimension on the strut as shown on Fig. 302.

(e) Use the chart on Fig. 302 to find the "A" dimension that corresponds to the pressure you measured.

(f) Compare the "A" dimension from the chart to the "A" dimension that you actually measured.

NOTE: When servicing the strut to the servicing chart, it is recommended that the intersection of your dimension and pressure values be at the center of the width of the servicing band. This practice will result in a more accurate assessment of the fluid level.

MECH | INSP

(g) If the actual measured "A" dimension is within the upper and lower limits of the "A" dimension from the chart, then do these steps to complete the check:

1) Tighten the swivel nut to 5 - 7 pound-feet to close the air valve.

2) Remove the pressure gage from the shock strut.

3) Install the cap for the air valve.

(h) If the actual measured "A" dimension is not within the upper and lower limits of the "A" dimension from the chart, then do the Fluid and Nitrogen Servicing to adjust the fluid level.

NOTE: If only one of the two pressure checks is satisfactory, then the fluid volume is not correct.

(i) Tighten the swivel nut to 5 - 7 pound-feet to close the air valve.

(j) Remove the pressure gage from the shock strut.

(k) Install the cap on the air valve.

2. Servicing of the Shock Strut for the Main Landing Gear

NOTE: Use this procedure for the usual servicing and checks of the shock struts. A fully serviced shock strut will contain approximately 38.1 quarts (36.0 liters) of shock strut fluid.

A. General

(1) This task services the shock strut for the main landing gear.

B. Equipment

(1) Strut Inflation Tool - F70200-14

(2) Drain Bucket - Commercially Available

(3) Hose to Strut Air Valve - (Commercially Available)

(4) Dry Air or Nitrogen Bottle, charged to 3000 psi - Commercially Available

(5) PF55451-23 - Servicing Cart, Malabar Hydronics (Commercially Available)

(6) Pressure Gage, 800 to 2500 PSIG - Commercially Available.

C. Consumable Materials

NOTE: Refer to AMM 12-15-11-301 for proper usage of fluids and for alternative fluids.

(1) D00467 Fluid - Hydraulic, BMS 3-32 (Recommended)

Type I - Royco SSF, Shell SSF and Castrolaero 35 (These fluids contain the mixture of MIL-H-6083 and lubrizol 1395)

Type II - Royco LGF, Shell LGF and Castrolaero 40 (These fluids are the recommended fluid for servicing and contain the mixture of MIL-H-5606 and lubrizol 1395)

NOTE: Type I is the recommended fluid to use when refilling a strut after overhaul.

(2) D00508 MIL-H-5606 Hydraulic Fluid (Alternative)

NOTE: This oil is the recommended fluid for servicing of the shock strut. For servicing, mix MIL-H-5606 in the correct proportion (41:1) with Lubrizol 1395 before you fill the shock strut.

(3) D00510 Lubrizol 1395

(4) RMC 481-026-XX SHELL Landing Gear Fluid (SHELL LGF) SAS SAS

NOTE: RMC 481-026-XX is the preferred fluid and fully mixable with the other fluids which is optional. SAS SAS SAS

(5) DOO509 MIL-H-6083 Hydraulic Fluid (alternative)

NOTE: You can use this fluid with MIL-H-5606 and you can use it as an alternative for MIL-H-5606. For servicing, mix MIL-H-6083 in the correct proportion (41:1) with Lubrizol 1395 before you fill the shock strut.

D. References

(1) AMM 12-15-11/301, Landing Gear Shock Strut Fluids

(2) AMM 32-00-15/201, Landing Gear Door Locks

(3) AMM 32-00-20/201, Landing Gear Downlocks

E. Prepare to Do the Servicing of the Shock Strut

WARNING: OBEY THE INSTALLATION PROCEDURE FOR THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

(2) Open the doors for the landing gear and install the door locks (AMM 32-00-15/201).

WARNING: CLEAR THE AREA BELOW THE WING BEFORE YOU DEFLATE THE SHOCK STRUT. IF YOU DEFLATE ONE SHOCK STRUT, THE WING TIP CAN MOVE DOWN AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(3) Deflate the shock strut of the main landing gear (Fig. 301):

(a) Remove the cap from the air valve (Detail A).

WARNING: LOOSEN THE NUT FOR THE AIR VALVE A MAXIMUM OF TWO TURNS. AIR PRESSURE CAN BLOW THE VALVE OFF AND CAN CAUSE INJURY TO PERSONS.

(b) Loosen the nut for the air valve.

(c) Let the shock strut deflate completely.

NOTE: The shock strut is fully deflated when the dimension "A" is 4.1 inches (Fig. 302).

F. Servicing of the Shock Strut

(1) Loosen the nut for the air valve to fully open the valve.

CAUTION: OBEY THE INSTRUCTIONS IN AMM 12-15-11/301 WHEN YOU ADD FLUID TO FILL THE SHOCK STRUT. IF AN INCORRECT FLUID IS USED, IT CAN CAUSE DAMAGE TO THE SEALS.

(2) To fill the MLG shock strut with hydraulic fluid, do one of the procedures that follow:

(a) Recommended steps to fill the MLG shock strut with hydraulic fluid (Airplane on ground or on jacks):

WARNING: WHEN YOU COMPRESS THE SHOCK STRUT WITH AXLE JACKS, MAKE SURE YOU DO NOT LIFT THE AIRPLANE OFF OF THE AIRPLANE JACKS. IF THE AIRPLANE IS NOT ON THE AIRPLANE JACKS IT MAY FALL AND CAUSE DAMAGE TO EQUIPMENT AND INJURY TO PERSONS.

1) If the airplane is on jacks, do this step:
Use the axle jacks to fully compress the shock strut.

NOTE: The strut is fully compressed when the dimension "A" is 4.1 inches.

2) Remove the cap for the pressure seal from the oil charging valve.

3) Attach an oil charging line to the oil charging valve.

4) Make sure the air valve is fully open.

5) Attach one end of a hose to the air valve.

6) Put the other end of the hose in a drain bucket.

CAUTION: DO NOT LET HYDRAULIC FLUID GET ON THE TIRES. IMMEDIATELY CLEAN ALL FLUID FROM THE TIRES. THE FLUID CAN CAUSE DAMAGE TO THE TIRES.

7) Fill the shock strut with hydraulic fluid until the hydraulic fluid flows into the drain bucket.

a) Continue to fill the shock strut until the hydraulic fluid which flows into the bucket is free of bubbles.

8) Remove the oil charging line.

9) Put the cap on for the pressure seal.

10) Remove the hose from the air valve.

11) If the airplane is on jacks, then remove the axle jacks.

(3) To inflate the MLG shock strut, do one of the procedures that follow:

(a) Do the steps that follow to inflate the MLG shock strut: (Airplane on the ground)

1) Install the inflation tool on the air valve. Use the instructions supplied with the tool.

2) Use dry air or nitrogen to inflate the shock strut until dimension "A" is approximately 8 inches or 2000 psig (Fig. 302).

3) Use a pressure gage to measure the pressure of the shock strut.

4) Add or release the dry air or nitrogen, until the measured pressure is in the range shown on the servicing chart.

NOTE: The values for Dimension "A" and the pressure must intersect on the servicing curve for a correctly serviced shock strut.

5) Remove the inflation tool from the air valve.

6) Tighten the swivel nut to 5-7 pound-feet (Detail A, Fig. 301).

7) Put the cap on the air valve.

(b) Do the steps that follow to inflate the MLG shock strut: (Airplane on jacks)

1) Lift the airplane to extend the shock strut fully (AMM 07-11-01/201).

