STA	TION								BOE	ING CAR	D NO.
TAII	L NO.		_	(S BOL	<i>5/N</i>	G		27-R	01	
DATE			S	AS &	76 TASK				AIRI	LINE CAR	D NO.
SKILL	WORK ARE	A	REL	_ATED TASK		INTERVAL		PHASE	MPD REV	I	SK CARD EVISION
AIRPL	MAIN EE	CTR							003	APR	22/08
TASI REPLA		FLAP	/SLAT	ELECTRONIC	S UNIT		STRUCTURAL ILLUSTRATION RE	FERENCE	AF AIRPLAN	PLICABI	LITY ENGINE
									ALL		ALL
	ZONES						ACCESS PANELS				
119				119AL							

MECH INSP

REPLACE THE FLAP/SLAT ELECTRONICS UNIT.

27-51-01-4A

MPD ITEM NUMBER

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.

- Remove the Flap/Slat Electronics Unit (FSEU)
 - A. References
 - (1) AMM 20-10-01/401, E/E Rack Mounted Components Boxes and Cards
 - (2) AMM 29-11-00/201, Main (Left, Right and Center) Hydraulic Systems
 - B. Remove the FSEU
 - (1) Make sure that the trailing edge (TE) flaps and the leading edge (LE) slats are in the fully retracted position.
 - (2) Make sure that the flap control lever is in zero (FLAPS UP) detent.
 - (3) Attach a DO-NOT-OPERATE tag to the flap control lever.
 - (4) Remove the power from the center hydraulic system (AMM 29-11-00/201).
 - (5) Open these circuit breakers on the overhead panel, P11, and attach D0-NOT-CLOSE tags:
 - (a) 11C15, FLAP SLAT ELEC UNIT 1 SENSOR
 - (b) 11C16, FLAP SLAT ELEC UNIT 1 CONT

REPLACE FLAP/SLAT ELECTRONICS UNIT

27-51-01-4A 27-R01 PAGE 1 OF 8 APR 22/01

27-R01

SAS BOEING TASK CARD

MECH	INSP
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- (c) 11G15, FLAP SLAT ELEC UNIT 2 SENSOR
- (d) 11G16, FLAP SLAT ELEC UNIT 2 CONT
- (e) 11G22, FLAP SLAT ELEC UNIT 3 SENSOR
- (f) 11G23, FLAP SLAT ELEC UNIT 3 CONT
- Open the Main Equipment Center Door, 119AL, to get access to the main equipment center.
- (7) Remove the hold down extractors from the front of the FSEU.
- (8) Remove the FSEU from the rack (AMM 20-10-01/401).

Install the Flap/Slat Electronics Unit (FSEU)

NOTE: A 285T0049-50 or earlier FSEU is not interchangeable with a 285T0049-53 or subsequent FSEU. A 285T0049-63 FSEU can replace a 285T0049-53 FSEU. A 285T0049-53 FSEU can only replace a 285T0049-63 FSEU on airplanes delivered with a 285T0049-53 FSEU.

References

- (1) AMM 20-10-01/401, E/E Rack Mounted Components Boxes and Cards
- (2) AMM 24-22-00/201, Electrical Power Control
- (3) AMM 27-51-45/201, Flap Position Transmitter
- (4) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
- Install the Flap/Slat Electronics Unit
 - (1) Make sure that the trailing edge (TE) flaps and the leading edge (LE) slats are in the fully retracted position.
 - Make sure the flap control lever is in the zero (FLAPS UP) detent.
 - Install the FSEU in the E2 rack and attach it into position with the hold down extractors (AMM 20-10-01/401).
 - (4) Remove DO-NOT-CLOSE tags and close these circuit breakers on the overhead panel, P11:
 - (a) 11C15, FLAP SLAT ELEC UNIT 1 SENSOR

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BOEING 767 TASK CARD

MECH	INSP

- (b) 11C16, FLAP SLAT ELEC UNIT 1 CONT
- (c) 11G15, FLAP SLAT ELEC UNIT 2 SENSOR
- (d) 11G16, FLAP SLAT ELEC UNIT 2 CONT
- (e) 11G22, FLAP SLAT ELEC UNIT 3 SENSOR
- (f) 11G23, FLAP SLAT ELEC UNIT 3 CONT
- (5) Supply electrical power (AMM 24-22-00/201).
- (6) AIRPLANES WITH -53 OR EARLIER FSEU;

Do these steps to test the FSEU:

(a) Push the BIT/VERIFY button and wait for the test complete light to come on.

<u>NOTE</u>: Make sure that no fault lights come on.

(7) AIRPLANES WITH -63 FSEU;

Do these tasks to test the FSEU and flap position transmitters:

- (a) Do the BITE test of the FSEU (AMM 27-51-00/501).
- Do the flap position transmitter adjustment check (AMM 27-51-45/201).

NOTE: This check makes sure the flap position transmitters are calibrated to the FSEU within correct limits.

- (8) Make sure the arming switches for the flap and slat alternate drives are not in the armed position (switch lights off).
- (9) Make sure the position selector switch for the flap/slat alternate drive is in the NORM position.

27-R01

SAS BOEING TASK CARD

MECH INSP

KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES AND WARNING: WHEEL WELLS WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. WHEN YOU MOVE THE FLAP CONTROL LEVER WITH THE HYDRAULIC SYSTEM PRESSURIZED, THE FLAPS AND FLAP DRIVE MECHANISMS WILL MOVE QUICKLY. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (10) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (11) Make sure that the amber TRAILING EDGE and LEADING EDGE lights on the P3 panel are off.
- (12) Make sure there are no flap/slat messages shown on the EICAS display.
- (13) Make sure the flap position indicators are in the UP position.
- Push the arming switches for the flap and slat alternate drive to arm the flap/slat alternate drives (the light on each switch comes on).
- Make sure that the Flaps/Slats position selector switch is in the NORM position for more than seven seconds and see that:
 - (a) The amber TRAILING EDGE and LEADING EDGE lights come on.
 - The TE FLAP DISAGREE and LE SLAT DISAGREE EICAS messages show on the flight compartment display.

DO NOT OPERATE THE ALTERNATE DRIVE MOTOR CONTINUOUSLY FOR CAUTION: MORE THAN 4 MINUTES. DO NOT OPERATE THE MOTOR AGAIN UNTIL IT IS COOL FOR AT LEAST 20 MINUTES TO PREVENT DAMAGE TO THE MOTOR.

(16) Turn the position selector switch for the flap/slat alternate drive to the 30-unit detent and do the checks that follow:

EFFECTIVITY

REPLACE

FLAP/SLAT ELECTRONICS UNIT

27-51-01-4A

27-R01

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27-R01

SAS

MECH INSP

BOEING 767 TASK CARD

		(a) Make sure the TE flaps and the LE slats move to the fully extended position.
		(b) Make sure the amber TRAILING EDGE and LEADING EDGE lights go off and no flap/slat EICAS messages show on the display.
		(c) Make sure the flap position indicator moves to the 30-unit position.
	(17)	Remove the DO-NOT-OPERATE tag from the flap control lever and move the flap control lever to the 30-unit detent.
	(18)	Do the steps that follow to disarm the flap and slat alternate drive:
		(a) Push the arming switches for the flap and slat alternate drive to disarm the flap and slat alternate drive (the light in each switch goes off).
		(b) In less than seven seconds, turn the position selector switch for the flap/slat alternate drive to the NORM position.
	(19)	Make sure that the amber TRAILING EDGE and LEADING EDGE lights are off.
	(20)	Make sure there are no flap/slat messages shown on the EICAS display.
	(21)	Move the flap control lever to the zero (FLAPS UP) detent and do the checks that follow:
		(a) Make sure the TE flaps and LE slats move to the fully retracted position.
		(b) Make sure the amber TRAILING EDGE and LEADING EDGE lights are off.

(22)	Remove	electrical	power	(AMM	24-2	22-	00/2	201).
	_							

display.

(23) Remove the power from the center hydraulic system (AMM 29-11-00/201).

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

(c) Make sure that there are no flap/slat messages on the EICAS

(d) Make sure the flap position indicator moves to the UP position.

27-R01

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SAS BOEING
767
TASK CARD

AIRLINE CARD NO.

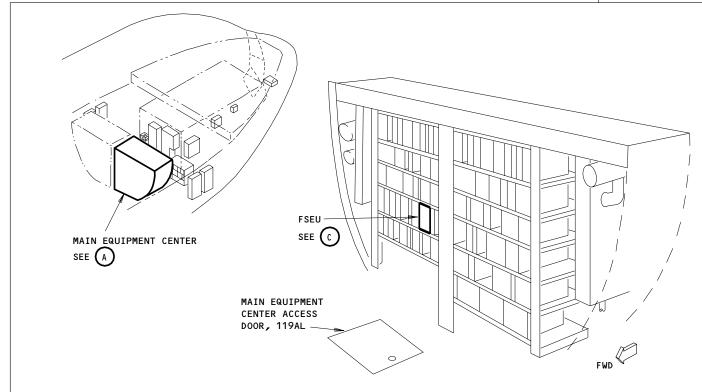
MECH	INSP														
			(24)	Close center	the `.	Main	Equipme	ent Center	Door,	119AL,	for	the	main	equipm	ent
EFF	ECTI	ATIA						PLACE		P/SLAT I					
								27-51-01-4					6 01	8 AP	R 22/02
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27-R01

AIRLINE CARD NO.

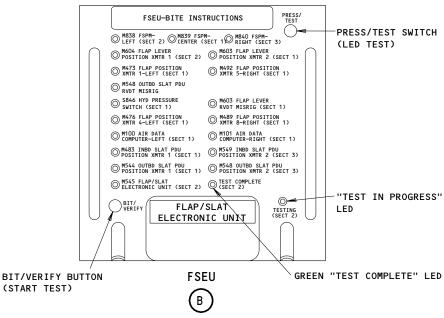
SAS





MAIN EQUIPMENT CENTER





Flap/Slat Electronics Unit (FSEU)
Figure 401 (Sheet 1)

#AIRPLANES WITH A -53 FSEU

REPLACE 27-51-01-4A FLAP/SLAT ELECTRONICS UNIT

27-R01

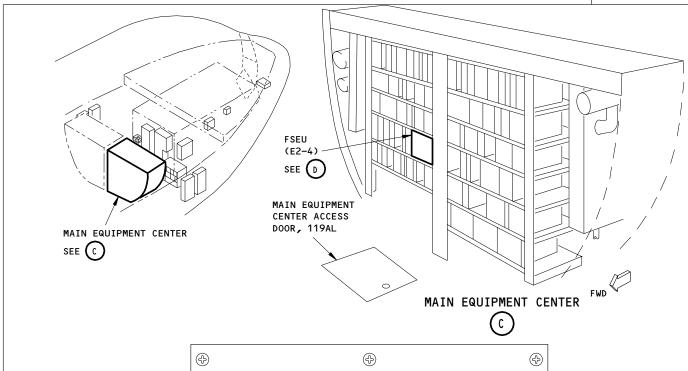
PAGE 7 OF 8 APR 22/02

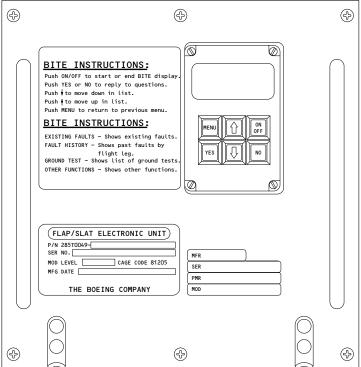
27-R01

AIRLINE CARD NO.

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(AIRPLANES WITH A -63 FSEU)

Flap/Slat Electronics Unit (FSEU) Figure 401 (Sheet 2)

EFFECTIVITY AIRPLANES WITH A -63 FSEU

REPLACE 27-51-01-4A FLAP/SLAT ELECTRONICS UNIT

27-R01

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STATION
TAIL NO.
DATE

WORK AREA

ZONES



BOEING CARD NO. 27-003-01

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

AIRPL CREW CABIN W-27-010-01 1C 11212 002 DEC 22/04

TASK TITLE STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY

INTERVAL

TASK

OPERATIONAL

AILERON POWER CONTROL ACTUATOR

APPLICABILITY
AIRPLANE
ENGINE

ALL

ALL

ALL

ACCESS PANELS

211

SKILL

MECH INSP

OPERATIONALLY CHECK EACH AILERON PCA BY PERFORMING SINGLE HYDRAULIC SYSTEM CHECK USING EACH HYDRAULIC SYSTEM IN SEQUENCE.

MPD ITEM NUMBER

27-11-00-5A

1. <u>Aileron Response - Test</u>

RELATED TASK

A. General

(1) Be careful because the spoilers will operate when you move the control wheel.

NOTE: A single thumping noise can be heard from a PCA when the ailerons are moved full up or full down. This noise is heard only when the direction of movement of the PCA is changed. It is heard when the snubbing ring moves in the snubbing gland to change the direction of movement of the piston at the end of the stroke.

- B. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
- C. Prepare for the Test
 - (1) Supply electrical power (AMM 24-22-00/201).

OPERATIONAL AILERON POWER CONTROL ACTUATOR

27-11-00-5A 27-003-01 PAGE 1 OF 4 APR 22/01

27-003-01

SAS BOEING TASK CARD

MECH INSP

KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN WARNING: HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

- (2) Supply pressure to the left, right, and center hydraulic systems (AMM 29-11-00/201).
- (3) Push the STATUS switch on the display select panel to show the aileron position indicator on the display.
- D. Aileron Response Test
 - Turn one of the control wheels clockwise and hold it there for 2 seconds. Do these checks:
 - (a) Make sure the two left ailerons move down and the two right ailerons move up.

NOTE: The spoilers on the right wing will operate when you turn the control wheel.

- (b) Make sure all the ailerons operate smoothly through their full travel range.
- Turn one of the control wheels counterclockwise and do these checks:
 - Make sure the two left ailerons move up and the two right ailerons move down.

NOTE: The spoilers on the left wing will operate when you turn the control wheel.

- (b) Make sure the ailerons operate smoothly through their full travel range.
- E. Aileron System and Lateral Control Shutoff Valve Operation with a Single Hydraulic Source - Test
 - (1) Remove the power from the center and right hydraulic systems (AMM 29-11-00/201).

EFFECTIVITY

OPERATIONAL AILERON POWER CONTROL ACTUATOR

27-11-00-5A

27-003-01

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27-003-01

AIRLINE CARD NO.

		343
		TASK CARD
INSP		·
	(2)	Turn the control wheel fully counterclockwise and hold it there for at least 4 seconds. Do this check:
		(a) Make sure the two left ailerons move up and the right outboard aileron moves down.
		NOTE: Ignore the movement of the right inboard aileron.
	(3)	Turn the control wheel fully clockwise and hold it there for at least 4 seconds. Do this check:
		(a) Make sure the two left ailerons move down and the right outboard aileron moves up.
		NOTE: Ignore the movement of the right inboard aileron.
	(4)	Move the control wheel to its neutral position.
	(5)	Supply pressure to the right hydraulic system (AMM 29-11-00/201).
	(6)	Remove the power from the left hydraulic system (AMM 29-11-00/201).
	(7)	Turn the control wheel to fully clockwise and hold it there for at least 4 seconds. Do this check:
		(a) Make sure the two right ailerons move up and the left outboard aileron moves down.
		NOTE: Ignore the movement of the left inboard aileron.
	(8)	Turn the control wheel fully counterclockwise and hold it there for at least 4 seconds. Do this check:
		(a) Make sure the two right ailerons move down and the left outboard aileron moves up.
		NOTE: Ignore the movement of the left inboard aileron.
	(9)	Remove the power from the right hydraulic system (AMM 29-11-00/201).
	(10)	Supply pressure to the center hydraulic system (AMM 29-11-00/201).
	INSP	(2) (3) (4) (5) (6) (7)

EFFECTIVITY

27-003-01

TASK CARD

AIRLINE CARD NO.

		TASK CARD
MECH	INSP	
		(11) Turn the control wheel fully clockwise and hold it there for at least 4 seconds. Do this check:
		(a) Make sure the right inboard aileron moves up and the left inboard aileron moves down.
		NOTE: Ignore the movement of the outboard ailerons.
		(12) Turn the control wheel fully counterclockwise and hold it there for at least 4 seconds. Do this check:
		(a) Make sure the right inboard aileron moves down and the left inboard aileron moves up.
		NOTE: Ignore the movement of the outboard ailerons.
		(13) Move the control wheel to its neutral position.
		F. Put the Airplane Back to Its Usual Condition
		(1) Remove the power from the center hydraulic system (AMM 29-11-00/201).
		(2) Remove electrical power if it is not necessary (AMM 24-22-00/201).

STA	TION						BOE	ING CARD
TAIL	L NO.		(7 BOEIN	i G		27-00	07-01
	ATE		SAS	767			AIRL	INE CARD
D.	ATE			TASK CARD				
SKILL	WORK AREA	A	RELATED TASK	INTERVAL		PHASE	MPD REV	TASI REV
AIRPL	CREW CAE	BIN		3C	1	3636	002	DEC
TASI	K		TITLE		STRUCTURAL ILLUSTRATION REFER		API AIRPLANE	PLICABIL

ZONES ACCESS PANELS

DUAL AILERON CONTROL OVERRIDE SYSTEM

211

OPERATIONAL

MPD ITEM NUMBER MECH INSP

OPERATIONALLY CHECK DUAL (FORWARD AND AFT) AILERON CONTROL PATH OVERRIDE SYSTEM.

27-11-36-4A

BOEING CARD NO.

AIRLINE CARD NO.

TASK CARD REVISION

DEC 22/05 APPLICABILITY

ENGINE

ALL

ALL

- <u>Dual Aileron Control Path Override Test</u>
 - References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
 - Prepare for the Test
 - (1) Make sure you removed all the rig pins in the aileron system.
 - (2) Supply electrical power (AMM 24-22-00/201).
 - (3) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

USE AMM 32-00-15/201 TO INSTALL THE DOOR LOCKS. THE DOORS OPEN WARNING: 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 the FLT CONTROL SHUTOFF WING, L, R and C switches on the right side panel P61, are in the ON position.
- Make sure these circuit breakers on the overhead panel, P11, are closed:
 - (a) 11H15, FLT CONT SHUTOFF WING LEFT

EFFECTIVITY OPERATIONAL DUAL AILERON CONTROL OVERRIDE SYSTEM 27-11-36-4A 27-007-01 PAGE 1 OF 3 AUG 22/01

27-007-01

AIRLINE CARD NO.

			TASK CARD
MECH	INSP		
			(b) 11H16, FLT CONT SHUTOFF WING CTR
			(c) 11H26, FLT CONT SHUTOFF WING RIGHT
			(d) 11L9, LEFT ENGINE OIL PRESS
			(e) 11L36, RIGHT ENGINE OIL PRESS
			(f) EICAS (6 LOCATIONS)
		(7)	Push the STATUS switch on the display select panel to show the aileron position indicator on the display.
		WARN	ING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.
		(8)	Supply pressure to the left, right, and center hydraulic systems (AMM 29-11-00/201).
		(9)	Operate the aileron trim switches on the aft electronic control panel, P8, until the trim indicator (on the control wheel) shows zero units of trim.
		(10)	Use a clamp to hold the captain's control wheel fully clockwise and do these steps:
			(a) Turn the first officer's control wheel fully counterclockwise with a slow and constant motion, and do this check:
			 Make sure the right ailerons move down and the left ailerons stay down.
			Get to the right wheel well to make sure that the roller of the cam follower lever moves out of its indent and rolls freely on the track.
			 Replace the roller or the complete lever assembly, if the roller is frozen (SB 27-0142).
		(11)	Use a clamp to hold the captain's control wheel fully counterclockwise and do these steps:

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27-007-01

AIRLINE CARD NO.

SAS BOEING
767
TASK CARD

MECH	INSP
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- (a) Turn the first officer's control wheel fully clockwise with a slow and constant motion, and do this check:
 - 1) Make sure the right ailerons move up and the left ailerons stay up.
 - 2) Get to the right wheel well to make sure that the roller of the cam follower lever moves out of its indent and rolls freely on the track.
 - 3) Replace the roller bearing, or the complete lever assembly, if the roller bearing is frozen.
- (12) Move the control wheels back to their neutral positions.
- (13) Make sure the shearout rivets of the LCCA torque tube are not damaged. Replace rivets if necessary.
- C. Put the Airplane Back to Its Usual Condition
 - (1) Remove the power from the left, right, and center hydraulic systems (AMM 29-11-00/201).

WARNING: USE 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 and close the doors (AMM 32-00-15/201).
- (3) Remove electrical power if it is not necessary (AMM 24-22-00/201).

EFFECTIVITY

OPERATIONAL

DUAL AILERON CONTROL OVERRIDE SYSTEM

27-11-36-4A

27-007-01

PAGE 3 OF 3 AUG 22/05

STATION	
TAIL NO.	
DATE	_
	TAIL NO.

WORK AREA



BOEING CARD NO. 27-010-01

AIRLINE CARD NO.

TASK CARD

ALL

MPD

ALL

RELATED TASK INTERVAL SKILL PHASE REV REVISION (#) 00400 HRS 006 APR 22/06 AIRPL CREW CABIN W-27-018-01003sc STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY
AIRPLANE ENGINE **FUNCTIONAL** RUDDER POWER CONTROL ACTUATOR

ZONES ACCESS PANELS

211

MPD ITEM NUMBER MECH INSP

PERFORM SINGLE HYDRAULIC SYSTEM CHECK OF EACH RUDDER PCA USING EACH HYDRAULIC SYSTEM IN SEQUENCE. THIS ALSO VERIFIES THAT THE RUDDER AND ELEVATOR SHUTOFF VALVES ARE OPEN.

27-21-00-5A

- (#) CMR FREQUENCY IS 400 HOURS AND TAKES PRECEDENCE OVER THE MSG-3 FREQUENCY OF 1C DEVELOPED FOR THE ORIGINAL MRB REPORT.
- Single Hydraulic Source Test
 - References Α.
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
 - Prepare for the Test
 - (1) Supply electrical power (AMM 24-22-00/201).
 - Make sure these circuit breakers on the overhead panel, P11, are closed:
 - (a) 11J2, EICAS CMPTR L
 - (b) 11J3, EICAS UPPER DSPL
 - (c) 11J29, EICAS CMPTR R
 - (d) 11J30, EICAS LOWER DSPL
 - (e) 11J31, EICAS DSPL SW
 - (f) 11J32, EICAS DSPL SELECT
 - (g) 11A10, AIR DATA CMPTR L

EFFECTIVITY FUNCTIONAL RUDDER POWER CONTROL ACTUATOR 27-21-00-5A 27-010-01 PAGE 1 OF 5 APR 22/06

27-010-01

AIRLINE CARD NO.

				TASK CARD
МЕСН	INSP			
				(h) 11F30, AIR DATA CMPTR RIGHT
				(i) 11L9, LEFT ENGINE OIL PRESS EICAS REF
				(j) 11L36, RIGHT ENGINE OIL PRESS EICAS REF
			(3)	Push the STATUS switch on the pilot's display select panel, P9, to show the rudder position indicator on the bottom EICAS display.
			(4)	Move the towing lever on the metering valve module to the tow position and install the towing lever lockpin in the nose gear (Fig. 501).
			(5)	Make sure these circuit breakers on the P11, panel are closed:
				(a) 11H17, FLT CONT SHUTOFF TAIL LEFT
				(b) 11H18, FLT CONT SHUTOFF TAIL CTR
				(c) 11H27, FLT CONT SHUTOFF TAIL RIGHT
			<u>WARN</u>	ING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.
			(6)	Supply pressure to the left, right, and center hydraulic systems (AMM 29-11-00/201).
		С.	Rudd	er Single Hydraulic Source – Test
			(1)	Make sure the FLT CONTROL SHUTOFF TAIL L, R, and C switches on the right side panel, P61, are ON.
			(2)	Remove the power from the center and right hydraulic systems (AMM 29-11-00/201).
				NOTE: Make sure only the left hydraulic system has power.
			(3)	Do these steps if the amber RUDDER RATIO light on the overhead panel, P5, is on:
				(a) Push the RESET switch on the RRCM.

27-21-00-5A 27-010-01 PAGE 2 OF 5 DEC 22/05

2 0

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27-010-01

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (b) Open this circuit breaker on the P11, panel:
 - 1) 11G10, RUDDER RATIO
- (c) Close this circuit breaker on the P11, panel:
 - 1) 11G10, RUDDER RATIO
- (4) Move the rudder pedals through their full travel range and do this check:
 - (a) Make sure the rudder moves through its full travel range.
- (5) Release the rudder pedals.
- (6) Remove the power from the left hydraulic system (Ref 29-11-00/201).

NOTE: When you remove power from the left hydraulic system, an amber RUDDER RATIO light on the P5 panel will come on. Also, an amber RUDDER RATIO message will show on EICAS.

If you use the left rudder/elevator hydraulic shutoff valve to remove hydraulic pressure, a PCA faultball will set on the RRCM.

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

- (7) Supply pressure to the center hydraulic system (AMM 29-11-00/201).
- (8) Move the rudder pedals through their full travel range and do this check:
 - (a) Make sure the rudder moves through its full travel range.
- (9) Release the rudder pedals.
- (10) Remove the power from the center hydraulic system (AMM 29-11-00/201).

EFFECTIVITY

FUNCTIONAL RUDDER POWER CONTROL ACTUATOR

27-21-00-5A

27-010-01

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27-010-01

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

- (11) Supply pressure to the right hydraulic system (AMM 29-11-00/201).
- (12) Move the rudder pedals through their full travel range and do this check:
 - (a) Make sure the rudder moves through its full travel range.
- (13) Release the rudder pedals.

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

- (14) Supply pressure to the left and center hydraulic systems (AMM 29-11-00/201).
- (15) If a PCA faultball shows on the RRCM, push the RESET switch.
- D. Put the Airplane Back to Its Usual Condition
 - (1) Remove the power from the left, right, and center hydraulic systems (AMM 29-11-00/201).
 - (2) Remove electrical power if it is not necessary (AMM 24-22-00/201).

WARNING: STAY AWAY FROM THE NOSE GEAR WHEELS WHEN THE LOCKPIN IS REMOVED. THE NOSE WHEELS CAN TURN TO THE CENTERED POSITION QUICKLY AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(3) Make sure that the nose gear wheels are in their center position and remove the nose gear towing lever lockpin.

EFFECTIVITY

FUNCTIONAL RUDDER POWER CONTROL ACTUATOR

27-21-00-5A

27-010-01

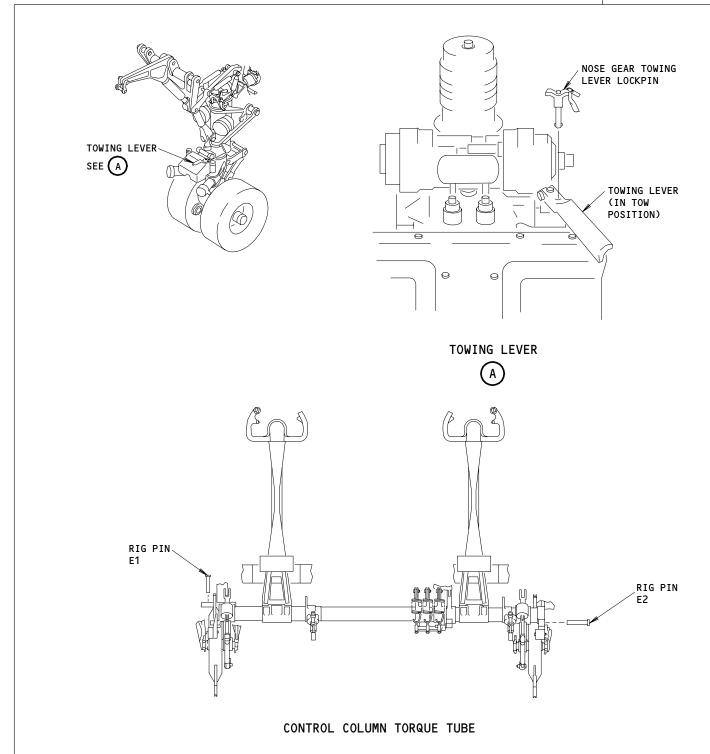
PAGE 4 OF 5 DEC 22/05

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27-010-01

AIRLINE CARD NO.



Elevator and Nose Gear Isolation Figure 501

FUNCTIONAL RUDDER POWER CONTROL ACTUATOR

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STATION
TAIL NO.
DATE

WORK AREA



BOEING CARD NO. 27-015-01

AIRLINE CARD NO.

27-21-00-5B

TASK CARD

MPD

PHASE

AIRPL CREW CABIN W-27-003-01 1C 11212 002 AUG 22/01

TASK TITLE STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY AIRPLANE ENGINE

INTERVAL

OPERATIONAL RUDDER RATIO CHANGER BYPASS VALVE

NOTE ALL

ZONES ACCESS PANELS

RELATED TASK

211

SKILL

MECH INSP MPD ITEM NUMBER

OPERATIONALLY CHECK RUDDER RATIO CHANGER BYPASS VALVE WITH ACTUATOR SOLENOID DE-ENERGIZED BY PERFORMING SINGLE "L" HYDRAULIC SYSTEM CHECK.

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

- 1. Rudder Ratio Changer Actuator Bypass Valve Test
 - A. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
 - B. Prepare for the Test
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Make sure these circuit breakers on the overhead panel, P11, are closed:
 - (a) 11J2, EICAS CMPTR L
 - (b) 11J3, EICAS UPPER DSPL
 - (c) 11J29, EICAS CMPTR R
 - (d) 11J30, EICAS LOWER DSPL
 - (e) 11J31, EICAS DSPL SW
 - (f) 11J32, EICAS DSPL SELECT
 - (g) 11A10, AIR DATA CMPTR L

OPERATIONAL RUDDER RATIO CHANGER BYPASS VALVE

27-21-00-5B 27-015-01 PAGE 1 OF 3 AUG 22/01

27-015-01

AIRLINE CARD NO.

SAS BOEING 767 TASK CARD

MECH INSP

- (h) 11F30, AIR DATA CMPTR RIGHT
- (i) 11L9, LEFT ENGINE OIL PRESS EICAS REF
- (j) 11L36, RIGHT ENGINE OIL PRESS EICAS REF
- (3) Push the STATUS switch on the pilot's display select panel, P9, to show the rudder position indicator on the bottom EICAS display.
- (4) Make sure these circuit breakers on the P11 panel are closed:
 - (a) 11H17, FLT CONT SHUTOFF TAIL LEFT
 - (b) 11H18, FLT CONT SHUTOFF TAIL CTR
 - (c) 11H27, FLT CONT SHUTOFF TAIL RIGHT

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

- (5) Supply pressure to the left, right, and center hydraulic systems (AMM 29-11-00/201).
- (6) Turn the captain's pedal adjustment crank fully clockwise and then fully counterclockwise.
 - (a) Make sure the rudder pedals move in a longitudinal direction.
- (7) Do the above step again for the first officer's pedals.
- (8) Move the left and right rudder pedals through their full travel range and release them. Do these checks:
 - (a) Make sure the pedals move smoothly and do not need too much force.
 - (b) Make sure the pedals go back to the neutral position.
- C. Rudder Ratio Changer Actuator Bypass Valve Test

EFFECTIVITY

OPERATIONAL

RUDDER RATIO CHANGER BYPASS VALVE

27-21-00-5B

27-015-01

PAGE 2 OF 3 AUG 22/01

27-015-01



AIRLINE CARD NO.

	TASK CARD
MECH INSP	
	(1) Move the FLT CONTROL SHUTOFF TAIL C and R switches on the right side panel, P61, to OFF. Attach DO-NOT-OPERATE tags and make sure the switch position lights come on.
	(2) Open these circuit breakers on the P11, panel and attach D0-NOT-CLOSE tags:
	(a) 11G10, RUDDER RATIO
	(b) 11H18, FLT CONT SHUTOFF TAIL CTR
	(c) 11H27, FLT CONT SHUTOFF TAIL RIGHT
	WARNING: MOVE ALL PERSONS AND EQUIPMENT AWAY FROM THE NOSE GEAR BEFORE YOU OPERATE THE RUDDER PEDALS. THE NOSE GEAR CAN TURN QUICKLY AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.
	(3) Move the rudder pedals through their full travel range and do this check:
	(a) Make sure the rudder does not move.
	(4) Remove the DO-NOT-CLOSE tags and close these circuit breakers on the P11, panel:
	(a) 11G10, RUDDER RATIO
	(b) 11H18, FLT CONT SHUTOFF TAIL CTR
	(c) 11H27, FLT CONT SHUTOFF TAIL RIGHT
	(5) Remove the power from the left, right, and center hydraulic systems (AMM 29-11-00/201).
	(6) Remove electrical power if it is not necessary (AMM 24-22-00/201).
	(7) Remove the DO-NOT-OPERATE tags and move the FLT CONTROL SHUTOFF TAIL C and R switches on the right side panel, P61, to ON.

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STATION
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BOEING CARD NO. 27-017-01

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

REV REVISION 017 AUG 10/98 AIRPL CREW CABIN 3C 13636 APPLICABILITY
LANE ENGINE STRUCTURAL ILLUSTRATION REFERENCE AIRPLANE

INTERVAL

OPERATIONAL ELEVATOR DUAL CONTROL PATH OVERRIDE **ALL** ALL ACCESS PANELS

ZONES

RELATED TASK

211

SKILL

MPD ITEM NUMBER MECH INSP

OPERATIONALLY CHECK ELEVATOR DUAL CONTROL PATH OVERRIDE SYSTEM FOR PROPER OPERATION.

27-31-00-5A

- 1. <u>Dual Control Path Override System Test</u>
 - A. References
 - (1) 24-22-00/201, Electrical Power Control
 - (2) 29/11/00/201, Main (Left, Right, and Center) Hydraulic System
 - Access B.
 - (1) Location Zones 211/212 Control Cabin
 - Prepare for the Test

A single thumping noise can be heard from a PCA when an elevator NOTE: is moved full up or full down. This noise is heard only when the direction of movement of the PCA is changed at the end of the stroke. It is caused when the snubbing ring moves in the snubbing gland to change the direction of movement of the piston at the end of the stroke.

KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN WARNING: HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO A PERSON OR DAMAGE TO EQUIPMENT CAN OCCUR

WHEN HYDRAULIC POWER IS SUPPLIED.

EFFECTIVITY OPERATIONAL ELEVATOR DUAL CONTROL PATH OVERRIDE 27-31-00-5A 27-017-01 PAGE 1 OF 2 AUG 10/98

27-017-01

AIRLINE CARD NO.

			3A3 C (6)
			TASK CARD
MECH	INSP		
			(1) Pressurize the left, right, and center hydraulic system (Ref 29-11-00/201).
			(2) Hold the First Officer's control column in the neutral position and pull the Captain's control column aft.
			(a) Make sure the left elevator moves up.
			NOTE: The right elevator will start to move up after the left elevator. The right elevator will move at a slower rate than the left elevator.
			(3) Let the Captain's control column go to the neutral position.
			(4) Hold the Captain's control column in the neutral position and push the First Officer's control column forward.
			(a) Make sure the right elevator moves down.
			NOTE: The left elevator will start to move down after the right elevator. The left elevator will move at a slower rate than the right elevator.
			(5) Let the First Officer's control column go to the neutral position.
		D.	Put the Airplane Back to Its Usual Condition
			(1) Remove the power from the left, center, and right hydraulic systems if it is not necessary (Ref 29-11-00/201).
			(2) Remove the electrical power if it is not necessary (Ref 24-22-00/201).

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BOEING CARD NO. 27-018-01

AIRLINE CARD NO.

27-31-00-5B

SKILL WORK AREA RELATED TASK INTERVAL MPD TASK CARD PHASE REV REVISION W-27-010-01 (#) 006 00400 HRS DEC 22/02 AIRPL CREW CABIN 003sc STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY
AIRPLANE ENGINE **OPERATIONAL ELEVATOR POWER CONTROL ACTUATOR** ALL ALL ZONES ACCESS PANELS

211

MECH INSP MPD ITEM NUMBER

PERFORM SINGLE HYDRAULIC SYSTEM CHECK OF EACH ELEVATOR PCA USING EACH HYDRAULIC SYSTEM IN SEQUENCE. THIS ALSO VERIFIES THAT THE RUDDER AND ELEVATOR SHUTOFF VALVES ARE OPEN.

(#) CMR FREQUENCY IS 400 HOURS AND TAKES PRECEDENCE OVER THE MSG-3 FREQUENCY OF 1C DEVELOPED FOR THE ORIGINAL MRB REPORT.

1. <u>Single Hydraulic Source - Test</u>

- A. References
 - (1) 24-22-00/201, Electrical Power Control
 - (2) 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
 - (3) 31-41-00/501, Engine Indication and Crew Alerting Systems
- B. Access
 - (1) Location Zones
 211/212 Control Cabin
- C. Prepare for the Test
 - (1) Supply electrical power (Ref 24-22-00/201).
- D. Do the Test

OPERATIONAL ELEVATOR POWER CONTROL ACTUATOR

27-31-00-5B 27-018-01 PAGE 1 OF 4 DEC 22/02

27-018-01

SAS BOEING
767
TASK CARD

MECH INSP

NOTE: A single thumping noise can be heard from a PCA when an elevator is moved full up or full down. This noise is heard only when the direction of movement of the PCA is changed at the end of the stroke. It is caused when the snubbing ring moves in the snubbing gland to change the direction of movement of the piston at the end of the stroke.

- (1) Make sure that the LEFT, CENTER, and RIGHT FLT CONTROL SHUTOFF TAIL valve switches on the P61 panel are ON.
- (2) Make sure that the amber OFF switch position lights are off.

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWRED SURFACES. INJURY TO A PERSON OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

- (3) Supply power to the left hydraulic system (AMM 29-11-00/201).
- (4) Operate the control columns through full travel and then put them to the neutral position.
 - (a) Make sure that the elevators move correctly to the control column movement.
- (5) Remove the power from the left hydraulic system (AMM 29-11-00/201).

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO A PERSON OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

- (6) Supply power to the center hydraulic system (AMM 29-11-00/201).
- (7) Operate the control columns through full travel and then put them to the neutral position.
 - (a) Make sure the elevators move correctly to the control column movement.

EFFECTIVITY

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ELEVATOR POWER CONTROL ACTUATOR

27-31-00-5B

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27-018-01

AIRLINE CARD NO.



MECH INSP

(8) Remove the power from the center hydraulic system (Ref 29-11-00/201).

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO A PERSON OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

- (9) Supply power to the right hydraulic system (AMM 29-11-00/201).
- (10) Operate the control columns through full travel and then put them to the neutral position.
 - (a) Make sure the elevators move correctly to the control column movement.
- (11) Remove the power from the right hydraulic system (AMM 29-11-00/201).
- E. Put the Airplane Back to Its Usual Condition
 - (1) Remove the electrical power if it is not necessary (AMM 24-22-00/201).

EFFECTIVITY

OPERATIONAL

ELEVATOR POWER CONTROL ACTUATOR

27-31-00-5B

27-018-01

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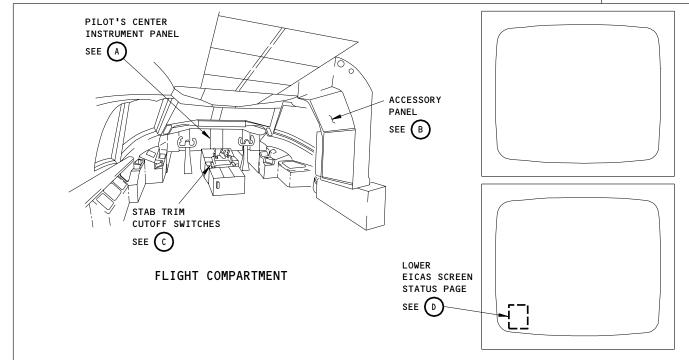
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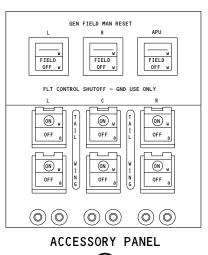
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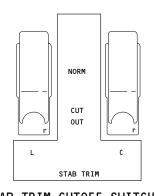
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PILOTS' CENTER INSTRUMENT PANEL

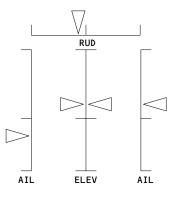


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STAB TRIM CUTOFF SWITCHES

(1)



LOWER EICAS SCREEN STATUS PAGE

(b)

Elevator Control System (Flight Compartment) Figure 501

OPERATIONAL ELEVATOR POWER CONTROL ACTUATOR

27-31-00-5B 27-018-01 PAGE 4 OF 4 AUG 22/01

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SKILL	WORK ARE	EA RE	LATED TASK	II	ITERVAL		PHASE	MPD REV		SK CARD EVISION
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TASK		FLEWATOR	NEUTRAL SHIFT MECHANISM		STRUCTURAL ILLUSTRATION REFERENCE		AF AIRPLAN	PLICABI E	LITY ENGINE	
UPERA	TIONAL	ELEVATOR	NEUIKAL SH	ITTI MECHANISM				200		ALL
	ZONES					ACCESS PANELS				
211										

MPD ITEM NUMBER MECH INSP

OPERATIONALLY CHECK ELEVATOR NEUTRAL SHIFT MECHANISM: FULL NOSE UP TRIM AND RETURN TO "GREEN BAND".