2) Install the inflation tool on the air valve. Use the instructions supplied with the tool.

3) Add or release dry air or Nitrogen to service the fully extended shock strut at 300 psig.

NOTE: Do not add hydraulic fluid when the airplane weight is not on the landing gear. When you service the landing gear with dry air or Nitrogen, it is not necessary to service the landing gear again when it is lowered and the jacks are removed. A fully serviced shock strut is also necessary before you do the extension and retraction test.

4) Remove the inflation tool from the air valve.

5) Tighten the swivel nut to 5-7 pound-feet (Detail A, Fig. 301).

6) Put the cap on the air valve.

CAUTION: SHOCK STRUT FLUID CAN ABSORB NITROGEN OR AIR AFTER A COMPLETE SERVICING. THIS WILL REDUCE THE PRESSURE IN THE SHOCK STRUT, WHICH CAN CAUSE DAMAGE TO EQUIPMENT.

(4) If the shock strut was overhauled, the fluid was completely replaced or the shock strut was completely deflated, then after 5-10 in-service landings you must do the task "Service the Shock Strut with Nitrogen Only"

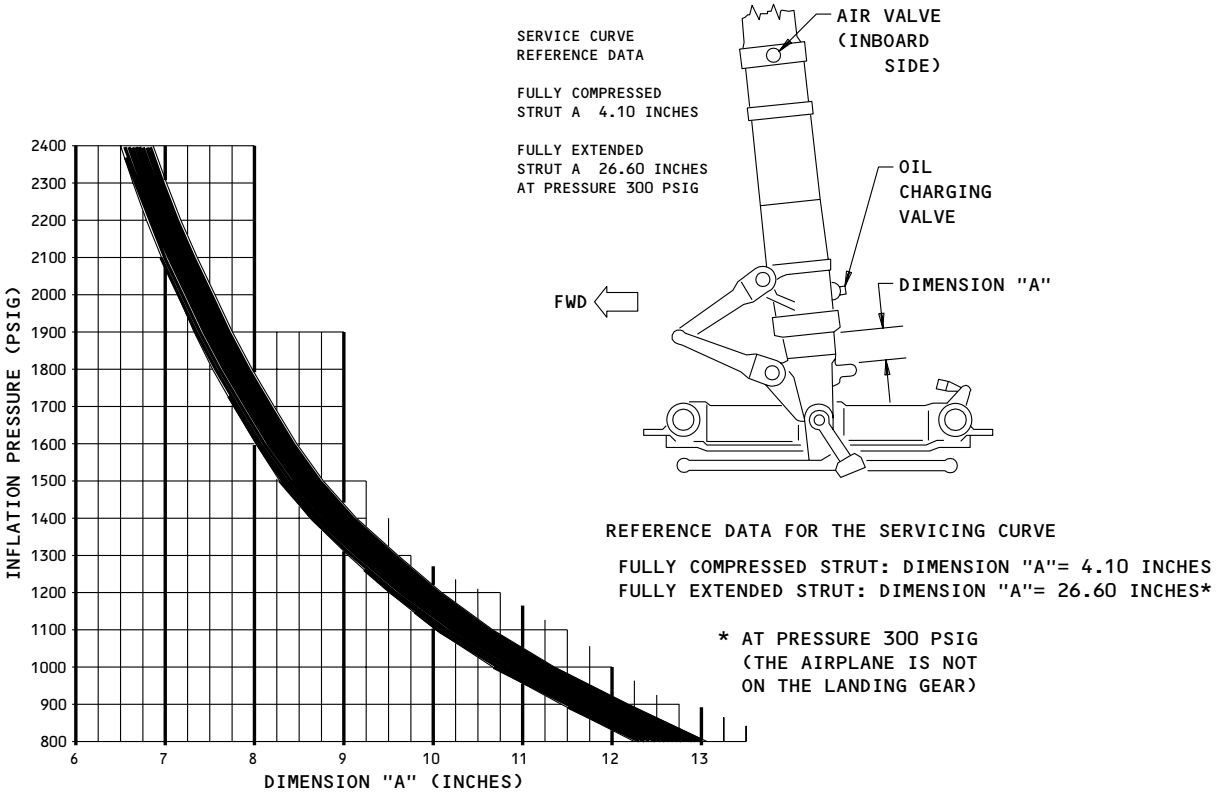
G. Put the Airplane Back to Its Usual Condition

MECH	INSP

WARNING: OBEY THE REMOVAL PROCEDURE FOR THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Remove the door locks and close the doors (AMM 32-00-15/201).

SERVICING CHART - MAIN LANDING GEAR SHOCK STRUT



REFERENCE DATA FOR THE SERVICING CURVE

FULLY COMPRESSED STRUT: DIMENSION "A"= 4.10 INCHES
FULLY EXTENDED STRUT: DIMENSION "A"= 26.60 INCHES*

* AT PRESSURE 300 PSIG
(THE AIRPLANE IS NOT
ON THE LANDING GEAR)

OIL SERVICING INSTRUCTIONS

1. WITH THE SHOCK STRUT VERTICAL, OPEN THE AIR VALVE AND FULLY COMPRESS THE STRUT (DIMENSION "A"= 4.10). FILL THE SHOCK STRUT WITH THE OIL SPECIFIED ON THE NAMEPLATE. FILL UNTIL THE OIL COMES OUT OF THE AIR VALVE AND IS BUBBLE FREE.

AIR SERVICING INSTRUCTIONS

1. WITH THE AIRPLANE WEIGHT ON THE LANDING GEAR, USE DRY AIR OR NITROGEN TO INFLATE THE SHOCK STRUT. INFLATE THE SHOCK STRUT THROUGH THE AIR VALVE UNTIL DIMENSION "A" IS APPROXIMATELY 8.00 INCHES OR UNTIL YOU GET 2000 PSIG.
2. USE A PRESSURE GAGE TO MEASURE THE AIR PRESSURE.
3. ADD OR RELEASE THE DRY AIR OR NITROGEN TO GET THE CORRECT DIMENSION "A" FOR THE PRESSURE. THE DIMENSION "A" IS SHOWN ON THE CHART. 1

IMPORTANT

4. IF THE SHOCK STRUT WAS OVERHAULED OR THE FLUID WAS COMPLETELY REPLACED, AFTER 5-10 IN SERVICE LANDINGS DO THE AIR SERVICING AGAIN PER STEPS 2 AND 3.

1 DIMENSION "A" AND THE PRESSURE MUST BE ON THE SERVICING CURVE FOR A CORRECTLY SERVICED SHOCK STRUT.

Servicing for the Shock Strut of the Main Landing Gear
Figure 302

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-048-01-2
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	R MAIN GEAR		1C	11212	017	APR 22/08

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
CHECK/INSP	MAIN GEAR SHOCK STRUT		NOTE	ALL

ZONES	ACCESS PANELS
741	1004

MECH	INSP	MPD ITEM NUMBER

CHECK THE RIGHT MAIN GEAR SHOCK STRUT FLUID LEVEL AND SERVICE AS REQUIRED. 12-15-01-3A

AIRPLANE NOTE: THIS TASK IS APPLICABLE TO ALL AIRPLANE MODELS EXCEPT THE 767-400ER.

ACCESS NOTE: SPECIAL ACCESS 1004 REQUIRES OPENING OF THE LANDING GEAR DOORS AND INSTALLING SAFETY LOCKS IN ACCORDANCE WITH MAINTENANCE MANUAL PROCEDURE 32-00-15.

1. Examine the Fluid Level of the Shock Strut

A. General

(a) You can obtain the different shock strut extensions one of two ways:

1) You can take the shock strut measurements at two different airplane weights, for example, before and after fueling the airplane, or,

2) If the airplane is on jacks, you can use floor jacks or the airplane jacks to compress or extend the shock strut.

(b) You should have a difference of 2 - 4 inches (51 - 102 mm) between the two shock strut extensions to do the check.

B. Prepare to Check the Hydraulic Fluid Level

WARNING: MAKE SURE THE DOWNLOCKS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCKS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

MECH | INSP

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

WARNING: OBEY THE INSTALLATION PROCEDURE FOR THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) Open the doors for the landing gear and install the door locks (AMM 32-00-15/201).

C. Check the hydraulic fluid level of the shock strut for the main landing gear:

(1) Check the hydraulic fluid level with the airplane at the first shock strut extension:

(a) Remove the cap from the air valve.

(b) Install a pressure gage on the shock strut to measure the pressure. Use the instructions supplied with the tool.

WARNING: LOOSEN THE NUT FOR THE AIR VALVE A MAXIMUM OF TWO TURNS. DO NOT REMOVE THE VALVE BODY ON A PRESSURIZED STRUT. AIR PRESSURE CAN BLOW THE VALVE OUT AND INJURE PERSONNEL.

(c) Loosen the swivel nut for the air valve two turns and measure the pressure of the shock strut.

(d) Measure the actual "A" dimension on the strut as shown on Fig. 302.

(e) Use the chart on Fig. 302 to find the "A" dimension that corresponds to the pressure you measured.

(f) Compare the "A" dimension from the chart to the "A" dimension that you actually measured.

(g) If the actual measured "A" dimension is within the upper and lower limits of the "A" dimension from the chart, then do the steps for a pressure check at the second point.

(h) If the actual measured "A" dimension is not within the upper and lower limits of the "A" dimension from the chart, then do the Nitrogen Servicing Only to get the measured "A" dimension within the limits. Then do the steps for a pressure check at the second point.

(2) Check the hydraulic fluid level with the airplane at the second shock strut extension:

NOTE: To get a different shock strut extension, you can have the airplane at a different weight, or, if the airplane is lifted on jacks, you can use the airplane jacks or floor jacks to compress or extend the shock strut.

You should have a minimum difference of 2 - 4 inches between the two shock strut extensions to do the check.

(a) Remove the cap from the air valve.

(b) Install a pressure gage on the shock strut to measure the pressure. Use the instructions supplied with the tool.

WARNING: LOOSEN THE NUT FOR THE AIR VALVE A MAXIMUM OF TWO TURNS. DO NOT REMOVE THE VALVE BODY ON A PRESSURIZED STRUT. AIR PRESSURE CAN BLOW THE VALVE OUT AND INJURE PERSONNEL.

(c) Loosen the swivel nut for the air valve two turns and measure the pressure of the shock strut.

(d) Measure the actual "A" dimension on the strut as shown on Fig. 302.

(e) Use the chart on Fig. 302 to find the "A" dimension that corresponds to the pressure you measured.

(f) Compare the "A" dimension from the chart to the "A" dimension that you actually measured.

NOTE: When servicing the strut to the servicing chart, it is recommended that the intersection of your dimension and pressure values be at the center of the width of the servicing band. This practice will result in a more accurate assessment of the fluid level.

(g) If the actual measured "A" dimension is within the upper and lower limits of the "A" dimension from the chart, then do these steps to complete the check:

1) Tighten the swivel nut to 5 - 7 pound-feet to close the air valve.

2) Remove the pressure gage from the shock strut.

3) Install the cap for the air valve.

(h) If the actual measured "A" dimension is not within the upper and lower limits of the "A" dimension from the chart, then do the Fluid and Nitrogen Servicing to adjust the fluid level.

NOTE: If only one of the two pressure checks is satisfactory, then the fluid volume is not correct.

(i) Tighten the swivel nut to 5 - 7 pound-feet to close the air valve.

(j) Remove the pressure gage from the shock strut.

(k) Install the cap on the air valve.

2. Servicing of the Shock Strut for the Main Landing Gear

NOTE: Use this procedure for the usual servicing and checks of the shock struts. A fully serviced shock strut will contain approximately 38.1 quarts (36.0 liters) of shock strut fluid.

A. General

(1) This task services the shock strut for the main landing gear.

B. Equipment

(1) Strut Inflation Tool - F70200-14

(2) Drain Bucket - Commercially Available

(3) Hose to Strut Air Valve - (Commercially Available)

(4) Dry Air or Nitrogen Bottle, charged to 3000 psi - Commercially Available

(5) PF55451-23 - Servicing Cart, Malabar Hydronics (Commercially Available)

(6) Pressure Gage, 800 to 2500 PSIG - Commercially Available.

C. Consumable Materials

NOTE: Refer to AMM 12-15-11-301 for proper usage of fluids and for alternative fluids.

(1) D00467 Fluid - Hydraulic, BMS 3-32 (Recommended)

Type I - Royco SSF, Shell SSF and Castrolaero 35 (These fluids contain the mixture of MIL-H-6083 and lubrizol 1395)

Type II - Royco LGF, Shell LGF and Castrolaero 40 (These fluids are the recommended fluid for servicing and contain the mixture of MIL-H-5606 and lubrizol 1395)

NOTE: Type I is the recommended fluid to use when refilling a strut after overhaul.

(2) D00508 MIL-H-5606 Hydraulic Fluid (Alternative)

NOTE: This oil is the recommended fluid for servicing of the shock strut. For servicing, mix MIL-H-5606 in the correct proportion (41:1) with Lubrizol 1395 before you fill the shock strut.

(3) D00510 Lubrizol 1395

(4) RMC 481-026-XX SHELL Landing Gear Fluid (SHELL LGF) SAS SAS

NOTE: RMC 481-026-XX is the preferred fluid and fully mixable with the other fluids which is optional. SAS SAS SAS

MECH | INSP

(5) DOO509 MIL-H-6083 Hydraulic Fluid (alternative)

NOTE: You can use this fluid with MIL-H-5606 and you can use it as an alternative for MIL-H-5606. For servicing, mix MIL-H-6083 in the correct proportion (41:1) with Lubrizol 1395 before you fill the shock strut.

D. References

(1) AMM 12-15-11/301, Landing Gear Shock Strut Fluids

(2) AMM 32-00-15/201, Landing Gear Door Locks

(3) AMM 32-00-20/201, Landing Gear Downlocks

E. Prepare to Do the Servicing of the Shock Strut

WARNING: OBEY THE INSTALLATION PROCEDURE FOR THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

(2) Open the doors for the landing gear and install the door locks (AMM 32-00-15/201).

WARNING: CLEAR THE AREA BELOW THE WING BEFORE YOU DEFLATE THE SHOCK STRUT. IF YOU DEFLATE ONE SHOCK STRUT, THE WING TIP CAN MOVE DOWN AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(3) Deflate the shock strut of the main landing gear (Fig. 301):

(a) Remove the cap from the air valve (Detail A).

WARNING: LOOSEN THE NUT FOR THE AIR VALVE A MAXIMUM OF TWO TURNS. AIR PRESSURE CAN BLOW THE VALVE OFF AND CAN CAUSE INJURY TO PERSONS.

(b) Loosen the nut for the air valve.

(c) Let the shock strut deflate completely.

NOTE: The shock strut is fully deflated when the dimension "A" is 4.1 inches (Fig. 302).

F. Servicing of the Shock Strut

(1) Loosen the nut for the air valve to fully open the valve.