27-31-00-5C

- 1. 767-200 AIRPLANES; Elevator Neutral Shift and Override Mechanism Test
 - A. References
 - (1) 24-22-00/201, Electrical Power Control
 - (2) 29-11-00/201, Main (Left, Right, and Center) Hydraulic System
 - B. Access
 - (1) Location Zones 211/212 Control Cabin
 - C. Prepare to Do the Test
 - (1) Supply electrical power (Ref 24-22-00/201).

KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN WARNING: HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO A PERSON OR DAMAGE TO EQUIPMENT CAN OCCUR

- WHEN HYDRAULIC POWER IS SUPPLIED.
- (2) Pressurize the left and center hydraullic systems (Ref 29-11-00/201).
- D. Do the Test

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	FFECTIVITY	OPERATIONAL	ELEVATOR NEUTRAL SHIFT MECHANISM			
		27-31-00-5C	27-021-01	PAGE 1 OF	2 APR 22/99	

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27-021-01

AIRLINE CARD NO.



MECH INSP

- NOTE: A single thumping noise can be heard from a PCA when an elevator is moved full up or full down. This noise is heard only when the direction of movement of the PCA is changed at the end of the stroke. It is caused when the snubbing ring moves in the snubbing gland to change the direction of movement of the piston at the end of the stroke.
- (1) Put the CENTER STAB TRIM SHUTOFF switch on the P10 panel to CUTOFF.
- (2) Move the horizontal stabilizer in the airplane nose-up direction (stabilizer leading edge down) until the elevators start to move from the neutral position.
 - (a) Make sure the elevators start to move at approximately 8.4 units of trim.
- (3) Move the stabilizer to the greenband range.
 - (a) Make sure the elevators go to the neutral position.
- E. Put the Airplane Back to Its Usual Condition
 - (1) Remove the power from the left and center hydraulic systems if it is not necessary (Ref 29-11-00/201).
 - (2) Remove the electrical power if it is not necessary (Ref 24-22-00/201).

EFFECTIVITY

OPERATIONAL

ELEVATOR NEUTRAL SHIFT MECHANISM

27-31-00-5C

27-021-01

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STATION	
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SKILL



BOEING CARD NO. 27-022-04

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

AVION CREW CABIN

TASK

TITLE

REV REVISION

11212 018 DEC 22/05

STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY

INTERVAL

TASK TITLE STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY AIRPLANE ENGINE

OPERATIONAL STALL WARNING SYSTEM NOTE ALL

ZONES ACCESS PANELS

119 211 212 | 119AL

WORK AREA

MECH INSP MPD ITEM NUMBER

OPERATIONALLY CHECK THE STALL WARNING SYSTEM.

RELATED TASK

27-32-00-5A

AIRPLANE NOTE: AIRPLANES WITH ADVANCED STALL WARNING COMPUTER(SWC). AIRPLANES DELIVERED AFTER LINE NUMBER 132 HAVE THE ADVANCED SWC (P/N 285T1104-XX).

- Operational Test Stall Warning System (Fig. 501, 502)
 - A. General
 - (1) The operational test for the left and right stall warning computers (SWC) is the same. This test is written for the left SWC. When you test the right SWC, replace the left references with the right references in parentheses.
 - B. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 27-51-00/201, Trailing Edge Flap System
 - (3) AMM 27-81-00/201, Leading Edge Slat System
 - (4) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
 - (5) AMM 34-22-00/501, Electronic Flight Instrument System
 - C. Access
 - (1) Location zones

119 Main Equipment Center 211/212 Flight Compartment

OPERATIONAL STALL WARNING SYSTEM

27-32-00-5A 27-022-04 PAGE 1 OF 6 DEC 22/01

2

27-022-04

AIRLINE CARD NO.



MECH INSP

- (2) Access panel
 119AL Main Equipment Center
- D. Prepare for the Operational Test
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Supply the center system hydraulic power (AMM 29-11-00/201).
 - (3) Make sure that the trailing edge flaps and the leading edge slats are fully retracted (AMM 27-51-00/201 and AMM 27-81-00/201).
 - (4) Make sure that the control columns are centered and are free to move.
 - (5) Make sure that the IRS and EFI switches on the instrument source select panel, P1, (P3) are in normal (ALTN legend is not shown).
 - (6) Make sure L, R, and C IRS mode select switches, on the inertial reference mode panel, P5, in the NAV position.
 - (a) Make sure that the Inertial Reference System is aligned (AMM 34-21-00/201).
 - (7) Make sure the ECS/MSG display select switch, on the EICAS maintenance panel, P61, is selected.
- E. Test the Stall Warning System Operation
 - (1) Open the EE bay access panel 119AL to see the WEU BITE.
 - (2) Push and hold the L (R) STALL test switch on side panel, P61.
 - (3) Make sure that these actions occur:
 - (a) The L (R) stick shaker operates.
 - (b) The Windshear Pitch Limit indicator (PLI) is shown on the L (R) EADI
 - (c) All segments on the LEFT (RIGHT) STALL hex display are lighted on the WEU BITE Module (P51), and fault code D9 is shown on the RIGHT (LEFT) STALL hex display.

EFFECTIVITY

OPERATIONAL | STALL WARNING SYSTEM

27-32-00-5A

27-022-04

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27-022-04

AIRLINE CARD NO.

SAS FOEING
767
TASK CARD

MECH INSP

- (d) The EICAS status message WARN ELEX is shown.
- (4) Release the L (R) STALL test switch.
- (5) Make sure that these actions occur:
 - (a) The L (R) stick shaker stops.
 - (b) The PLI is not shown on the L (R) EADI.
 - (c) The EICAS message WARN ELEX is not shown.
 - (d) SAS 050-149;

The LEFT (RIGHT) STALL hex display on the WEU BITE Module (P51) shows 37.

(e) SAS 150-999 AND MTH 275-999;

The LEFT (RIGHT) STALL hex display on the WEU BITE Module (P51) shows 27.

F. Do the steps that follow for the flap position listed below.

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. OPERATION OF STALL WARNING TEST SWITCHES CAN CAUSE THE SLATS TO MOVE TO THEIR FULLY EXTENDED POSITION. INJURY TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

- (1) Put the flap lever in the 1-unit detent.
- (2) Hold down the L STALL (R STALL) TEST switch.
- (3) Make sure that the L (R) stick shaker operates.
- (4) Release the L STALL (R STALL) test switch.
- (5) Make sure that the L (R) stick shaker stops.
- (6) The Windshear Pitch Limit indicator (PLI) shows on the L (R) EADI at 15 degrees.

EFFECTIVITY

OPERATIONAL | STALL WARNING SYSTEM

27-32-00-5A

27-022-04

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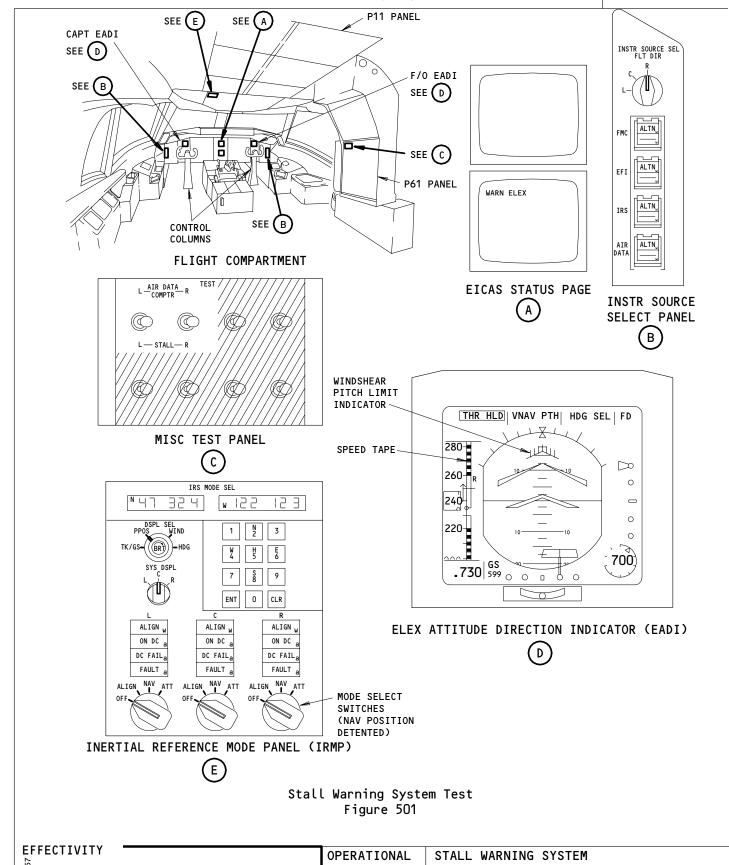
			SAS 767 TASK CARD	AIRLINE CARD NO.
MECH	INSP			
		(7)	Put the flap lever in the 25-unit detent.	
		(8)	Hold down the L STALL (R STALL) test switch.	
		(9)	Make sure that the L (R) stick shaker operates.	
		(10)	Release the L STALL (R STALL) test switch.	
		(11)	Make sure that the L (R) stick shaker stops.	
		(12)	Put the flap lever to the O unit detent.	
		G. Test	t the Stick Nudger Operation	
		(1)	Push and hold the L and R STALL TEST switches on the P61	panel.
		(2)	After at least 5 seconds, make sure that these actions o	ccur.
			(a) The L and R stick shakers operate.	
			(b) The L and R control columns move forward and stay f	orward.
		(3)	Release the L STALL TEST switch.	
		(4)	Make sure that these actions occur:	
			(a) The two control columns return to the original, cen position.	tered
			(b) The L stick shaker stops.	
		(5)	Release R STALL TEST switch.	
		(6)	Make sure that the R stick shaker stops.	
		H. Put	the Airplane Back to Its Initial Condition.	
		(1)	Remove hydraulic power if it is not necessary (AMM 29-11	-00/201).
		(2)	Remove electrical power if it is not necessary (AMM 24-2	2-00/201).

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27-022-04

SAS FOEING
TASK CARD

AIRLINE CARD NO.



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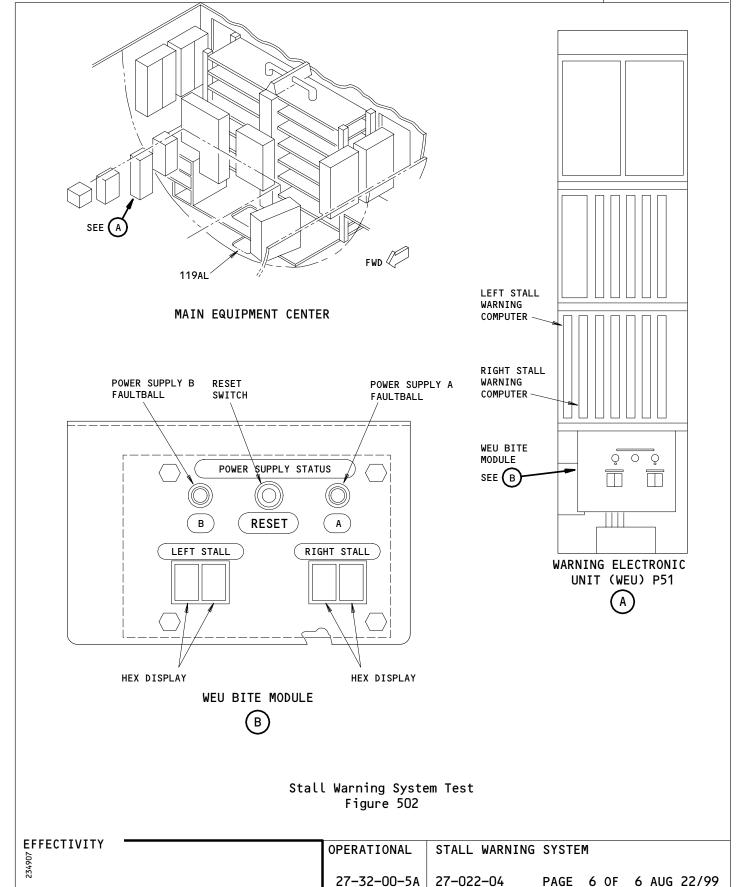
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BOEING CARD NO.

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AIRLINE CARD NO.

SAS BOEING
767
TASK CARD



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STATION	
TAIL NO.	
DATE	

WORK AREA



BOEING CARD NO. 27-023-01

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

AIRPL CREW CABIN

1C

11212

007

DEC 22/08

TASK

TITLE

STRUCTURAL ILLUSTRATION REFERENCE
APPLICABILITY
AIRPLANE
ENGINE

INTERVAL

OPERATIONAL | MANUAL-MECH HORZ STAB TRIM CONTROL | NOTE ALL

ZONES ACCESS PANELS

RELATED TASK

211

SKILL

MECH INSP MPD ITEM NUMBER

OPERATIONALLY CHECK MANUAL MECHANICAL STABILIZER TRIM CONTROL BY CHECKING LEFT AND RIGHT STAB TRIM CONTROL LEVERS IN SEQUENCE.

27-41-00-5A

AIRPLANE NOTE: APPLICABLE TO AIRPLANES WITH MECHANICAL STABILIZER TRIM CONTROL SYSTEMS (PRIOR TO L/N 276, AND UNMODIFIED AIRPLANES).

AIRPLANES WITH STAB TRIM LEVERS;
 Manual-Mechanical Stabilizer Trim Control Operational Test

NOTE: This is a scheduled maintenance task.

- A. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic System
- B. Access
 - (1) Location Zones
 211/212 Control Cabin
- C. Procedure
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Make sure that LEFT, RIGHT, and CENTER FLT CONT SHUTOFF TAIL valve switches on the P61 panel are OFF.
 - (3) Supply power to the left hydraulic system (AMM 29-11-00/201).
 - (4) Move the STAB TRIM levers full forward and full aft (Fig 501).

OPERATIONAL MANUAL-MECH HORZ STAB TRIM CONTROL

27-41-00-5A 27-023-01 PAGE 1 OF 3 DEC 22/08

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AIRLINE CARD NO.

			TASK CARD
IECH :	INSP		
			(a) Make sure that the stabilizer moves smoothly and freely through its full travel.
		(5)	Move only the left STAB TRIM lever forward.
			(a) Make sure that the stabilizer does not move.
		(6)	Move only the right STAB TRIM lever forward.
			(a) Make sure that the stabilizer does not move.
		(7)	Move only the left STAB TRIM lever aft.
			(a) Make sure that the stabilizer does not move.
		(8)	Move only the right STAB TRIM lever aft.
			(a) Make sure that the stabilizer does not move.
		(9)	Move the STAB TRIM levers full travel in opposite directions at the same rate.
			(a) Make sure that the stabilizer does not move.
		(10)	Change the positions of the STAB TRIM levers.
			<u>NOTE</u> : The STAB TRIM levers must go through neutral at the same time.
			(a) Make sure that the stabilizer does not move.
		(11)	Move the two levers to neutral at the same rate.
			(a) Make sure that the stabilizer does not move.
		D. Put	the Airplane Back to Its Usual Condition
		(1)	Remove the power from the left hydraulic system (AMM 29-11-00/201).
		(2)	Remove electrical power (AMM 24-22-00/201).

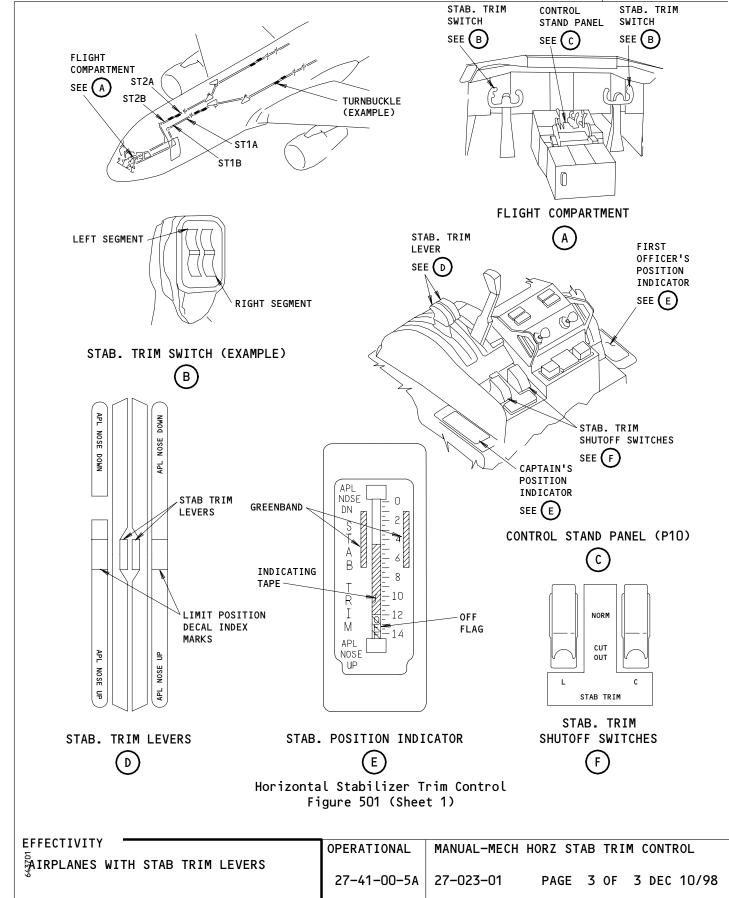
EFFECTIVITY

27-023-01

AIRLINE CARD NO.

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FOEING 767 TASK CARD



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TAI	L NO.
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SKILL	WORK AREA
ΔTRPI	CREW CARIN



BOEING CARD NO. 27-024-01

AIRLINE CARD NO.

MPD

PHASE REVISION REV 002 AUG 22/09 3C 13636

STRUCTURAL ILLUSTRATION REFERENCE

ACCESS PANELS

APPLICABILITY
ANF ENGINE AIRPLANE

TASK CARD

ALL ALL

ZONES

FUNCTIONAL

MECH INSP

211 212 312

312AR

MPD ITEM NUMBER

FUNCTIONALLY CHECK HORIZONTAL STABILIZER TRIM POSITION TRANSMITTER LIMIT FUNCTIONS.

STABILIZER TRIM POSITION TRANSMITTER

27-41-00-5B

1. Horizontal Stabilizer Trim Position Transmitter Limit Test

NOTE: This is a scheduled maintenance task.

- Equipment Α.
 - (1) Control Wheel Adapter Equipment A27021-96 or -98
 - (2) Protractor A27021-30 (from the A27021-29 kit) or 4MIJ65B80307-1
 - (3) Device to measure the distance from the end surface on the upper ballscrew stop and the face surface on the lower gimbal by \pm 0.02 inch (± 0.5 millimeter) - Commercially Available
- References В.
 - (1) AMM 06-42-00/201, Empennage Access Doors and Panels
 - (2) AMM 24-22-00/201, Electrical Power Control
 - (3) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic System
 - (4) AMM 34-11-00/201, Pitot Static Systems
- Access
 - (1) Location Zones

211/212 Control Cabin

312

Area Aft of Pressure Bulkhead to BS 1725 (Right)

EFFECTIVITY FUNCTIONAL STABILIZER TRIM POSITION TRANSMITTER 27-41-00-5B 27-024-01 PAGE 1 OF 16 AUG 22/09

AIRLINE CARD NO.



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- (2) Access Panel
 312AR Stabilizer Trim Ballscrew Actuator
- D. Prepare for the Test
 - (1) Supply electrical power (AMM 24-22-00/201).

WARNING: STAY OFF THE SERVICE ACCESS DOOR, 312AR, AND THE ACCESS DOOR FOR THE CONTROLS BAY, 313AL. YOUR WEIGHT CAN CAUSE THE SPRING-LOADED LATCHES TO RELEASE. IF YOU FALL THROUGH THE DOOR, INJURY CAN OCCUR.

- (2) Open the access panel, 312AR, for the stabilizer trim ballscrew actuator (AMM 06-42-00/201).
- (3) Put the LEFT and CENTER STAB TRIM SHUTOFF valve switches on the P10, control stand panel, to the NORM position.
- (4) Install the adapter equipment for the control wheels on the captain's or the first officer's control wheels (Fig. 505).

<u>NOTE</u>: The adapter equipment is used to measure control column angular displacement of the control column.

To measure the fore and aft angle of the control column, attach the protractor perpendicular to the face of the control wheel. The angle of the control column is read from the pendulum on the protractor.

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

- (5) Supply power to the left and center hydraulic systems (AMM 29-11-00/201).
- (6) Move the stabilizer to 6 units of trim.
- E. Electrical Travel Limit and Column Cutoff Switch Test With the Right STCM

FUNCTIONAL STABILIZER TRIM POSITION TRANSMITTER

27-41-00-5B 27-024-01 PAGE 2 OF 16 AUG 22/05

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BOEING 767 TASK CARD

MECH INSP

- (1) Do the test of the nose down electrical limit:
 - (a) Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel to the CUTOUT position.
 - Open this circuit breaker on the P11 panel and attach a DO-NOT-CLOSE tag:
 - 1) 11C12, STAB TRIM SHUTOFF L
 - (c) Make sure this circuit breaker on the P11 panel is closed:
 - 1) 11C13, STAB TRIM SHUTOFF CENTER
 - Make sure that the flaps and slats are retracted and the flap control lever is in the FLAP UP detent.
 - Move the captain's or first officer's stabilizer trim control wheel switches to the APL NOSE DN position and hold until the stabilizer stops.
 - (f) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel to the CUTOUT position.
 - Open this circuit breaker on the P11 panel and attach a (g) DO-NOT-CLOSE tag:
 - 1) 11C13, STAB TRIM SHUTOFF CENTER
 - Make sure that Dimension A on the stabilizer trim ballscrew actuator is 3.00 +0.15/-0.42 inches (76.2 +3.8/-10.7 millimeters) (Fig. 502).
 - (i) Do the steps that follow for the nose down electrical limit test with the flaps in the 5 unit detent:
 - 1) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel to the NORM position.
 - Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
 - a) 11C13, STAB TRIM SHUTOFF CENTER

EFFECTIVITY

FUNCTIONAL

STABILIZER TRIM POSITION TRANSMITTER

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MECH INSP

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- 3) Move the flap control lever to the 5-unit detent to extend the TE flaps to the 5 unit position.
- 4) Move the captain's or first officer's stabilizer trim control wheel switches to the APL NOSE DN position and hold until the stabilizer stops.
- 5) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the CUTOUT position.
- 6) Open this circuit breaker on the P11 panel and attach a D0-N0T-CLOSE tag:
 - a) 11C13 STAB TRIM SHUTOFF CENTER
- 7) Make sure that Dimension A on the stabilizer trim ballscrew actuator is 0.92 +0.15/-0.42 inches (23.4 +3.8/-10.7 millimeters) (Fig. 502).
- 8) Put the flap lever in the FLAP UP detent to retract the flaps.
- (2) Do the steps that follow for the column forward cutoff test:
 - (a) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
 - 1) 11C13, STAB TRIM SHUTOFF CENTER
 - (b) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position.
 - (c) Move the captain's or first officer's stabilizer trim control wheel switches to the APL NOSE UP position.
 - (d) With the stabilizer trim switches held in the APL NOSE UP position, slowly push the control column forward until the stabilizer stops.

EFFECTIVITY

FUNCTIONAL STABILIZER TRIM POSITION TRANSMITTER

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AIRLINE CARD NO.

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MECH	INSP
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- (e) Measure the angle of the control column from the column neutral position.
 - 1) Make sure that the angle is between 2.2 and 2.7 degrees.
- (f) Let the control column go to the neutral position and let the stabilizer move until it stops.
- (g) Release the stabilizer trim control wheel switches.
- (3) Do the steps that follow for the nose up electrical limit test:
 - (a) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel to the CUTOUT position.
 - (b) Open this circuit breaker on the P11 panel and attach a D0-NOT-CLOSE tag:
 - 1) 11C13, STAB TRIM SHUTOFF CENTER
 - (c) Make sure that Dimension A on the stabilizer trim ballscrew actuator is 22.43 +0.42/-0.15 inches (569.7 +10.7/-3.8 millimeters) (Fig. 502).
- (4) 767-200;

Do the steps that follow for the column/neutral shift cutoff test:

NOTE: Do this test for 767-200 airplanes only.

767-300 airplanes do not have neutral shift and cutoff components.

- (a) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
 - 1) 11C13, STAB TRIM SHUTOFF CENTER
- (b) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position.
- (c) Move the captain's or first officer's stabilizer trim control wheel switches to the APL NOSE DN position.

EFFECTIVITY

FUNCTIONAL STABILIZER TRIM POSITION TRANSMITTER

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				TASK CARD			
MECH	INSP						
			(d)	While the switches are held in the APL NOSE DN position, slowly pull the control column aft until the stabilizer stops.			
		NOTE: The control column must be pulled aft while the stabilizer is at 11.00 or more units of trim.					
			(e)	Measure the angular displacement of the control column from the neutral position.			
				 Make sure that the angular displacement is between 3.0 and 3.5 degrees. 			
			(f)	Move the control column forward just enough (control column is more than 2.0 degrees aft of neutral) to let the stabilizer move.			
			(g)	When the stabilizer stops (at the electrical limit), release the control wheel switches and then release the control column.			
			(h)	Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the CUTOUT position.			
			(i)	Open this circuit breaker on the P11 panel and attach a D0-N0T-CLOSE tag:			
				1) 11C13, STAB TRIM SHUTOFF CENTER			
			(j)	Make sure that Dimension A on the stabilizer trim ballscrew actuator is $14.61 + 0.21/-0.41$ inches $(371.1 + 5.3/-10.4)$ millimeters) (Fig. 502).			
		(5)	Do t	he steps that follow for the column aft cutoff test:			
			(a)	Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:			
				1) 11C13, STAB TRIM SHUTOFF CENTER			
			(b)	Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position.			
			(c)	Move the captain's or first officer's stabilizer trim control wheel switches to the APL NOSE DN position.			

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			J	TASK CARD	
MECH	INSP				
			(d)	While the stabilizer trim control wheel switches are held in the APL NOSE DN position, slowly pull the control column af until the stabilizer stops.	
			(e)	Measure the angular displacement of the control column from neutral position.	the
				 Make sure that the angular displacement is between 2.0 degrees. 	and
			(f)	Release the stabilizer trim control wheel switches and then release the control column.	I
		F. E	Lectrical	l Travel Limit and Column Cutoff Switch Test With the Left S	тсм
		(′) Do th	he steps that follow for the column forward cutoff test:	
			(a)	Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 pain the CUTOUT position.	nel
			(b)	Open this circuit breaker on the P11 panel and attach a D0-N0T-CLOSE tag:	
				1) 11C13, STAB TRIM SHUTOFF CENTER	
			(c)	Remove the DO-NOT-CLOSE tag and close this circuit breaker the P11 panel:	on
				1) 11C12, STAB TRIM SHUTOFF L	
			(d)	Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 pane the NORM position.	lin
			(e)	Move the captain's or first officer's stabilizer trim controlly wheel switches to the APL NOSE UP position.	ol
			(f)	While the stabilizer trim control switches are held in the NOSE UP position, slowly push the control column forward un the stabilizer stops.	
			(g)	Measure the angular displacement of the control column from neutral position.	the

EFFECTIVITY					
	FUNCTIONAL	STABILIZER	TRIM	POSITION	TRANSMITTER

2.7 degrees.

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1) Make sure that the angular displacement is between 2.2 and

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MECH	INSP							
				Let the control column go to the neutral position a stabilizer move until it stops.	and let the			
				Release the stabilizer trim control wheel switches when the stabilizer stops.				
		(2)	Do the steps that follow for the nose up electrical limit test:					
				a) Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the CUTOUT position.				
		(b) Open this circuit breaker on the P11 panel and attach a D0-NOT-CLOSE tag:						
				1) 11C12, STAB TRIM SHUTOFF L				
				Make sure that Dimension A on the stabilizer trim bactuator is 22.43 +0.42/-0.15 inches (569.7 +10.7/-millimeters) (Fig. 502).				
		(3)	767-200; Do the steps that follow for the column/neutral shift cutoff test:		utoff test:			
				NOTE: Do this test for 767-200 airplanes only.				
				767-300 airplanes do not have neutral shift components.	and cutoff			
				Remove the DO-NOT-CLOSE tag and close this circuit the P11 panel:	breaker on			
				1) 11C12, STAB TRIM SHUTOFF L				
				Put the LEFT STAB TRIM SHUTOFF valve switch on the the NORM position.	P10 panel in			
				Move the captain's or first officer's stabilizer tr wheel switches to the APL NOSE DN position.	rim control			

AIRLINE CARD NO.

27-024-01

SAS BOEING TASK CARD

MECH INSP

(d) While the stabilizer trim control wheel switches are held in the APL NOSE DN position, slowly pull the control column aft until the stabilizer stops.

The control column must be pulled aft while the NOTE: stabilizer is at 11.00 or more units of trim.

- (e) Measure angular displacement of the control column from the neutral position.
 - 1) Make sure that the angular displacement is between 3.0 and 3.5 degrees.
- (f) Move the control column forward just enough (control column more than 2.0 degrees aft of neutral) to let the stabilizer move.
- When the stabilizer stops (at the electrical limit), release the stabilizer trim control switches and then release the control column.
- (h) Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the CUTOUT position.
- Open this circuit breaker on the P11 panel and attach a DO-NOT-CLOSE tag:
 - 1) 11C12, STAB TRIM SHUTOFF L
- (j) Make sure that Dimension A on the stabilizer trim ballscrew actuator is 14.61 +0.21/0.41 inches (371.1 +5.3/-10.4 millimeters) (Fig. 502).
- Do the steps that follow for the column aft cutoff test:
 - Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
 - 1) 11C12, STAB TRIM SHUTOFF L
 - (b) Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position.
 - (c) Move the captain's or first officer's stabilizer trim control wheel switches to the APL NOSE DN position.

EFFECTIVITY

FUNCTIONAL STABILIZER TRIM POSITION TRANSMITTER

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TASK CARD

- (d) While the switches are held in the APL NOSE DN position, slowly pull the control column aft until the stabilizer stops.
- (e) Measure the angular displacement of the control column from the neutral position.
 - 1) Make sure that the angle is between 2.0 and 2.5 degrees.
- (f) Let the control column go to the neutral position.
- (q) Release the control wheel switches when the stabilizer stops.
- (5) Do the steps that follow for the nose down electrical limit test:
 - (a) Make sure that the flaps and slats are retracted and the flap control lever is in the FLAPS UP detent.
 - (b) Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the CUTOUT position.
 - (c) Open this circuit breaker on the P11 panel and attach a D0-N0T-CLOSE tag:
 - 1) 11C12, STAB TRIM SHUTOFF L
 - (d) Make sure that Dimension A on the stabilizer trim ballscrew actuator is 3.00 +0.15/-0.42 inches (76.2 +3.8/-10.7 millimeters) (Fig. 502).
 - (e) Do the steps that follow to do the nose down electrical limit with the flaps in the 5 unit detent test:
 - 1) Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position.
 - 2) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
 - a) 11C12, STAB TRIM SHUTOFF L

CAUTION:

MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

EFFECTIVITY

FUNCTIONAL

STABILIZER TRIM POSITION TRANSMITTER

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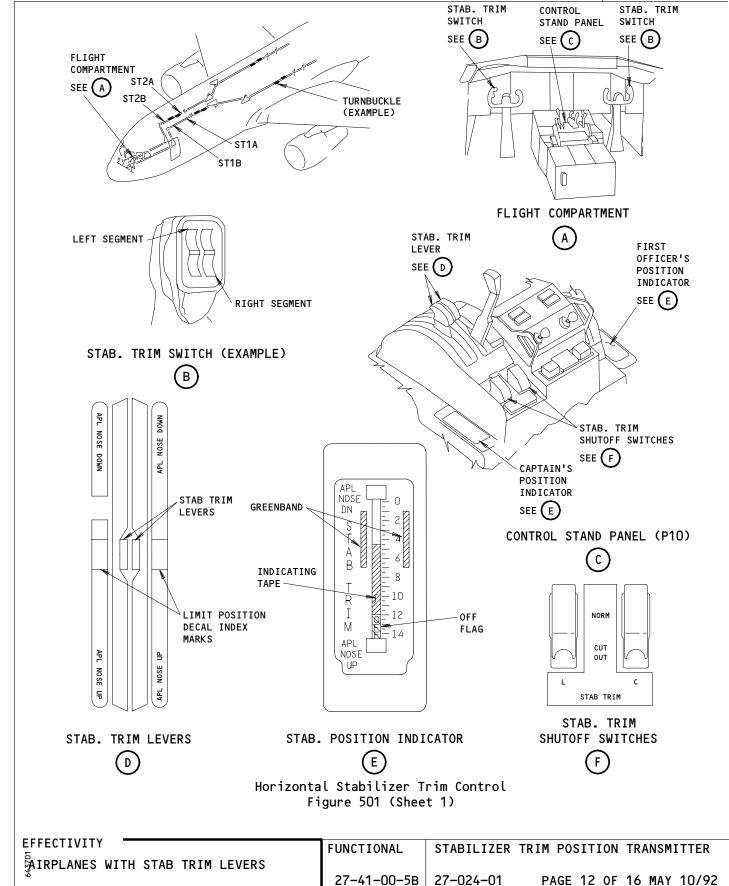
AIRLINE CARD NO.

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				TASK CARD	
MECH	INSP				
			3)	Move the flap lever to the 5-unit detent to ext flaps to the 5 unit detent.	end the TE
			4)	Move the captain's or first officer's stabilize control wheel switches to the APL NOSE DN posit until the stabilizer stops.	
			5)	Put the LEFT STAB TRIM SHUTOFF valve switch on panel in the CUTOUT position.	the P10
			6)	Open this circuit breaker on the P11 panel and D0-NOT-CLOSE tag:	attach a
				a) 11C12, STAB TRIM SHUTOFF L	
			7)	Make sure that Dimension A on the stabilizer tractuator is $0.92 + 0.15/-0.42$ inches (23.4 +3.8/millimeters) (Fig. 502).	
			8)	Put the flap lever in the FLAP UP detent to ret flaps.	ract the
		G. Put th	e Airpla	ne Back to Its Usual Condition	
				e power from the left and center hydraulic syst 1–00/201).	ems
		(2) M	ake sure	that these circuit breakers on the P11 panel a	re closed:
		(a) 11C1	2, STAB TRIM SHUTOFF L	
		(b) 11C1	3, STAB TRIM SHUTOFF CENTER	
				that the LEFT and CENTER STAB TRIM SHUTOFF val O panel are in the NORM position.	ve switches
		(4) R	emove th	e control wheel adapter equipment.	
		(5) R	emove el	ectrical power (AMM 24-22-00/201).	
		(6) C	lose the	e access door, 312AR (AMM 06-42-00/201).	

AIRLINE CARD NO.

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767 TASK CARD



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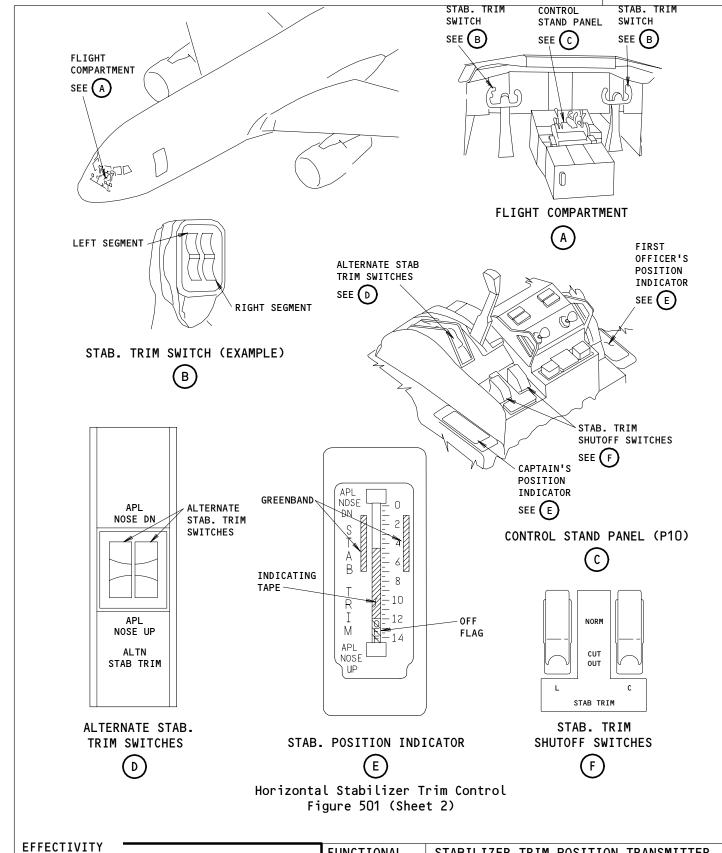
BOEING CARD NO.

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STABILIZER TRIM POSITION TRANSMITTER

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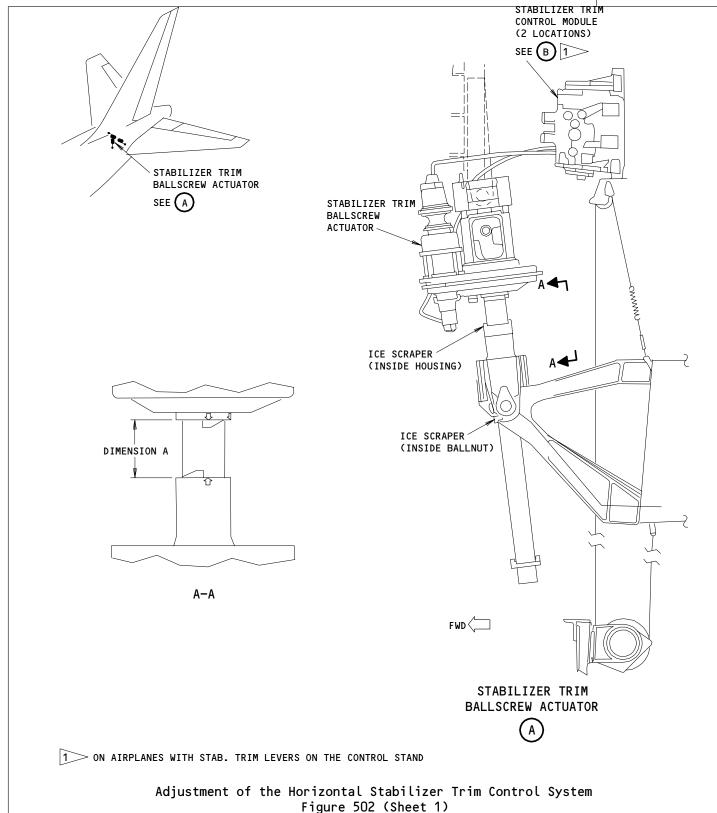
SWITCHES

ÄAIRPLANES WITH ALTERNATE STAB TRIM

AIRLINE CARD NO.

SAS





FUNCTIONAL

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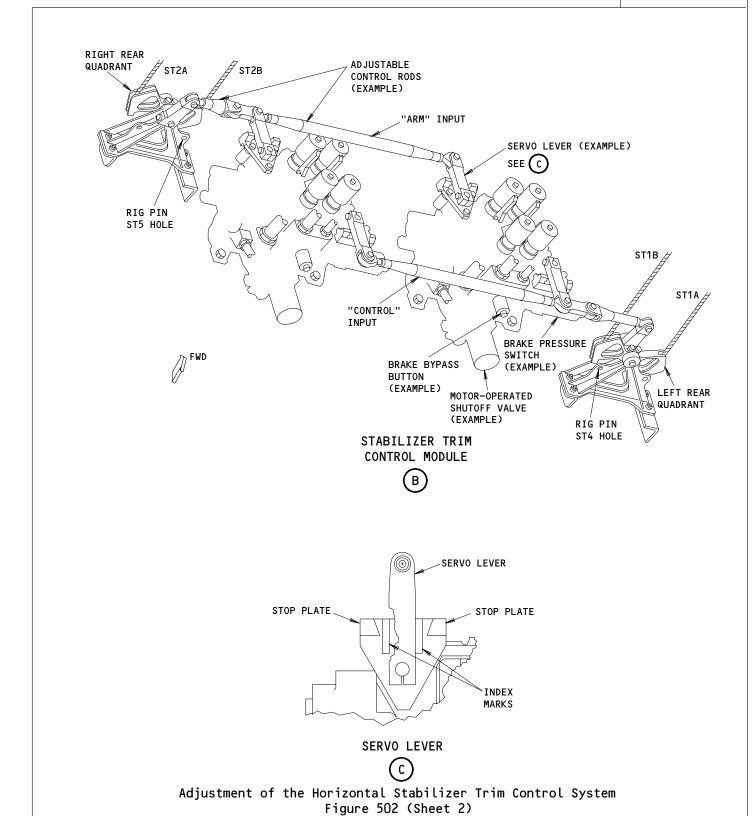
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EFFECTIVITY

AIRLINE CARD NO.

SAS

767 TASK CARD



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3

EFFECTIVITY

🛱 IRPLANES WITH STAB TRIM LEVERS

STABILIZER TRIM POSITION TRANSMITTER

FUNCTIONAL

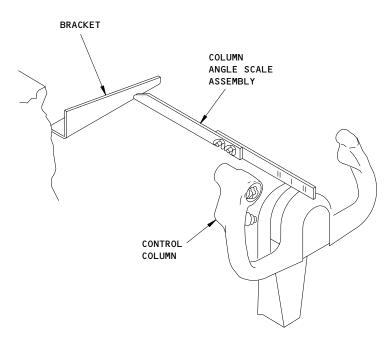
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AIRLINE CARD NO.

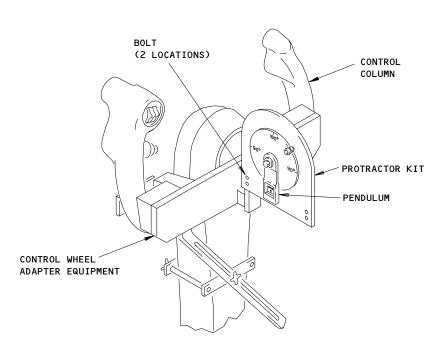
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BOEING 767 TASK CARD



CONTROL COLUMN ANGLE SCALE INSTALLATION



PROTRACTOR INSTALLATION - FORE AND AFT CONTROL MEASUREMENT

Control Column Angle Scale and Protractor Installation Fig 505

EFFECTIVITY	FUNCTIONAL	STABILIZER	TRIM POSITION	TRANSMITTER
752958	27-41-00-5B	27-024-01	PAGE 16 OF	16 AUG 22/00

STATION
TAIL NO.
DATE



BOEING CARD NO. 27-025-01

AIRLINE CARD NO.

SKILL	WORK ARE	EA	REI	LATED TASK			IN	ITERVAL		PHASE	MPD REV	1	VISION
AIRPL	CREW CA	BIN					3C			13636	002	AUG	22/05
TAS	K				TITLE				STRUCTURAL ILLUSTRATION RE	FERENCE	AF	PLICABI	LITY
OPERA	TIONAL	STAB	TRIM	CNTRL	COL	CUTOFF	SWITCH	ES			AIRPLAN	E	ENGINE
											ALL		ALL
	ZONES								ACCESS PANELS				
211													

MPD ITEM NUMBER MECH INSP

OPERATIONALLY CHECK HORIZONTAL STABILIZER TRIM CONTROL COLUMN CUT-OFF SWITCHES.

27-41-00-5C

- 1. Stabilizer Trim Control Column Cut-off Switch Test
 - A. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic System
 - B. Access
 - (1) Location Zones 211/212 Control Cabin
 - C. Procedure
 - (1) Supply electrical power (AMM 24-22-00/201).

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

- (2) Supply power to the left and center hydraulic systems (AMM 29-11-00/201).
- (3) Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the CUTOUT position (Fig. 501).

EFFECTIVITY STAB TRIM CNTRL COL CUTOFF SWITCHES OPERATIONAL 27-41-00-5c | 27-025-01 PAGE 1 OF 5 APR 22/01

27-025-01

AIRLINE CARD NO.

BOEING 767 TASK CARD

MECH INSP

- (4) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position.
- (5) Make sure these circuit breakers on the P11 panel are closed:
 - (a) 11H17, FLT CONT SHUTOFF TAIL LEFT
 - (b) 11H18, FLT CONT SHUTOFF TAIL CTR

DO NOT LET THE BALLSCREW ACTUATOR HIT THE MECHANICAL STOPS. CAUTION: DAMAGE TO THE BALLSCREW ACTUATOR AND THE STABILIZER CAN OCCUR.

- (6) Move the captain's or first officer's stabilizer trim control wheel switches to the APL NOSE DN position and hold until the stabilizer stops.
- (7) Move the captain's or first officer's stabilizer trim control wheel switches to the APL NOSE UP position and hold.
- (8) With the stabilizer trim control wheel switches held in the APL NOSE UP position, slowly push the control column forward.
 - Make sure that the stabilizer stops before it gets to the leading edge down travel limit.
- Move the control columns to the neutral position and let the stabilizer move until it stops.
- (10) Release the stabilizer trim control wheel switches.
- (11) Move the captain's or first officer's stabilizer trim control wheel switches to the APL NOSE DN position and hold.
- (12) With the stabilizer trim control wheel switches held in the APL NOSE DN position, slowly pull the control column aft.
 - Make sure that the stabilizer stops before it gets to the leading edge up travel limit.
- (13) Move the control columns to the neutral position and let the stabilizer move until it stops.
- (14) Release the stabilizer trim control wheel switches.

EFFECTIVITY

OPERATIONAL

STAB TRIM CNTRL COL CUTOFF SWITCHES

27-41-00-5c | 27-025-01

PAGE 2 OF 5 AUG 22/05

27-025-01

TASK CARD

AIRLINE CARD NO.

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		(15)	Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position.
		(16)	Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the CUTOUT position.
		(17)	Move the captain's or first officer's stabilizer trim control wheel switches to the APL NOSE DN position and hold until the stabilizer stops.
		(18)	Move the captain's or first officer's stabilizer trim control wheel switches to the APL NOSE UP position and hold.
		(19)	With the stabilizer trim control wheel switches held to the APL NOSE UP position, slowly push the elevator control column forward.
			(a) Make sure that the stabilizer stops before it gets to the leading edge down travel limit.
		(20)	Move the control columns to the neutral position and let the stabilizer move until it stops.
		(21)	Release the stabilizer trim control wheel switches.
		(22)	Move the captain's or first officer's stabilizer trim control wheel switches to the APL NOSE DN position and hold.
		(23)	With the stabilizer trim control wheel switches held to the APL NOSE DN position, slowly pull the control column aft.
			(a) Make sure that the stabilizer stops before it gets to the leading edge up travel limit.
		(24)	Move the control columns to the neutral position and let the stabilizer move until it stops.
		(25)	Release the stabilizer trim control wheel switches.
		(26)	Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position.
		(27)	Remove the power from the left and center hydraulic systems (AMM 29-11-00/201).
		(28)	Remove electrical power (AMM 24-22-00/201).

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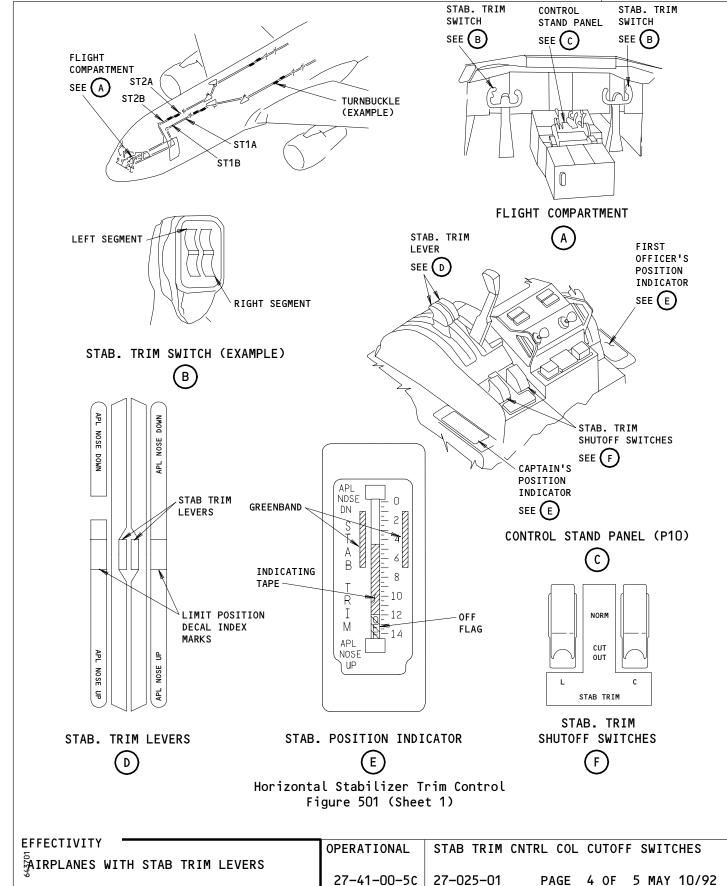
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EFFECTIVITY

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BOEING 767 TASK CARD

AIRLINE CARD NO.



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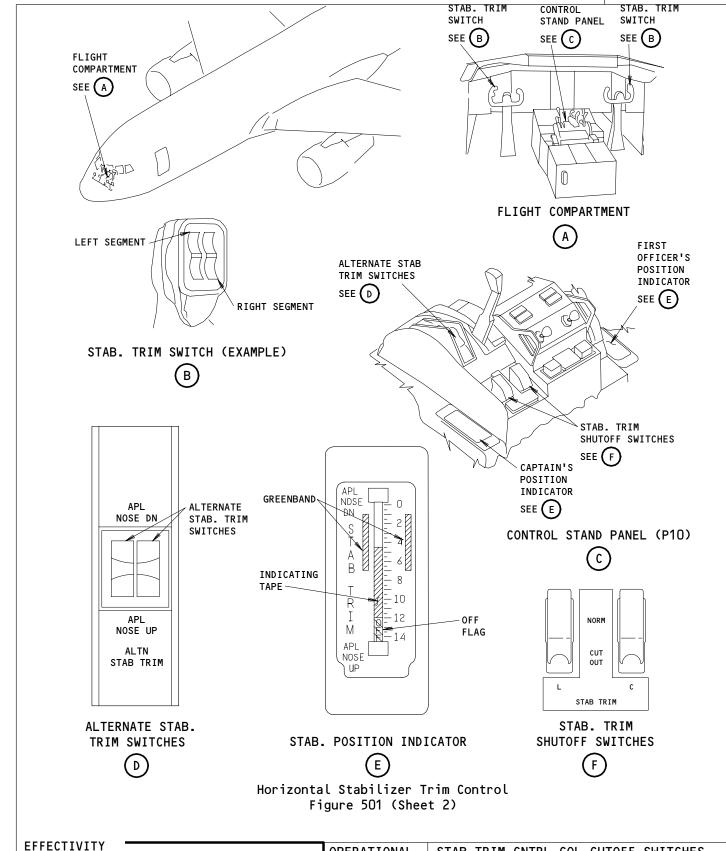
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STAB TRIM CNTRL COL CUTOFF SWITCHES

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27-41-00-5C

27-025-01

SWITCHES

ÄAIRPLANES WITH ALTERNATE STAB TRIM

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	L NO.		SAS	Ø	767 TASK CARD	.	
SKILL	WORK ARI	EA	RELATED TASK		INTERVAL		PHASE
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TASK			T:	ITLE		STRUCTURAL ILLUSTRATION RE	FERENCE

ACCESS PANELS

211

OPERATIONAL

ZONES

MECH INSP

OPERATIONALLY CHECK HORIZONTAL STABILIZER TRIM CUT-OUT (PEDESTAL) SWITCHES.

27-41-00-5D

MPD ITEM NUMBER

BOEING CARD NO.

AIRLINE CARD NO.

TASK CARD REVISION

APR 22/01 APPLICABILITY
AIRPLANE ENGINE

ALL

27-026-01

MPD

REV 002

ALL

1. Stabilizer Trim Shutoff Switch Test

NOTE: This is a scheduled maintenance task.

STAB TRIM CUTOUT (PEDESTAL) SWITCHES

- References Α.
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
- B. Access
 - (1) Location Zones 211/212 Control Cabin
- C. Procedure
 - (1) Supply electrical power (AMM 24-22-00/201).

KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN WARNING: HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT WHEN

HYDRAULIC POWER IS SUPPLIED.

- (2) Supply power to the left and center hydraulic systems (AMM 29-11-00/201).
- (3) Make sure these circuit breakers on the P11 panel are closed:

EFFECTIVITY OPERATIONAL STAB TRIM CUTOUT (PEDESTAL) SWITCHES 27-41-00-5D 27-026-01 PAGE 1 OF 5 APR 22/01

27-026-01

AIRLINE CARD NO.

			TASK CARD
MECH	INSP		
			(a) 11C12, STAB TRIM SHUTOFF L
			(b) 11C13, STAB TRIM SHUTOFF CENTER
		(4)	Put the LEFT and CENTER STAB TRIM SHUTOFF valve switches on the P10 panel in the CUTOUT position.
		(5)	Make sure that LEFT, RIGHT, and CENTER FLT CONT SHUTOFF TAIL valve switches on the P61 panel are OFF.
			(a) Make sure that the stabilizer does not move.
		(6)	AIRPLANES WITH ALT STAB SWITCHES; Move the alternate stab switches full forward and then full aft slowly.
			(a) Make sure that the stabilizer does not move.
		(7)	Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position.
		<u>CAUT</u>	ION: DO NOT LET THE BALLSCREW ACTUATOR HIT THE MECHANICAL STOPS. DAMAGE TO THE BALLSCREW ACTUATOR AND THE STABILIZER CAN OCCUR.
		(8)	AIRPLANES WITH STAB TRIM LEVERS; Move the stab trim levers full forward and hold.
			(a) Make sure that the stabilizer moves up.
		(9)	AIRPLANES WITH ALT STAB SWITCHES; Move the alternate stab switches full forward and hold.
			(a) Make sure that the stabilizer moves up.
		(10)	Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the CUTOUT position.
		(11)	Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position.
		(12)	AIRPLANES WITH STAB TRIM LEVERS; Move the stab trim levers full aft and hold.
			(a) Make sure that the stabilizer moves down.

BOEING CARD NO.

27-026-01

AIRLINE CARD NO.



MECH INSP (13) AIRPLANES WITH ALT STAB SWITCHES; Move the alternate stab switches full aft and hold. (a) Make sure that the stabilizer moves down. (14) Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position. (15) Remove the power from the left and center hydraulic systems (AMM 29-11-00/201).(16) Remove electrical power (AMM 24-22-00/201).

EFFECTIVITY

OPERATIONAL

AIRLINE CARD NO.

BOEING 767

TASK CARD

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27-026-01

STAB. TRIM STAB. TRIM CONTROL SWITCH STAND PANEL SWITCH SEE B SEE (B) SEE (c) FLIGHT COMPARTMENT ST2A SEE (A **TURNBUCKLE** (EXAMPLE) ST1A ST1B FLIGHT COMPARTMENT STAB. TRIM LEFT SEGMENT FIRST LEVER OFFICER'S SEE (D) POSITION INDICATOR SEE (E) RIGHT SEGMENT STAB. TRIM SWITCH (EXAMPLE) (B) DOWN STAB. TRIM NOSE NOSE SHUTOFF SWITCHES DOWN APLCAPTAIN'S POSITION APL NOSE INDICATOR STAB TRIM GREENBAND -SEE (E) **LEVERS** DΝ CONTROL STAND PANEL (P10) C В INDICATING TAPE ~ R LIMIT POSITION -12 OFF NORM DECAL INDEX М FLAG 14 MARKS APL CUT ΑPL NOSE Ъ OUT UР NOSE NOSE STAB TRIM STAB. TRIM STAB. POSITION INDICATOR SHUTOFF SWITCHES STAB. TRIM LEVERS (E) Horizontal Stabilizer Trim Control Figure 501 (Sheet 1) **EFFECTIVITY** STAB TRIM CUTOUT (PEDESTAL) SWITCHES OPERATIONAL ∰AIRPLANES WITH STAB TRIM LEVERS 27-41-00-5D 27-026-01 PAGE 4 OF 5 MAY 10/92

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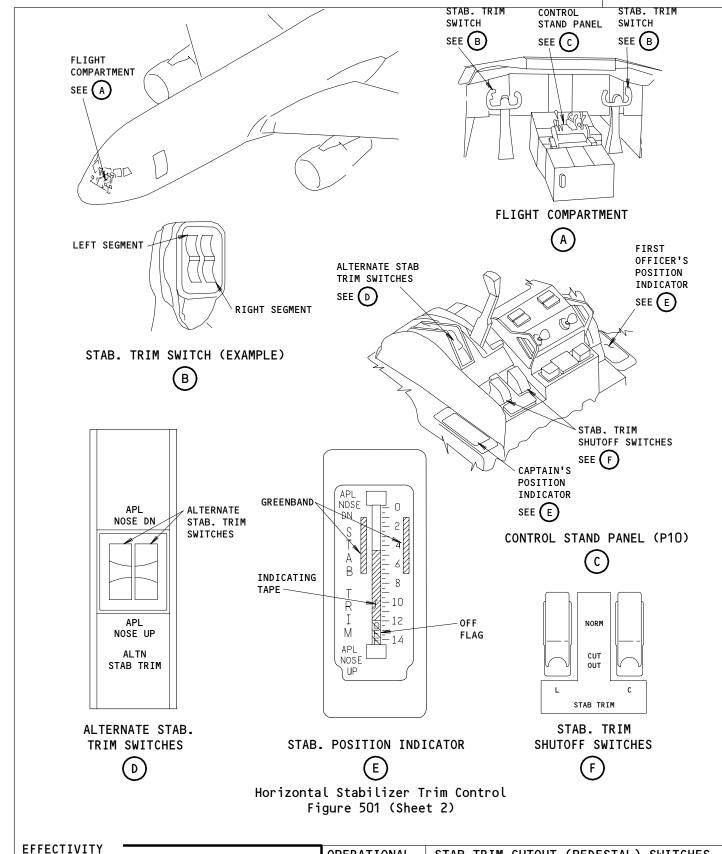
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AIRLINE CARD NO.

BOEING CARD NO.



SWITCHES

ÄAIRPLANES WITH ALTERNATE STAB TRIM

OPERATIONAL

27-41-00-5D

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STAB TRIM CUTOUT (PEDESTAL) SWITCHES

PAGE 5 OF 5 MAY 10/92

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AIRP	L s	TAB CO	MPT				1 C					112	12 002	FEB	10/90
	TASK CK/I	NSP	STAB	TRIM	ACTUATOR		CHMENT	GIMBAL	STRUCTUR	AL ILLUST	RATION RE	EFERENCE	AIRPLA		ENGINE
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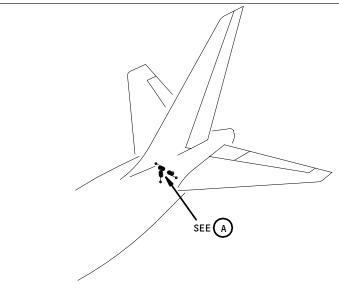
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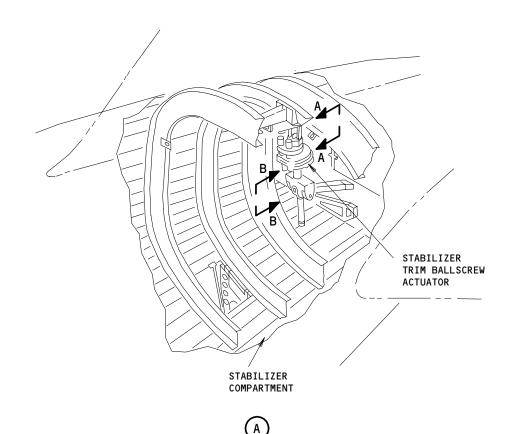
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Stabilizer Trim Ballscrew Actuator Gimbal Pins Figure 403 (Sheet 1)

EFFECTIVITY

CHECK/INSP

STAB TRIM ACTUATOR ATTACHMENT GIMBAL

27-41-10-B

27-028-01

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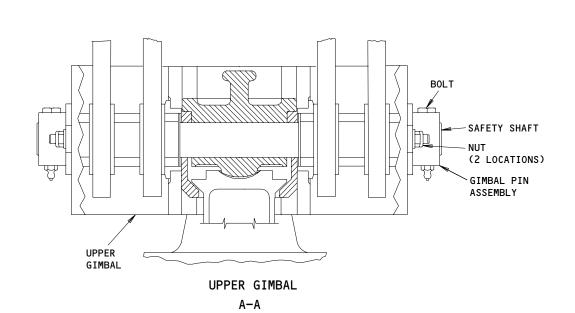
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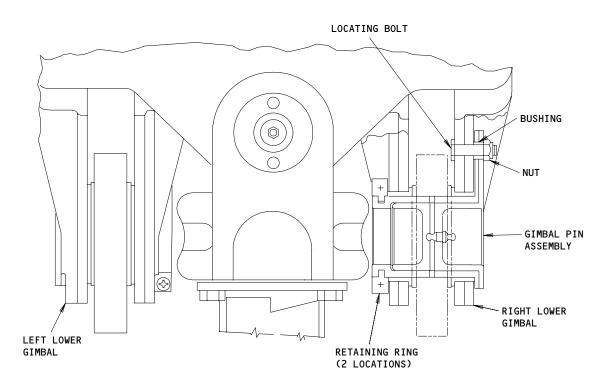
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AIRLINE CARD NO.





LOWER GIMBAL B-B

Stabilizer Trim Ballscrew Actuator Gimbal Pins Figure 403 (Sheet 2)

EFFECTIVITY	CHECK/INSP	STAB TRIM	ACTUATOR	ATTACH	MENT GIMBAL
	27-41-10-B	27-028-01	PAGE	3 OF	3 FEB 10/90

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STATION	
TAIL NO.	
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BOEING CARD NO. 27-030-01

AIRLINE CARD NO.

SKILL WORK AREA RELATED TASK INTERVAL MPD TASK CARD PHASE REVISION REV 02000 HRS 002 NOTE AUG 22/08 AIRPL STAB COMPT 104XX APPLICABILITY
ANE ENGINE STRUCTURAL ILLUSTRATION REFERENCE AIRPLANE CHECK/INSP STAB TRIM ACTUATOR BALLSCREW/NUT **ALL** ALL ZONES ACCESS PANELS 311 312 312AR

MECH INSP

MPD ITEM NUMBER

INSPECT (DETAILED) THE HORIZONTAL STABILIZER JACKSCREW.

27-41-10-6B

INTERVAL NOTE: 2000 HOURS OR 1 YEAR, WHICHEVER COMES FIRST.

1. Detailed Visual Inspection of the Stabilizer Ballscrew and Ballnut (Fig. 604)

NOTE: This is a scheduled maintenance task.

- A. References
 - (1) AMM 27-41-10/601, Stabilizer Ballscrew to Ballnut Freeplay Procedure
 - (2) AMM 27-41-10/401, Stabilizer Trim Actuator Removal/Installation
- B. Access
 - (1) Location Zones
 311/312 Area Aft of the Pressure Bulkhead to BS 1725
 - (2) Access Panel
 312AR Service Access Door
- C. Prepare for the Detailed Visual Inspection
 - (1) Supply electrical power (AMM 24-22-00/201).

CHECK/INSP STAB TRIM ACTUATOR BALLSCREW/NUT

27-41-10-6B 27-030-01 PAGE 1 OF 6 AUG 22/05

BOEING CARD NO.

27-030-01

AIRLINE CARD NO.



MECH INSP

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

- (2) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (3) Use the STAB TRIM levers or switches to move the stabilizer to approximately 4 units of trim, as shown on the stabilizer position indicators that are on the control stand panel.
- (4) Remove the pressure from the center hydraulic system (AMM 29-11-00/201).
- (5) Put the L and C STAB TRIM shutoff switches on the P10 panel to the CUTOUT position.
- (6) Open these circuit breakers on the overhead panel, P11, and attach D0-NOT-CLOSE tags:
 - (a) 11A36, ALT STAB TRIM (IF INSTALLED)
 - (b) 11C12, STAB TRIM SHUTOFF L
 - (c) 11C13, STAB TRIM SHUTOFF CENTER
- D. Stabilizer Ballscrew/Ballnut Visual Inspection Procedure (Fig. 604)

WARNING: STAY OFF THE SERVICE ACCESS DOOR, 312AR. YOUR WEIGHT CAN RELEASE THE SPRING-LOADED LATCHES ON THE DOOR. IF YOU FALL THROUGH THE DOOR, INJURIES CAN OCCUR.

- (1) Get access to the stabilizer trim actuator through the Service Access Door, 312AR (AMM 06-42-00/201).
- (2) Inspect the ballscrew and ballnut for signs of corrosion.
 - (a) Look for metallic dust particles on or around the ballscrew and ball nut.

EFFECTIVITY

CHECK/INSP

STAB TRIM ACTUATOR BALLSCREW/NUT

27-41-10-6B

27-030-01

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AIRLINE CARD NO.

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MECH INSP

(b) Examine the grease on the ballscrew for metal debris.

NOTE: Metallic debris in the grease may indicate degradation of the balls in the ballnut.

- (c) If you find metal debris or corrosion, replace the stabilizer trim ballscrew actuator (AMM 27-41-10/401).
- Small amounts of grease may come out of the ballnut at other locations than the grease vent, or bottom seal for Umbra Ballnuts, and from the top and bottom seal on the Beaver Ballnuts.
 - If more than a small amount of grease is visible at these other locations, replace the stabilizer trim ballscrew actuator (AMM 27-41-10/401).
- Clean the ballscrew by wiping any old grease and dirt from the ballscrew threads.

NOTE: Use a clean, dry, non-abrasive cloth.

- (5) Visually inspect the stabilizer ballscrew ballnut.
 - If you find damage, cracking, corrosion, or obvious signs of wear, replace the stabilizer trim actuator (AMM 27-41-10/401).
- Inspect the ballscrew for the following:
 - Check the ballscrew threads for cross-threading, distortion, or (a) stripping.
 - Check the ballscrew threads for metal debris, pitting, gouging, corrosion, spalling, or brinelling.
 - Check for obvious differences in thread shape between the thread grooves in the lower, middle, and upper portions of the ballscrew.
 - Check the ballscrew for damage or cracking.
- Remove the DO-NOT-CLOSE tags and close these circuit breakers on the overhead panel:
 - (a) 11A36, ALT STAB TRIM (IF INSTALLED)

EFFECTIVITY

CHECK/INSP STAB TRIM ACTUATOR BALLSCREW/NUT

27-41-10-6B

27-030-01

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27-030-01

27-030-01

SAS BOEING
767
TASK CARD

MECH INSP

- (b) 11C12, STAB TRIM SHUTOFF L
- (c) 11C13, STAB TRIM SHUTOFF CENTER
- (8) Set the L STAB TRIM and C STAB TRIM shutoff switch to the NORM position.

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

(9) Use the STAB TRIM levers or switches to Move the stabilizer up and down from 4 units of trim.

NOTE: This will expose the covered threads of the ballscrew.

- (a) Repeat the steps above to examine the newly exposed threads of the ballscrew.
- (10) Remove the pressure from the center hydraulic system (AMM 29-11-00/201).
- (11) Put the L and C STAB TRIM shutoff switches on the P10 panel to the CUTOUT position.
- (12) Open these circuit breakers on the overhead panel, P11, and attach D0-N0T-CLOSE tags:
 - (a) 11A36, ALT STAB TRIM (IF INSTALLED)
 - (b) 11C12, STAB TRIM SHUTOFF L
 - (c) 11C13, STAB TRIM SHUTOFF CENTER
 - (d) If you find any problems listed above, replace the stabilizer trim ballscrew actuator (AMM 27-41-10/401).
- (13) Inspect the ballnut return tubes for the following:
 - (a) Visually inspect the ballnut return tubes to see if they have lifted from the ballnut or are damaged in a way that would restrict free movement of the ball bearings.

EFFECTIVITY

CHECK/INSP | STAB TRIM ACTUATOR BALLSCREW/NUT

27-41-10-6B

27-030-01

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27-030-01

SAS BOEING TASK CARD

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- 1) If any of the return tubes have lifted from the ballnut, or are dented or damaged, replace the stabilizer trim ballscrew actuator (AMM 27-41-10/401).
- Check the exterior of the ballnut, stabilizer actuator, and the area below the actuator for ball bearings.

NOTE: The ball bearings used inside the ballnut are 0.375 inch (9.53 millimeters) diameter.

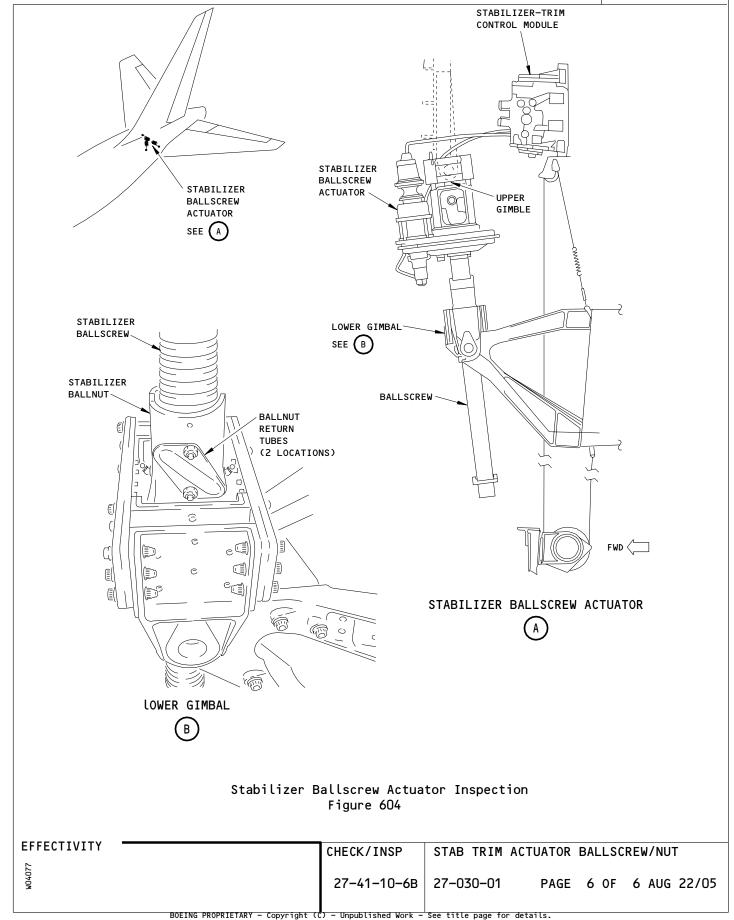
- 1) If any ball bearings are found, replace the stabilizer trim ballscrew actuator (AMM 27-41-10/401).
- (14) Visually examine the upper and lower gimbals for cracks, corrosion, and parts that are worn or loose.
 - (a) If it is necessary, replace or repair the gimbals.
- Put the Airplane Back to Its Usual Condition
 - (1) Unless you will immediately perform the check for stabilizer ballscrew to ballnut freeplay (AMM 27-41-10/601), lubricate the stabilizer ballscrew and ballnut (AMM 12-21-05/301).
 - (2) Close the Service Access Door for the forward stabilizer compartment, 312AR (AMM 06-42-00/201).
 - (3) Set the C STAB TRIM shutoff switch and L STAB TRIM shutoff switch to the NORM position.
 - (4) Remove the DO-NOT-CLOSE tags and close the following circuit breakers:
 - (a) 11A36, ALT STAB TRIM (IF INSTALLED)
 - (b) 11C12, STAB TRIM SHUTOFF L
 - (c) 11C13, STAB TRIM SHUTOFF CENTER

27-030-01

AIRLINE CARD NO.

SAS





STATION	
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BOEING CARD NO. 27-033-01

AIRLINE CARD NO.

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SKILL	WORK ARI	EA	REL	_ATED TASK	INTE	ERVAL		PHASE	MPD		K CARD
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ELECT	MAIN EE	CTR			2A	((#)	10202	017	AUG	22/08
TASK		TITLE		S1	TRUCTURAL ILLUSTRATION RE	FERENCE		PLICABIL			
OPERA	TIONAL	FLAP	/SLAT	ELECTRONIC	S UNIT (FSEU)				AIRPLAN	E	ENGINE
									ALL		ALL
	ZONES					A	CCESS PANELS				
119				119AL							

MECH INSP

PERFORM BITE TEST OF FLAP/SLAT ELECTRONICS UNIT (FSEU). (#) CMR FREQUENCY IS 4000 HOURS FOR THE 767-200/-300. THIS IS NOT A CMR FOR THE 767-400ER.

27-51-00-5D

MPD ITEM NUMBER

- Flap Slat Electronics Unit Test
 - A. References
 - (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
 - (2) AMM 24-22-00/201, Electrical Power Control
 - Prepare for the System Test
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Make sure the COMPUTER switch on the EICAS DISPLAY select panel, P9, is in the L position.
 - (3) Make sure the TE flaps and the LE slats are in the fully retracted position.
 - (4) Make sure the flap control lever is in the zero (FLAPS UP) detent (Fig. 511).
 - (5) Open the access door, 119AL, to get access to the main equipment center (AMM 06-41-00/201).
 - AIRPLANES WITH A -53 OR EARLIER FSEU; Test the Flap/Slat Electronics Unit (FSEU) (Fig. 503)
 - (1) Push the TEST button on the front panel of the FSEU (E2 equipment rack, main equipment center) and make sure that all the lights come on.

EFFECTIVITY OPERATIONAL FLAP/SLAT ELECTRONICS UNIT (FSEU) 27-51-00-5D 27-033-01 PAGE 1 OF 6 DEC 22/07

AIRLINE CARD NO.



MECH INSP

- (2) Push the BIT/VERIFY switch and look for the TEST COMPLETE light to come on. Make sure that no fault lights come on.
- D. AIRPLANES WITH A -63 FSEU; Test the Flap/Slat Electronics Unit (FSEU) (Fig. 503)
 - (1) Do a test of the BITE display on the FSEU:
 - (a) Push the ON/OFF button on the front panel of the FSEU to turn on the display.

NOTE: The display will show "EXISTING FAULTS?"

- (b) Push the down arrow until GROUND TESTS? shows on the display.
- (c) Push the YES button to select GROUND TESTS? on the FSEU.
- (d) Push the down arrow until DISPLAY TEST? shows on the display.
- (e) Push the YES button to perform the DISPLAY TEST? on the FSEU.
- (f) Make sure the display characters on the front panel of the FSEU turn on in groups of four for approximately 2 seconds.
- (2) Do a check for EXISTING FAULTS with the FSEU:
- (3) Push the LE ALTN and TE ALTN arming switches in the flight compartment to arm the alternate flap/slat drive system and make sure the ALTN switch lights come on.
- (4) Make sure the "Alternate Flaps/Slat" selector switch is turned to the "UP" position.
- (5) Make sure the ALTN switches are in the armed positions.

<u>NOTE</u>: Do not run the test if the flaps are moving. Make sure the flap control lever is in the zero (FLAPS UP) detent (Fig. 511).

(a) Push the menu button.

NOTE: The display will show EXISTING FAULTS?

OPERATIONAL FLAP/SLAT ELECTRONICS UNIT (FSEU)

27-51-00-5D 27-033-01 PAGE 2 OF 6 AUG 22/08

AIRLINE CARD NO.

SAS BOEING

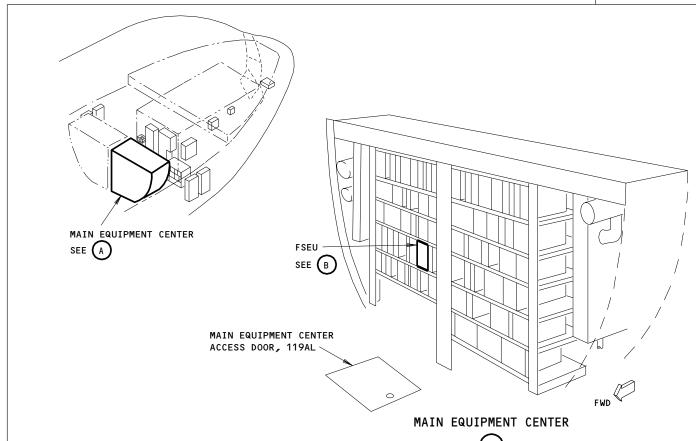
				S	SAS	767	AIRLINE CARD NO.
					_	TASK CARD	
MECH	INSP						
				(b)	Puch t	he YES button to select the EXISTING FAULTS?	test
				(6)			test.
					NOTE:	The display will show TEST IN PROGRESS.	
				(c)	The me	essage "NO FAULTS" should show on the display.	
					NOTE:	If "N FLTS FOUND" shows on the FSEU BITE diswhere N is the number of faults detected, maall the fault messages and maintenance messayou can use the up and down arrow buttons to through the list of messages.	ke a list of nge numbers.
				(d)		corrective action shown in table A, for the 27-51-00/101, Fig. 104A).	faults found
		Ε.	Put	the A	irplane	Back to Its Usual Condition	
			(1)			occess door, 119AL, for the main equipment cereouver.	nter
			(2)	alte	rnate d	the alternate flap arming switches for the fla Irives in the flight compartment are set to of its off).	
			(3)	Remo	ve elec	trical power (AMM 24-22-00/201).	
	1 1						

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AIRLINE CARD NO.

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767 TASK CARD



FSEU-BITE INSTRUCTIONS ○ M838 FSPM-LEFT (SECT 2) ○ CENTER (SECT 1) M840 FSPM-RIGHT (SECT 3) ○ M604 FLAP LEVER
POSITION XMTR 1 (SECT 2) ○ POSITION XMTR 2 (SECT 1) ↑ M473 FLAP POSITION ↑ M492 FLAP POSITION ↑ XMTR 1-LEFT (SECT 1) M548 OUTBD SLAT PDU
 RVDT MISRIG S846 HYD PRESSURE SWITCH (SECT 1) M603 FLAP LEVER RVDT MISRIG (SECT 1) M476 FLAP POSITION XMTR 4-LEFT (SECT 1) M489 FLAP POSITION XMTR 8-RIGHT (SECT 1) M100 AIR DATA
COMPUTER-LEFT (SECT 1)

M101 AIR DATA
COMPUTER-RIGHT (SECT 1) FLAP/SLAT TESTING (SECT 2) ELECTRONIC UNIX

GREEN "TEST COMPLETE" LED

FSEU

B

Flap/Slat Electronics Unit (FSEU)
Figure 503 (Sheet 1)

#AIRPLANES WITH A -53 FSEU

OPERATIONAL

FLAP/SLAT ELECTRONICS UNIT (FSEU)

27-51-00-5D

27-033-01

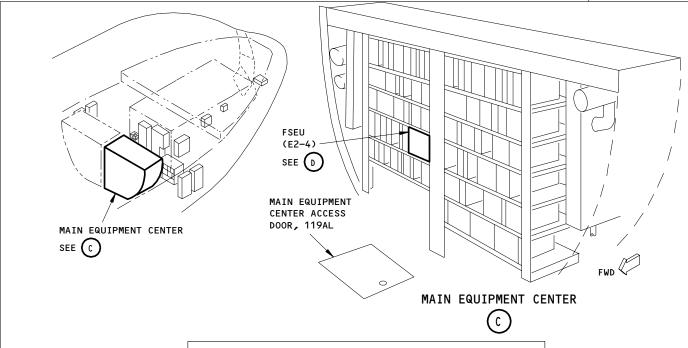
PAGE 4 OF 6 APR 22/01

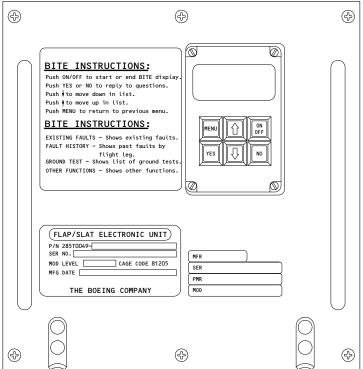
27-033-01

AIRLINE CARD NO.