CAUTION: OBEY THE INSTRUCTIONS IN AMM 12-15-11/301 WHEN YOU ADD FLUID TO FILL THE SHOCK STRUT. IF AN INCORRECT FLUID IS USED, IT CAN CAUSE DAMAGE TO THE SEALS.

(2) To fill the MLG shock strut with hydraulic fluid, do one of the procedures that follow:

(a) Recommended steps to fill the MLG shock strut with hydraulic fluid (Airplane on ground or on jacks):

WARNING: WHEN YOU COMPRESS THE SHOCK STRUT WITH AXLE JACKS, MAKE SURE YOU DO NOT LIFT THE AIRPLANE OFF OF THE AIRPLANE JACKS. IF THE AIRPLANE IS NOT ON THE AIRPLANE JACKS IT MAY FALL AND CAUSE DAMAGE TO EQUIPMENT AND INJURY TO PERSONS.

1) If the airplane is on jacks, do this step:
Use the axle jacks to fully compress the shock strut.

NOTE: The strut is fully compressed when the dimension "A" is 4.1 inches.

2) Remove the cap for the pressure seal from the oil charging valve.

3) Attach an oil charging line to the oil charging valve.

4) Make sure the air valve is fully open.

5) Attach one end of a hose to the air valve.

6) Put the other end of the hose in a drain bucket.

CAUTION: DO NOT LET HYDRAULIC FLUID GET ON THE TIRES. IMMEDIATELY CLEAN ALL FLUID FROM THE TIRES. THE FLUID CAN CAUSE DAMAGE TO THE TIRES.

7) Fill the shock strut with hydraulic fluid until the hydraulic fluid flows into the drain bucket.

a) Continue to fill the shock strut until the hydraulic fluid which flows into the bucket is free of bubbles.

8) Remove the oil charging line.

9) Put the cap on for the pressure seal.

10) Remove the hose from the air valve.

11) If the airplane is on jacks, then remove the axle jacks.

(3) To inflate the MLG shock strut, do one of the procedures that follow:

(a) Do the steps that follow to inflate the MLG shock strut: (Airplane on the ground)

1) Install the inflation tool on the air valve. Use the instructions supplied with the tool.

2) Use dry air or nitrogen to inflate the shock strut until dimension "A" is approximately 8 inches or 2000 psig (Fig. 302).

3) Use a pressure gage to measure the pressure of the shock strut.

4) Add or release the dry air or nitrogen, until the measured pressure is in the range shown on the servicing chart.

NOTE: The values for Dimension "A" and the pressure must intersect on the servicing curve for a correctly serviced shock strut.

5) Remove the inflation tool from the air valve.

6) Tighten the swivel nut to 5-7 pound-feet (Detail A, Fig. 301).

7) Put the cap on the air valve.

(b) Do the steps that follow to inflate the MLG shock strut: (Airplane on jacks)

1) Lift the airplane to extend the shock strut fully (AMM 07-11-01/201).

2) Install the inflation tool on the air valve. Use the instructions supplied with the tool.

3) Add or release dry air or Nitrogen to service the fully extended shock strut at 300 psig.

NOTE: Do not add hydraulic fluid when the airplane weight is not on the landing gear. When you service the landing gear with dry air or Nitrogen, it is not necessary to service the landing gear again when it is lowered and the jacks are removed. A fully serviced shock strut is also necessary before you do the extension and retraction test.

4) Remove the inflation tool from the air valve.

5) Tighten the swivel nut to 5-7 pound-feet (Detail A, Fig. 301).

6) Put the cap on the air valve.

CAUTION: SHOCK STRUT FLUID CAN ABSORB NITROGEN OR AIR AFTER A COMPLETE SERVICING. THIS WILL REDUCE THE PRESSURE IN THE SHOCK STRUT, WHICH CAN CAUSE DAMAGE TO EQUIPMENT.

(4) If the shock strut was overhauled, the fluid was completely replaced or the shock strut was completely deflated, then after 5-10 in-service landings you must do the task "Service the Shock Strut with Nitrogen Only"

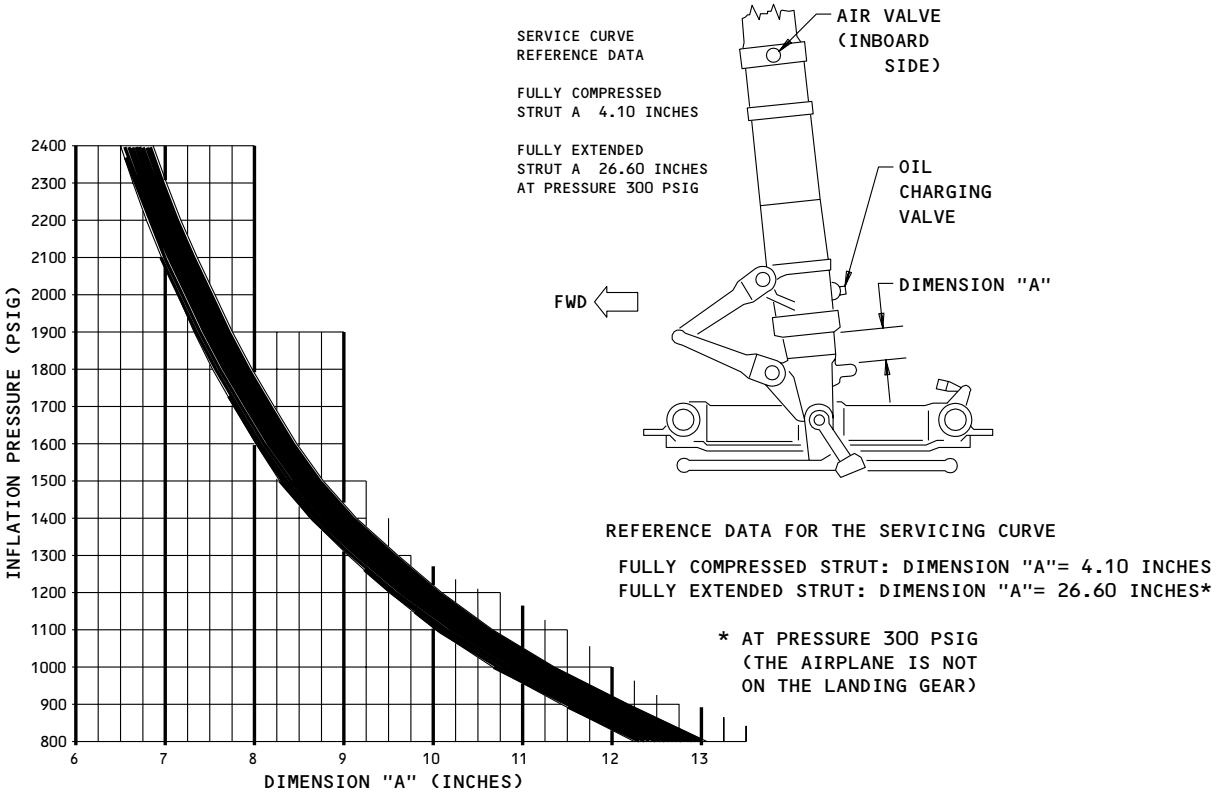
G. Put the Airplane Back to Its Usual Condition

MECH	INSP

WARNING: OBEY THE REMOVAL PROCEDURE FOR THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Remove the door locks and close the doors (AMM 32-00-15/201).