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(AIRPLANES WITH A -63 FSEU)

(D)

Flap/Slat Electronics Unit (FSEU) Figure 503 (Sheet 2)

AIRPLANES WITH A −63 FSEU

OPERATIONAL

FLAP/SLAT ELECTRONICS UNIT (FSEU)

27-51-00-5D

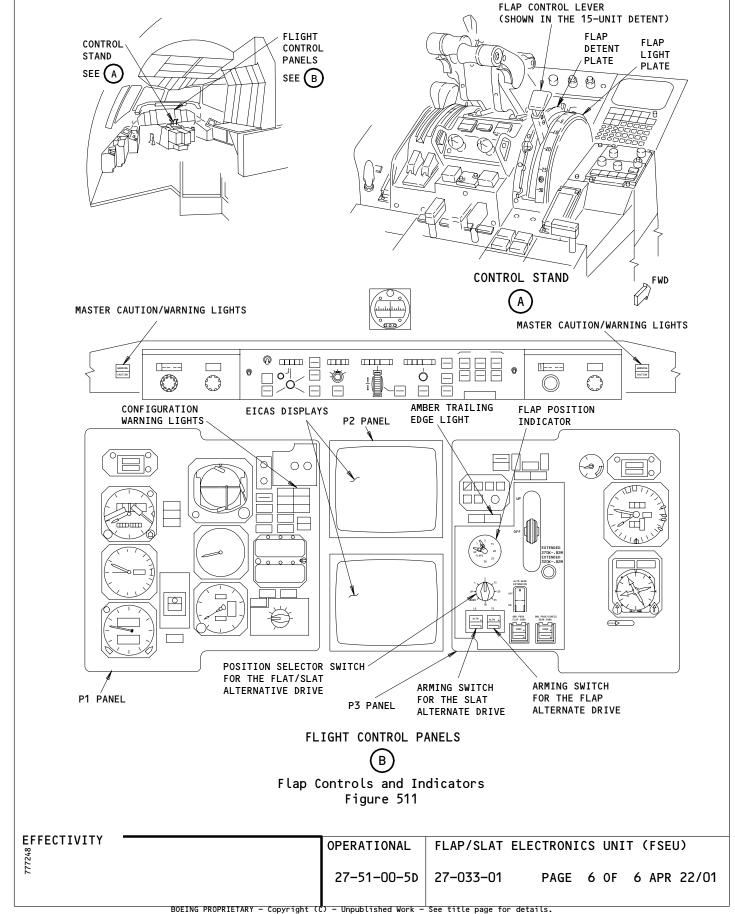
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AIRLINE CARD NO.

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767
TASK CARD



STA	TION		
TAI	L NO.		SAS
D	ATE		
SKILL	WORK ARI	EA	RELATED TASK

BOEING CARD NO. 27-036-01 AIRLINE CARD NO. 767

PHASE

REV REVISION 009 DEC 22/00 CREW CABIN 1 C AIRPL 11212 STRUCTURAL ILLUSTRATION REFERENCE

TASK CARD

INTERVAL

APPLICABILITY
LANE ENGINE AIRPLANE **OPERATIONAL** ALT TE FLAP POWER DRIVE SYSTEM NOTE ALL

ZONES ACCESS PANELS

212

MPD ITEM NUMBER MECH INSP

OPERATIONALLY CHECK TE FLAP ALTERNATE POWER DRIVE SYSTEM.

27-51-00-5A

MPD

TASK CARD

AIRPLANE NOTE: SB 767-27-0096. APPLICABLE TO AIRPLANE

LINE NUMBERS 403 AND ON AND THOSE

INCORPORATING THIS SERVICE BULLETIN OR

EQUIVALENT.

1. Flap Alternate Power and Drive - Test

- References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
- B. Prepare for the System Test
 - (1) Supply electrical power (AMM 24-22-00/201).
 - Make sure the TE flaps and the LE slats are in the fully retracted position.
 - (3) Make sure the flap control lever is in the zero (FLAPS UP) detent (Fig. 511).
- Test for the Flap Alternate Power and Drive (Fig. 511)

KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES AND WARNING: WHEEL WELLS WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. WHEN YOU MOVE THE FLAP CONTROL LEVER WITH THE HYDRAULIC SYSTEM PRESSURIZED, THE FLAPS AND FLAP DRIVE MECHANISMS WILL MOVE QUICKLY. INJURY TO PERSONS OR DAMAGE TO

EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

EFFECTIVITY OPERATIONAL ALT TE FLAP POWER DRIVE SYSTEM 27-51-00-5A 27-036-01 PAGE 1 OF 6 DEC 22/00

27-036-01

SAS BOEING
767
TASK CARD

AIRLINE CARD NO.

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CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (1) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (2) Push the TE arming switch for the flap alternate drive to arm the flap alternate drive. Do the checks that follow:
 - (a) Make sure the ALTN light on the arming switch comes on immediately.
 - (b) Make sure that these conditions occur in seven seconds after you push the arming switch:
 - 1) The amber TRAILING EDGE light comes on
 - 2) The EICAS message, TE FLAP DISAGREE, shows on the top display in the flight compartment.
- (3) Move the flap control lever to the 5-unit detent and do the checks that follow:
 - (a) Make sure the slats extend to the intermediate position.
 - (b) Make sure the flaps do not move.
- (4) Move the flap control lever to the zero (FLAPS UP) detent and make sure the slats move to the fully retracted position.
- (5) Remove the power from the center hydraulic system (AMM 29-11-00/201).

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM THE FLAPS WHEN YOU OPERATE THE FLAP ALTERNATE DRIVE. THE ACCIDENTAL MOVEMENT OF THE FLAPS CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

CAUTION: DO NOT OPERATE THE ALTERNATE DRIVE MOTOR CONTINUOUSLY FOR MORE THAN 4 MINUTES. DO NOT OPERATE THE MOTOR AGAIN UNTIL IT IS COOL FOR AT LEAST 20 MINUTES TO PREVENT DAMAGE TO THE MOTOR.

EFFECTIVITY

OPERATIONAL | ALT TE FLAP POWER DRIVE SYSTEM

27-51-00-5A

27-036-01

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767
TASK CARD

AIRLINE CARD NO.

	(6)	Turn the position selector switch for the flap/slat alternate drive to the 5-unit detent, and do the checks that follow:

NOTE: The amber TRAILING EDGE light will go off immediately when you turn the position selector switch out of the NORM position. The amber TRAILING EDGE light will stay off if the flaps extend correctly by the alternate drive. If the flaps take longer than the usual time to move to the position on the switch, the amber TRAILING EDGE light will come on again. This light will stay on until the flaps move to the position shown on the switch.

- (a) Make sure the flaps move to the 5-unit position.
- (b) Make sure the flap position indicator moves to the 5-unit mark.
- (c) Make sure the EICAS message, TE FLAP DISAGREE, does not show on the top display screen in the flight compartment.
- (d) Make sure the amber TRAILING EDGE light goes off.
- (7) Turn the position selector switch for the flap/slat alternate drive to the 15, 20, 25, and 30-unit detents, and do the checks that follow:

NOTE: Stop at each detent to permit the flaps to move to the position on the switch before you turn the switch to the subsequent detent.

- (a) Make sure the flap position indicator starts to move to the position shown on the selector switch while the flaps extend.
- b) Make sure the flap position indicator is at the correct position when the flap movement stops.

NOTE: It is usual for the flap position indicator to stop in a position between the 25 and 30-unit marks when the position selector switch is in the 30-unit detent.

OPERATIONAL ALT TE FLAP POWER DRIVE SYSTEM

27-51-00-5A 27-036-01 PAGE 3 OF 6 DEC 22/00

MECH INSP

AIRLINE CARD NO.

			TASK CARD
MECH	INSP		
		(8)	Turn the position selector switch to the 25, 20, 15, 5, and UP-unit detents, and do the checks that follow:
			NOTE: Stop at each detent to permit the flaps to move to the position on the switch before you turn the switch to the subsequent detent.
			The flaps will not be in the fully retracted position when the flap position selector switch is in the UP position.
			(a) Make sure the flap position indicator starts to move to the position shown on the selector switch while the flaps retract.
			(b) Make sure the flap position indicator is at the correct position when the flap movement stops.
		(9)	Turn the position selector switch to the NORM detent, and make sure that these conditions occur after seven seconds:
			(a) The TRAILING EDGE light comes on
			(b) The EICAS message, TE FLAP DISAGREE, shows on the top display screen in the flight compartment.
		(10)	Push the TE arming switch for the flap alternate drive to disarm the flap alternate drive (ALTN switch light goes off), and do these checks:
			(a) The amber TRAILING EDGE light goes off
			(b) The EICAS message, TE FLAP DISAGREE, does not show on the top display screen in the flight compartment.
		WARN	WHEEL WELLS WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. WHEN YOU MOVE THE FLAP CONTROL LEVER WITH THE HYDRAULIC SYSTEM PRESSURIZED, THE FLAPS AND FLAP DRIVE MECHANISMS WILL MOVE QUICKLY. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

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AIRLINE CARD NO.

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767
TASK CARD

MECH INSP

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (11) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (12) Move the flap control lever to the 5-unit detent and make sure the flaps move to the 5-unit position after the slats move to the intermediate position.
- (13) Move the flap control lever to the zero (FLAPS UP) detent and make sure the flaps and slats move to the fully retracted position.
- D. Put the Airplane Back to Its Usual Condition
 - (1) Remove the power from the center hydraulic system (AMM 29-11-00/201).
 - (2) Remove electrical power (AMM 24-22-00/201).

EFFECTIVITY

OPERATIONAL | ALT TE FLAP POWER DRIVE SYSTEM

27-51-00-5A

27-036-01

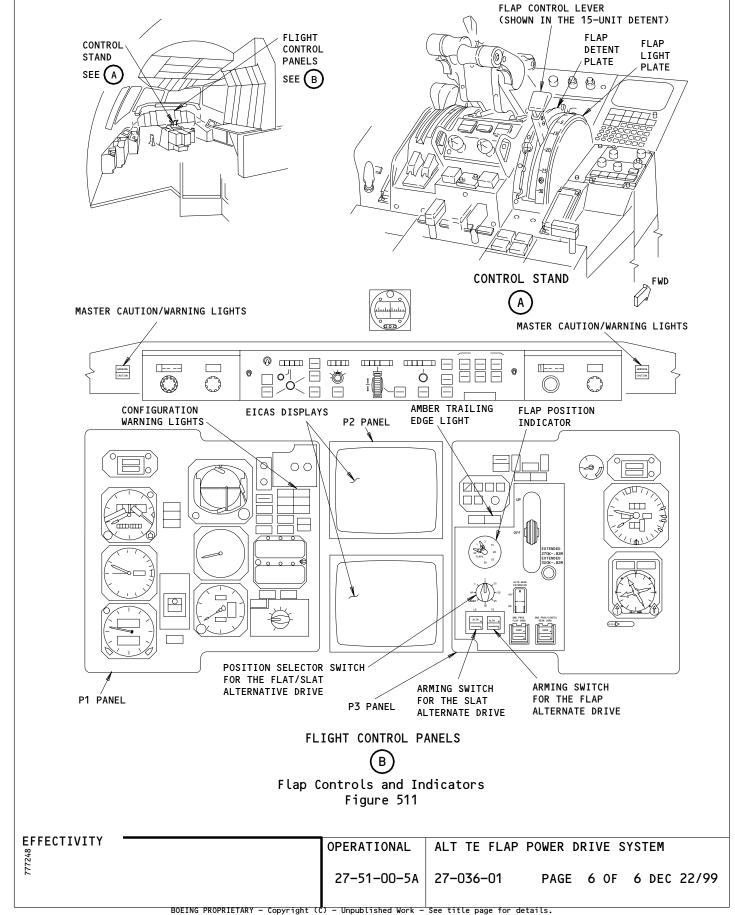
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BOEING

27-036-01

SAS

767 TASK CARD



STATION	
TAIL NO.	
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WORK AREA



BOEING CARD NO. 27-036-51

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

REV REVISION 99XXX 011 DEC 22/00 AIRPL CREW CABIN NOTE APPLICABILITY
ANF ENGINE STRUCTURAL ILLUSTRATION REFERENCE AIRPLANE

INTERVAL

OPERATIONAL ALT TE FLAP POWER DRIVE SYSTEM NOTE ALL ACCESS PANELS

ZONES

RELATED TASK

212

SKILL

MPD ITEM NUMBER MECH INSP

OPERATIONALLY CHECK TE FLAP ALTERNATE POWER DRIVE SYSTEM.

27-51-00-5A

INTERVAL NOTE: SB 767-27A0094. PERFORM OPERATIONAL CHECK

AT THE INTERVALS SHOWN IN THE SERVICE BULLETIN AS REQUIRED BY FAA AD 93-19-05 WHICH SUPERSEDES FAA AD 89-26-04.

SB 767-27-0096. APPLICABLE TO AIRPLANES AIRPLANE NOTE:

> PRIOR TO LINE NUMBER 403 THAT DO NOT INCORPORATE THIS SERVICE BULLETIN.

1. Flap Alternate Power and Drive - Test

- A. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
- Prepare for the System Test
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Make sure the TE flaps and the LE slats are in the fully retracted position.
 - (3) Make sure the flap control lever is in the zero (FLAPS UP) detent (Fig. 511).
- C. Test for the Flap Alternate Power and Drive (Fig. 511)

EFFECTIVITY OPERATIONAL ALT TE FLAP POWER DRIVE SYSTEM 27-51-00-5A 27-036-51 PAGE 1 OF 6 DEC 22/00

AIRLINE CARD NO.

SAS BOEING
767
TASK CARD

MECH INSP

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES AND WHEEL WELLS WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. WHEN YOU MOVE THE FLAP CONTROL LEVER WITH THE HYDRAULIC SYSTEM PRESSURIZED, THE FLAPS AND FLAP DRIVE MECHANISMS WILL MOVE QUICKLY. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (1) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (2) Push the TE arming switch for the flap alternate drive to arm the flap alternate drive. Do the checks that follow:
 - (a) Make sure the ALTN light on the arming switch comes on immediately.
 - (b) Make sure that these conditions occur in seven seconds after you push the arming switch:
 - 1) The amber TRAILING EDGE light comes on
 - 2) The EICAS message, TE FLAP DISAGREE, shows on the top display in the flight compartment.
- (3) Move the flap control lever to the 5-unit detent and do the checks that follow:
 - (a) Make sure the slats extend to the intermediate position.
 - (b) Make sure the flaps do not move.
- (4) Move the flap control lever to the zero (FLAPS UP) detent and make sure the slats move to the fully retracted position.
- (5) Remove the power from the center hydraulic system (AMM 29-11-00/201).

EFFECTIVITY

OPERATIONAL | ALT TE FLAP POWER DRIVE SYSTEM

27-51-00-5A

27-036-51

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AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM THE FLAPS WHEN YOU OPERATE
THE FLAP ALTERNATE DRIVE. THE ACCIDENTAL MOVEMENT OF THE FLAPS
CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

CAUTION: DO NOT OPERATE THE ALTERNATE DRIVE MOTOR CONTINUOUSLY FOR MORE THAN 4 MINUTES. DO NOT OPERATE THE MOTOR AGAIN UNTIL IT IS COOL FOR AT LEAST 20 MINUTES TO PREVENT DAMAGE TO THE MOTOR.

(6) Turn the position selector switch for the flap/slat alternate drive to the 5-unit detent, and do the checks that follow:

NOTE: The amber TRAILING EDGE light will go off immediately when you turn the position selector switch out of the NORM position. The amber TRAILING EDGE light will stay off if the flaps extend correctly by the alternate drive. If the flaps take longer than the usual time to move to the position on the switch, the amber TRAILING EDGE light will come on again. This light will stay on until the flaps move to the position shown on the switch.

- (a) Make sure the flaps move to the 5-unit position.
- (b) Make sure the flap position indicator moves to the 5-unit mark.
- (c) Make sure the EICAS message, TE FLAP DISAGREE, does not show on the top display screen in the flight compartment.
- (d) Make sure the amber TRAILING EDGE light goes off.
- (7) Turn the position selector switch for the flap/slat alternate drive to the 15, 20, 25, and 30-unit detents, and do the checks that follow:

NOTE: Stop at each detent to permit the flaps to move to the position on the switch before you turn the switch to the subsequent detent.

(a) Make sure the flap position indicator starts to move to the position shown on the selector switch while the flaps extend.

EFFECTIVITY

OPERATIONAL | ALT TE FLAP POWER DRIVE SYSTEM

27-51-00-5A

27-036-51

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AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

(b) Make sure the flap position indicator is at the correct position when the flap movement stops.

NOTE: It is usual for the flap position indicator to stop in a position between the 25 and 30-unit marks when the position selector switch is in the 30-unit detent.

(8) Turn the position selector switch to the 25, 20, 15, 5, and UP-unit detents, and do the checks that follow:

NOTE: Stop at each detent to permit the flaps to move to the position on the switch before you turn the switch to the subsequent detent.

The flaps will not be in the fully retracted position when the flap position selector switch is in the UP position.

- (a) Make sure the flap position indicator starts to move to the position shown on the selector switch while the flaps retract.
- (b) Make sure the flap position indicator is at the correct position when the flap movement stops.
- (9) Turn the position selector switch to the NORM detent, and make sure that these conditions occur after seven seconds:
 - (a) The TRAILING EDGE light comes on
 - (b) The EICAS message, TE FLAP DISAGREE, shows on the top display screen in the flight compartment.
- (10) Push the TE arming switch for the flap alternate drive to disarm the flap alternate drive (ALTN switch light goes off), and do these checks:
 - (a) The amber TRAILING EDGE light goes off
 - (b) The EICAS message, TE FLAP DISAGREE, does not show on the top display screen in the flight compartment.

EFFECTIVITY

OPERATIONAL | ALT TE FLAP POWER DRIVE SYSTEM

27-51-00-5A

27-036-51

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AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES AND WHEEL WELLS WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS,

ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. WHEN YOU MOVE THE FLAP CONTROL LEVER WITH THE HYDRAULIC SYSTEM PRESSURIZED, THE FLAPS AND FLAP DRIVE MECHANISMS WILL MOVE QUICKLY. INJURY TO PERSONS OR DAMAGE TO

EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD

FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE

MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

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

- (12) Move the flap control lever to the 5-unit detent and make sure the flaps move to the 5-unit position after the slats move to the intermediate position.
- (13) Move the flap control lever to the zero (FLAPS UP) detent and make sure the flaps and slats move to the fully retracted position.
- D. Put the Airplane Back to Its Usual Condition
 - (1) Remove the power from the center hydraulic system (AMM 29-11-00/201).
 - (2) Remove electrical power (AMM 24-22-00/201).

EFFECTIVITY

OPERATIONAL | ALT TE FLAP POWER DRIVE SYSTEM

27-51-00-5A

27-036-51

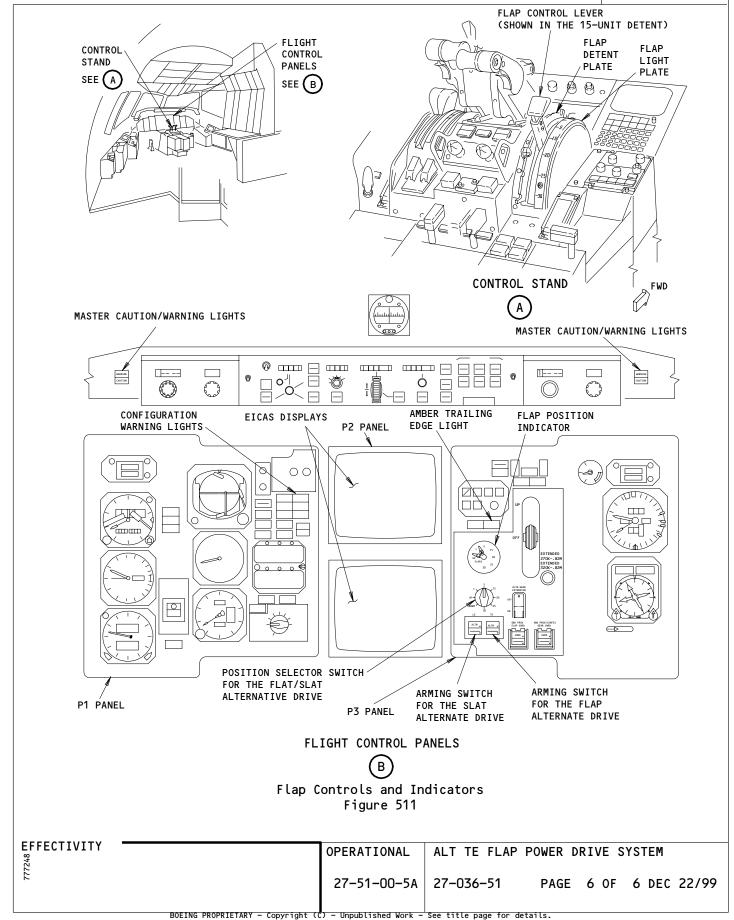
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767

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BOEING TASK CARD

27-036-51



STATION	
TAIL NO.	
DATE	1



BOEING CARD NO. 27-037-01

AIRLINE CARD NO.

WORK AREA RELATED TASK INTERVAL MPD TASK CARD SKILL PHASE REV REVISION 002 DEC 22/00 AIRPL CREW CABIN 1C 11212 APPLICABILITY
ANE ENGINE STRUCTURAL ILLUSTRATION REFERENCE AIRPLANE **OPERATIONAL** TE FLAP FAILURE PROTECTION SYSTEM

ACCESS PANELS

ZONES 742

MECH INSP

144 212

MPD ITEM NUMBER

ALL

27-51-00-5B

ALL

1. Flap Failure Protection System - Test

- A. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
 - (3) AMM 32-00-15/201, Main Gear Door Locks

OPERATIONALLY CHECK TE FLAP FAILURE PROTECTION SYSTEM.

- (4) AMM 32-00-20/201, Landing Gear Downlocks
- B. Prepare for the System Test
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Make sure the COMPUTER switch on the EICAS DISPLAY select panel, P9, is in the L position.
 - (3) Make sure the TE flaps and the LE slats are in the fully retracted position.
 - (4) Make sure the flap control lever is in the zero (FLAPS UP) detent (Fig. 511).
 - (5) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

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

EFFECTIVITY

OPERATIONAL TE FLAP FAILURE PROTECTION SYSTEM

27-51-00-5B

27-037-01

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27-037-01

AIRLINE CARD NO.



MECH INSP

- (6) Open the doors for the landing gear and install the door locks (AMM 32-00-15/201).
- C. Test for the Flap Failure Protection System

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES AND WHEEL WELLS WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. WHEN YOU MOVE THE FLAP CONTROL LEVER WITH THE HYDRAULIC SYSTEM PRESSURIZED, THE FLAPS AND FLAP DRIVE MECHANISMS WILL MOVE QUICKLY. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (1) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (2) Move the flap control lever to the 1-unit detent to move the slats to intermediate position while you keep the flap in the fully retracted position.
- (3) Attach a DO-NOT-OPERATE tag to the flap control lever.
- (4) Remove the pressure from the center hydraulic system (AMM 29-11-00/201).
- (5) Remove the nut and washer from the bolt that attaches the control rod to the pilot input arm on the TE flap PDU (Detail E, Fig. 501).

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES AND WHEEL WELLS WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. WHEN YOU MOVE THE FLAP CONTROL LEVER WITH THE HYDRAULIC SYSTEM PRESSURIZED, THE FLAPS AND FLAP DRIVE MECHANISMS WILL MOVE QUICKLY. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

EFFECTIVITY

OPERATIONAL | TE FLAP FAILURE PROTECTION SYSTEM

27-51-00-5B

27-037-01

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27-037-01

AIRLINE CARD NO.

SAS BOEING TASK CARD

MECH INSP

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (6) Pressurize the center hydraulic system (AMM 29-11-00/201).
- Remove the bolt that attaches the control rod to the pilot input arm, but do not move the pilot input arm.
- (8) Open this circuit breaker on the P11 panel and attach a D0-N0T-CLOSE tag:
 - (a) 11J14, FLAP SHUTOFF
- Move the pilot input arm to the extend direction, clockwise (View E, Fig. 501) approximately 15-20 degrees, and do these checks:
 - Make sure the flap movement stops when you move the pilot input arm.
 - Make sure the manual override lever moves to the No. 1 position (bypass) on the PDU bypass valve (Detail F, Fig. 501).
 - (c) Make sure this EICAS message, TE FLAP SHUTDOWN, shows on the display in the flight compartment.
 - Turn the COMPUTER switch on the EICAS DISPLAY select panel, P9, to the R position.
 - Make sure this EICAS message, TE FLAP SHUTDOWN, stays on the display in the flight compartment.
 - (f) Turn the COMPUTER switch on the EICAS DISPLAY select panel back to the L position.
 - Make sure the flap position indicator stopped in an area between the 1-unit and 5-unit marks.
- (10) Move the pilot input arm back to the initial position and connect the control rod.

EFFECTIVITY

OPERATIONAL

TE FLAP FAILURE PROTECTION SYSTEM

27-51-00-5B

27-037-01

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27-037-01

AIRLINE CARD NO.



MECH INSP

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM THE FLAPS AND SLATS IN THE SUBSEQUENT STEP. ACCIDENTAL MOVEMENT OF THE SLATS CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (11) Remove the DO-NOT-OPERATE tag and move the flap control lever to the 5-unit detent, and do these checks:
 - (a) Make sure this EICAS message, TE FLAP DISAGREE, shows on the display screen in the flight compartment.

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM THE FLAPS WHEN YOU OPERATE THE FLAP ALTERNATE DRIVE. ACCIDENTAL MOVEMENT OF THE FLAPS CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

- (12) Push the TE arming switch for the flap alternate drive to arm the flap alternate drive (ALTN switch light comes on).
- (13) Push the TE arming switch for the flap alternate drive again to disarm the flap alternate drive (ALTN switch light goes off), and do these checks:
 - (a) Make sure the EICAS message, TE FLAP DISAGREE, does not show on the display screen in the flight compartment.
 - (b) Make sure the amber TRAILING EDGE light goes off when the flaps move to the 5-unit position.
 - (c) Make sure the EICAS message, TE FLAP SHUTDOWN, does not show on the display screen in the flight compartment.
- (14) Move the flap control lever to the zero (FLAPS UP) detent and permit the flaps and the slats to move to the fully retracted position.
- (15) Remove the power from the center hydraulic system (AMM 29-11-00/201).

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27-51-00-5B

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AIRLINE CARD NO.

		TASK CARD
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		(16) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
		(a) 11J14, FLAP SHUTOFF
		D. Put the Airplane Back to Its Usual Condition
		WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO REMOVE THE DOORLOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.
		(1) Remove the door locks from the landing gear doors and close the doors (AMM 32-00-15/201).
		(2) Remove electrical power (AMM 24-22-00/201).

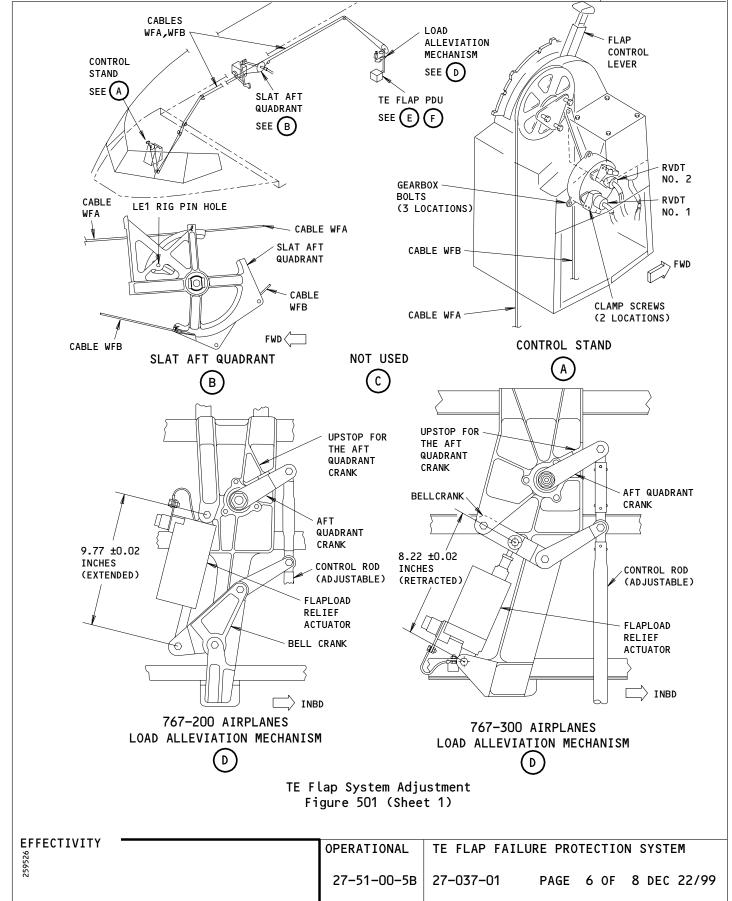
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BOEING 767 TASK CARD

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767 TASK CARD

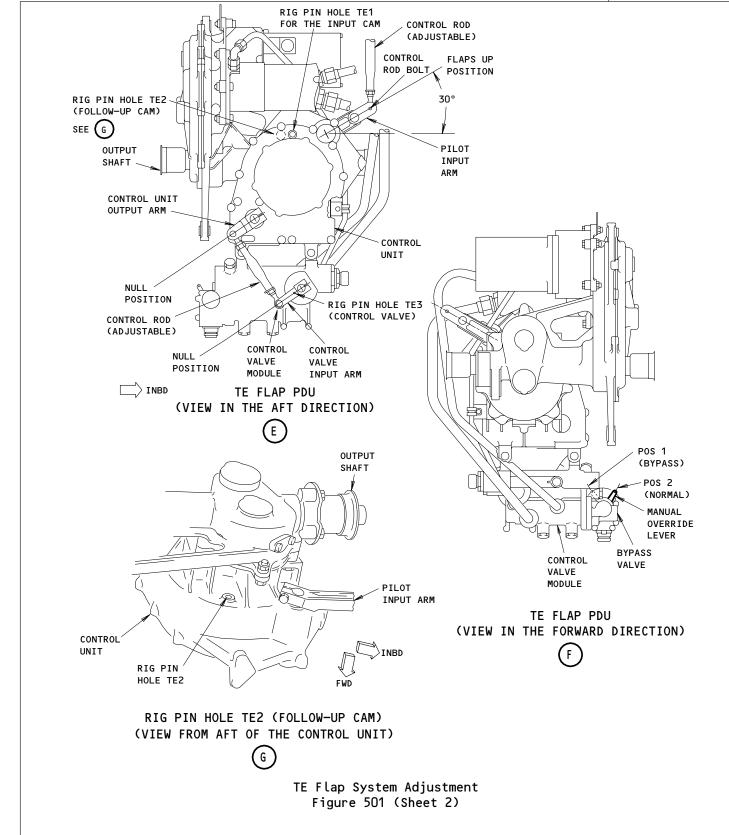
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TE FLAP FAILURE PROTECTION SYSTEM

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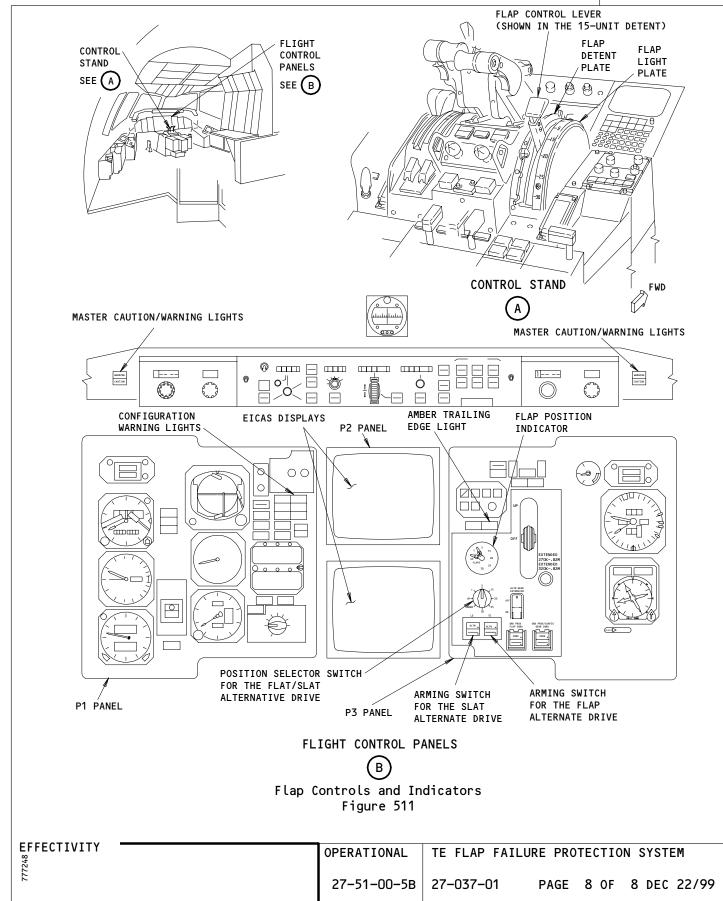
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STATION
TAIL NO.
DATE

SKILL



BOEING CARD NO. 27-042-01

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

AIRPL CREW CABIN

3C

TASK

TITLE

STRUCTURAL ILLUSTRATION REFERENCE

APPLICABILITY
AIRPLANE
ENGINE

INTERVAL

OPERATIONAL TE FLAP ASYMMETRY PROTECTION SYSTEM NOTE ALL

ZONES ACCESS PANELS

144 212 742

WORK AREA

MECH INSP MPD ITEM NUMBER

OPERATIONALLY CHECK TE FLAP ASYMMETRY PROTECTION SYSTEM.

27-51-00-5C

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

1. Flap Asymmetry Protection System - Test

RELATED TASK

- A. Equipment
 - (1) Spare Flap Position Transmitter No. 4 M476 (The Transmitter must be locked in the retracted rig position)
 - (2) Rig Pin TE4 P/N A20004-7, part of Set A20004-XX (AMM 20-10-24/201)
 - (3) TE Flap PDU Lock A27009-7
- B. References
 - (1) AMM 20-10-24/201, Rig Pins
 - (2) AMM 24-22-00/201, Electrical Power Control
 - (3) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
 - (4) AMM 32-00-15/201, Main Gear Door Locks
 - (5) AMM 32-00-20/201, Landing Gear Downlock
- C. Prepare for the System Test
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Make sure the TE flaps and the LE slats are in the fully retracted position.

OPERATIONAL TE FLAP ASYMMETRY PROTECTION SYSTEM

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- (3) Make sure the flap control lever is in the zero (FLAPS UP) detent (Fig. 511).
- (4) 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

- (5) Open the doors for the landing gear and install the door locks (AMM 32-00-15/201).
- (6) Remove the power from the center hydraulic system (AMM 29-11-00/201).
- (7) Install the PDU lock in the TE flap PDU (Fig. 505).
- Test for the Flap Asymmetry Protection System D.
 - (1) Use the Procedure 1 or the Procedure 2 that follows to prepare the flap drive system for the asymmetry indication test:
 - (a) Procedure 1:
 - Disconnect the torque tube at the coupling in the left hand MLG (main landing gear) wheel well, between the keel beam and the bulkhead tee gearbox (Fig. 504).
 - Make a mark on the torque tube and the adjacent structure. This is to keep a record of the adjusted position for the subsequent installation.
 - (b) Procedure 2:
 - Open these circuit breakers on the P11 panel:
 - a) 11C14, FLAP/STAB POS SENSING C
 - b) 11C15, FLAP SLAT ELEC UNIT 1 SENSOR
 - Remove the electrical connector from the flap position transmitter, No. 4 (M476), at the inboard rotary actuator on the left inboard flap.

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TE FLAP ASYMMETRY PROTECTION SYSTEM

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- 3) Install the electrical connector on a spare flap position transmitter, No. 4 (M476).
- 4) Lock the spare transmitter in the retracted rig position with rig pin TE4 (Fig. 512).
- 5) Close these circuit breakers on the P11 panel:
 - a) 11C14, FLAP/STAB POS SENSING C
 - b) 11C15, FLAP SLAT ELEC UNIT 1 SENSOR
- (2) Prepare to count the number of turns of a torque tube with the recommended procedure that follows:

It will be necessary to count the number of turns of a torque tube for the subsequent test.

(a) Attach a long piece of string to the torque tube with tape and permit the string to wind around the torque tube when it turns.

The number of winds of the string around the torque tube NOTE: is the number of turns of the torque tube. Make sure you make a mark on the torque tube to identify the direction of the string and where to start the count.

> If the string come loose or breaks during this test, it will be necessary to adjust the flap overtravel stops with the instructions given in the adjustment task.

(3) Remove the PDU lock from the TE flap PDU (Fig. 505).

KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES AND WARNING: WHEEL WELLS WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. WHEN YOU MOVE THE FLAP CONTROL LEVER WITH THE HYDRAULIC SYSTEM PRESSURIZED, THE FLAPS AND FLAP DRIVE MECHANISMS WILL MOVE QUICKLY. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

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TE FLAP ASYMMETRY PROTECTION SYSTEM

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MECH INSP

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (4) Pressurize the center hydraulic system (AMM 29-11-00/201).
- Move the flap control lever to the 1-unit detent and permit the slats to move to the intermediate position.
- Move the flap control lever to the 5-unit detent, and do the checks that follow:
 - (a) Make sure that all flap movement stops after you move the flap control lever to the 5-unit detent.
 - (b) Make sure the amber TRAILING EDGE light comes on at the P3 panel (Fig. 511).
 - (c) Make sure this EICAS message, TE FLAP ASYM, shows on the display screen in the flight compartment.
 - (d) Make sure the EICAS message, TE FLAP DISAGREE, does not show on the display screen in the flight compartment.
 - Turn the COMPUTER switch on the EICAS DISPLAY select panel to the R position and make sure the TE FLAP ASYM message does not change.
 - Turn the COMPUTER switch on the EICAS DISPLAY select panel back to the L position.
 - Make sure the torque tube for the flap drive turned no more than 43 1/4 times before the drive system shutdown.
- Open the following circuit breaker on the P11 panel and attach a DO-NOT-CLOSE tag:
 - (a) 11G16, FLAP SLAT ELEC UNIT 2 CONT

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TE FLAP ASYMMETRY PROTECTION SYSTEM

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AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

(8) Turn the alternate flap selector switch to the 5-unit detent and verify that the flaps do not move.

NOTE: If the flaps move, the ALTN TE FLAPS ARM (K361) relay has failed in the energized position. This relay is located in the P33 panel. Replace before continuing the test.

- (9) Turn the alternate flap selector switch to the NORM detent.
- (10) Open these circuit breakers on the P11 panel and attach D0-N0T-CLOSE tags:
 - (a) 11C16, FLAP SLAT ELEC UNIT 1 CONT
 - (b) 11G23, FLAP SLAT ELEC UNIT 3 CONT
- (11) Make sure the EICAS message, TE FLAP ASYM, does not show on the display screen in the flight compartment.
- (12) Make sure the amber TRAILING EDGE light goes out.
- (13) Make sure the manual override lever on the PDU bypass valve is in the No. 1 (bypass) position (Detail F, Fig. 501).
- (14) Move the flap control lever to the 1-unit detent.

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM THE FLAPS AND SLATS
IN THE SUBSEQUENT STEP. THE FLAPS CAN MOVE ACCIDENTALLY AND
CAUSE INJURE TO PERSONS OR DAMAGE TO EQUIPMENT.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

(15) Move the manual override lever on the PDU bypass valve to the No. 2 (NORMAL) position and do the check that follows:

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MECH INSP

Make sure the torque tube turns no more than 43 1/4 times as the flaps move to the fully retracted position.

If you disconnected the torque tube (with Procedure 1), make sure that the torque tube turns back the same number of times as the flaps extended before. This is to make sure the flap drive moves back to the adjusted position.

- (16) Do the steps that follow when the flaps stop at the fully retracted position:
 - (a) Remove the DO-NOT-CLOSE tags and close these circuit breakers on the P11 panel:
 - 11C16, FLAP SLAT ELEC UNIT 1 CONT
 - 11G16, FLAP SLAT ELEC UNIT 2 CONT
 - 3) 11G23, FLAP SLAT ELEC UNIT 3 CONT
- (17) Push the ALTN TE arming switch for the flap alternate drive in the flight compartment to arm the flap alternate drive, and make sure the ALTN switch light comes on.
- Push the ALTN TE arming switch for the flap alternate drive again to disarm the flap alternate drive, and make sure the ALTN switch light goes off.

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM THE FLAPS AND SLATS FOR THE SUBSEQUENT STEP. THE FLAPS AND SLATS CAN ACCIDENTALLY MOVE AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

- (19) Move the flap control lever to the zero (FLAPS UP) detent and permit the slats to move to the fully retracted position.
- (20) Remove the power from the center hydraulic system (AMM 29-11-00/201).
- (21) Install the PDU lock on the TE flap PDU.
- (22) Put the flap drive system back to the usual condition with the Procedure 1 or Procedure 2:

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SAS FOR TASK CARD

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- (a) Procedure 1 (with the torque tube disconnected between the keel beam and the bulkhead tee gearbox):
 - Make sure the torque tube turns back the same number of times as the flaps extended before.

NOTE: If the torque tube does not turn back the same number of times, or if you turn the disconnected torque tube accidentally, it will be necessary to adjust the flap retract overtravel stops with the procedures given in the adjustment task.

- 2) Align the marks that you made on the torque tube and the adjacent structure, and connect the torque tube at the coupling in the left MLG wheel well (Fig. 504).
- (b) Method 2 (with the spare flap position transmitter):
 - 1) Open these circuit breakers on the P11 panel:
 - a) 11C14, FLAP/STAB POS SENSING C
 - b) 11C15, FLAP SLAT ELEC UNIT 1 SENSOR
 - Remove the rig pin TE4 from the spare position transmitter, No. 4 (M476) (Fig. 512).
 - Disconnect the electrical connector from the spare position transmitter No. 4.
 - 4) Connect the electrical connector back to the flap position transmitter on the airplane (No. 4, M476), at the inboard rotary actuator of the left inboard flap.
 - 5) Close these circuit breakers on the P11 panel:
 - a) 11C14, FLAP/STAB POS SENSING C
 - b) 11C15, FLAP SLAT ELEC UNIT 1 SENSOR
- E. Put the Airplane Back to Its Usual Condition
 - (1) Remove the PDU lock on the TE flap PDU.

EFFECTIVITY

OPERATIONAL

TE FLAP ASYMMETRY PROTECTION SYSTEM

27-51-00-5C

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AIRLINE CARD NO.

BOEING 767 TASK CARD

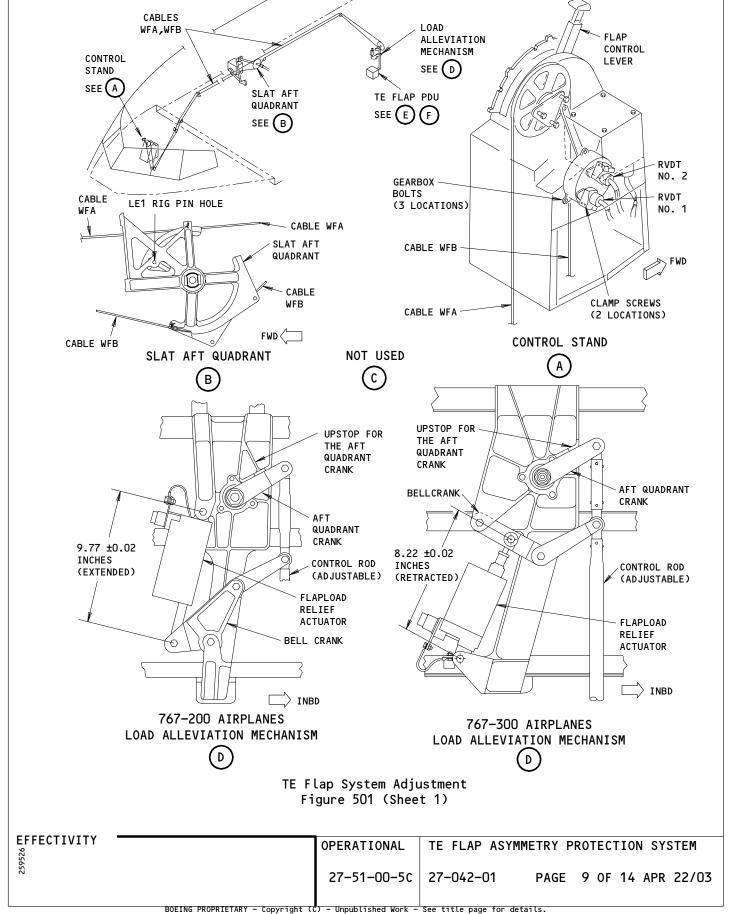
MECH INSP WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO REMOVE THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT. (2) Remove the door locks from the landing gear doors and close the doors (AMM 32-00-15/201). (3) Remove the power from the center hydraulic system (AMM 29-11-00/201). (4) Remove electrical power (AMM 24-22-00/201). **EFFECTIVITY** OPERATIONAL TE FLAP ASYMMETRY PROTECTION SYSTEM

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BOEING 767 TASK CARD



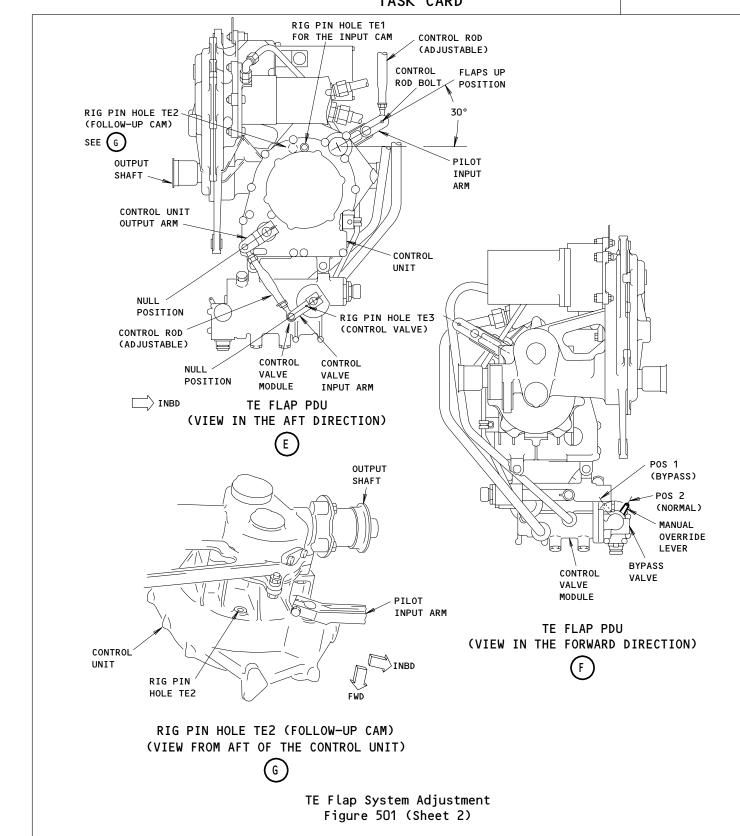
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767 TASK CARD

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TE FLAP ASYMMETRY PROTECTION SYSTEM

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COUPLING TORQUE TUBE BULKHEAD TEE GEARBOX LEFT WHEEL WELL SEE (A) KEEL BEAM AFT WALL LEFT INBD WHEEL WELL LEFT WHEEL WELL (A)

TE Flap Torque Tube (Left Wheel Well) Figure 504

EFFECTIVITY OPERATIONAL TE FLAP ASYMMETRY PROTECTION SYSTEM 191474 27-51-00-5C 27-042-01 PAGE 11 OF 14 APR 22/03

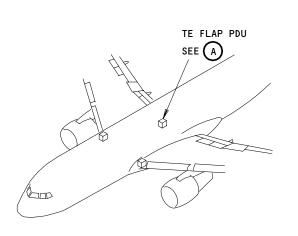
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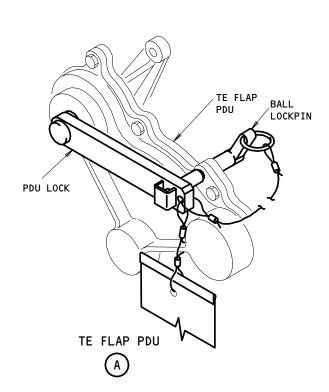
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TASK CARD

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PDU Lock for the TE Flaps PDU Figure 505

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TE FLAP ASYMMETRY PROTECTION SYSTEM

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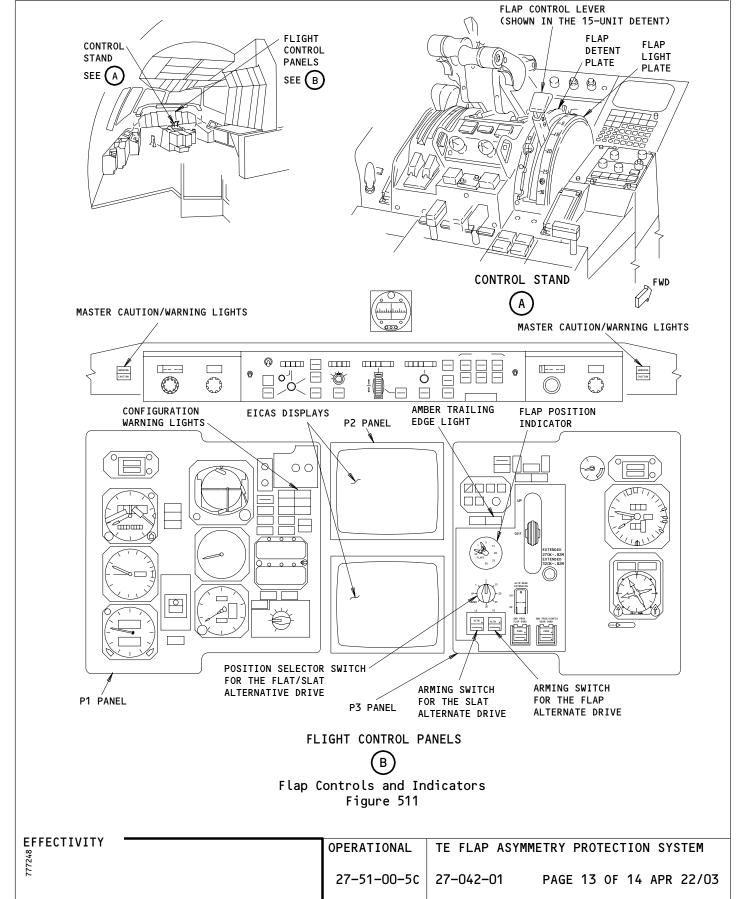
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TE FLAP POWER DRIVE UNIT LEFT INBOARD FLAP FLAP POSITION TRANSMITTER, POSITION 4 SEE (A) **EXTEND** RIG PIN TE4 HOLE (FLAPS AT THE FULLY RETRACTED POSITION) FWD 🗀

FLAP POSITION TRANSMITTER, POSITION 4



Location for Rig Pin TE4 Figure 512

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OPERATIONAL

TE FLAP ASYMMETRY PROTECTION SYSTEM

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STATION	
TAIL NO.	
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BOEING CARD NO. 27-043-01

AIRLINE CARD NO.

TASK CARD

MPD

SKILL RELATED TASK PHASE REV REVISION 009 AIRPL CREW CABIN 1C AUG 22/06 11212 APPLICABILITY
ANE ENGINE STRUCTURAL ILLUSTRATION REFERENCE

INTERVAL

AIRPLANE OPERATIONAL LE SLAT FAILURE PROTECTION SYSTEM NOTE ALL

ZONES ACCESS PANELS

212 510 610 511BB 611BB

MPD ITEM NUMBER MECH INSP

OPERATIONALLY CHECK LE SLAT FAILURE PROTECTION SYSTEM.

27-81-00-5A

AIRPLANE NOTE: SB 767-27-0108. APPLICABLE TO AIRPLANE LINE NUMBERS 403 AND ON AND THOSE INCORPORATING THIS SERVICE BULLETIN OR EQUIVALENT.

1. Slat Failure Protection System - Test

- A. References
 - (1) AMM 06-44-00/201, Wing Access Doors and Panels
 - (2) AMM 24-22-00/201, Electrical Power Control
 - (3) AMM 27-81-00/601, Leading Edge Slat System
 - (4) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
 - (5) AMM 31-41-00/201, EICAS
 - (6) AMM 31-51-00/501, Warning Systems
 - (7) AMM 78-31-00/201, Thrust Reverser System
- B. Prepare for the Test

DO THE THRUST REVERSER DEACTIVATION PROCEDURE TO PREVENT THE WARNING: OPERATION OF THE THRUST REVERSER. THE ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Do this procedure: Thrust Reverser Deactivation for Ground Maintenance (AMM 78-31-00/201).

EFFECTIVITY OPERATIONAL LE SLAT FAILURE PROTECTION SYSTEM 27-81-00-5A 27-043-01 PAGE 1 OF 15 AUG 22/06

AIRLINE CARD NO.

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SAS BOEING TASK CARD

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- (2) Make sure the trailing edge (TE) flaps and the leading edge (LE) slats are in the fully retracted position.
- (3) Make sure the flap control lever is in the zero (FLAPS UP) detent.
- (4) Supply electrical power (AMM 24-22-00/201).
- (5) Make sure the arming switches for the flap and the slat alternate drives, on the P3 panel, are not in the armed position (ALTN switch lights are off).
- Make sure you close these circuit breakers on the main power distribution panel (P6):
 - (a) 6D21, ALTN SLAT INBD PWR
 - (b) 6D24, ALTN FLAP PWR
 - (c) 6F24, ALTN SLAT OUTBD PWR
- Make sure you close these circuit breakers on the P11 Overhead Panel.
 - (a) 11C10, SLAT POS IND
 - (b) 11C14, FLAP/STAB POS SENSING C
 - 11C15, FSEU POS SENSOR 1
 - (d) 11C16, FLAP SLAT ELEC UNIT 1 CONT, or FSEU CONT 1
 - 11C29, 11E19, 11C21 or 11C27, LDG GR POS AIR/GND SYS 2 ALT (e)
 - 11G15 or 11S14, FSEU POS SENSOR 2 (f)
 - (g) 11G16, FLAP SLAT ELEC UNIT 2 CONT, or FSEU CONT 2
 - 11G22, FSEU POS SENSOR 3 (h)
 - (i) 11G23, FLAP SLAT ELEC UNIT 3 CONT, or FSEU CONT 3
 - (j) 11H14, LE SLAT SHUTOFF
 - 11H23, SLAT ALTN CONT INBD (k)

EFFECTIVITY

OPERATIONAL LE SLAT FAILURE PROTECTION SYSTEM

27-81-00-5A

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TASK CARD

AIRLINE CARD NO.

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				(1) 11H24, SLAT ALTN CONT OUTBD
				(m) 11J13, LOAD RELIEF
				(n) 11J14, TE FLAP SHUTOFF
				(o) 11J17, FLAP/STAB POS SENSING L
				(p) 11J24, TE FLAPS ALTN CONT
				(q) 11J26, FLAP/STAB POS SENSING R
				(r) 11T36, PROX SW TEST
				(s) 11U23 or 11U24, LDG GR POS AIR/GND SYS 2
			(8)	Make sure you close these circuit breakers on the P11 Overhead Panel:
				(a) 11J02, EICAS CMPTR L
				(b) 11J03, EICAS UPPER DISPL
				(c) 11J11, FLAP/SLAT POS IND
				(d) 11J15, L FLAP POS IND
				(e) 11J16, R FLAP POS IND
				(f) 11J29, EICAS CMPTR R
				(g) 11J30, EICAS LOWER DSPL
				(h) 11J31, EICAS DSPL SW
				(i) 11J32, EICAS PILOT DISPLAY, or DISPLAY SELECT
			(9)	Make sure the COMPUTER switch on the EICAS DISPLAY select panel is in the L position.
		c.	Test	for the Inboard Slat Failure Protection (Fig. 502)
			(1)	Make sure the flap control lever is in the zero (FLAPS UP) detent.
			(2)	Attach a DO-NOT-OPERATE tag to the flap control lever.
'	-	•		

EFFECTIVITY

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MECH INSP

- (3) Remove power from the center hydraulic system (AMM 29-11-00/201).
- (4) If installed, remove the access panel, 611BB, to get access to the inboard slat PDU (AMM 06-44-00/201).
- (5) Remove the nut and washer from the bolt that connects the input control rod to the pilot input arm, at the inboard slat PDU (Detail C, Fig. 502). Do not remove the bolt.

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (6) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (7) Hold the pilot input arm in position and remove the bolt from the arm. Do not move the arm or change the length of the input control rod.
- (8) Standing forward of the inboard slat PDU and looking aft, move the pilot input arm clockwise to the extend direction (Detail C, Fig. 502) to approximately 15-20 degrees.
- (9) Make sure the slats do not move.
- (10) Open this circuit breaker on the P11 panel and attach a D0-N0T-CLOSE tag:

<u>NOTE</u>: Prepare to do the subsequent steps before you open the circuit breaker in this step.

- (a) 11H14, SLAT SHUTOFF
- (11) Make sure these conditions occur after you open the circuit breaker:

OPERATIONAL LE SLAT FAILURE PROTECTION SYSTEM

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AIRLINE CARD NO.

			TASK CARD
MECH	INSP		
			(a) The inboard slats start to move, and then stop in less than 4 seconds.
			(b) The manual override lever on the inboard slat PDU is in the No. 1 (bypass) position (Detail C, Fig. 502).
			(c) The amber LEADING EDGE light (on P3) is on (Fig. 501).
			(d) The L and R needles point to a position between the UP and 1-unit marks on the flap position indicator.
			(e) The EICAS message, LE SLAT DISAGREE, shows on the EICAS display.
			(f) When the LE SLAT DISAGREE message shows on the EICAS display, do the steps that follow:
			 Push the STAT button on the engine display panel located on the center aisle stand to show status messages on the bottom EICAS display.
			NOTE: The FLAP/SLAT ELEC and SLAT ISLN VAL messages are possibly shown on the bottom EICAS display because the circuit breaker SLAT SHUTOFF VALVE is open.
			Make sure that the LE SLAT SHUTDOWN message shows on the bottom EICAS display.
			3) Turn the COMPUTER switch on the EICAS DISPLAY select panel to the R position, and make sure the EICAS messages stay on the EICAS display.
		(12)	Move the pilot input arm back to the initial position and connect the input control rod to the pilot input arm with the bolt, washer, and nut (Detail C, Fig. 502).
			NOTE: Do not change the length of the input control rod. Keep the the flap control lever in the zero (FLAPS UP) detent when you install the bolt.
		(13)	Remove the DO-NOT-OPERATE tag from the flap control lever.
		(14)	Move the flap control lever to the 1-unit detent, and make sure the outboard slats move to the intermediate position.

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SAS BOEING 767 TASK CARD

AIRLINE CARD NO.

				TASK CARD
MECH	INSP			
		('	15)	Push the arming switch (on P3) for the slat alternate drive to arm the slat alternate drive (ALTN switch light comes on at the LE side) (Fig. 501).
		('	16)	Push the arming switch again to disarm the slat alternate drive (ALTN switch lights goes off), and make sure the inboard slats move to the intermediate position.
		('	17)	Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
				(a) 11H14, SLAT SHUTOFF
		('	18)	Erase the SLAT ISLN VAL maintenance message because this message is latched (AMM $31-41-00/201$).
		('	19)	Do these checks after the inboard slats stop at the intermediate position:
				(a) Make sure the amber LEADING EDGE light goes off.
				(b) Make sure there are no messages on the EICAS display for the slats.
		(7	20)	Move the flap control lever to the zero (FLAPS UP) detent, and make sure the slats move to the fully retracted position.
		C	21)	Remove power from the center hydraulic system (AMM 29-11-00/201).
		D	Test	for the Outboard Slat Failure Protection (Fig. 503)
			(1)	Make sure the flap control lever is in the zero (FLAPS UP) detent.
			(2)	Attach a DO-NOT-OPERATE tag to the flap control lever.

outboard slat PDU (AMM 06-44-00/201).

OPERATIONAL LE SLAT FAILURE PROTECTION SYSTEM

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

(4) If installed, remove the access panel, 511BB, to get access to the

(5) Remove the nut and washer from the bolt that connects the input control rod to the pilot input arm, at the outboard slat PDU

(Detail B, Fig. 503). Do not remove the bolt.

SAS BOEING TASK CARD

AIRLINE CARD NO.

MECH INSP

KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN WARNING: HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (6) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (7) Do these steps to make sure the messages show on the EICAS display.
 - (a) Open this circuit breaker on P11 Overhead Panel:
 - 1) 11H14, SLAT SHUTOFF
 - Approximately 10 seconds after you open the circuit breaker, look for these messages on the EICAS display:
 - 1) FLAP/SLAT ELEC

This message shows on both the status and NOTE: maintenance pages on EICAS.

2) AIRPLANES WITH -603 AND SUBSEQUENT EICAS COMPUTERS;

SLAT ISLN VAL

The Signal Consolidation Card (SCC) needs to be installed on the airplane to display this message. This message is shown on the EICAS maintenance page only.

- Turn the COMPUTER switch on the EICAS DISPLAY select panel to the R position, and make sure the EICAS messages stay on the EICAS display.
- (d) Turn the COMPUTER switch back to the L position.

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AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (e) Close this circuit breaker on the P11 panel:
 - 1) 11H14, SLAT SHUTOFF
- (8) Hold the pilot input arm in position and remove the bolt from the arm. Do not move the arm or change the length of the input control rod.
- (9) Standing forward of the outboard slat PDU and looking aft, move the pilot input arm clockwise to the extend direction (Detail B, Fig. 503) to approximately 15-20 degrees.
- (10) Make sure the slats do not move.
- (11) Open this circuit breaker on the P11 panel and attach a D0-N0T-CLOSE tag:

<u>NOTE</u>: Prepare to do the subsequent steps before you open the circuit breaker in this step.

- (a) 11H14, SLAT SHUTOFF
- (12) Make sure these conditions occur after you open the circuit breaker:
 - (a) The outboard slats start to move, and then stop in less than 4 seconds.
 - (b) The manual override lever on the outboard slat PDU is in the No. 1 (bypass) position (Detail B, Fig. 503).
 - (c) The amber LEADING EDGE light (on P3) goes on (Fig. 501).
 - (d) The L and R needles point to a position between the UP and 1-unit marks on the flap position indicator.
 - (e) The EICAS message, LE SLAT DISAGREE shows on the EICAS display.
 - (f) Turn the COMPUTER switch on the EICAS DISPLAY select panel to the R position, and make sure the EICAS message does not change, then turn the switch back to the L position.
 - (g) When the LE SLAT DISAGREE message shows on the EICAS display, do the steps that follow:

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AIRLINE CARD NO.

			TASK CARD
MECH	INSP		•
			 Push the STAT button on the engine display panel located on the center aisle stand to show status messages on the bottom EICAS display.
			NOTE: The FLAP/SLAT ELEC and SLAT ISLN VAL messages are possibly shown on the bottom EICAS display because the circuit breaker SLAT SHUTOFF VALVE is open.
			Make sure that the LE SLAT SHUTDOWN message shows on the bottom EICAS display.
			3) Turn the COMPUTER switch on the EICAS DISPLAY select panel to the R position, and make sure the EICAS messages stay on the EICAS display.
			4) Turn the COMPUTER switch back to the L position.
		(13)	Move the pilot input arm back to the initial position and connect the input control rod to the pilot input arm with the bolt, washer, and nut (Detail B, Fig. 503).
			NOTE: Do not change the length of the input control rod. Keep the the flap control lever in the zero (FLAPS UP) detent when you install the bolt.
		(14)	Remove the DO-NOT-OPERATE tag from the flap control lever.
		(15)	Move the flap control lever to the 1-unit detent, and make sure the inboard slats move to the intermediate position.
		(16)	Push the arming switch (on P3) for the slat alternate drive to arm the slat alternate drive (ALTN switch light comes on at the LE side) (Fig. 501).
		(17)	Push the arming switch again to disarm the slat alternate drive (ALTN switch light goes off), and make sure the outboard slats move to the intermediate position.
		(18)	Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
			(a) 11H14, SLAT SHUTOFF
		(19)	Erase the SLAT ISLN VAL maintenance message because this message is latched (AMM 31-41-00/201).

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AIRLINE CARD NO.

SAS BOEING 767 TASK CARD

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- (20) Do these checks after the outboard slats stop at the intermediate position:
 - (a) Make sure the amber LEADING EDGE light goes off.
 - (b) Make sure there are no messages on the EICAS display for the slats with the steps that follow:
 - 1) Push the STAT button on the engine display panel located on the center aisle stand to show status messages on the bottom EICAS display.
- (21) Move the flap control lever to the zero (FLAPS UP) detent, and make sure the slats move to the fully retracted position.
- E. Put the Airplane Back to Its Usual Condition
 - (1) Remove power from the center hydraulic system (AMM 29-11-00/201).
 - (2) Remove electrical power (AMM 24-22-00/201).
 - (3) Install the access panels, 511BB and 611BB, for the outboard and inboard slat PDU (AMM 06-44-00/201).
 - (4) Do the activation procedure for the thrust reverser (AMM 78-31-00/201).

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LE SLAT FAILURE PROTECTION SYSTEM

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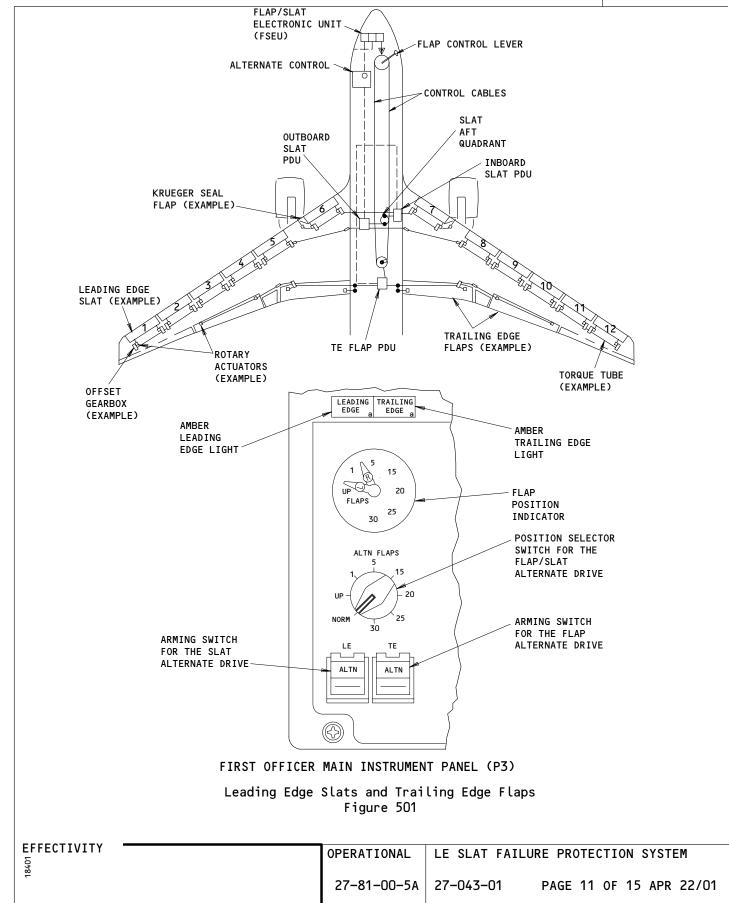
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AIRLINE CARD NO.

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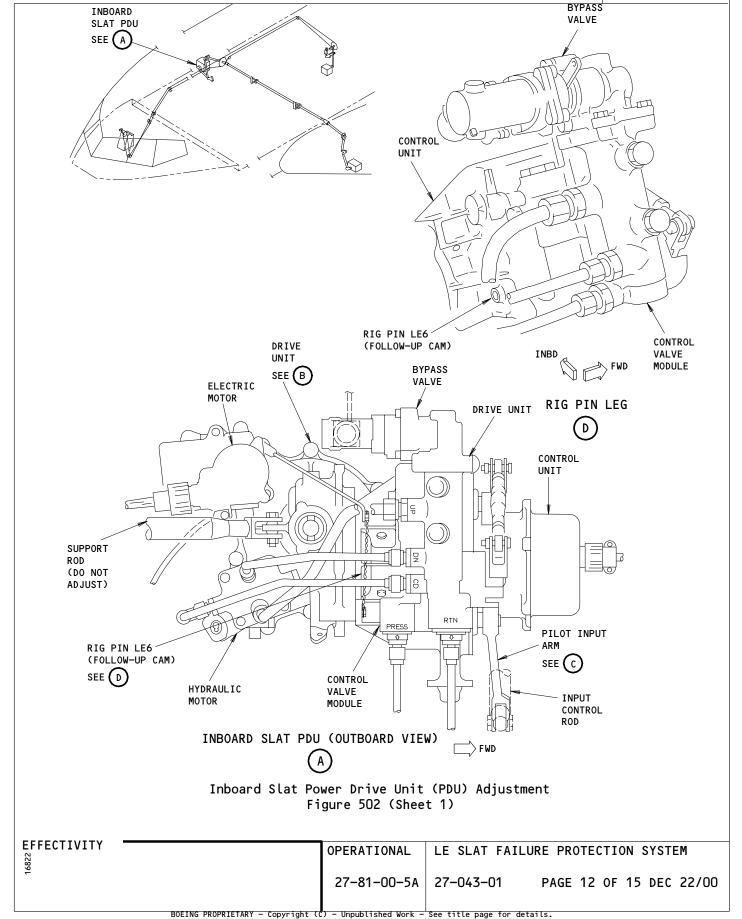
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AIRLINE CARD NO.

SAS

767
TASK CARD

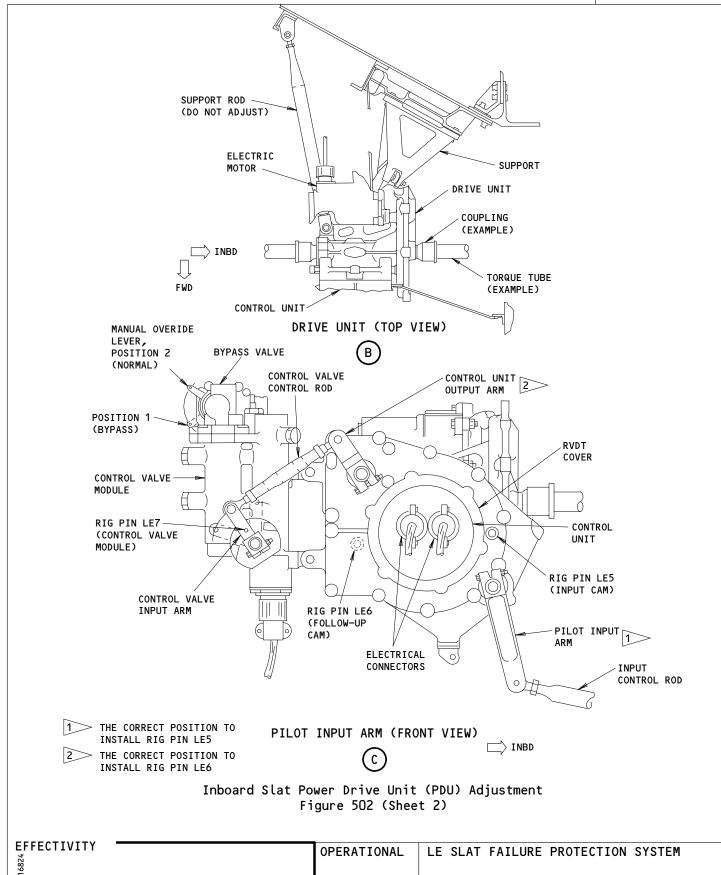


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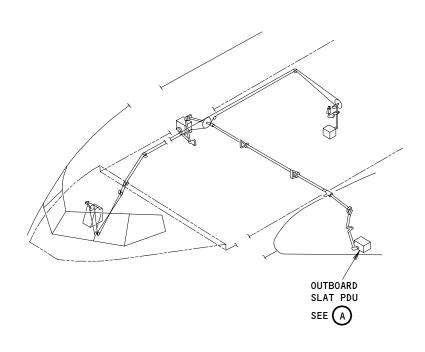
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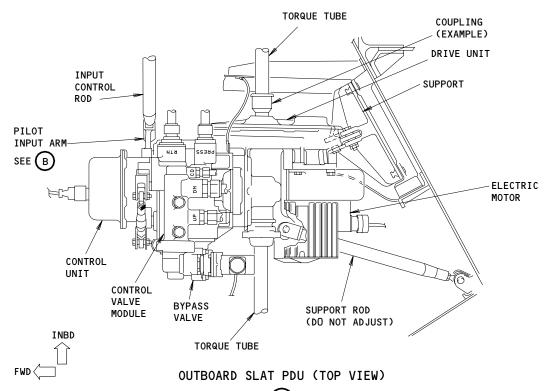
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AIRLINE CARD NO.

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Outboard Slat Power Drive Unit (PDU) Adjustment Figure 503 (Sheet 1)

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LE SLAT FAILURE PROTECTION SYSTEM

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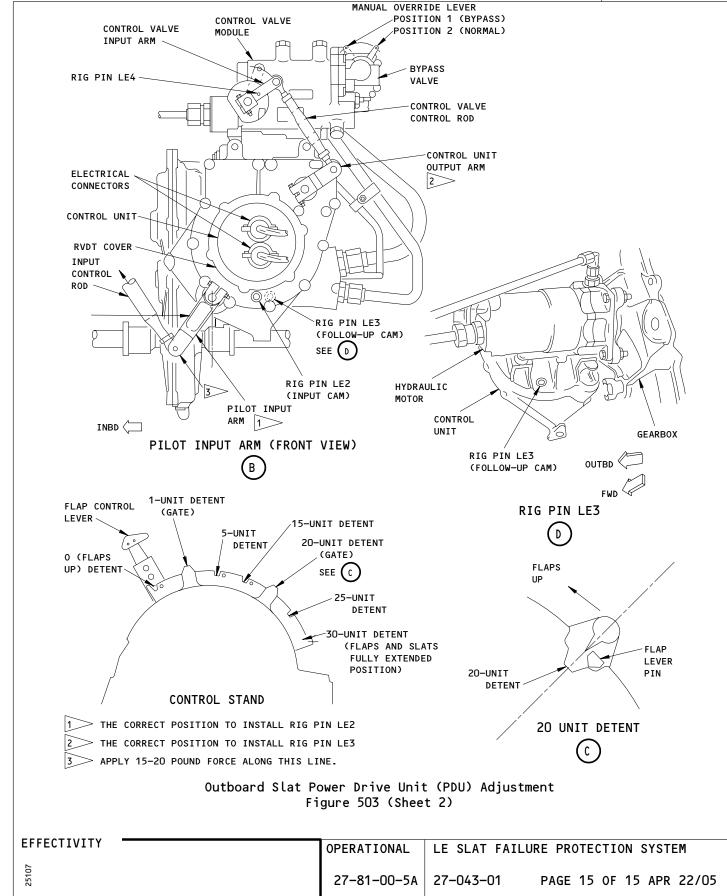
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SAS

767 TASK CARD



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STATION	
TAIL NO.	
DATE	

SKILL

WORK AREA



BOEING CARD NO. 27-043-51

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

AIRPL CREW CABIN

TASK

TITLE

O4000 HRS

STRUCTURAL ILLUSTRATION REFERENCE

APPLICABILITY
AIRPLANE
ENGINE

INTERVAL

OPERATIONAL LE SLAT FAILURE PROTECTION SYSTEM NOTE ALL

ZONES ACCESS PANELS

212 510 610 511BB 611BB

RELATED TASK

MECH INSP MPD ITEM NUMBER

OPERATIONALLY CHECK LE SLAT FAILURE PROTECTION SYSTEM.

27-81-00-5A

AIRPLANE NOTE: SB 767-27A0094. APPLICABLE TO AIRPLANES

PRIOR TO LINE NUMBER 403 THAT DO NOT

INCORPORATE THE TERMINATING ACTION CONTAINED

IN SB 767-27-0108 OR EQUIVALENT. THIS OPERATIONAL CHECK REQUIRED BY AD 93-19-05 WHICH SUPERSEDES AD 89-26-04.

1. <u>Slat Failure Protection System - Test</u>

A. References

- (1) AMM 06-44-00/201, Wing Access Doors and Panels
- (2) AMM 24-22-00/201, Electrical Power Control
- (3) AMM 27-81-00/601, Leading Edge Slat System
- (4) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
- (5) AMM 31-41-00/201, EICAS
- (6) AMM 31-51-00/501, Warning Systems
- (7) AMM 78-31-00/201, Thrust Reverser System
- B. Prepare for the Test

WARNING: DO THE THRUST REVERSER DEACTIVATION PROCEDURE TO PREVENT THE OPERATION OF THE THRUST REVERSER. THE ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURY TO PERSONS OR DAMAGE TO

EQUIPMENT.

OPERATIONAL LE SLAT FAILURE PROTECTION SYSTEM

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AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (1) Do this procedure: Thrust Reverser Deactivation for Ground Maintenance (AMM 78-31-00/201).
- (2) Make sure the trailing edge (TE) flaps and the leading edge (LE) slats are in the fully retracted position.
- (3) Make sure the flap control lever is in the zero (FLAPS UP) detent.
- (4) Supply electrical power (AMM 24-22-00/201).
- (5) Make sure the arming switches for the flap and the slat alternate drives, on the P3 panel, are not in the armed position (ALTN switch lights are off).
- (6) Make sure you close these circuit breakers on the main power distribution panel (P6):
 - (a) 6D21, ALTN SLAT INBD PWR
 - (b) 6D24, ALTN FLAP PWR
 - (c) 6F24, ALTN SLAT OUTBD PWR
- (7) Make sure you close these circuit breakers on the P11 Overhead Panel.
 - (a) 11C10, SLAT POS IND
 - (b) 11C14, FLAP/STAB POS SENSING C
 - (c) 11C15, FSEU POS SENSOR 1
 - (d) 11C16, FLAP SLAT ELEC UNIT 1 CONT, or FSEU CONT 1
 - (e) 11C29, 11E19, 11C21 or 11C27, LDG GR POS AIR/GND SYS 2 ALT
 - (f) 11G15 or 11S14, FSEU POS SENSOR 2
 - (g) 11G16, FLAP SLAT ELEC UNIT 2 CONT, or FSEU CONT 2
 - (h) 11G22, FSEU POS SENSOR 3
 - (i) 11G23, FLAP SLAT ELEC UNIT 3 CONT, or FSEU CONT 3

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AIRLINE CARD NO.



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MECH	INSP		
			(j) 11H14, LE SLAT SHUTOFF
			(k) 11H23, SLAT ALTN CONT INBD
			(l) 11H24, SLAT ALTN CONT OUTBD
			(m) 11J13, LOAD RELIEF
			(n) 11J14, TE FLAP SHUTOFF
			(o) 11J17, FLAP/STAB POS SENSING L
			(p) 11J24, TE FLAPS ALTN CONT
			(q) 11J26, FLAP/STAB POS SENSING R
			(r) 11T36, PROX SW TEST
			(s) 11U23 or 11U24, LDG GR POS AIR/GND SYS 2
		(8)	Make sure you close these circuit breakers on the P11 Overhead Panel:
			(a) 11JO2, EICAS CMPTR L
			(b) 11J03, EICAS UPPER DISPL
			(c) 11J11, FLAP/SLAT POS IND
			(d) 11J15, L FLAP POS IND
			(e) 11J16, R FLAP POS IND
			(f) 11J29, EICAS CMPTR R
			(g) 11J30, EICAS LOWER DSPL
			(h) 11J31, EICAS DSPL SW
			(i) 11J32, EICAS PILOT DISPLAY, or DISPLAY SELECT
		(9)	Make sure the COMPUTER switch on the EICAS DISPLAY select panel is in the L position.
		C. Test	for the Inboard Slat Failure Protection (Fig. 502)
EFF	ECTI	/ITY —	OPERATIONAL LE SLAT FAILURE PROTECTION SYSTEM

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (1) Make sure the flap control lever is in the zero (FLAPS UP) detent.
- (2) Attach a DO-NOT-OPERATE tag to the flap control lever.
- (3) Remove power from the center hydraulic system (AMM 29-11-00/201).
- (4) If installed, remove the access panel, 611BB, to get access to the inboard slat PDU (AMM 06-44-00/201).
- (5) Remove the nut and washer from the bolt that connects the input control rod to the pilot input arm, at the inboard slat PDU (Detail C, Fig. 502). Do not remove the bolt.

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (6) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (7) Hold the pilot input arm in position and remove the bolt from the arm. Do not move the arm or change the length of the input control rod.
- (8) Standing forward of the inboard slat PDU and looking aft, move the pilot input arm clockwise to the extend direction (Detail C, Fig. 502) to approximately 15-20 degrees.
- (9) Make sure the slats do not move.
- (10) Open this circuit breaker on the P11 panel and attach a D0-N0T-CLOSE tag:

<u>NOTE</u>: Prepare to do the subsequent steps before you open the circuit breaker in this step.

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OPERATIONAL | LE SLAT FAILURE PROTECTION SYSTEM

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AIRLINE CARD NO.