SERVICING CHART - MAIN LANDING GEAR SHOCK STRUT



REFERENCE DATA FOR THE SERVICING CURVE

FULLY COMPRESSED STRUT: DIMENSION "A"= 4.10 INCHES
FULLY EXTENDED STRUT: DIMENSION "A"= 26.60 INCHES*

* AT PRESSURE 300 PSIG
(THE AIRPLANE IS NOT
ON THE LANDING GEAR)

OIL SERVICING INSTRUCTIONS

1. WITH THE SHOCK STRUT VERTICAL, OPEN THE AIR VALVE AND FULLY COMPRESS THE STRUT (DIMENSION "A"= 4.10). FILL THE SHOCK STRUT WITH THE OIL SPECIFIED ON THE NAMEPLATE. FILL UNTIL THE OIL COMES OUT OF THE AIR VALVE AND IS BUBBLE FREE.

AIR SERVICING INSTRUCTIONS

1. WITH THE AIRPLANE WEIGHT ON THE LANDING GEAR, USE DRY AIR OR NITROGEN TO INFLATE THE SHOCK STRUT. INFLATE THE SHOCK STRUT THROUGH THE AIR VALVE UNTIL DIMENSION "A" IS APPROXIMATELY 8.00 INCHES OR UNTIL YOU GET 2000 PSIG.
2. USE A PRESSURE GAGE TO MEASURE THE AIR PRESSURE.
3. ADD OR RELEASE THE DRY AIR OR NITROGEN TO GET THE CORRECT DIMENSION "A" FOR THE PRESSURE. THE DIMENSION "A" IS SHOWN ON THE CHART. 1

IMPORTANT

4. IF THE SHOCK STRUT WAS OVERHAULED OR THE FLUID WAS COMPLETELY REPLACED, AFTER 5-10 IN SERVICE LANDINGS DO THE AIR SERVICING AGAIN PER STEPS 2 AND 3.

1 DIMENSION "A" AND THE PRESSURE MUST BE ON THE SERVICING CURVE FOR A CORRECTLY SERVICED SHOCK STRUT.

Servicing for the Shock Strut of the Main Landing Gear
Figure 302

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-048-02
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	NOSE GEAR		1C	11212	013	APR 22/08

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
CHECK/INSP	NOSE GEAR SHOCK STRUT		ALL	ALL

ZONES	ACCESS PANELS
711	713 714

MECH	INSP	MPD ITEM NUMBER

CHECK THE NOSE GEAR SHOCK STRUT FLUID LEVEL AND SERVICE AS REQUIRED. 12-15-02-3A

1. Examine the Fluid Level of the Shock Strut

(1) This procedure supplies instructions to check the level of the hydraulic fluid in the shock strut of the nose landing gear.

(2) To do a check of the fluid level, you must measure the pressure and the extension of the shock strut twice, at two different shock strut extensions. The greater the difference between the shock strut extensions, the more accurate the fluid measurement will be.

(a) You can obtain the different shock strut extensions on of two ways:

1) You can take the shock strut measurements at two different airplane weights, for example, before and after fueling the airplane, or,

2) If the airplane is on jacks, you can use floor jacks or the airplane jacks to compress or extend the shock strut.

(b) You should have a difference of 2 - 4 inches (51 - 102 mm) between the two shock strut extensions to do the check.

A. Prepare to Check the Hydraulic Fluid Level

WARNING: MAKE SURE THE DOWNLOCKS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCKS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

MECH | INSP

WARNING: OBEY THE INSTALLATION PROCEDURE FOR THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY. THE MOVEMENT OF THE DOORS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) Open the doors for the landing gear and install the door locks (AMM 32-00-15/201).

B. Check the hydraulic fluid level of the shock strut for the nose landing gear:

(1) To open the forward doors of the nose landing gear, release the lock on rod 2 of the operating mechanism.

(2) Check the hydraulic fluid level with the airplane at the first shock strut extension:

(a) Remove the cap from the air valve.

(b) Install a pressure gage on the shock strut to measure the pressure. Use the instructions supplied with the tool.

WARNING: LOOSEN THE NUT FOR THE AIR VALVE A MAXIMUM OF TWO TURNS. DO NOT REMOVE THE VALVE BODY ON A PRESSURIZED STRUT. AIR PRESSURE CAN BLOW THE VALVE OUT AND INJURE PERSONNEL.

(c) Loosen the swivel nut for the air valve two turns and measure the pressure of the shock strut.

(d) Measure the actual "A" dimension on the strut as shown on the servicing chart.

(e) Use the servicing chart to find the "A" dimension that corresponds to the pressure you measured.

NOTE: Service placard BAC27TLG0007 is preferred for all 767-200 airplanes and required for all 767-300/400 airplanes. Service Placard BAC27TLG0002 is optional for 767-200 airplanes only.

(f) Compare the "A" dimension from the chart to the "A" dimension that you actually measured.

(g) If the actual measured "A" dimension is within the upper and lower limits of the "A" dimension from the chart, then do the steps for a pressure check at the second point.

(h) If the actual measured "A" dimension is not within the upper and lower limits of the "A" dimension from the chart, then do the Nitrogen Servicing Only to get the measured "A" dimension within the limits. Then do the steps for a pressure check at the second point.

(3) Check the hydraulic fluid level with the airplane at the second shock strut extension:

NOTE: To get a different shock strut extension, you can have the airplane at a different weight, or, if the airplane is lifted on jacks, you can use the airplane jacks or floor jacks to compress or extend the shock strut.

You should have a minimum difference of 2 - 4 inches between the two shock strut extensions to do the check.

(a) Remove the cap from the air valve.

(b) Install a pressure gage on the shock strut to measure the pressure. Use the instructions supplied with the tool.

WARNING: LOOSEN THE NUT FOR THE AIR VALVE A MAXIMUM OF TWO TURNS. DO NOT REMOVE THE VALVE BODY ON A PRESSURIZED STRUT. AIR PRESSURE CAN BLOW THE VALVE OUT AND INJURE PERSONNEL.

(c) Loosen the swivel nut for the air valve two turns and measure the pressure of the shock strut.

(d) Measure the actual "A" dimension on the strut as shown in the servicing chart.

(e) Use the servicing chart to find the "A" dimension that corresponds to the pressure you measured.

MECH | INSP

(f) Compare the "A" dimension from the chart to the "A" dimension that you actually measured.

NOTE: When servicing the strut to the servicing chart, it is recommended that the intersection of your dimension and pressure values be at the center of the width of the servicing band. This practice will result in a more accurate assessment of the fluid level.

(g) If the actual measured "A" dimension is within the upper and lower limits of the "A" dimension from the chart, then do these steps to complete the check:

1) Tighten the swivel nut to close the air valve.

2) Remove the pressure gage from the shock strut.

3) Install the cap for the air valve.

(h) If the actual measured "A" dimension is not within the upper and lower limits of the "A" dimension from the chart, then do the Fluid and Nitrogen Servicing to adjust the fluid level.

NOTE: If only one of the two pressure checks is satisfactory, then the fluid volume is not correct.

(i) Tighten the swivel nut to to close the air valve.

(j) Remove the pressure gage from the shock strut.

(k) Install the cap on the air valve.

1) Use oil and air to do the servicing of the shock strut.

2. Servicing of the Shock Strut for the Nose Landing Gear

NOTE: Use this procedure for the usual servicing and checks of the shock strut. A fully serviced shock strut will contain approximately 12.4 quarts (11.7 liters) of shock strut fluid.

A. General

(1) This task services the shock strut for the nose landing gear.