SAS BOEING
767
TASK CARD

MECH INSP

- (a) 11H14, SLAT SHUTOFF
- (11) Make sure these conditions occur after you open the circuit breaker:
 - (a) The inboard slats start to move, and then stop in less than 4 seconds.
 - (b) The manual override lever on the inboard slat PDU is in the No. 1 (bypass) position (Detail C, Fig. 502).
 - (c) The amber LEADING EDGE light (on P3) is on (Fig. 501).
 - (d) The L and R needles point to a position between the UP and 1-unit marks on the flap position indicator.
 - (e) The EICAS message, LE SLAT DISAGREE, shows on the EICAS display.
 - (f) When the LE SLAT DISAGREE message shows on the EICAS display, do the steps that follow:
 - 1) Push the STAT button on the engine display panel located on the center aisle stand to show status messages on the bottom EICAS display.

NOTE: The FLAP/SLAT ELEC and SLAT ISLN VAL messages are possibly shown on the bottom EICAS display because the circuit breaker SLAT SHUTOFF VALVE is open.

- 2) Make sure that the LE SLAT SHUTDOWN message shows on the bottom EICAS display.
- 3) Turn the COMPUTER switch on the EICAS DISPLAY select panel to the R position, and make sure the EICAS messages stay on the EICAS display.
- (12) Move the pilot input arm back to the initial position and connect the input control rod to the pilot input arm with the bolt, washer, and nut (Detail C, Fig. 502).

NOTE: Do not change the length of the input control rod. Keep the the flap control lever in the zero (FLAPS UP) detent when you install the bolt.

(13) Remove the DO-NOT-OPERATE tag from the flap control lever.

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AIRLINE CARD NO.



MECH INSP

- (14) Move the flap control lever to the 1-unit detent, and make sure the outboard slats move to the intermediate position.
- (15) Push the arming switch (on P3) for the slat alternate drive to arm the slat alternate drive (ALTN switch light comes on at the LE side) (Fig. 501).
- (16) Push the arming switch again to disarm the slat alternate drive (ALTN switch lights goes off), and make sure the inboard slats move to the intermediate position.
- (17) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
 - (a) 11H14, SLAT SHUTOFF
- (18) Erase the SLAT ISLN VAL maintenance message because this message is latched (AMM 31-41-00/201).
- (19) Do these checks after the inboard slats stop at the intermediate position:
 - (a) Make sure the amber LEADING EDGE light goes off.
 - (b) Make sure there are no messages on the EICAS display for the slats.
- (20) Move the flap control lever to the zero (FLAPS UP) detent, and make sure the slats move to the fully retracted position.
- (21) Remove power from the center hydraulic system (AMM 29-11-00/201).
- D. Test for the Outboard Slat Failure Protection (Fig. 503)
 - (1) Make sure the flap control lever is in the zero (FLAPS UP) detent.
 - (2) Attach a DO-NOT-OPERATE tag to the flap control lever.
 - (3) Remove power from the center hydraulic system (AMM 29-11-00/201).
 - (4) If installed, remove the access panel, 511BB, to get access to the outboard slat PDU (AMM 06-44-00/201).
 - (5) Remove the nut and washer from the bolt that connects the input control rod to the pilot input arm, at the outboard slat PDU (Detail B, Fig. 503). Do not remove the bolt.

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AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (6) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (7) Do these steps to make sure the messages show on the EICAS display.
 - (a) Open this circuit breaker on P11 Overhead Panel:
 - 1) 11H14, SLAT SHUTOFF
 - (b) Approximately 10 seconds after you open the circuit breaker, look for these messages on the EICAS display:
 - 1) FLAP/SLAT ELEC

NOTE: This message shows on both the status and maintenance pages on EICAS.

2) AIRPLANES WITH -603 AND SUBSEQUENT EICAS COMPUTERS;

SLAT ISLN VAL

NOTE: The Signal Consolidation Card (SCC) needs to be installed on the airplane to display this message. This message is shown on the EICAS maintenance page only.

- (c) Turn the COMPUTER switch on the EICAS DISPLAY select panel to the R position, and make sure the EICAS messages stay on the EICAS display.
- (d) Turn the COMPUTER switch back to the L position.

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AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (e) Close this circuit breaker on the P11 panel:
 - 1) 11H14, SLAT SHUTOFF
- (8) Hold the pilot input arm in position and remove the bolt from the arm. Do not move the arm or change the length of the input control rod.
- (9) Standing forward of the outboard slat PDU and looking aft, move the pilot input arm clockwise to the extend direction (Detail B, Fig. 503) to approximately 15-20 degrees.
- (10) Make sure the slats do not move.
- (11) Open this circuit breaker on the P11 panel and attach a D0-N0T-CLOSE tag:

<u>NOTE</u>: Prepare to do the subsequent steps before you open the circuit breaker in this step.

- (a) 11H14, SLAT SHUTOFF
- (12) Make sure these conditions occur after you open the circuit breaker:
 - (a) The outboard slats start to move, and then stop in less than 4 seconds.
 - (b) The manual override lever on the outboard slat PDU is in the No. 1 (bypass) position (Detail B, Fig. 503).
 - (c) The amber LEADING EDGE light (on P3) goes on (Fig. 501).
 - (d) The L and R needles point to a position between the UP and 1-unit marks on the flap position indicator.
 - (e) The EICAS message, LE SLAT DISAGREE shows on the EICAS display.
 - (f) Turn the COMPUTER switch on the EICAS DISPLAY select panel to the R position, and make sure the EICAS message does not change, then turn the switch back to the L position.
 - (g) When the LE SLAT DISAGREE message shows on the EICAS display, do the steps that follow:

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 Push the STAT button on the engine display panel located on the center aisle stand to show status messages on the bottom EICAS display.

NOTE: The FLAP/SLAT ELEC and SLAT ISLN VAL messages are possibly shown on the bottom EICAS display because the circuit breaker SLAT SHUTOFF VALVE is open.

- 2) Make sure that the LE SLAT SHUTDOWN message shows on the bottom EICAS display.
- Turn the COMPUTER switch on the EICAS DISPLAY select panel to the R position, and make sure the EICAS messages stay on the EICAS display.
- 4) Turn the COMPUTER switch back to the L position.
- (13) Move the pilot input arm back to the initial position and connect the input control rod to the pilot input arm with the bolt, washer, and nut (Detail B, Fig. 503).

NOTE: Do not change the length of the input control rod. Keep the the flap control lever in the zero (FLAPS UP) detent when you install the bolt.

- (14) Remove the DO-NOT-OPERATE tag from the flap control lever.
- (15) Move the flap control lever to the 1-unit detent, and make sure the inboard slats move to the intermediate position.
- (16) Push the arming switch (on P3) for the slat alternate drive to arm the slat alternate drive (ALTN switch light comes on at the LE side) (Fig. 501).
- (17) Push the arming switch again to disarm the slat alternate drive (ALTN switch light goes off), and make sure the outboard slats move to the intermediate position.
- (18) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
 - (a) 11H14, SLAT SHUTOFF
- (19) Erase the SLAT ISLN VAL maintenance message because this message is latched (AMM 31-41-00/201).

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		(20)) Do these checks after the outboard slats stop at the intermediate position:
			(a) Make sure the amber LEADING EDGE light goes off.
			(b) Make sure there are no messages on the EICAS display for the slats with the steps that follow:
			 Push the STAT button on the engine display panel located on the center aisle stand to show status messages on the bottom EICAS display.
		(21)) Move the flap control lever to the zero (FLAPS UP) detent, and make sure the slats move to the fully retracted position.
		E. Pu	t the Airplane Back to Its Usual Condition
		(1)	Remove power from the center hydraulic system (AMM 29-11-00/201).
		(2)) Remove electrical power (AMM 24-22-00/201).
		(3)) Install the access panels, 511BB and 611BB, for the outboard and inboard slat PDU (AMM 06-44-00/201).
		(4)) Do the activation procedure for the thrust reverser (AMM 78-31-00/201).

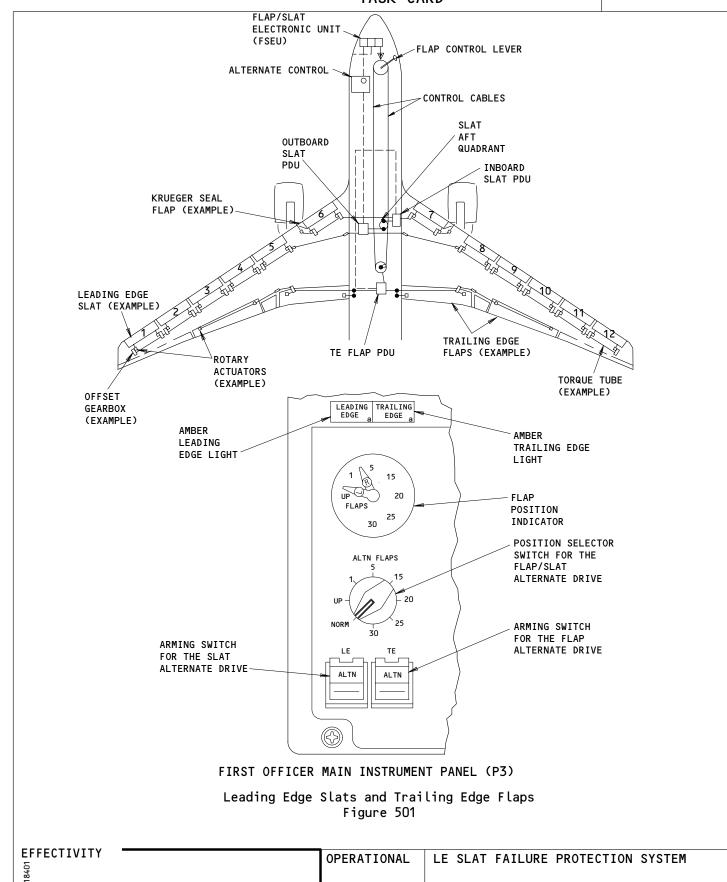
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BYPASS INBOARD VALVE SLAT PDU SEE (A CONTROL UNIT RIG PIN LE6 CONTROL DRIVE (FOLLOW-UP CAM) VALVE UNIT MODULE **BYPASS** SEE (B) VALVE ELECTRIC MOTOR RIG PIN LEG DRIVE UNIT CONTROL UNIT SUPPORT ROD (DO NOT ADJUST) PRESS PILOT INPUT RIG PIN LE6 (FOLLOW-UP CAM) SEE (C) SEE (D) CONTROL HYDRAULIC VALVE INPUT MOTOR MODULE CONTROL ROD INBOARD SLAT PDU (OUTBOARD VIEW) \longrightarrow FWD Inboard Slat Power Drive Unit (PDU) Adjustment Figure 502 (Sheet 1) **EFFECTIVITY** OPERATIONAL LE SLAT FAILURE PROTECTION SYSTEM

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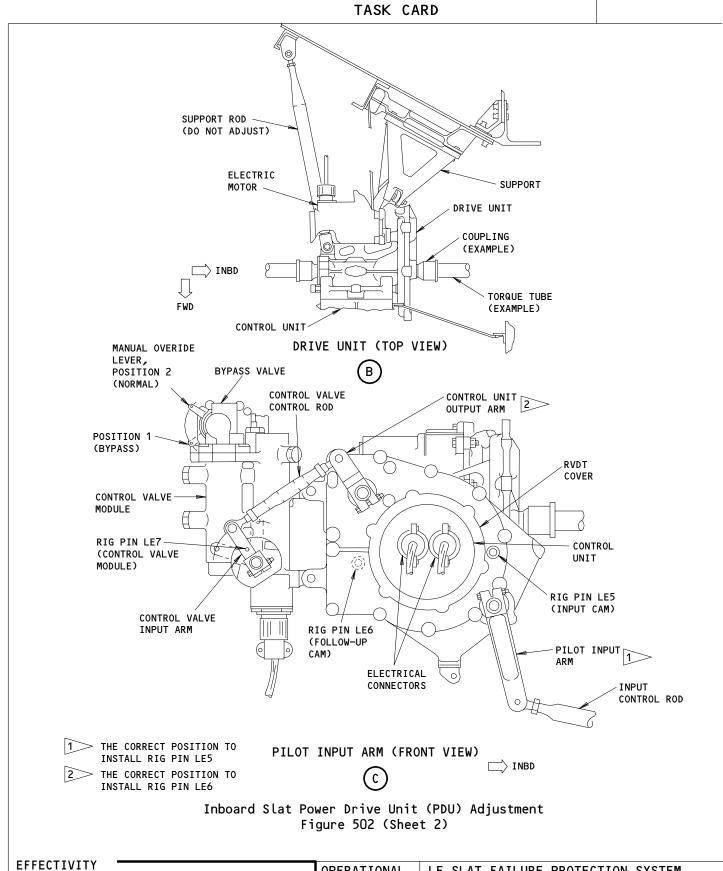
LE SLAT FAILURE PROTECTION SYSTEM

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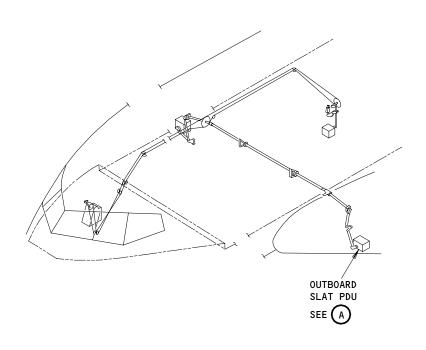
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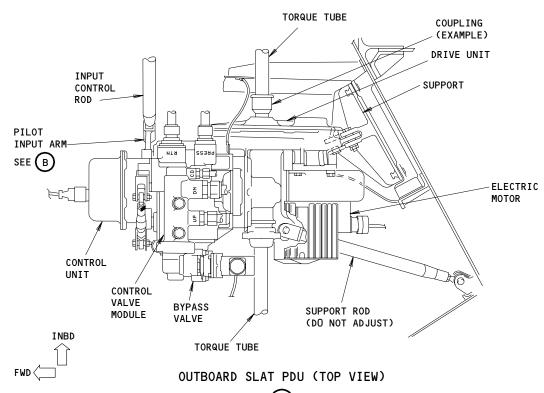
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Outboard Slat Power Drive Unit (PDU) Adjustment Figure 503 (Sheet 1)

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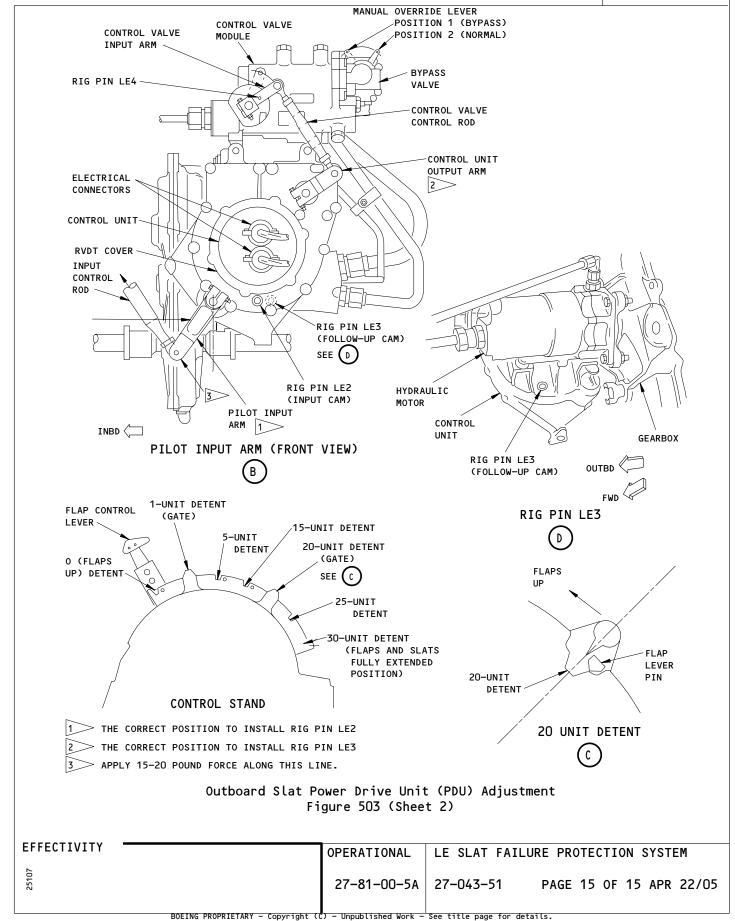
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BOEING CARD NO. 27-044-01

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

AIRPL CREW CABIN A-27-043-01 3C 13636 008 DEC 22/08

TASK TITLE STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY

INTERVAL

TASK
OPERATIONAL

LE SLAT ASYMMETRY PROTECTION SYSTEM

ARPLANE

STRUCTURAL ILLUSTRATION REFERENCE

APPLICABILITY
AIRPLANE
ENGINE

ALL

ALL

ZONES ACCESS PANELS

212 510 610 511BB 511FB 521AFB 611BB

RELATED TASK

MPD ITEM NUMBER

OPERATIONALLY CHECK LE SLAT ASYMMETRY PROTECTION SYSTEM.

27-81-00-5B

- Slat Asymmetry Protection System Test
 - A. Equipment
 - (1) Proximity Sensor Actuator/Deactuator Set A27092-106 (optional to the Aluminum Shim):
 - (a) Deactuator P/N A27092-62 (1 necessary)

 - (3) Leading Edge Slats Groundlock A27007-1 (2 Necessary)
 - B. Consumable Materials
 - (1) G00347 Tape, Double Back Permacel 55
 - C. References
 - (1) AMM 06-44-00/201, Wing Access Doors and Panels
 - (2) AMM 24-22-00/201, Electrical Power Control
 - (3) AMM 27-88-00/501, Leading Edge Slat Position Indicating System
 - (4) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
 - (5) AMM 31-51-00/501, Warning Systems
 - (6) AMM 78-31-00/201, Thrust Reverser System

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		D.	Prepare	for the Test	
			WARNING:	DO THE THRUST REVERSER DEACTIVATION PROCEDURE TO PREVENT TO PERATION OF THE THRUST REVERSER. THE ACCIDENTAL OPERATION THE THRUST REVERSER CAN CAUSE INJURY TO PERSONS OR DAMAGE EQUIPMENT.	N OF
				this procedure: Thrust Reverser Deactivation for Ground ntenance (AMM 78-31-00/201).	
				e sure the trailing edge (TE) flaps and the leading edge (LE ts are in the fully retracted position.	:)
			(3) Mak	e sure the flap control lever is in the zero (FLAPS UP) dete	nt.
			(4) Supp	ply electrical power (AMM 24-22-00/201).	
			dri	e sure the arming switches for the flap and the slat alterna ves, on the first officer's main instrument panel, P3, are n armed position (ALTN switch lights are off).	
				e sure you close these circuit breakers on the main power tribution panel (P6):	
			(a)	6D21, ALTN SLAT INBD PWR	
			(b)	6D24, ALTN FLAP PWR	
			(c)	6F24, ALTN SLAT OUTBD PWR	
			(7) Make Pane	e sure you close these circuit breakers on the P11 Overhead	
			(a)	11C10, SLAT POS IND	
			(b)	11C14, FLAP/STAB POS SENSING C	
			(c)	11C15, FSEU POS SENSOR 1	
			(d)	11C16, FLAP SLAT ELEC UNIT 1 CONT, or FSEU CONT 1	

(f) 11G15 or 11S14, FSEU POS SENSOR 2

(e) 11C29, 11E19, 11C21 or 11C27, LDG GR POS AIR/GND SYS 2 ALT

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			(g) 11G16, FLAP SLAT ELEC UNIT 2 CONT, or FSEU CONT 2
			(h) 11G22, FSEU POS SENSOR 3
			(i) 11G23, FLAP SLAT ELEC UNIT 3 CONT, or FSEU CONT 3
			(j) 11H14, LE SLAT SHUTOFF
			(k) 11H23, SLAT ALTN CONT INBD
			(L) 11H24, SLAT ALTN CONT OUTBD
			(m) 11J13, LOAD RELIEF
			(n) 11J14, TE FLAP SHUTOFF
			(o) 11J17, FLAP/STAB POS SENSING L
			(p) 11J24, TE FLAPS ALTN CONT
			(q) 11J26, FLAP/STAB POS SENSING R
			(r) 11T36, PROX SW TEST
			(s) 11U23 or 11U24, LDG GR POS AIR/GND SYS 2
		(8)	Make sure you close these circuit breakers on the P11 Overhead Panel:
			(a) 11J02, EICAS CMPTR L
			(b) 11J03, EICAS UPPER DISPL
			(c) 11J11, FLAP/SLAT POS IND
			(d) 11J15, L FLAP POS IND
			(e) 11J16, R FLAP POS IND
			(f) 11J29, EICAS CMPTR R
			(g) 11J30, EICAS LOWER DSPL
			(h) 11J31, EICAS DSPL SW

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- (i) 11J32, EICAS PILOT DISPLAY, or DISPLAY SELECT
- (9) Make sure the COMPUTER switch on the EICAS DISPLAY select panel is in the L position.
- E. Test for the Inboard Slat Asymmetry Protection (Fig. 509)

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (1) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (2) Move the flap control lever to the 25-unit detent and permit the slats to move to the fully extended position.
- (3) Attach a DO-NOT-OPERATE tag to the flap control lever.
- (4) Remove the power from the center hydraulic system (AMM 29-11-00/201).
- (5) Remove the access panels, 511BB and 611BB, to get access to the outboard and inboard slat power drive units (PDUs) (AMM 06-44-00/201).
- (6) Install the groundlocks on the inboard and outboard slat PDUs (Fig. 511).
- (7) Do one of the two steps that follow to isolate the sensor switch (S281) from the retract target:

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		(a)	Remove the access panel (Ref 06-44-00), 511FB, to get access to the sensor switch, S281, on slat No. 6 (Detail D, Fig. 509). Attach the deactuator tool (or the aluminum shim) to the sensor switch (S281).
			<u>NOTE</u> : You can use double-sided tape to attach the deactuator to the sensor switch.
		(b)	Attach the deactuator tool (or the aluminum shim) to the face of the retract target on the inboard auxiliary arm of slat No. 6 (Detail D, Fig. 509).
			NOTE: You can use double sided tape to attach the deactuator to the retract target.
			ove the groundlocks from the inboard and outboard slat PDUs . 511).
		<u>WARNING</u> :	KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.
		<u>CAUTION</u> :	MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.
		(9) Pres	surize the center hydraulic system (AMM 29-11-00/201).
		(10) Remo	ve the DO-NOT-OPERATE tag from the flap control lever.

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(11) Move the flap control lever to the zero (FLAPS UP) detent and do these checks:

If you removed the access panel, 511 FB, to get access to the NOTE: sensor switch, S281, on slat No. 6 and attached the deactuator tool or the aluminum shim to the sensor switch (S281), then the lights and messages called out in the next steps will already be on. The slats move or do not move to the retracted position.

- (a) Make sure the amber LEADING EDGE light (on P3) comes on (Fig. 501).
- (b) Make sure this EICAS message, LE SLAT ASYM, shows on the EICAS display.
- Turn the COMPUTER switch on the EICAS DISPLAY select panel to the R (12) position and make sure the LE SLAT ASYM message shows on the EICAS display.
- (13) Turn the COMPUTER switch back to the L position and stop for 10 seconds before you continue with the subsequent step.
- (14) Move the flap control lever to the 1-unit detent and do these checks:
 - The outboard slats move (if a -53 or older FSEU is installed) NOTE: or not move (if a- 63 or newer FSEU is installed) to the intermediate position.
 - (a) Make sure the inboard slats (No. 6 and 7) do not move.

NOTE: It is normal that the inboard slats move slightly. This is due to the transition of the bypass valve in the power drive unit.

Move the alternate flap selector switch to the 1-unit position and make sure the inboard slats do not move toward the 1-unit position.

NOTE: If the inboard slats move toward the 1-unit position, it is an indication that the arming relay K226 is failing in the energized state and needs replacement.

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(16) Move the alternate flap selector switch to the NORM position.

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM THE OUTBOARD SLATS IN THE SUBSEQUENT STEP. THE OUTBOARD SLATS CAN MOVE TO THE INTERMEDIATE POSITION AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

- (17) Open this circuit breaker on the P11 panel and attach a D0-N0T-CLOSE tag:
 - (a) 11C16, FLAP SLAT ELEC UNIT 1 CONT
- (18) Make sure the manual override lever on the inboard slat PDU is in the No. 1 (bypass) position (Detail C, Fig. 502).
- (19) Make sure the manual override lever on the outboard slat PDU is in the No. 2 (normal) position (Detail B, Fig. 503).

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM THE SLATS IN THE SUBSEQUENT STEP. THE SLATS CAN MOVE ACCIDENTALLY AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

- (20) Move the manual override lever on the inboard slat PDU to the No. 2 (normal) position, and make sure the inboard slats move to the intermediate position.
- (21) Move the flap control lever to the 25-unit detent to move the slats to the fully extended position.
- (22) Attach a DO-NOT-OPERATE tag to the flap control lever.
- (23) Remove the power from the center hydraulic system (AMM 29-11-00/201).
- (24) Remove the deactuator (or the aluminum shim) from the sensor switch or the retract target.

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WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (25) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (26) Remove the DO-NOT-OPERATE tag from the flap control lever.
- (27) Move the flap control lever to the zero (FLAPS UP) detent to move the slats to the fully retracted position.
- (28) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
 - (a) 11C16, FLAP SLAT ELEC UNIT 1 CONT
- (29) Make sure the amber LEADING EDGE light (on P3) is off.
- (30) Make sure the EICAS message, LE SLAT ASYM, does not show on the EICAS display.
- (31) Make sure the L and R needles point to the UP mark on the flap position indicator.
- (32) If removed, install the access panel, 511FB, at the slat No. 6 location (AMM 06-44-00/201).
- F. Test for the Outboard Slat Asymmetry Protection (Fig. 509)

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

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CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (1) Make sure the center hydraulic system is pressurized (AMM 29-11-00/201).
- (2) Move the flap control lever to the 25-unit detent to move the slats to the fully extended position.
- (3) Attach a DO-NOT-OPERATE tag to the flap control lever.
- (4) Remove the power from the center hydraulic system (AMM 29-11-00/201).
- (5) Remove the access panels, 511BB and 611BB, to get access to the outboard and inboard slat PDUs (AMM 06-44-00/201).
- (6) Install the groundlocks on the inboard and outboard slat PDUs (Fig. 511).
- Do one of the two steps that follow to isolate the sensor switch (S276) from the retract target:
 - Remove the access panel (AMM 06-44-00/201), 521AFB, to get access to the sensor switch, \$276, on slat No. 1 (Detail C, Fig. 509). Attach the deactuator assembly (or the aluminum shim) to the sensor switch (\$276).

NOTE: You can use double-sided tape to attach the deactuator to the sensor switch.

Attach the deactuator assembly (or the aluminum shim) to the face of the retract target on the outboard auxiliary arm of slat No. 1 (Detail C, Fig. 509).

You can use double sided tape to attach the NOTE: deactuator to the retract target.

(8) Remove the groundlocks from the inboard and outboard slat PDUs.

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WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (9) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (10) Remove the DO-NOT-OPERATE tag from the flap control lever.
- (11) Move the flap control lever to the zero (FLAPS UP) detent and do these checks:

NOTE: If you removed the access panel, 521AFB, to get access to the sensor switch, S276, on slat No. 1 and attached the deactuator tool or the aluminum shim to the sensor switch (S276), then the lights and messages called out in the next steps will already be on. The slats move or do not move to the retracted position.

- (a) Make sure the amber LEADING EDGE light (on P3) comes on (Fig. 501).
- (b) Make sure this EICAS message, LE SLAT ASYM, shows on the EICAS display.
- (12) Turn the COMPUTER switch on the EICAS DISPLAY select panel to the R position and make sure the LE SLAT ASYM message shows on the EICAS display.
- (13) Turn the COMPUTER switch back to the L position and stop for 10 seconds before you continue with the subsequent step.

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(14) Move the flap control lever to the 1-unit detent and do these checks:

NOTE: The inboard slats move (if a -53 or older FSEU is installed) or not move (if a -63 or newer FSEU is installed) to the intermediate position.

(a) Make sure the outboard slats (No. 1-5 and 8-12) do not move.

NOTE: It is normal that the outboard slats move lightly.

This is due to the transition of the bypass valve in the power drive unit.

(15) Move the alternate flap selector switch to the 1-unit position and make sure the outboard slats do not move toward the 1-unit position.

<u>NOTE</u>: If the outboard slats move toward the 1-unit position, it is an indication that the arming relay K223 is failing in the energized state and needs replacement.

(16) Move the alternate flap selector switch to the NORM position.

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM THE INBOARD SLATS IN THE SUBSEQUENT STEP. THE INBOARD SLATS CAN MOVE TO THE INTERMEDIATE POSITION AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

- (17) Open this circuit breaker on the P11 panel and attach a D0-N0T-CLOSE tag:
 - (a) 11C16, FLAP SLAT ELEC UNIT 1 CONT
- (18) Make sure the manual override lever on the outboard slat PDU is in the No. 1 (bypass) position (Detail B, Fig. 503).
- (19) Make sure the manual override lever on the inboard slat PDU is in the No. 2 (normal) position (Detail C, Fig. 502).

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AIRLINE CARD NO.



MECH INSP

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM THE SLATS IN THE SUBSEQUENT STEP. THE SLATS CAN MOVE ACCIDENTALLY AND CAUSE INJURE TO PERSONS OR DAMAGE TO EQUIPMENT.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (20) Move the manual override lever on the outboard slat PDU to the No. 2 (normal) position, and make sure the outboard slats move to the intermediate position.
- (21) Move the flap control lever to the 25-unit detent to move the slats to the fully extended position.
- (22) Attach a DO-NOT-OPERATE tag to the flap control lever.
- (23) Remove power from the center hydraulic system (AMM 29-11-00/201).
- (24) Remove the deactuator (or the aluminum shim) from the sensor switch or the retract target.

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (25) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (26) Move the flap control lever to the zero (FLAPS UP) detent.

EFFECTIVITY

OPERATIONAL

LE SLAT ASYMMETRY PROTECTION SYSTEM

27-81-00-5B

27-044-01

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AIRLINE CARD NO.

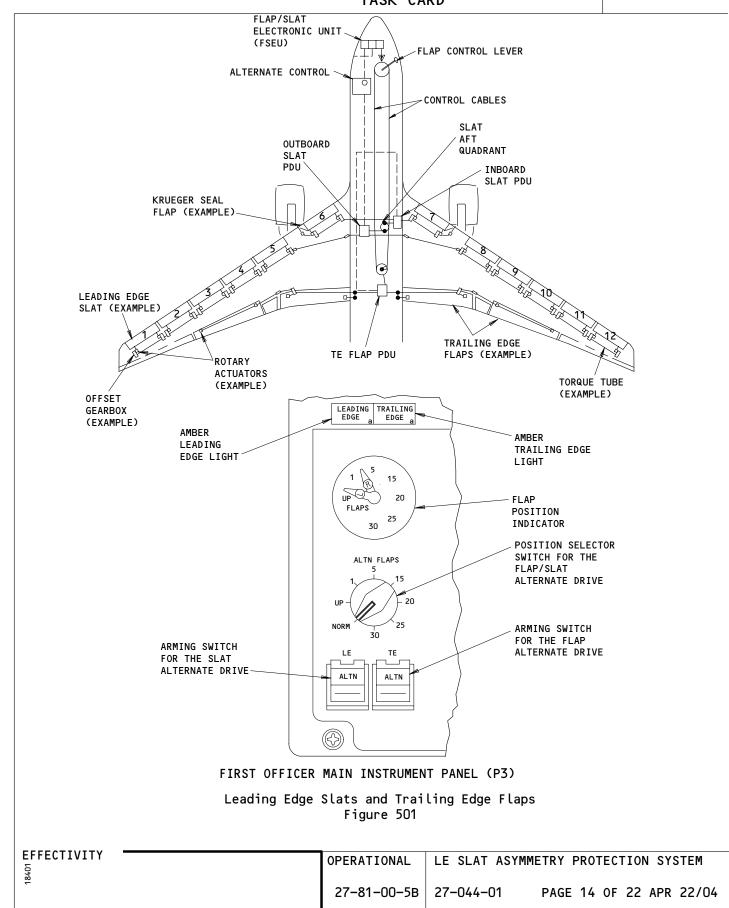
				TASK CARD					
MECH	INSP			<u>'</u>					
			(27)	Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:					
				(a) 11C16, FLAP SLAT ELEC UNIT 1 CONT					
			(28)	Make sure the amber LEADING EDGE light is off.					
		(29) Make sure the EICAS message, LE SLAT ASYM, does not show on the EICAS display.							
		(30) Make sure the L and R needles point to the UP mark on the flap position indicator.							
			(31)	If removed, install the access panel, 521AFB, at the slat No. 1 location (AMM $06-44-00/201$).					
		G.	Put	the Airplane Back to Its Usual Condition					
			(1)	Remove the power from the center hydraulic system (AMM 29-11-00/201).					
			(2)	Remove electrical power (AMM 24-22-00/201).					
			(3)	Install the access panels, 511BB and 611BB, if not necessary to keep access open to the outboard and inboard slat PDU (AMM $06-44-00/201$).					
			(4)	Do the activation procedure for the thrust reverser (AMM 78-31-00/201).					

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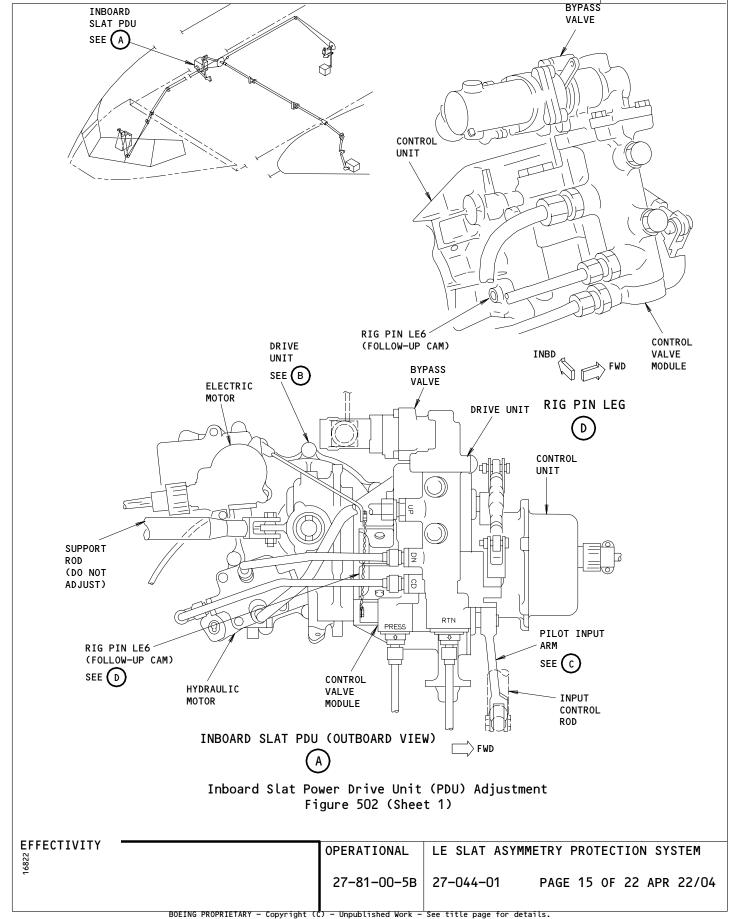
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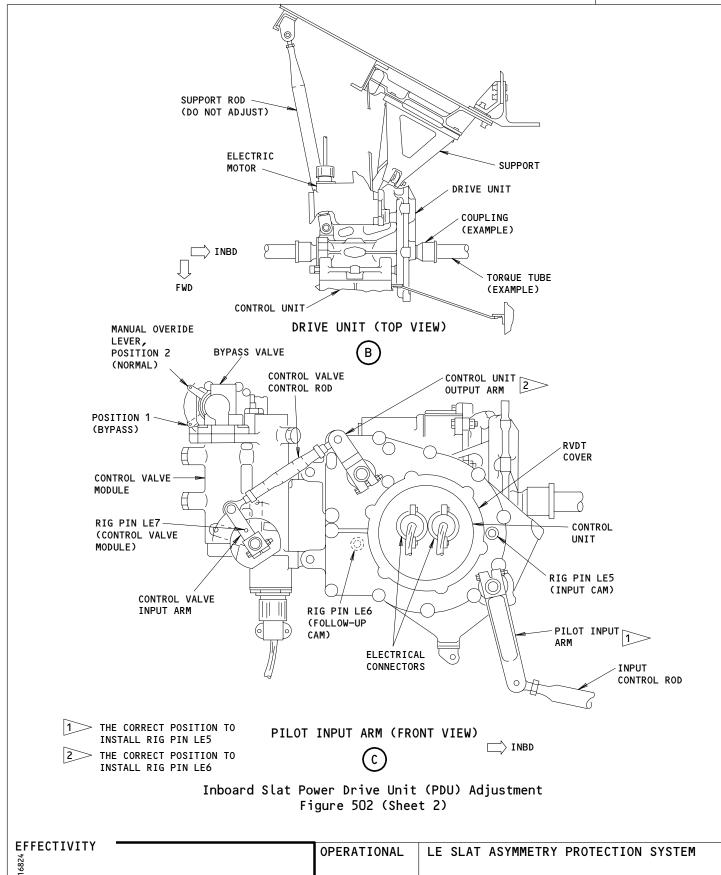


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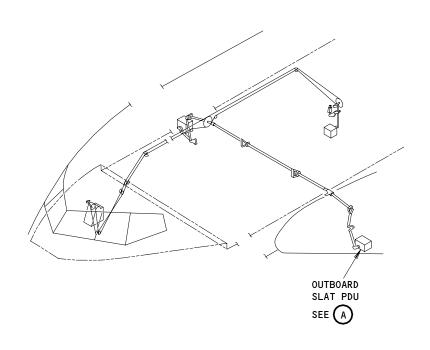
PAGE 16 OF 22 APR 22/04

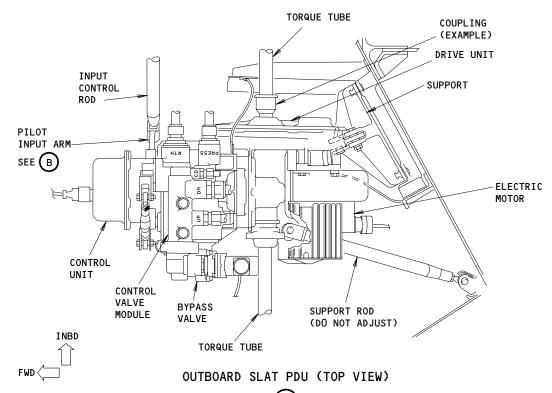
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Outboard Slat Power Drive Unit (PDU) Adjustment Figure 503 (Sheet 1)

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LE SLAT ASYMMETRY PROTECTION SYSTEM

27-81-00-5B

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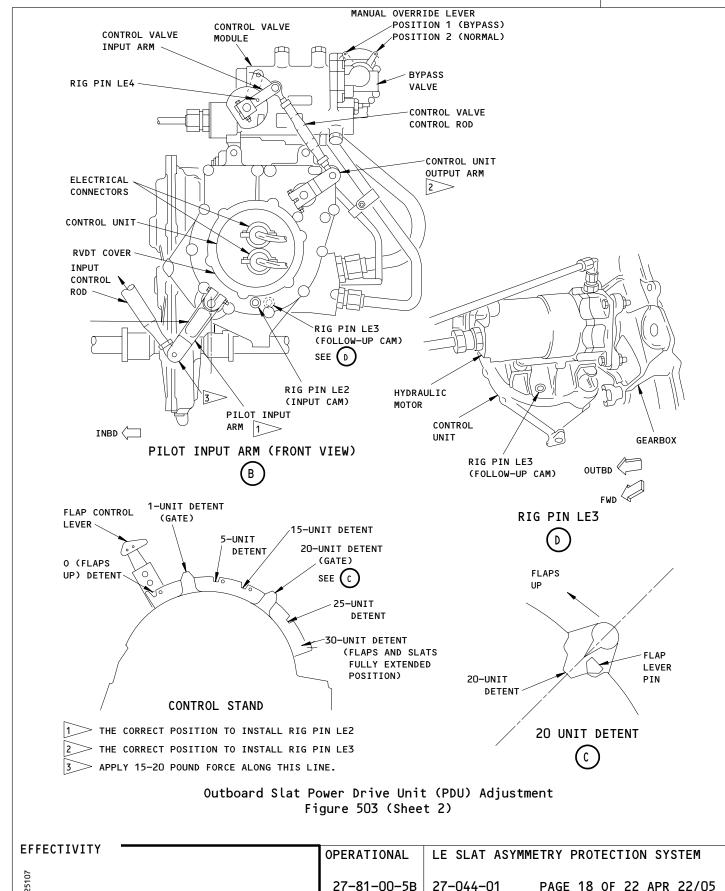
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TASK CARD

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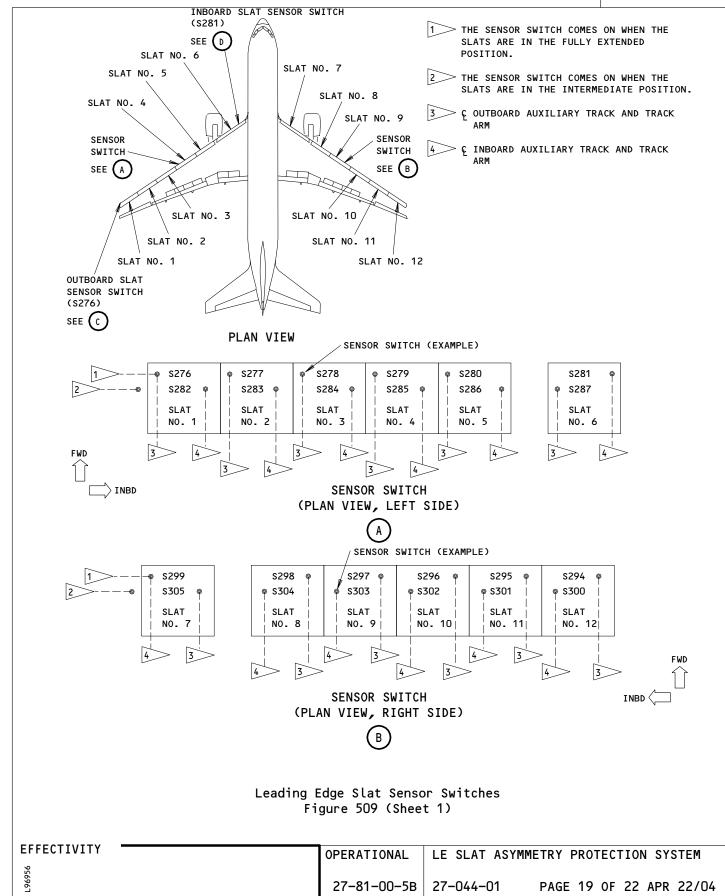
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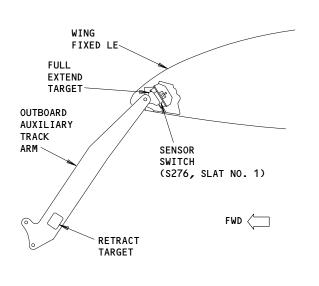
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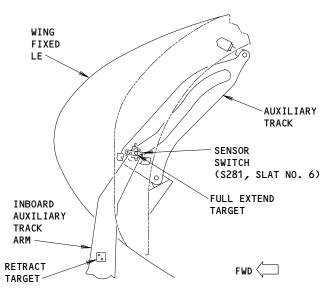
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OUTBOARD SLAT SENSOR SWITCH, SLAT NO. 1 (OUTBOARD VIEW, SLAT NOT SHOWN)

(c)

INBOARD SLAT SENSOR SWITCH, SLAT NO. 6 (OUTBOARD VIEW, SLAT NOT SHOWN)

D' Leading Edge Slat Sensor Switches

Figure 509 (Sheet 2)

EFFECTIVITY

OPERATIONAL

LE SLAT ASYMMETRY PROTECTION SYSTEM

27-81-00-5B

27-044-01

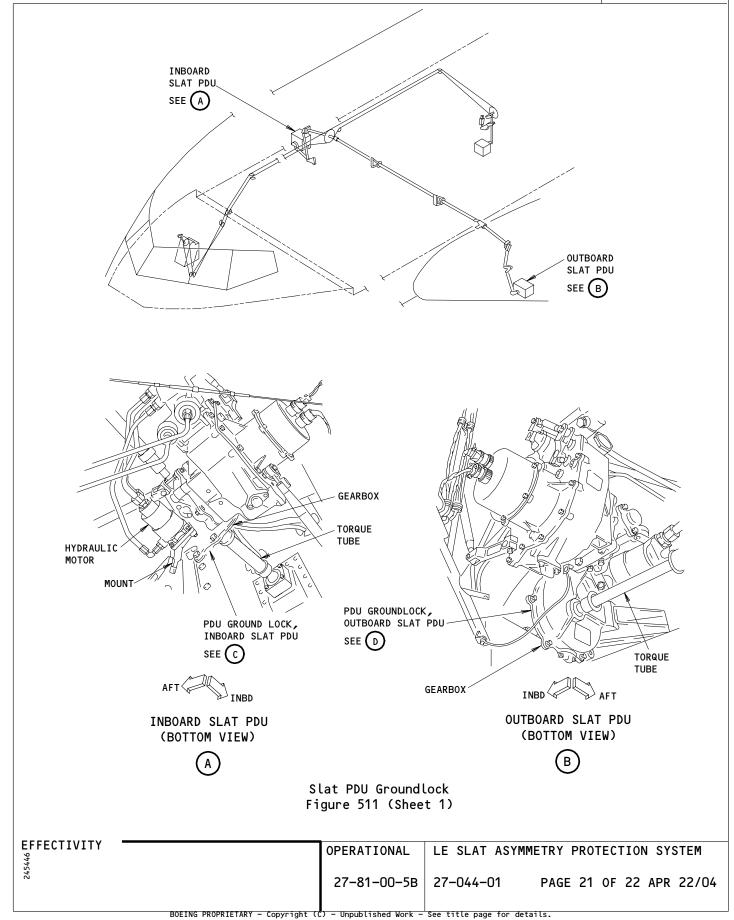
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AIRLINE CARD NO.

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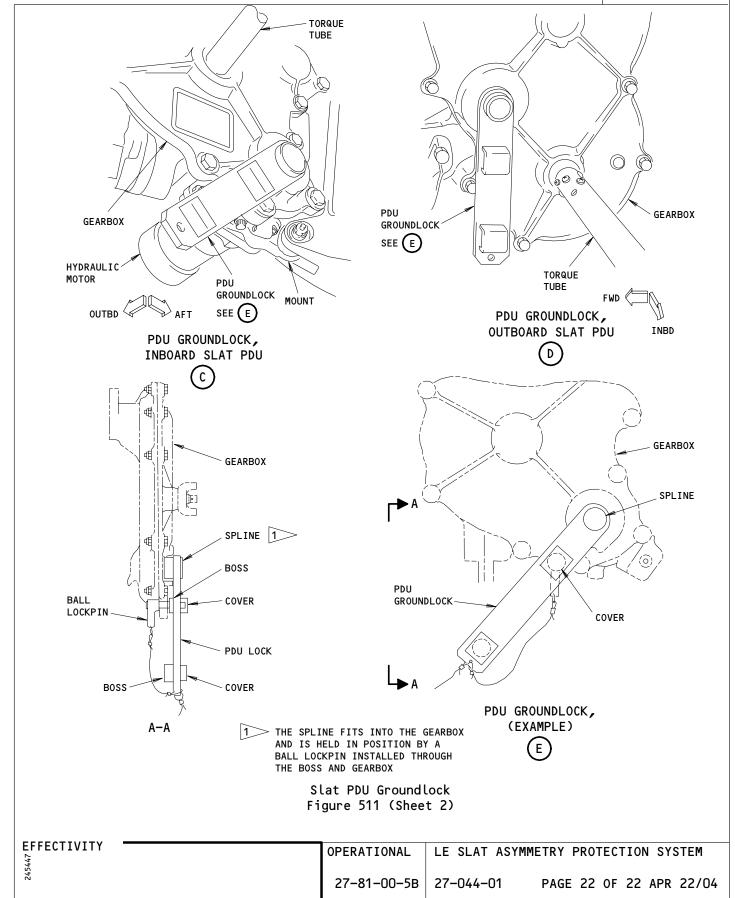


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AIRLINE CARD NO.

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TASK CARD



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STA	TION							BOE	ING CAR	NO.
TAIL	_ NO.				BOEIN	G		27-0	45-01	l
			SAS	8	767			AIRI	INE CAR	D NO.
Di	ATE				TASK CARD					
SKILL	WORK ARE	EA	RELATED TASK		INTERVAL		PHASE	MPD REV		SK CARD VISION
AIRPL	CREW CA	BIN			1 C		11212	002	DEC	22/07
TASK		·		TITLE		STRUCTURAL ILLUSTRATION RE	FERENCE	AF AIRPLAN	PLICABI E	LITY ENGINE
OPERA	TIONAL	AUTO	SPEEDBRAKE							
								ALL		ALL
	ZONES					ACCESS PANELS				

MECH INSP MPD ITEM NUMBER

OPERATIONALLY CHECK AUTO SPEEDBRAKE FUNCTION INITIATED BY THRUST REVERSER HANDLE MOVEMENT.

27-62-00-5A

- 1. <u>Auto-Speedbrake Operational Test</u>
 - A. References

211 212

- (1) AMM 24-22-00/201, Electrical Power Control
- (2) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic System
- B. Access
 - (1) Location Zones
 211/212 Control Cabin
- C. Prepare for the Test
 - (1) Make sure the speedbrake lever is in its down-and-locked detent.
 - (2) Make sure the landing gear lever is in the down position.
 - (3) Supply electrical power (AMM 24-22-00/201).

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES AND ENGINE THURST REVERSERS WHEN HYDRAULIC POWER IS SUPPLIED.
AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

(4) Supply pressure to the left, right, and center hydraulic systems (AMM 29-11-00/201).

OPERATIONAL AUTO SPEEDBRAKE

27-62-00-5A 27-045-01 PAGE 1 OF 3 APR 22/06

27-045-01

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (5) Make sure the left, right and center WING FLT CONTROL shutoff valve switches on the P61 HYD/GEN FIELD CONT panel are in the ON position.
- (6) Move the FUEL CONTROL switches on the control stand panel, P10, to CUTOFF and attach DO-NOT-OPERATE tags.
- (7) Make sure this circuit breaker on the overhead panel, P11, is closed:
 - (a) 11G11, AUTO SPEEDBRK
- (8) Open these circuit breakers on the P11 panel and attach D0-N0T-CLOSE tags:
 - (a) 11L6 or 11D14, LEFT ENGINE T/R CONT
 - (b) AIRPLANES WITH HYDRAULIC MOTOR GENERATOR;
 11D4 or 11D5, T/R CONT ALTN L ENG
 - (c) 11L33, RIGHT ENGINE T/R CONT
 - (d) 11D33, RIGHT ENGINE T/R CONT ALTN
- (9) Operate the aileron trim switches until the aileron trim indicator shows zero units of trim.
- D. Auto-Speedbrake Operational Test
 - (1) Move the forward thrust levers forward until they are a minimum of 15° away from the idle stop.
 - (2) Move the speedbrake lever to its ARMED detent.
 - (3) Move the forward thrust levers rearward until they are less than 8° away from the idle stop.
 - (a) Make sure the speedbrake lever moves fully up.
 - (b) Make sure all the spoilers move up.
 - (4) Move the forward thrust levers forward until they are a minimum of 15° away from the idle stop.
 - (a) Make sure the speedbrake lever moves to its down-and-locked detent.

EFFECTIVITY

OPERATIONAL AUTO SPEEDBRAKE

27-62-00-5A

27-045-01

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27-045-01

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

(b) Make sure all the spoilers move fully down.

NOTE: The spoilers will move fully down when the forward thrust levers are approximately 11° away from the idle stop.

- (5) Move the forward thrust levers rearward to the idle stop.
- (6) Move the reverse thrust levers rearward to the reverse idle detent.
 - (a) Make sure the speedbrake lever moves fully up.
 - (b) Make sure all the spoilers move up.
- (7) Move the reverse thrust levers fully forward and down.
- (8) Move the speedbrake lever to its down-and-locked detent.
- E. Put the Airplane Back to Its Usual Condition
 - (1) Remove the DO-NOT-CLOSE tags and close these circuit breakers on the P11 panel:
 - (a) 11L6 or 11D14, LEFT ENGINE T/R CONT
 - (b) AIRPLANES WITH HYDRAULIC MOTOR GENERATOR;

11D4 or 11D5, T/R CONT - ALTN L ENG

- (c) 11L33, RIGHT ENGINE T/R CONT
- (d) 11D33, RIGHT ENGINE T/R CONT ALTN
- (2) Remove the DO-NOT-OPERATE tags from the FUEL CONTROL switches on the P10 panel.
- (3) Remove the power from the left, right, and center hydraulic systems (AMM 29-11-00/201).
- (4) Remove electrical power if it is not necessary (AMM 24-22-00/201).

STA	TION									BOE	ING CAR	D NO.
TAII	L NO.		•	4.0	X	BO	EIN	G			147-0°	
D	ATE		5	AS		_ 7	'67			AIR	LINE CAF	RD NO.
	··· -					TASK	CARD					
SKILL	WORK ARE	RELATED TASK			INTERVAL		PHASE	MPD REV	1	SK CARD EVISION		
AIRPL	CREW CA	BIN	B-27-	043-01		1C			11212	002	APR	22/06
TASK		TIT	LE			STRUCTURAL ILLUSTRATION	REFERENCE	AIRPLAN	PPLICABI	ILITY ENGINE		
OPERA	TIONAL	LE SL	AT AL	TERNATE	DRIVE	SYSTEM				XIXI EXI		LINGTINE
										ALL		ALL
	ZONES							ACCESS PANELS				
212												

MECH INSP

MPD ITEM NUMBER

OPERATIONALLY CHECK LE SLAT ALTERNATE POWER AND DRIVE SYSTEM.

27-81-00-5C

- 1. <u>Slat Alternate Power and Drive System Test</u>
 - A. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
 - (3) AMM 78-31-00/201, Thrust Reverser System
 - B. Prepare for the Test

WARNING: DO THE THRUST REVERSER DEACTIVATION PROCEDURE TO PREVENT THE OPERATION OF THE THRUST REVERSER. THE ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

- (1) Do this procedure: Thrust Reverser Deactivation for Ground Maintenance (AMM 78-31-00/201).
- (2) Make sure the trailing edge (TE) flaps and the leading edge (LE) slats are in the fully retracted position.
- (3) Make sure the flap control lever is in the zero (FLAPS UP) detent.
- (4) Do these checks to make sure the flap and the slat alternate drives are disarmed (Fig. 501):
 - (a) Make sure the position selector switch for the flap/slat alternate drive on the first officer instrument panel, P3, is in the NORM detent.

OPERATIONAL LE SLAT ALTERNATE DRIVE SYSTEM

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TASK CARD

AIRLINE CARD NO.

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			(b) Supply electrical power (AMM 24-22-00/201).
			(c) Make sure the arming switches for the flap and the slat alternate drives (on P3) are not in the armed position (ALTN switch lights are off).
			(d) Make sure the amber TRAILING EDGE and LEADING EDGE lights (on P3) are off.
		(5)	Make sure you close these circuit breakers on the main power distribution panel (P6):
			(a) 6D21, ALTN SLAT INBD PWR
			(b) 6D24, ALTN FLAP PWR
			(c) 6F24, ALTN SLAT OUTBD PWR
		(6)	Make sure you close these circuit breakers on the P11 Overhead Panel:
			(a) 11C10, SLAT POS IND
			(b) 11C14, FLAP/STAB POS SENSING C
			(c) 11C15, FSEU POS SENSOR 1
			(d) 11C16, FLAP SLAT ELEC UNIT 1 CONT, or FSEU CONT 1
			(e) 11C29, 11E19, 11C21 or 11C27, LDG GR POS AIR/GND SYS 2 ALT
			(f) 11G16, FLAP SLAT ELEC UNIT 2 CONT, or FSEU CONT 2
			(g) 11G23, FLAP SLAT ELEC UNIT 3 CONT, or FSEU CONT 3
			(h) 11G15 or 11S14, FSEU POS SENSOR 2
			(i) 11G22, FSEU POS SENSOR 3
			(j) 11H14, LE SLAT SHUTOFF
			(k) 11H23, SLAT ALTN CONT INBD
			(l) 11H24, SLAT ALTN CONT OUTBD

EFFECTIVITY

TASK CARD

AIRLINE CARD NO.

			TAGE CARD				
MECH	INSP						
			(m) 11J13, LOAD RELIEF				
			(n) 11J14, TE FLAP SHUTOFF				
			(o) 11J17, FLAP/STAB POS SENSING L				
			(p) 11J24, TE FLAPS ALTN CONT				
			(q) 11J26, FLAP/STAB POS SENSING R				
			(r) 11T36, PROX SW TEST				
			(s) 11U23 or 11U24, LDG GR POS AIR/GND SYS 2				
		(7)	Make sure you close these circuit breakers on the P11 Overhead Panel:				
			(a) 11JO2, EICAS CMPTR L				
			(b) 11J03, EICAS UPPER DISPL				
			(c) 11J11, FLAP/SLAT POS IND				
			(d) 11J15, L FLAP POS IND				
			(e) 11J16, R FLAP POS IND				
			(f) 11J29, EICAS CMPTR R				
			(g) 11J30, EICAS LOWER DSPL				
			(h) 11J31, EICAS DSPL SW				
			(i) 11J32, EICAS PILOT DISPLAY, or DISPLAY SELECT				
(8) C. Test			Make sure the COMPUTER switch on the EICAS DISPLAY select panel is in the L position.				
			for the Slat Alternate Power and Drive System (Fig. 501)				
		NOTE	When you read the flap position indicator, a tolerance of 1/32 of an inch is permitted on the L and R needle positions.				

EFFECTIVITY

AIRLINE CARD NO.

SAS BOEING TASK CARD

MECH INSP

(1) Make sure the EICAS messages on the EICAS display and the amber LEADING EDGE light on P3 come on only when it is shown in the test instruction.

CAUTION: DO NOT OPERATE THE ALTERNATE DRIVE MOTOR CONTINUOUSLY FOR MORE THAN 4 MINUTES. DO NOT OPERATE THE MOTOR AGAIN UNTIL IT IS COOL FOR AT LEAST 20 MINUTES TO PREVENT DAMAGE TO THE MOTOR.

WHILE USING THE ALTERNATE OR THE PRIMARY METHOD TO OPERATE THE CAUTION: LEADING EDGE SLAT DRIVE SYSTEM, MAKE SURE THE SAME METHOD IS USED UNTIL THE CYCLE IS COMPLETED. QUICK TRANSITION OF THE LEADING EDGE SLAT DRIVE SYSTEM FROM THE ALTERNATE MODE TO THE PRIMARY MODE CAN CAUSE INTERNAL FAILURE OF THE ALTERNATE DRIVE MOTOR.

(2) Get visual assistance from another person to make sure the alternate drive motors shut off when the slats stop moving.

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (3) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (4) Push the arming switch for the slat alternate drive to arm the slat alternate drive (ALTN switch light comes on at the LE side).
- Make sure that these conditions occur in seven seconds after you push the arming switch:
 - (a) The amber LEADING EDGE light (on P3) comes on.

EFFECTIVITY

OPERATIONAL LE SLAT ALTERNATE DRIVE SYSTEM

27-81-00-5c | 27-047-01

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AIRLINE CARD NO.



MECH INSP

- (b) This EICAS message, LE SLAT DISAGREE, shows on the EICAS display.
- (6) Move the flap control lever to the 1-unit detent, and make sure the inboard and outboard slats do not move.
- (7) Move the flap control lever to the zero (FLAPS UP) detent.
- (8) Remove the power from the center hydraulic system (AMM 29-11-00/201).

CAUTION: DO NOT OPERATE THE ALTERNATE DRIVE MOTOR CONTINUOUSLY FOR MORE THAN 4 MINUTES. DO NOT OPERATE THE MOTOR AGAIN UNTIL IT IS COOL FOR AT LEAST 20 MINUTES TO PREVENT DAMAGE TO THE MOTOR.

CAUTION: WHILE USING THE ALTERNATE OR THE PRIMARY METHOD TO OPERATE THE LEADING EDGE SLAT DRIVE SYSTEM, MAKE SURE THE SAME METHOD IS USED UNTIL THE CYCLE IS COMPLETED. QUICK TRANSITION OF THE LEADING EDGE SLAT DRIVE SYSTEM FROM THE ALTERNATE MODE TO THE PRIMARY MODE CAN CAUSE INTERNAL FAILURE OF THE ALTERNATE DRIVE MOTOR.

- (9) Turn the position selector switch for the flap/slat alternate drive to the 1-unit detent and do these checks:
 - (a) Make sure the amber LEADING EDGE light goes off.
 - Make sure the EICAS message, LE SLAT DISAGREE, does not show on the EICAS display.
 - While the slats move, make sure the L and R needles on the flap position indicator (on P3) move to a position between the UP and 1-unit marks.
 - After the slats stop at the intermediate position, make sure the L and R needles point to the 1-unit mark on the flap position indicator.
- Turn the position selector switch for the flap/slat alternate drive to the 5, 15, and 20-unit detents. Stop at each detent to make sure the slats do not move.

EFFECTIVITY

OPERATIONAL LE SLAT ALTERNATE DRIVE SYSTEM

27-81-00-5c | 27-047-01

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TASK CARD

AIRLINE CARD NO.

		TASK CARD
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		(11) Turn the position selector switch to the 25-unit detent, and make sure the slats move to the fully extended position.
		(12) Turn the position selector switch to the 30-unit detent, and make sure the slats stay in the fully extended position.
		(13) Turn the position selector switch to the 20-unit detent, and make sure the slats move to the intermediate position.
		(14) Turn the position selector switch to the 15, 5, and 1-unit detents. Stop at each detent to make sure the slats do not move.
		(15) Turn the position selector switch to the UP detent to move the slats to the fully retracted position, and do these checks:
		(a) While the slats move, make sure the L and R needles on the flap position indicator move to a position between the UP and 1-unit marks.
		(b) When the slats stop at the fully retracted position, make sure the L and R needles point to the UP mark on the flap position indicator.
		NOTE: The slat movement will not be as accurate when the slats are retracted with the alternate electric power.
		(16) Turn the rotary position selector switch for the slat alternate drive to the NORM detent, and make sure these conditions occur after 7 seconds:
		(a) The amber LEADING EDGE light (on P3) comes on.
		(b) This EICAS message, LE SLAT DISAGREE, shows on the EICAS display.
		(17) Push the arming switch for the slat alternate drive to disarm the alternate drive (ALTN switch light off).
		(18) Make sure the amber LEADING EDGE light is off.
		(19) Make sure the EICAS message, LE SLAT DISAGREE, does not show on the EICAS display.
		D. Put the Airplane Back to Its Usual Condition
		(1) Remove electrical power (AMM 24-22-00/201).

EFFECTIVITY

27-047-01

AIRLINE CARD NO.

TASK CARD

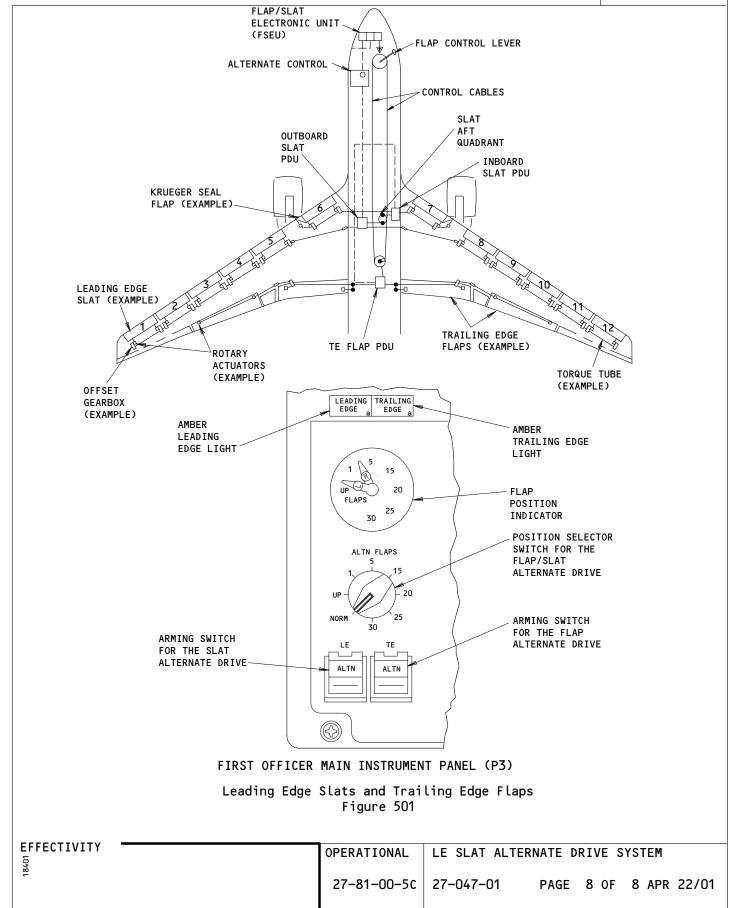
MECH	INSP							
		(2	neces	all the access ssary to access 06-44-00/201).	open to the o			
		(3	3) Do th (AMM	he activation p 78-31-00/201).	rocedure for t	he thrust re	verser	
EFF	ECTI	VITY —			l openations.	F 0 4 T 4 T	EDNATE ADTUE O	VOTEM
	1				OPERATIONAL		ERNATE DRIVE S	
					■ 27-81-00-5c	27-047-01	PAGE 7 OF	8 APP 22/NA

AIRLINE CARD NO.

27-047-01

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BOEING 767 TASK CARD



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	_
STATION	
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TAIL NO.	
DATE	



BOEING CARD NO. 27-047-02

AIRLINE CARD NO.

PHASE

TASK CARD

REV REVISION 002 20 AIRPL WINGS 12424 AUG 22/08 APPLICABILITY
LANE ENGINE STRUCTURAL ILLUSTRATION REFERENCE

INTERVAL

ACCESS PANELS

AIRPLANE **SERVICE** LE SLAT ALTERNATE DRIVE MOTORS NOTE ALL

ZONES

211 212 510 520 610 511CB 611CB 620 730 740

WORK AREA

RELATED TASK

MECH INSP

SKILL

MPD ITEM NUMBER

CHECK OIL LEVEL IN ALTERNATE SLAT DRIVE MOTORS AND SERVICE AS REQUIRED.

12-21-08-31

AIRPLANE NOTE: APPLICABLE TO AIRPLANES THAT HAVE INSTALLED

ALTERNATE DRIVE MOTORS WITH PART NUMBER S256T011-2 OR S256T011-3. AIRPLANE LINE NUMBER 576 AND ON HAVE THE OIL-FILLED ALTERNATE DRIVE MOTORS (\$256T011-2 AND

S256T011-3) INSTALLED IN THE FACTORY. REFER TO 767-SL-27-093-A FOR INTERCHANGEABILITY

OF THE ALTERNATE DRIVE MOTORS.

- Service the Leading Edge Slat System 1.
 - Α. Equipment
 - (1) Leading Edge Slat Groundlock A27007-1 (2 Necessary)
 - (2) Circuit Breaker Lockout Clip (Commercially Available)
 - B. Consumable Materials
 - (1) D00070 Oil Hydraulic, Petroleum Base, MIL-H-5606
 - C. References
 - (1) AMM 06-44-00/201, Wing Access Doors and Panels
 - (2) AMM 24-22-00/201, Electrical Power Control
 - (3) AMM 27-81-00/201, Leading Edge Slat System
 - (4) AMM 29-11-00/201, Main (Left, Right and Center) Hydraulic Systems

EFFECTIVITY SERVICE LE SLAT ALTERNATE DRIVE MOTORS 27-047-02

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (5) AMM 32-00-15/201, Landing Gear Door Locks
- (6) AMM 32-00-20/201, Landing Gear Downlocks
- (7) AMM 78-31-00/201, Thrust Reverser System
- D. Prepare for Servicing

WARNING: DO THE THRUST REVERSER DEACTIVATION PROCEDURE TO PREVENT THE OPERATION OF THE THRUST REVERSER. ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

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.

- (1) Do these procedures: Thrust Reverser Deactivation for Ground Maintenance (AMM 78-31-00/201) and open the doors for the landing gears and install the door locks (AMM 32-00-15/201).
- (2) Make sure the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (3) Make sure that the TE flaps and LE slats are in the fully extended position, and that the flap control lever is in the 30-unit detent.
- (4) Attach a DO-NOT-OPERATE tag to the flap control lever.
- (5) Open these circuit breakers on the main power distribution panel, P6, and install locks and attach D0-NOT-CLOSE tags:

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LE SLAT ALTERNATE DRIVE MOTORS

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SAS BOEING 767 TASK CARD

MECH INSP

- (a) 6D21, ALTN SLAT INBD PWR
- (b) 6F24, ALTN SLAT OUTBD PWR
- (6) Open these circuit breakers on the overhead panel, P11, and install locks and attach DO-NOT-CLOSE tags:
 - (a) 11H23, SLAT ALTN CONT INBD
 - (b) 11H24, SLAT ALTN CONT OUTBD
- (7) Remove the power from the center hydraulic system (AMM 29-11-00/201), if the center hydraulic system is pressurized.
- (8) Remove the access panel 611CB to get to the inboard slat PDU (AMM 06-44-00/201).
- (9) Remove the access panel 511CB to get to the outboard slat PDU $(AMM\ 06-44-00/201)$.
- (10) Move the manual override levers on the bypass valve for the inboard LE slat and outboard LE slat power drive unit (PDU) to the No. 1 (bypass) position (Fig. 306).
- (11) Install a DO-NOT-OPERATE tag on the manual override lever.
- (12) Install the PDU locks in the inboard LE slat and outboard LE slat PDUs (Fig. 306).

E. Procedure

(1) Remove the applicable access panels for oil replenishment of (inboard or outboard slat PDU) alternate drive motors with oil fill port (AMM 06-44-00/201).

WARNING: DO NOT LET OBJECTS GET IN THE HOUSING ASSEMBLY OF THE SLAT TRACK. THIS WILL HELP PREVENT A PUNCTURE OF THE HOUSING ASSEMBLY THAT COULD CAUSE A FUEL LEAK. THE FUEL LEAK COULD CAUSE A FIRE AND POSSIBLE DEATH OR INJURY TO PERSONNEL.

(2) Keep clean and free of all unwanted objects (FOD), the housing (can) assemblies of the slat main tracks, at all time.

EFFECTIVITY

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LE SLAT ALTERNATE DRIVE MOTORS

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SAS FOEING
767
TASK CARD

MECH INSP

- (3) Oil service airplanes with alternate (electric) drive motor P/N 4134T100 (S265T011) or P/N 4135T100 (S256T011), with the steps that follow (Fig. 306):
 - (a) Remove the electric motor from the PDU, if it is necessary (AMM 27-81-11/401).
 - (b) Remove plug from higher oil port of alternate drive motor.
 - (c) Add hydraulic fluid MIL-H-5606 to the (inboard or outboard slat PDU) alternate drive motor to keep it full of oil, and install the plug in the oil port (Fig. 306).
 - (d) Install the electric motor on the PDU, if removed (AMM 27-81-11/401).
- F. Put the Airplane Back to Its Usual Condition
 - (1) Remove the DO-NOT-OPERATE tag and move the manual override lever on the bypass valve for the inboard and outboard PDUs to the No. 2 (normal) position (Fig. 306).

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 landing gear doors and close the doors (AMM 32-00-15/201).
- (3) Remove the PDU locks from the inboard LE slat and outboard LE slat PDUs (Fig. 306).

WARNING: DO NOT LET OBJECTS GET IN THE HOUSING ASSEMBLY OF THE SLAT TRACK. THIS WILL HELP PREVENT A PUNCTURE OF THE HOUSING ASSEMBLY THAT COULD CAUSE A FUEL LEAK. THE FUEL LEAK COULD CAUSE A FIRE AND POSSIBLE DEATH OR INJURY TO PERSONNEL.

- (4) Keep clean and free of all unwanted objects (FOD), the housing (can) assemblies of the slat main tracks, at all time.
- (5) Install the access panels/doors that you removed for the tasks of lubrication, oil replenishment, and/or protective coating application (AMM 06-44-00/201, AMM 28-11-06/401).

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LE SLAT ALTERNATE DRIVE MOTORS

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AIRLINE CARD NO.



MECH INSP

- (6) Remove the DO-NOT-CLOSE tags and locks and close these circuit breakers on the P6 panel:
 - (a) 6D21, ALTN SLAT INBD PWR
 - (b) 6F24, ALTN SLAT OUTBD PWR
- (7) Remove the DO-NOT-CLOSE tags and locks and close these circuit breakers on the P11 panel:
 - (a) 11H23, SLAT ALTN CONT INBD
 - (b) 11H24, SLAT ALTN CONT OUTBD
- WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.
- CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.
- (8) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (9) Remove the DO-NOT-OPERATE tag from the flap control lever.
- (10) Move the flap control lever to the zero-unit detent and make sure the TE flaps and LE slats move to the fully retracted position.
- (11) Do the activation procedure for the thrust reverser (AMM 78-31-00/201).

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LE SLAT ALTERNATE DRIVE MOTORS

12-21-08-3I

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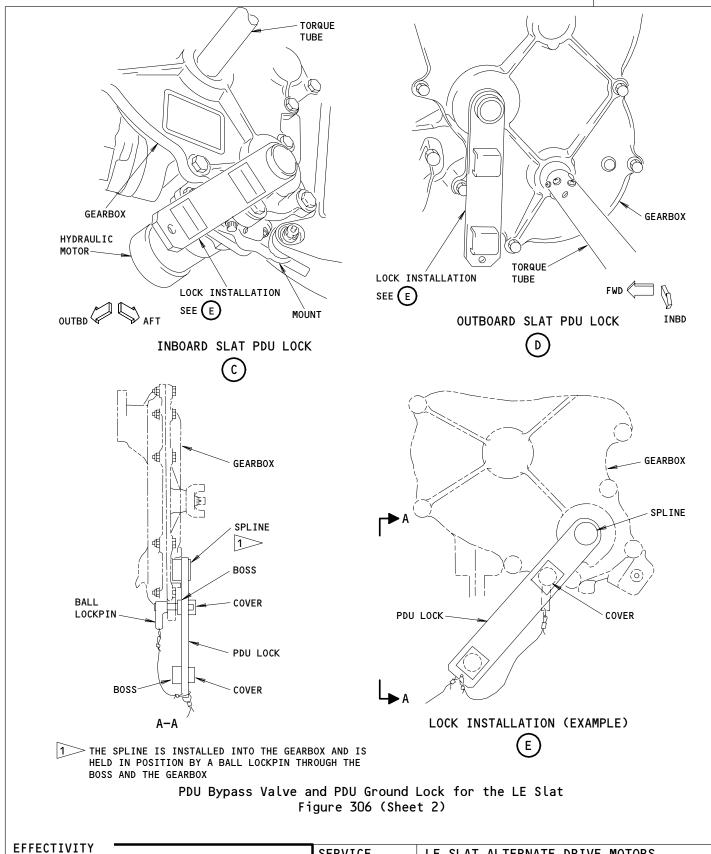
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AIRLINE CARD NO.

27-047-02

SAS

BOEING 767 TASK CARD



SERVICE

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LE SLAT ALTERNATE DRIVE MOTORS

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27-047-02

ST	ATION	7									BOE	ING CARD NO.
	T. NO.				α						27-0	52-01
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SKILL	WORK AF	REA	REL	ATED TASK		TAGIC	INTERVAL			PHASE	MPD	TASK CARD
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BOEING CARD NO. 27-052-51

AIRLINE CARD NO.

TASK CARD

MPD

SKILL PHASE REV REVISION 011 AUG 22/09 AIRPL CREW CABIN 1C 11212 APPLICABILITY
ANE ENGINE STRUCTURAL ILLUSTRATION REFERENCE AIRPLANE

OPERATIONAL ALTERNATE HORIZ STAB TRIM SYSTEM NOTE ALL

ACCESS PANELS

ZONES

211

MPD ITEM NUMBER MECH INSP

OPERATIONALLY CHECK THE HORIZONTAL STABILIZER ALTERNATE ELECTRIC TRIM CONTROL SYSTEM.

27-41-00-5F

AIRPLANE NOTE: APPLICABLE TO AIRPLANES WITH ALTERNATE

ELECTRIC HORIZONTAL STABILIZER TRIM SYSTEM (LINE NO. 276 & ON) INCLUDING LINE NUMBERS 402-403, 405-406, 408, 410, 428, 430, 432, 441, 446 AND 478-479 THAT HAVE SERVICE BULLETIN SB 767-27A0130 INCORPORATED.

1. AIRPLANES WITH ALTERNATE STAB TRIM SWITCHES; Alternate Electrical Stabilizer Trim Control Test

NOTE: This is a scheduled maintenance task.

- References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic System
- B. Access
 - (1) Location Zones Control Cabin 211/212
- C. Procedure
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Make sure that the LEFT and CENTER STAB TRIM SHUTOFF valve switches on the control stand panel, P10, are in the NORM position.

EFFECTIVITY OPERATIONAL ALTERNATE HORIZ STAB TRIM SYSTEM 27-41-00-5F 27-052-51 PAGE 1 OF 7 AUG 22/09

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AIRLINE CARD NO.

			TASK CARD
MECH	INSP		
		(3)	Make sure that LEFT, RIGHT, and CENTER FLT CONT SHUTOFF TAIL valve switches on the P61 panel are OFF.
		(4)	Pressurize the left and center hydraulic systems (AMM 29-11-00/201).
		(5)	Use the alternate stabilizer trim switches on the P10 panel to move the horizontal stabilizer to 2 units of trim.
		(6)	Put the LEFT and CENTER STAB TRIM SHUTOFF valve switches on the P10 panel to the CUTOUT position.
		(7)	Move the alternate stabilizer trim switches on the P1O panel to the APL NOSE UP and APL NOSE DOWN positions.
			(a) Make sure that the stabilizer does not move.
		(8)	Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position.
		(9)	Move the alternate stabilizer trim switches to the APL NOSE DN position.
			(a) Make sure that the stabilizer leading edge moves up.
			(b) Make sure that the stabilizer stops when the alternate stab trim switches are released.
		(10)	Move the alternate stabilizer trim switches to the APL NOSE UP position.
			(a) Make sure that the stabilizer leading edge moves down.
			(b) Make sure that the stabilizer stops when the alternate stab trim switches are released.
		(11)	Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position.
		(12)	Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the CUTOUT position.
		(13)	Move the alternate stab trim switches to the APL NOSE DN position.
			(a) Make sure that the stabilizer leading edge moves up.
			(b) Make sure that the stabilizer stops when the alternate stab trim switches are released.
1			

EFFECTIVITY

27-052-51

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (14) Move the alternate stabilizer trim switches to the APL NOSE UP position.
 - (a) Make sure that the stabilizer leading edge moves down.
 - (b) Make sure that the stabilizer stops when the alternate stab trim switches are released.
- (15) Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position.
- (16) Remove the power from the left and center hydraulic systems (AMM 29-11-00/201).
- (17) Remove electrical power (AMM 24-22-00/201).
- AIRPLANE WITH ALTERNATE STAB TRIM SWITCHES; Stabilizer Trim Single Switch Test

NOTE: This is a scheduled maintenance task.

- A. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic System
- B. Access
 - (1) Location Zones 211/212 Control Cabin
- C. Procedure
 - (1) Supply electrical power (AMM 24-22-00/201).

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

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

OPERATIONAL ALTERNATE HORIZ STAB TRIM SYSTEM

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AIRLINE CARD NO.

27-052-51

TASK CARD

(3)	Make sure that the L, R and C FLT CONT SHUTOFF switches on the right side panel, P61, are ON.
(4)	Make sure these circuit breakers on the P11 panel are closed:
	(a) 11A36, STAB TRIM ALT
	(b) 11C12, STAB TRIM SHUTOFF L
	(c) 11C13, STAB TRIM SHUTOFF C
	(d) 11H10, L STAB TRIM POS IND
	(e) 11H19, R STAB TRIM POS IND
(5)	Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel to the CUTOUT position.
(6)	Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position.
(7)	Move the two alternate stab trim switches to the APL NOSE DN position.
	(a) Make sure the stabilizer moves in the airplane nose down direction.
(8)	Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the CUTOUT position while the stabilizer moves.
	(a) Make sure the stabilizer stops.
(9)	Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position.
	(a) Make sure the stabilizer starts to move.
(10)	Release the alternate stab trim switches.
	(a) Make sure that the stabilizer stops when the alternate stab trim switches are released.
(11)	Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position.
	(4) (5) (6) (7) (8)

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(12) Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the

CUTOUT position.

27-052-51

TASK CARD

AIRLINE CARD NO.