B. Equipment

(1) Strut Inflation Tool - F70200-14

(2) Drain Bucket - Commercially Available

(3) Hose to Strut Air Valve
(Commercially Available)

(4) Dry Air or Nitrogen Bottle, charged to 2000 psi
- Commercially Available

(5) PF55451-23 - Servicing Cart, Malabar Hydronics
(Commercially Available)

(6) Pressure Gage, 100 to 1700 psig - Commercially Available

C. Consumable Materials

NOTE: Obey the instructions in AMM 12-15-11-301 for proper usage of fluids and for alternative fluids.

(1) D00467 Fluid - Hydraulic, BMS 3-32 (Recommended)

Type I - Royco SSF, Shell SSF and Castrolaero 35 (These fluids contain the mixture of MIL-H-6083 and lubrizol 1395)

Type II - Royco LGF, Shell LGF and Castrolaero 40 (These fluids are the recommended fluid for servicing and contain the mixture of MIL-H-5606 and lubrizol 1395)

NOTE: Type I is the recommended fluid to use when filling a strut after overhaul.

(2) D00508 MIL-H-5606 Hydraulic Fluid

NOTE: This oil is the recommended fluid for servicing of the shock strut. For servicing, mix MIL-H-5606 in the correct proportion with Lubrizol 1395 before you fill the shock strut.

(3) D00510 Lubrizol 1395

(4) DOO509 MIL-H-6083 Hydraulic Fluid

NOTE: You can use this fluid with MIL-H-5606 and use it as an alternative for MIL-H-5606. For servicing, mix MIL-H-6083 in the correct proportion with Lubrizol 1395 before you fill the shock strut.

(5) RMC 481-026-XX SHELL Landing Gear Fluid (SHELL LGF) SAS SAS

NOTE: RMC 481-026-XX is the preferred fluid and fully mixable with with the other fluids which is optional. SAS SAS SAS

D. References

(1) AMM 32-00-20/201, Landing Gear Downlocks

(2) AMM 12-15-11/301, Landing Gear Shock Strut Fluids

E. Prepare to Do the Servicing of the Shock Strut

(1) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

(2) To open the forward doors of the nose landing gear, release the lock on rod 2 of the operating mechanism.

(3) Deflate the shock strut of the nose landing gear (Fig. 301).

(a) Remove the cap from the air valve at the top of the shock strut (Detail A).

WARNING: LOOSEN THE NUT FOR THE AIR VALVE A MAXIMUM OF TWO TURNS. AIR PRESSURE CAN BLOW THE VALVE OFF AND CAN CAUSE INJURY TO PERSONS.

(b) Loosen the nut for the air valve.

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(c) Let the shock strut deflate completely.

NOTE: The shock strut is fully deflated when you get the dimension A on Fig. 302.

F. Servicing of the Shock Strut

CAUTION: DO NOT ADD SMALL QUANTITIES OF HYDRAULIC FLUID WITHOUT LUBRIZOL MANY TIMES. THIS CAN DECREASE THE LUBRICITY OF THE FLUID IN THE STRUT WHICH CAN CAUSE DAMAGE TO THE STRUT.

(1) You must add a lubricant to the shock strut during servicing. As an alternative, you can use a fluid which has an added lubricant. For usual servicing when small quantities of fluid are necessary, you can use fluid without lubricant to fill the shock strut.

(2) Loosen the nut for the air valve to fully open the valve.

CAUTION: OBEY THE INSTRUCTIONS IN AMM 12-15-11/301 WHEN YOU ADD FLUID TO FILL THE SHOCK STRUT. IF AN INCORRECT FLUID IS USED, IT CAN CAUSE DAMAGE TO THE SEALS.

(3) Fill the shock strut with a mixture of hydraulic fluid and Lubrizol (41:1 ratio).

(a) Make sure the shock strut is fully compressed

WARNING: WHEN YOU COMPRESS THE SHOCK STRUT WITH AXLE JACKS, MAKE SURE YOU DO NOT LIFT THE AIRPLANE OFF OF THE AIRPLANE JACKS. IF THE AIRPLANE IS NOT ON THE AIRPLANE JACKS IT MAY FALL AND CAUSE DAMAGE TO EQUIPMENT AND INJURY TO PERSONS.

1) If the airplane is on jacks, use the axle jacks to fully compress the shock strut.

NOTE: The strut is fully compressed when the dimension A is 4.3 inches.

(b) Remove the cap for the pressure seal from the oil charging valve.

(c) Attach an oil charging line to the oil charging valve.

(d) Make sure the air valve is fully open.

(e) Attach one end of a hose to the air valve.

(f) Put the other end of the hose in a drain bucket.

CAUTION: CLEAN ALL THE LEAKED HYDRAULIC FLUID FROM THE TIRES IMMEDIATELY. THE FLUID CAN CAUSE DAMAGE TO THE TIRES.

(g) Fill the shock strut with hydraulic fluid until the hydraulic fluid flows into the drain bucket.

1) Continue to fill the shock strut until the hydraulic fluid which flows into the bucket is free of bubbles.

(h) Remove the oil charging line.

(i) Put the cap on the oil charging valve for the pressure seal.

(j) Remove the hose from the air valve.

(4) Inflate the shock strut for the nose landing gear (Airplane on Ground).

(a) Install the inflation tool on the air valve. Use the instructions supplied with the tool.

(b) Use dry air or nitrogen to inflate the shock strut until the dimension A is approximately 8 inches or 800 psig (Fig. 302).

(c) Use a pressure gage to measure the pressure of the shock strut.

(d) Add or release the dry air or nitrogen, until the measured pressure is in the range shown on the servicing chart.

NOTE: Dimension "A" and the pressure must be on the servicing curve for a correctly serviced shock strut.

(5) Inflate the shock strut for the nose landing gear (Airplane on Jacks).

(a) Lift the airplane to extend the shock strut fully (AMM 07-11-01/201).

(b) Install the inflation tool on the air valve. Use the instructions supplied with the tool.

(c) Add or release dry air or Nitrogen to service the fully extended shock strut at 200 psig.

NOTE: Do not add hydraulic fluid when the airplane weight is not on the landing gear. When you service the landing gear with dry air or Nitrogen, it is not necessary to service the landing gear again when it is lowered and the jacks are removed. A fully serviced shock strut is also necessary before you do the extension and retraction test.

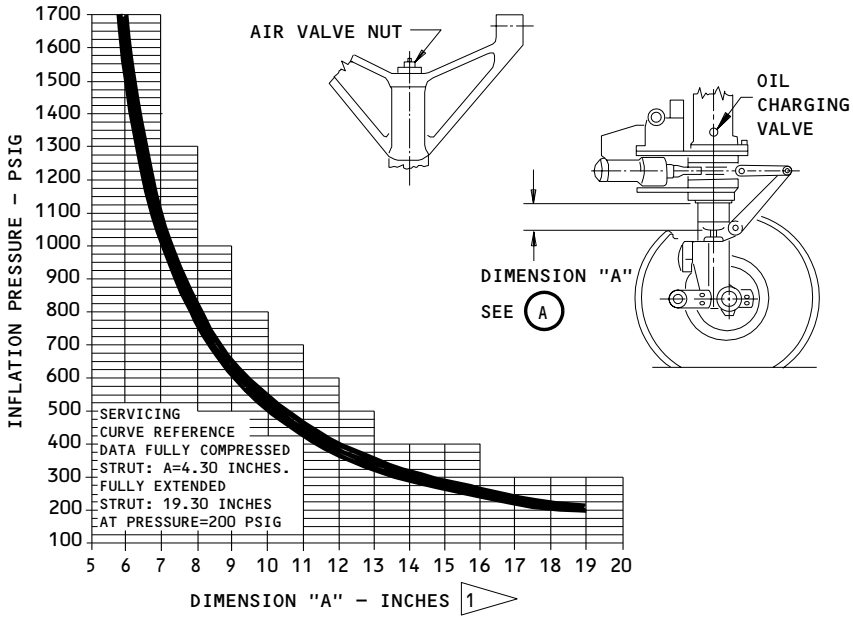
(6) Remove the inflation tool from the air valve.

(7) Tighten the swivel nut to 5-7 pound-feet (Detail A, Fig. 301).

(8) Put the cap on the air valve.

G. Put the Airplane Back to Its Usual Condition

(1) Manually close the forward doors of the nose landing gear.



REFERENCE DATA FOR THE SERVICING CURVE

FULLY COMPRESSED STRUT: DIMENSION "A"= 4.30 INCHES
FULLY EXTENDED STRUT: DIMENSION "A"= 19.30 INCHES*

* AT PRESSURE 200 PSIG (THE AIRPLANE IS NOT ON THE LANDING GEAR)

OIL SERVICING INSTRUCTIONS

1. WITH THE SHOCK STRUT VERTICAL, OPEN THE AIR VALVE AND FULLY COMPRESS THE STRUT (DIMENSION "A"= 4.30). FILL THE SHOCK STRUT WITH THE OIL SPECIFIED ON THE NAMEPLATE. FILL UNTIL THE OIL COMES OUT OF THE AIR VALVE AND IS FREE OF BUBBLES.

AIR SERVICING INSTRUCTIONS

1. WITH THE AIRPLANE WEIGHT ON THE LANDING GEAR, USE DRY AIR OR NITROGEN TO INFLATE THE SHOCK STRUT. INFLATE THE SHOCK STRUT THROUGH THE AIR VALVE UNTIL DIMENSION "A" IS APPROXIMATELY 8.00 INCHES OR 800 PSIG.
2. USE A PRESSURE GAGE TO MEASURE THE AIR PRESSURE.
3. ADD OR RELEASE THE DRY AIR OR NITROGEN TO GET THE CORRECT DIMENSION "A" FOR THE PRESSURE. THE DIMENSION "A" IS SHOWN ON THE CHART. 2

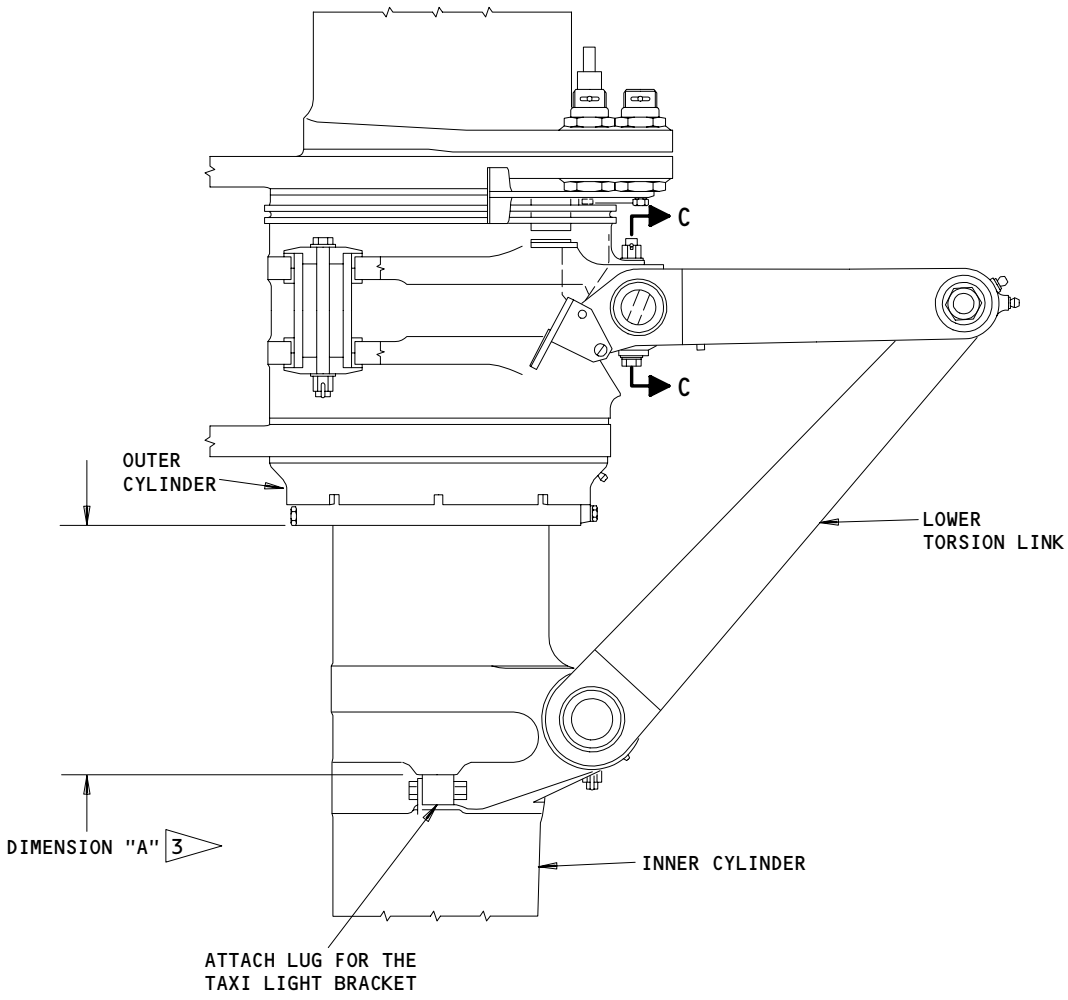
IMPORTANT

4. IF THE SHOCK STRUT WAS OVERHAULED OR THE FLUID WAS COMPLETELY REPLACED, AFTER 5-10 IN SERVICE LANDINGS DO THE AIR SERVICING AGAIN PER STEPS 2 AND 3.

1 DIMENSION "A" MEASUREMENTS ARE USED TO DETERMINE SHOCK STRUT EXTENSION REQUIREMENTS TO DO THE SERVICING.

2 DIMENSION "A" AND THE PRESSURE MUST BE ON THE SERVICING CURVE FOR A CORRECTLY SERVICED SHOCK STRUT

Servicing Chart for the Shock Strut of the Nose Landing Gear
Figure 302 (Sheet 1)



DIMENSION "A" MEASUREMENT

(A)

3 DIMENSION "A" IS MEASURED FROM THE LOWER EDGE OF THE OUTER CYLINDER TO THE UPPER EDGE OF THE ATTACH LUG FOR THE TAXI LIGHT BRACKET ON THE INNER CYLINDER.

Servicing Chart for the Shock Strut of the Nose Landing Gear
Figure 302 (Sheet 2)

STATION		BOEING CARD NO.
TAIL NO.	SAS BOEING 767 TASK CARD	32-050-01
DATE		AIRLINE CARD NO.

SKILL	WORK AREA	RELATED TASK	INTERVAL	PHASE	MPD REV	TASK CARD REVISION
AIRPL	CREW CABIN		2C	12424	018	AUG 22/09

TASK	TITLE	STRUCTURAL ILLUSTRATION REFERENCE	APPLICABILITY AIRPLANE	APPLICABILITY ENGINE
FUNCTIONAL	PARKING BRAKE SYSTEM TEST		ALL	ALL

ZONES	ACCESS PANELS
119 144 211 212 731 741	119AL 742

MECH	INSP	MPD ITEM NUMBER

FUNCTIONALLY CHECK THE PARKING BRAKE SYSTEM. 32-44-00-5A

1. Parking Brake System Test

A. Equipment

B. References

(1) AMM 12-15-04/301, Parking Brake Accumulator

(2) AMM 24-22-00/201, Electrical Power - Control

(3) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic System

(4) AMM 32-00-15/201, Landing Gear Door Locks

(5) AMM 32-00-20/201, Landing Gear Downlocks

(6) FIM 32-44-00/101, Parking Brake System

C. Access

(1) Location Zones

119	Main Equipment Center (Left and Right)
144	Right MLG wheel well
211/212	Control Cabin
731/741	Main Landing Gear

(2) Access Panels

119AL	Main Equipment Center
742	Right Main Gear and Wheel Well Components

D. Prepare to Do the Test for the Parking Brake System

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(1) Supply electrical power (AMM 24-22-00/201)

(2) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

WARNING: USE THE PROCEDURE IN AMM 32-00-15 TO INSTALL THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(3) Open the doors for the landing gear and install the door locks (AMM 32-00-15/201).

(a) Make sure that the parking brake is released.

(b) Make sure that the brakes are not operated manually.

WARNING: THE BRAKES MUST NOT BE IN OPERATION WHEN YOU CONNECT OR DISCONNECT THE TWO PARTS OF A HYDRAULIC BRAKE DISCONNECT. IF YOU TRY TO CONNECT OR DISCONNECT A HYDRAULIC BRAKE DISCONNECT WITH THE BRAKE IN OPERATION, HYDRAULIC FLUID UNDER HIGH PRESSURE CAN RELEASE. THIS CAN CAUSE INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(c) To remove all pressure from the brake unit, disconnect the hose half of the hydraulic brake disconnect from the brake half.

(d) Remove the brake bleeder assembly from the brake unit housing.

NOTE: Each brake bleeder assembly has a bleeder valve installed in an adapter. The adapter is installed in the brake unit housing.

CAUTION: BE CAREFUL DURING INSTALLATION OF THE PRESSURE GAGE IN THE PORT ON THE BRAKE UNIT HOUSING. DO NOT INSTALL THE PRESSURE GAGE WITH MORE THAN 110 POUND-INCHES OF TORQUE. IF YOU USE TOO MUCH TORQUE DURING INSTALLATION OF A PRESSURE GAGE, YOU CAN DAMAGE THE BRAKE UNIT HOUSING.

(e) Install a pressure gage in the port on the brake unit housing.

(f) Connect the hose half of the hydraulic brake disconnect to the brake half.

(4) Make sure the accumulator for the parking brake is correctly charged (AMM 12-15-04/301).

(a) Use the instructions on the placard in the wheel well for the right main landing gear (AMM 12-15-04/301).

(5) Make sure this circuit breaker on the main power distribution panel, P6, is closed:

(a) 6F4, PARKING BRAKE VLV

E. Do the test that follows to check parking brake system operation and parking brake hold time.

CAUTION: DO NOT USE THE HANDLE FOR THE PARKING BRAKE WHEN YOU RELEASE THE PARKING BRAKE. IF YOU PUSH OR TWIST THE HANDLE, YOU CAN CAUSE DAMAGE TO THE CABLE LINKAGE OF THE PARKING BRAKE.

(1) Fully push and release the Captain's or the First Officer's brake pedals to release the parking brake.

(2) Supply power to the right system hydraulic (AMM 29-11-00/201).

CAUTION: DO NOT TWIST THE HANDLE OF THE PARKING BRAKE WHEN YOU SET THE PARKING BRAKE. IF YOU TWIST THE HANDLE, YOU CAN CAUSE DAMAGE TO THE CABLE OR LINKAGE OF THE PARKING BRAKE.

(3) Push the Captain's right brake pedal, and pull on the handle for the parking brake.

(a) Release the brake pedals.

(b) Do these steps for the Captain's left brake pedal.

(4) Push the two Captain's or First Officer's brake pedals fully.

(5) Pull the handle for the parking brake.

(6) Release the brake pedals.

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(7) Make sure the parking brakes are set.

NOTE: The two brake pedals will stay in and the PARK BRAKE indicator light on the P10 panel will come on.

(8) Make sure the override lever for the parking brake valve is at POSITION 2, the closed position.

(9) Conduct the antiskid system release test to fill the surge accumulators using the Antiskid/Autobrake Control Unit (M102) located on the E1-1 shelf in the Main E-E center.

(a) Make sure the Antiskid/Autobrake Control Unit is powered (C/B's 11U18, 11C31, 11C32, 11U27, 11U12, 11U21 pushed in).

(b) Move the BRAKE TEST switch on the front of the antiskid/autobrake control unit to the "1" position.

(c) Press and hold the ENABLE/VERIFY button on the control unit.

(d) Press and hold the VERIFY button on the control unit.

(e) Release both the ENABLE/VERIFY and VERIFY buttons.

(f) Pause for 3 to 4 seconds to allow the No. 1 brake pressure to be released in response to pressing the verify button.

(g) Repeat the brake release test (steps c through f) 10 times or until the surge accumulators are full.

(h) Move the BRAKE TEST switch back to the normal position.

(10) Leave the right hydraulic system powered for 10 minutes.

(11) Remove power from the right hydraulic system.

(12) Make sure that the brake pressure is not less than 2800 psig.

(13) Record the brake pressure.

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(14) Do one of the following brake pressure tests that follow:

NOTE: Normally, passing any of these tests will indicate parking capability for at least 8 hours. The longer test times give a higher level of confidence should the leakage characteristics not be normal.

(a) After 10 minutes, the pressure at the brake must not have dropped more than 125 psi.

(b) After 30 minutes, the pressure at the brake must not have dropped more than 300 psi.

(c) After 60 minutes, the pressure at the brake must not have dropped more than 540 psi.

(d) After 120 minutes, the pressure at the brake must not have dropped more than 840 psi.

(15) If the parking brake pressure drops faster than permitted, do the applicable fault isolation procedure in the FIM.

(16) Release the brake pedals to disengage the parking brakes.

(17) Make sure the handle for the parking brake goes to the off position.

(18) Make sure the PARK BRAKE indicator light on the P10 panel goes off.

F. Put the Airplane Back to Its Usual Condition

(1) Do these steps at each brake unit to remove the pressure gage and to install a brake bleeder assembly (8 locations)

(a) Remove the pressure gage from the brake unit housing.

(b) Do these steps to install a brake bleeder assembly on the brake unit housing:

NOTE: Each brake bleeder assembly has a bleeder valve installed in an adapter. The adapter is installed in the brake unit housing.

CAUTION: TIGHTEN THE ADAPTER TO 150-190 POUND INCHES. IF YOU TIGHTEN THE ADAPTER TO MORE THAN 190 POUND-INCHES, YOU CAN DAMAGE THE ADAPTER OR THE BRAKE UNIT HOUSING.

(c) Tighten the adapter to 150-190 pound-inches.

NOTE: The specified torque values are for installation of the adapter in the brake unit housing. The allowable torque range for the bleeder valve, which you do not operate in this procedure, is 40-80 pound-inches.

(2) Connect the hydraulic line to the brakes at the quick-disconnect fittings.

(3) Pressurize the hydraulic systems and reservoirs (AMM 29-11-00/201).

(4) Make sure there are no hydraulic leaks.

(5) Remove the power from the hydraulic system if it is not necessary. (AMM 29-11-00/201).

WARNING: USE THE PROCEDURE IN AMM 32-00-15 TO REMOVE THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(6) Remove the door locks from the landing gear doors and close the doors (AMM 32-00-15/201).

(7) Remove the electrical power if it is not necessary (AMM 24-22-00/201).