	MECH	INSP		
			(13)	Move the two alternate stab trim switches to the APL NOSE DN position.
			(14)	Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the CUTOUT position while the stabilizer moves.
				(a) Make sure the stabilizer stops.
			(15)	Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position.
				(a) Make sure the stabilizer starts to move.
			(16)	Release the alternate stab trim switches.
				(a) Make sure that the stabilizer stops when the alternate stab trim switches are released.
			(17)	Move the two alternate stab trim switches to the APL NOSE UP position.
				(a) Make sure the stabilizer moves in the airplane nose up direction.
			(18)	Make sure that the stabilizer is between 6 and 9 units of stabilizer trim.
			(19)	Move the left alternate stabilizer trim switch to the APL NOSE UP position.
				(a) Make sure the stabilizer does not move.
			(20)	Move the left alternate stabilizer trim switch to the APL NOSE DN position.
				(a) Make sure the stabilizer does not move.
			(21)	Move the right alternate stabilizer trim switch to the APL NOSE UP position.
				(a) Make sure the stabilizer does not move.
			(22)	Move the right alternate stabilizer trim switch to the APL NOSE DN position.
				(a) Make sure the stabilizer does not move.
1				

EFFECTIVITY

BOEING CARD NO.

27-052-51

AIRLINE CARD NO.



MECH INSP CAUTION: full travel. not necessary (AMM 29-11-00/201).

DO NOT LET THE BALLSCREW ACTUATOR HIT THE MECHANICAL STOPS. DAMAGE TO THE BALLSCREW ACTUATOR AND THE STABILIZER CAN OCCUR.

- (23) Move the alternate stab trim switches full forward and full aft.
 - (a) Make sure that the stabilizer moves smoothly and freely through
 - (b) Make sure that the stabilizer position indicator correctly shows the position of the stabilizer (0.25 - 14.0 pilot units).
- D. Put the Airplane Back to Its Usual Condition
 - (1) Remove the power from the left and center hydraulic systems if it is
 - (2) Remove the electrical power if it is not necessary (AMM 24-22-00/201).

EFFECTIVITY

OPERATIONAL

ALTERNATE HORIZ STAB TRIM SYSTEM

27-41-00-5F

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SAS

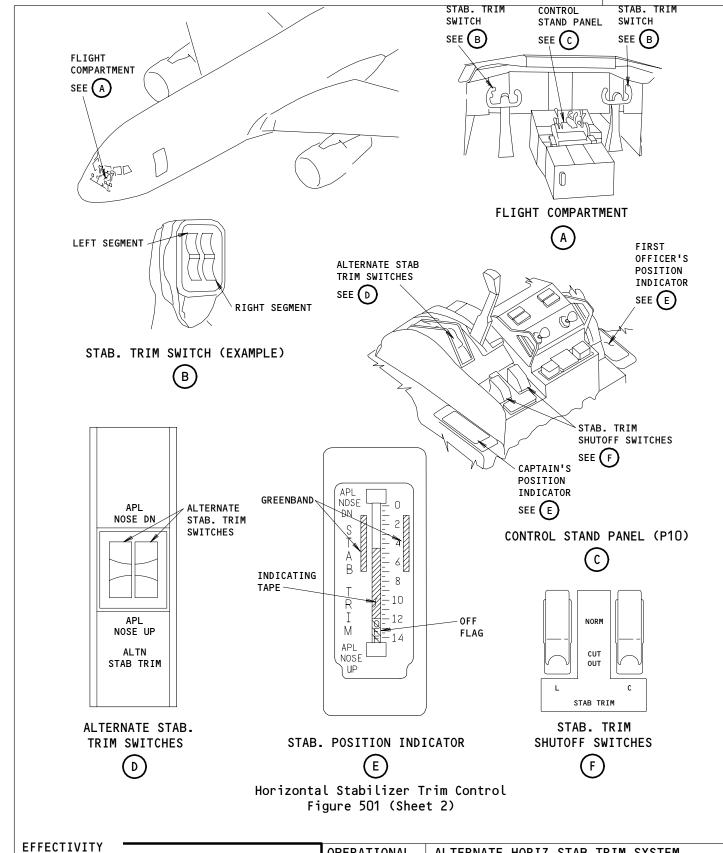


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AIRLINE CARD NO.

ALTERNATE HORIZ STAB TRIM SYSTEM

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OPERATIONAL

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27-41-00-5F

27-052-51

SWITCHES

ÄAIRPLANES WITH ALTERNATE STAB TRIM

STA	TION						BOE	ING CARD NO.
TAII	L NO.		(BOEIN	G		27-0	53-01
<u> </u>	ATE	S	as &	767			AIRI	LINE CARD NO.
	A12			TASK CARD				
SKILL	WORK AREA	RELA	ATED TASK	INTERVAL		PHASE	MPD REV	TASK CARD REVISION
AIRPL	STAB COM	1PT		10		11212	003	APR 22/09
TASK SERVICE		STABILIZER	TRIM BALL	SCREW ACTUATOR	STRUCTURAL ILLUSTRATION RE	FERENCE	AF AIRPLAN	PPLICABILITY E ENGINE

ACCESS PANELS

MECH INSP

311 312

ZONES

CHECK FLUID LEVEL IN STABILIZER TRIM BALL-SCREW ACTUATOR AND SERVICE AS NECESSARY.

12-13-06-3A

MPD ITEM NUMBER

ALL

ALL

- 1. Stabilizer-Trim Ballscrew-Actuator Oil-Reservoir Servicing (Fig. 301)
 - A. Consumable Materials
 - (1) D00070 Hydraulic Oil-MIL-H-5606

312AR

- References
 - (1) AMM 06-42-00/201, Empennage Access Panels and Doors
- C. Access
 - (1) Location Zone 312 Area Aft of Pressure Bulkhead to BS 1725 (Right)
 - (2) Access Panels Stabilizer Trim Ballscrew Actuator 312AR
- Prepare for Servicing
 - (1) Remove the pressure from the center and left hydraulic systems (AMM 29-11-00/201).
 - (2) Set the L and C STAB TRIM shutoff switches on the control stand panel, P10, to CUTOUT.
 - Open these circuit breakers on the overhead panel, P11, and attach DO-NOT-CLOSE tags:
 - (a) 11A36, ALT STAB TRIM (if installed)

EFFECTIVITY SERVICE STABILIZER TRIM BALL-SCREW ACTUATOR 12-13-06-3A 27-053-01 PAGE 1 OF 3 APR 22/08

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (b) 11C12, STAB TRIM SHUTOFF L
- (c) 11C13, STAB TRIM SHUTOFF CENTER

WARNING: STAY OFF THE SERVICE ACCESS DOOR, 312AR, AND THE ACCESS DOOR FOR THE CONTROLS BAY, 313AL. YOUR WEIGHT CAN CAUSE THE SPRING-LOADED LATCHES TO RELEASE. IF YOU FALL THROUGH THE DOOR, INJURY CAN OCCUR.

- (4) Open the access door 312AR , for the stabilizer trim ballscrew actuator (AMM 06-42-00/201).
- E. Fill the Stabilizer-Trim Ballscrew Actuator Oil Reservoir
 - (1) Make sure that the oil level is to the bottom of the fill plug hole. Do the following:
 - (a) Remove the fill plug.
 - (b) Verify that the oil level is at the bottom of the fill plug hole.

NOTE: If you can see the oil level in the sight gage, the oil level is too low. You need to add oil to the reservoir.

- (2) If the oil level is below the bottom of the fill plug, put oil into the fill port until oil comes back out of the fill port hole.
 - (a) Clean any spilled oil from the area.
- (3) Install the fill plug.
- (4) Tighten fill plug to 80-120 in-lbs (9-14 newton-meters).
- (5) Lockwire the fill plug.
- (6) Close the access door 312AR.
- (7) Put the airplane back to its usual condition.

EFFECTIVITY

SERVICE

STABILIZER TRIM BALL-SCREW ACTUATOR

12-13-06-3A

27-053-01

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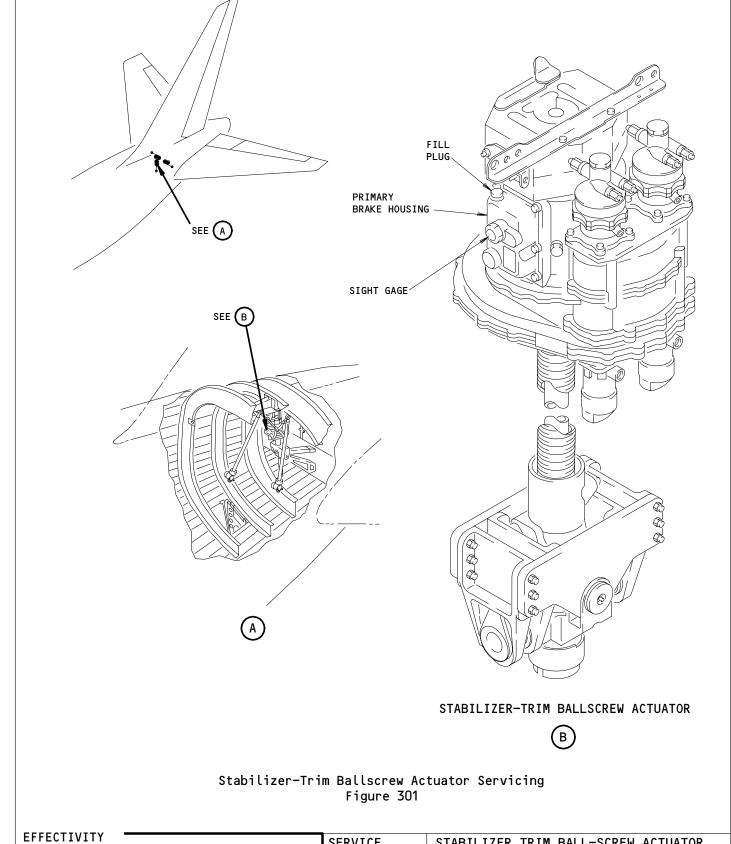
BOEING CARD NO.

27-053-01

AIRLINE CARD NO.

SAS





SERVICE

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12-13-06-3A

27-053-01

STABILIZER TRIM BALL-SCREW ACTUATOR

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STATION
TAIL NO.
DATE



BOEING CARD NO. 27-053-51

AIRLINE CARD NO.

WORK AREA RELATED TASK INTERVAL MPD TASK CARD SKILL PHASE REV REVISION 007 20 APR 22/09 AIRPL CREW CABIN 12424 STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY
AIRPLANE ENGINE **FUNCTIONAL** TE FLAP LOAD ALLEVIATION SYSTEM

ACCESS PANELS

ZONES

211 212

MPD ITEM NUMBER

ALL

MECH INSP

FUNCTIONALLY CHECK THE TE FLAP LOAD ALLEVIATION SYSTEM.

27-51-00-5F

NOTE

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

- AIRPLANES WITH A -53 OR EARLIER FSEU;
 Flap Load Alleviation System Test
 - A. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
 - (3) AMM 34-11-00/201, Pitot-Static (Pressurization)
 - (4) AMM 34-12-00/501, Air Data Computing System
 - B. Prepare for the System Test
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Make sure the COMPUTER switch on the EICAS DISPLAY select panel, P9, is in the L position.
 - (3) Make sure the TE flaps and the LE slats are in the fully retracted position.
 - (4) Make sure the flap control lever is in the zero (FLAPS UP) detent (Fig. 511).
 - C. Test for the Flap Load Alleviation System

<u>NOTE</u>: For this test, a tolerance of two needle widths is permitted when you read the L and R needles on the flap position indicator on P3.

FUNCTIONAL TE FLAP LOAD ALLEVIATION SYSTEM

27-51-00-5F 27-053-51 PAGE 1 OF 10 AUG 22/08

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (1) Open these circuit breakers on the main power distribution panel, P6, and attach D0-NOT-CLOSE tags:
 - (a) 6K14, PITOT PROBE HT CAPT PHASE A
 - (b) 6K15, PITOT PROBE HT CAPT PHASE B
 - (c) 6K16, PITOT PROBE HT R AUX PHASE B
 - (d) 6K17, PITOT PROBE HT R AUX PHASE C
 - (e) 6K2O, PITOT PROBE HT L AUX PHASE C
 - (f) 6K21, PITOT PROBE HT L AUX PHASE B
 - (g) 6K22, PITOT PROBE HT F/O PHASE B
 - (h) 6K23, PITOT PROBE HT F/O PHASE A

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES AND WHEEL WELLS WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS,

WHEEL WELLS WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. WHEN YOU MOVE THE FLAP CONTROL LEVER WITH THE HYDRAULIC SYSTEM PRESSURIZED, THE FLAPS AND FLAP DRIVE MECHANISMS WILL MOVE QUICKLY. INJURY TO PERSONS OR DAMAGE TO

EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (2) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (3) Make sure you follow these precaution steps before you operate the pitot-static system (AMM 34-11-00/201):
 - (a) Do not apply more than 4.75 PSI gaged pressure.
 - (b) The rate that you apply or release the vacuum to a static system must be less than 5000 feet-per-minute.

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TE FLAP LOAD ALLEVIATION SYSTEM

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			TASK CARD
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			(c) The rate that you apply or release the pressure to a pitot system must be less than 300 knots-per-minute.
			(d) Install flow restrictors between the cutoff valve and the pitot-static system when it is necessary.
			(e) Do not decrease the absolute pressure in the auxiliary pitot systems NO.1 and NO.2 below the ambient pressure. Low pressure in the auxiliary pitot systems can cause damage to the elevator feel computer.
			(f) Make sure the autopilot is off for this test.
		(4)	Pressurize the captain's PT and S1 (left) or the first officer's PT and S1 (right) pitot-static system to 140-150 knots airspeed (AMM 34-11-00/201).
		(5)	Activate the left ADC (if the captain's pitot static system is pressurized) or the right ADC (if the first officer's pitot-static system is pressurized) (AMM 34-12-00/501).
		(6)	Isolate the applicable left or right ADC:
			NOTE: You must isolate the left or the right ADC for this test if you do not pressurize the two pitot static systems.
			(a) Make sure the AIR DATA computer switchs on the P1-1 and P3-3 panels are not armed in the alternate position.
			(b) To isolate the left ADC, open this circuit breaker on the P11 panel:
			1) 11F30, AIR DATA COMPUTER R
			(c) To isolate the right ADC, open this circuit breaker on the P11 panel:
			1) 11A10, AIR DATA COMPUTER L
		(7)	Do the operational test on the load alleviation system with the procedure that follows:
			(a) Move the flap control lever to the 30-unit detent and permit the flaps and slats to move to the fully extended position.

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(b) Slowly increase the pitot-static pressure to the airspeed shown in Table 501.

NOTE: Monitor the pitot-static pressure and keep a record of the airspeed at which the flaps retract.

1) SAS 050, 051;

Make sure these conditions occur while the airspeed increases:

- a) The flaps retract to the 25-unit position.
- b) The flap position indicator in the flight compartment moves to the 25-unit mark.
- 2) SAS 150-280;

Make sure these conditions occur while the airspeed increases:

- a) The flaps retract to the 20-unit position.
- b) The L and R needles move to the 20-unit mark on the flap position indicator.

Table 501					
AIRPLANE EFFECTIVITY	PITOT-STATIC SYSTEM AIRSPEED				
767–200	167-170 KNOTS				
767–300	171-174 KNOTS				

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767
TASK CARD

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Table	e 502
AIRPLANE EFFECTIVITY	PITOT-STATIC SYSTEM AIRSPEED
767–200	163-166 KNOTS
767–300	167-170 KNOTS

Table 503

PITOT-STATIC SYSTEM
AIRSPEED

181-184 KNOTS

Table 504

PITOT-STATIC SYSTEM
AIRSPEED

177-180 KNOTS

(c) Slowly decrease the pitot-static pressure to the airspeed shown in Table 502, and make sure these conditions occur while the airspeed decreases:

<u>NOTE</u>: Monitor the pitot-static pressure and keep a record of the airspeed at which the flaps extend.

- 1) The flaps extend to the 30-unit position.
- 2) The L and R needles move to the 30-unit mark on the flap position indicator.

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					TASK CARD
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			(d)	slo	e sure the flaps extend at a pitot-static airspeed 4 knots wer than the flaps retracted during the load relief dition.
			(e)		150-280; the steps that follow:
				1)	Move the flap control lever to the 25-unit detent and permit the flaps to move to the 25-unit position.
				2)	Increase the pitot-static pressure to the airspeed shown in Table 503, and do these checks:
					a) Make sure the flaps retract to the 20-unit position.
					NOTE: Monitor the pitot-static pressure and keep a record of the airspeed at which the flaps retract.
					b) Make sure that the flap position indicator moves to the 20-unit mark.
				3)	Decrease the pitot-static pressure to the airspeed shown in Table 504, and do these checks:
					a) Make sure the flaps extend to the 25-unit position.
					b) Make sure the flap position indicator moves to the 25-unit mark.
				4)	Make sure the flaps extend at a pitot-static airspeed four knots slower than the flaps retracted during the load relief condition.
				5)	Decrease the airspeed to 140-150 knots.
		(8)			t on the load relief failure operation with the procedure lows:
			(a)		n this circuit breaker on the P11 panel and attach a NOT-CLOSE tag:
				1)	11J13, FLAP LOAD RELIEF
			(b)		e the flap control lever to the 30-unit detent and permit flaps and slats to move to the fully extended position.

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		(c)	Increase the pitot-static system pressure to the airspeed shown in Table 501 and do the checks that follow:					
			1) Make sure the amber TRAILING EDGE light comes on.					
			Make sure this EICAS message, FLAP LD RELIEF, shows on the top EICAS display.					
			3) Make sure that there is no movement on the flaps.					
		(d)	Turn the COMPUTER SWITCH on the EICAS DISPLAY select panel to the L position.					
			 Make sure the EICAS message, FLAP LD RELIEF, does not change on the EICAS display. 					
		(e)	Decrease the pitot-static system pressure to the airspeed shown in Table 502.					
		(f)	Make sure the amber TRAILING EDGE light goes off.					
		(g)	(g) Make sure the EICAS message, FLAP LD RELIEF, does not show on the display in the flight compartment.					
		(h)	SAS 150-280; Do the steps that follow:					
			 Move the flap control lever to the 25-unit detent and permit the flaps to move to the 25-unit position. 					
			2) Increase the pitot-static pressure to the airspeed shown in Table 503.					
			3) Make sure that the amber TRAILING EDGE light comes on.					
			4) Make sure this EICAS message, FLAP LD RELIEF, shows on the display in the flight compartment.					
			5) Make sure the flaps do not move.					
			6) Turn the COMPUTER SWITCH on the EICAS DISPLAY select panel, P9, to the R position.					
		7) Decrease the pitot-static pressure to the airspeed shown Table 504.						
	8) Make sure the amber TRAILING EDGE Light goes off.							
FFF	ECTI	VITY —	TELINOTTONIA TE ELAD LOAD ALLEVATORIO OVOTTO					
	_5,1		FUNCTIONAL TE FLAP LOAD ALLEVIATION SYSTEM					

TASK CARD

AIRLINE CARD NO.

				TASK CARD		
MECH	INSP					
			Ç	 Make sure the EICAS message, FLAP LD RELIEF, does not show on the top EICAS display. 		
				Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:		
			,	1) 11J13, FLAP LOAD RELIEF		
			-	SAS 050, 051; Do the steps that follow:		
			,	 Move the flap control lever to the 25-unit detent and permit the flaps to retract. 		
			2	 Increase the pitot-static system pressure to the airspeed shown in Table 501. 		
			3	3) Make sure the flaps do not move.		
			4	4) Move the flap control lever to the 20-, 15-, and 5-unit detents and permit the flaps to retract to each position.		
				5) Make sure the movement of the flaps do not change because of the load relief signal.		
				SAS 150-280; Do the steps that follow:		
			,	 Move the flap control lever to the 20-unit detent and permit the flaps to retract. 		
			â	 Increase the pitot-static system pressure to the airspeed shown in Table 503. 		
			3	Make sure the movement of the flaps do not change because of the load relief signal.		
		(9)		ssurize the captains PT and S1 (left) or the first officers PT 1 (right) pitot-static system (AMM 34-11-00/201).		
		(10)	•	u isolated the left ADC to do this test, close this circuit er on the P11 panel:		
			(a) ′	11F3O, AIR DATA COMPUTER R		
		(11) If you isolated the right ADC to do this test, close this circuit breaker on the P11 panel:				
1						

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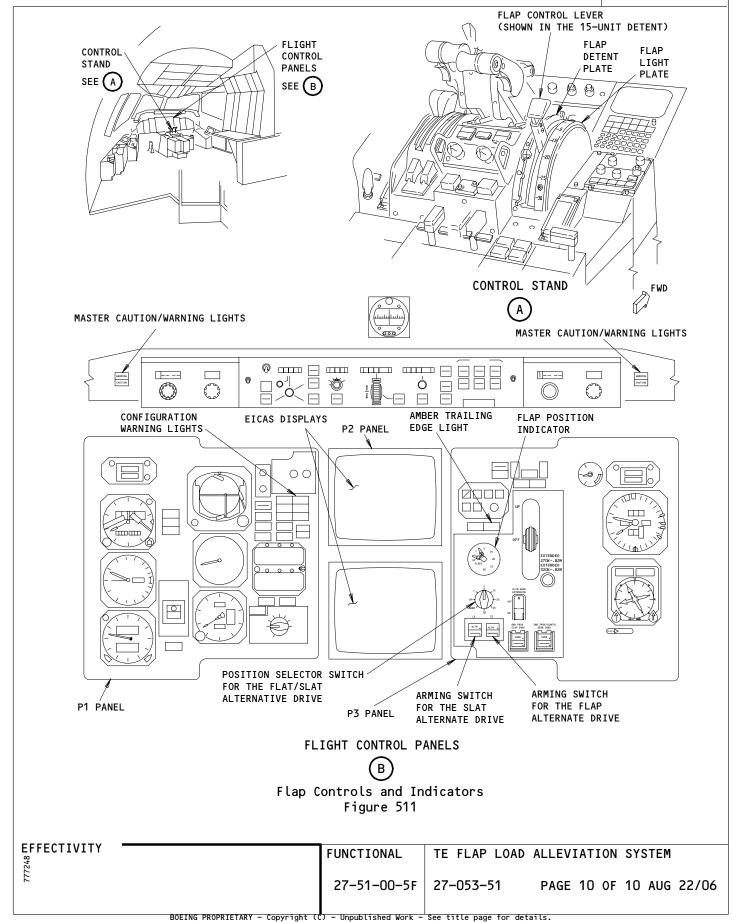
		ა 	AS C		CARD			
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		(a)	11A10, AIR	DATA COMPU	TER L			
		(12) Remove the DO-NOT-CLOSE tags and close these circuit breakers on P6 panel:						
		(a)	6K14, PITOT	PROBE HT	CAPT PHASE	4		
		(b)	6K15, PITOT	F PROBE HT	CAPT PHASE I	3		
		(c)	6K16, PIT01	F PROBE HT I	R AUX PHASE	В		
		(d)	6K17, PITOT	F PROBE HT I	R AUX PHASE	С		
		(e)	6K20, PITOT	r PROBE HT I	_ AUX PHASE	С		
		(f)	6K21, PITOT	r PROBE HT I	_ AUX PHASE	В		
		(g)	6K22, PITOT	r PROBE HT I	F/O PHASE B			
		(h)	6K23, PITOT	F PROBE HT I	F/O PHASE A			
						o (FLAPS UP) deter ted position.	nt and permit	
						DISPLAY select par ne R position.	nel, P9, to	
			ve the power 29-11-00/20		center hydra	aulic system		
		D. Put the A	irplane Back	to Its Us	ual Conditio	on		
		(1) Remove electrical power (AMM 24-22-00/201).						

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767 TASK CARD



STATION	
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DATE	1

WORK AREA



BOEING CARD NO. 27-054-01

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

AIRPL CREW CABIN W-27-046-01 NOTE 11212 019 DEC 22/03

TASK TITLE STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY AIRPLANE ENGINE

INTERVAL

OPERATIONAL TE FLAP/LE SLAT SHUTOFF VALVE MODULE

ALL ALL

ZONES ACCESS PANELS

212

SKILL

MECH INSP MPD ITEM NUMBER

OPERATIONALLY CHECK TE FLAP/LE SLAT SHUTOFF VALVE MODULE.

27-51-48-2A

INTERVAL NOTE: THIS 1C-CHECK TASK ALSO SATISFIES MPD ITEM 27-81-00-6A (TASK INTERVAL: 3C).

MPD ITEM NUMBER 27-81-00-6A IS ALSO COVERED BY THIS TASK CARD.

Flap/Slat Shutoff Valve Module - Test

RELATED TASK

- A. References
 - (1) AMM 12-12-01/301, Hydraulic Systems Servicing
 - (2) AMM 24-22-00/201, Electrical Power Control
 - (3) AMM 29-11-00/201, Main (Left, Right and Center) Hydraulic Systems
- B. Flap/Slat Shutoff Valve Module Test
 - (1) Make sure that the trailing edge (TE) flaps and the leading edge (LE) slats are in the fully retracted position.
 - (2) Make sure that the flap control lever is in the zero (FLAPS UP) detent.
 - (3) Remove the DO-NOT-OPERATE tag from the flap control lever.
 - (4) Supply electrical power (AMM 24-22-00/201).
 - (5) Remove the circuit breaker locks and the DO-NOT-CLOSE tags and close these circuit breakers on the power distribution panel, P6:
 - (a) 6D21, ALTN SLAT INBD PWR
 - (b) 6D24, ALTN FLAP PWR

OPERATIONAL TE FLAP/LE SLAT SHUTOFF VALVE MODULE
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- (c) 6F24, ALTN SLAT OUTBD PWR
- (6) Remove the circuit breaker locks and the DO-NOT-CLOSE tags and close these circuit breakers on the overhead panel, P11:
 - (a) 11H14, SLAT SHUTOFF
 - (b) 11H23, SLAT ALTN CONT INBD
 - (c) 11H24, SLAT ALTN CONT OUTBD
 - (d) 11J14, FLAP SHUTOFF
 - (e) 11J24, FLAPS ALTN CONT

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES TO PREVENT INJURY AND DAMAGE. THE TRAILING EDGE FLAPS AND LEADING EDGE SLATS ARE SUPPLED WITH POWER. THE MOVEMENT OF THE FLAPS AND SLATS DOES NOT ALWAYS OCCUR AT THE SAME TIME. THE FLAP MOVEMENT BETWEEN THE 5-UNIT AND 15-UNIT DETENTS CAN CAUSE THE INBOARD AILERONS TO MOVE. THE AILERONS, SPOILERS, RUDDER, ELEVATOR, AND STABILIZER SURFACES ARE ALSO SUPPLIED WITH POWER.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVENENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (7) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (8) Move the flap control lever to the 5-unit detent, and do a check on these steps in the sequence that follow:
 - (a) Make sure that the LE slats move to the intermediate position.
 - (b) Make sure the flap position indicators in the flight compartment, move to the 1-unit position.
 - (c) Make sure the TE flaps move to the 5-degree position after the LE slats move to the intermediate position.
 - (d) Make sure the flap position indicators in the flight compartment, move to the 5-unit position.

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		(9)	Move the flap control lever to the zero (FLAPS UP) detent and do a check on these steps in the sequence that follow:
			(a) Make sure the TE flaps move to the fully retracted position.
			(b) Make sure the flap position indicators in the flight compartment, move to the 1-unit position.
			(c) Make sure the LE slats move to the fully retracted position after the TE flaps move to the fully retracted position.
			(d) Make sure the flap position indicators in the flight compartment, move to the UP position.
		(10)	Make sure that there is no leakage of hydraulic fluid at the hydraulic components on the shutoff valve module.
		(11)	Examine the hydraulic system reservoir and do the servicing steps if necessary (AMM 12-12-01/301).
		(12)	Remove power from the center hydraulic system (AMM 29-11-00/201).
		(13)	Remove electrical power if it is not necessary (AMM 24-22-00/201).

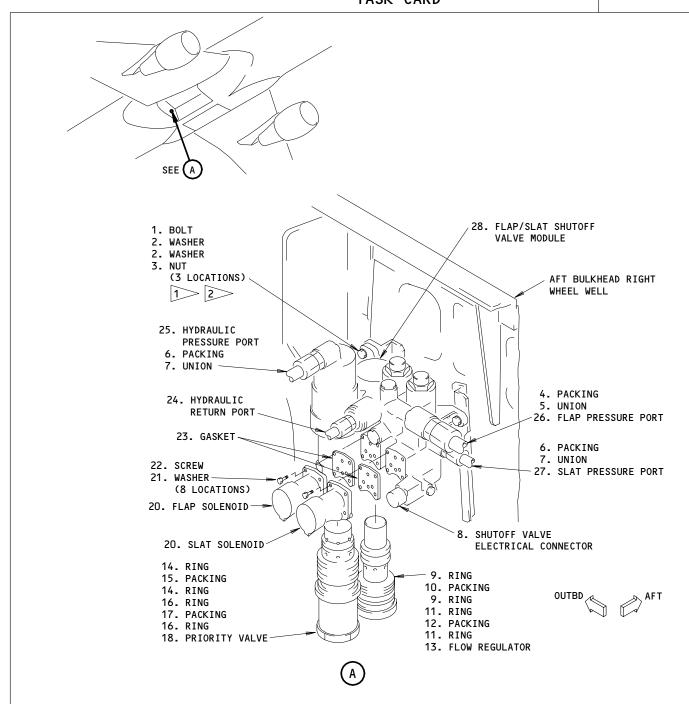
BOEING CARD NO.

27-054-01

BOEING 767 TASK CARD

SAS

AIRLINE CARD NO.



1> RESISTANCE ACROSS CONNECTIONS MAX 0.001 OHM

2 ON AIRPLANES WITH NUTPLATE, DO NOT USE NUT AND SECOND WASHER

Flap/Slat Shutoff Valve Module Figure 201

OPERATIONAL TE FLAP/LE SLAT SHUTOFF VALVE MODULE

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STATION
TAIL NO.
DATE



BOEING CARD NO. 27-054-51

AIRLINE CARD NO.

WORK AREA RELATED TASK INTERVAL MPD TASK CARD SKILL PHASE REV REVISION 800 4C AUG 22/05 AIRPL STAB COMPT 14848 APPLICABILITY
ANE ENGINE STRUCTURAL ILLUSTRATION REFERENCE AIRPLANE **OPERATIONAL** STABILIZER TRIM SECONDARY BRAKES ALL ALL

ACCESS PANELS

ZONES

MECH INSP

211 212 311 312

312AR

MPD ITEM NUMBER

OPERATIONALLY CHECK THE HORIZONTAL STABILIZER TRIM SECONDARY BRAKES.

27-41-00-5G

1. <u>Horizontal Stabilizer Secondary Brake Test</u>

NOTE: This is a scheduled maintenance task.

- References
 - (1) AMM 06-42-00/201, Empennage Access Doors and Panels
 - (2) AMM 24-22-00/201, Electrical Power Control
 - (3) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic System
- B. Access
 - (1) Location Zones

211/212 Control Cabin

311/312 Area Aft of Pressure Bulkhead to BS 1725

(2) Access Panel

312AR Stabilizer Trim Ballscrew Actuator

- C. Prepare for the Test
 - (1) Supply electrical power (AMM 24-22-00/201).

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STABILIZER TRIM SECONDARY BRAKES

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STAY OFF THE SERVICE ACCESS DOOR, 312AR, AND THE ACCESS DOOR WARNING: FOR THE CONTROLS BAY, 313AL. YOUR WEIGHT CAN CAUSE THE SPRING-LOADED LATCHES TO RELEASE. IF YOU FALL THROUGH THE DOOR, INJURY CAN OCCUR.

(2) Open the access panel, 312AR, for the stabilizer trim ballscrew actuator (AMM 06-42-00/201).

KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN WARNING: HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

- (3) Supply power to the left and center hydraulic systems (AMM 29-11-00/201).
- (4) Move the stabilizer to 6 units of trim.
- D. Secondary Brake Reaction Torque Test
 - (1) Do the steps that follow to make sure that the stabilizer trim secondary brake reaction torque is correct (Fig. 501):
 - (a) Make sure this circuit breaker on the P11 panel is closed:
 - 1) 11C12, STAB TRIM SHUTOFF L
 - (b) Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position.
 - (c) Make sure the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel is in the CUTOUT position.
 - Open this circuit breaker on the P11 panel and install a DO-NOT-CLOSE tag:
 - 1) 11C13, STAB TRIM SHUTOFF CENTER
 - Use the captain's or first officer's stabilizer trim control wheel switches to move the stabilizer at least three units of trim away from the ends of the travel range.

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OPERATIONAL STABILIZER TRIM SECONDARY BRAKES

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(f) Press and hold the BRAKE BYPASS valve button on the left STCM (Fig. 502). NOTE: The BRAKE BYPASS valve button is on the bottom of the STCM. (g) Move the captain's or first officer's stabilizer trim control switches full travel in the same direction and hold for 10 seconds. 1) Make sure that the stabilizer does not move. (h) Release the control wheel switches and then release the BRAKE BYPASS valve button. (i) Move the control wheel switches full travel in one direction and then in the other direction. 1) Make sure that the stabilizer moves correctly. (j) Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the CUTOUT position. (k) Open this circuit breaker on the P11 panel and attach a DO-NOT-CLOSE tag: 1) 11C12, STAB TRIM SHUTOFF L (l) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel: 1) 11C13, STAB TRIM SHUTOFF CENTER (m) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position. (n) Press and hold the BRAKE BYPASS valve button on the right STCM wheel switches full travel in the same direction and hold for 10 seconds. 1) Make sure that the stabilizer does not move.		TASK CARD	
(Fig. 502). NOTE: The BRAKE BYPASS valve button is on the bottom of the STCM. (g) Move the captain's or first officer's stabilizer trim control switches full travel in the same direction and hold for 10 seconds. 1) Make sure that the stabilizer does not move. (h) Release the control wheel switches and then release the BRAKE BYPASS valve button. (i) Move the control wheel switches full travel in one direction and then in the other direction. 1) Make sure that the stabilizer moves correctly. (j) Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the CUTOUT position. (k) Open this circuit breaker on the P11 panel and attach a D0-NOT-CLOSE tag: 1) 11C12, STAB TRIM SHUTOFF L (l) Remove the D0-NOT-CLOSE tag and close this circuit breaker on the P11 panel: 1) 11C13, STAB TRIM SHUTOFF CENTER (m) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position. (n) Press and hold the BRAKE BYPASS valve button on the right STCM wheel switches full travel in the same direction and hold for 10 seconds.	MECH INSP		
(g) Move the captain's or first officer's stabilizer trim control switches full travel in the same direction and hold for 10 seconds. 1) Make sure that the stabilizer does not move. (h) Release the control wheel switches and then release the BRAKE BYPASS valve button. (i) Move the control wheel switches full travel in one direction and then in the other direction. 1) Make sure that the stabilizer moves correctly. (j) Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the CUTOUT position. (k) Open this circuit breaker on the P11 panel and attach a DO-NOT-CLOSE tag: 1) 11C12, STAB TRIM SHUTOFF L (l) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel: 1) 11C13, STAB TRIM SHUTOFF CENTER (m) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position. (n) Press and hold the BRAKE BYPASS valve button on the right STCM wheel switches full travel in the same direction and hold for 10 seconds.			1
switches full travel in the same direction and hold for 10 seconds. 1) Make sure that the stabilizer does not move. (h) Release the control wheel switches and then release the BRAKE BYPASS valve button. (i) Move the control wheel switches full travel in one direction and then in the other direction. 1) Make sure that the stabilizer moves correctly. (j) Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the CUTOUT position. (k) Open this circuit breaker on the P11 panel and attach a D0-N0T-CLOSE tag: 1) 11C12, STAB TRIM SHUTOFF L (l) Remove the D0-N0T-CLOSE tag and close this circuit breaker on the P11 panel: 1) 11C13, STAB TRIM SHUTOFF CENTER (m) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position. (n) Press and hold the BRAKE BYPASS valve button on the right STCM wheel switches full travel in the same direction and hold for 10 seconds.			
 (h) Release the control wheel switches and then release the BRAKE BYPASS valve button. (i) Move the control wheel switches full travel in one direction and then in the other direction. 1) Make sure that the stabilizer moves correctly. (j) Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the CUTOUT position. (k) Open this circuit breaker on the P11 panel and attach a D0-N0T-CLOSE tag: 1) 11C12, STAB TRIM SHUTOFF L (l) Remove the D0-N0T-CLOSE tag and close this circuit breaker on the P11 panel: 1) 11C13, STAB TRIM SHUTOFF CENTER (m) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position. (n) Press and hold the BRAKE BYPASS valve button on the right STCM wheel switches full travel in the same direction and hold for 10 seconds. 		switches full travel in the same direction and hold for 10	L
BYPASS valve button. (i) Move the control wheel switches full travel in one direction and then in the other direction. 1) Make sure that the stabilizer moves correctly. (j) Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the CUTOUT position. (k) Open this circuit breaker on the P11 panel and attach a D0-N0T-CLOSE tag: 1) 11C12, STAB TRIM SHUTOFF L (l) Remove the D0-NOT-CLOSE tag and close this circuit breaker on the P11 panel: 1) 11C13, STAB TRIM SHUTOFF CENTER (m) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position. (n) Press and hold the BRAKE BYPASS valve button on the right STCM wheel switches full travel in the same direction and hold for 10 seconds.		1) Make sure that the stabilizer does not move.	
and then in the other direction. 1) Make sure that the stabilizer moves correctly. (j) Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the CUTOUT position. (k) Open this circuit breaker on the P11 panel and attach a D0-NOT-CLOSE tag: 1) 11C12, STAB TRIM SHUTOFF L (l) Remove the D0-NOT-CLOSE tag and close this circuit breaker on the P11 panel: 1) 11C13, STAB TRIM SHUTOFF CENTER (m) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position. (n) Press and hold the BRAKE BYPASS valve button on the right STCM wheel switches full travel in the same direction and hold for 10 seconds.			Ξ
 (j) Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the CUTOUT position. (k) Open this circuit breaker on the P11 panel and attach a D0-NOT-CLOSE tag: 1) 11c12, STAB TRIM SHUTOFF L (l) Remove the D0-NOT-CLOSE tag and close this circuit breaker on the P11 panel: 1) 11c13, STAB TRIM SHUTOFF CENTER (m) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position. (n) Press and hold the BRAKE BYPASS valve button on the right STCM (o) Move the captain's or first officer's stabilizer trim control wheel switches full travel in the same direction and hold for 10 seconds. 			
the CUTOUT position. (k) Open this circuit breaker on the P11 panel and attach a D0-NOT-CLOSE tag: 1) 11C12, STAB TRIM SHUTOFF L (l) Remove the D0-NOT-CLOSE tag and close this circuit breaker on the P11 panel: 1) 11C13, STAB TRIM SHUTOFF CENTER (m) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position. (n) Press and hold the BRAKE BYPASS valve button on the right STCM wheel switches full travel in the same direction and hold for 10 seconds.		1) Make sure that the stabilizer moves correctly.	
DO-NOT-CLOSE tag: 1) 11C12, STAB TRIM SHUTOFF L (l) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel: 1) 11C13, STAB TRIM SHUTOFF CENTER (m) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position. (n) Press and hold the BRAKE BYPASS valve button on the right STCM wheel switches full travel in the same direction and hold for 10 seconds.		·	in
 (l) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel: 1) 11C13, STAB TRIM SHUTOFF CENTER (m) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position. (n) Press and hold the BRAKE BYPASS valve button on the right STCM (o) Move the captain's or first officer's stabilizer trim control wheel switches full travel in the same direction and hold for 10 seconds. 			
the P11 panel: 1) 11C13, STAB TRIM SHUTOFF CENTER (m) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position. (n) Press and hold the BRAKE BYPASS valve button on the right STCM (o) Move the captain's or first officer's stabilizer trim control wheel switches full travel in the same direction and hold for 10 seconds.		1) 11C12, STAB TRIM SHUTOFF L	
 (m) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position. (n) Press and hold the BRAKE BYPASS valve button on the right STCM (o) Move the captain's or first officer's stabilizer trim control wheel switches full travel in the same direction and hold for 10 seconds. 			า
 in the NORM position. (n) Press and hold the BRAKE BYPASS valve button on the right STCM (o) Move the captain's or first officer's stabilizer trim control wheel switches full travel in the same direction and hold for 10 seconds. 		1) 11C13, STAB TRIM SHUTOFF CENTER	
(o) Move the captain's or first officer's stabilizer trim control wheel switches full travel in the same direction and hold for 10 seconds.		·	el
wheel switches full travel in the same direction and hold for 10 seconds.		(n) Press and hold the BRAKE BYPASS valve button on the right STO	CM.
1) Make sure that the stabilizer does not move.		wheel switches full travel in the same direction and hold for	
		1) Make sure that the stabilizer does not move.	
(p) Release the control wheel switches and then release the BRAKE BYPASS valve button.		•	Ē

EFFECTIVITY

AIRLINE CARD NO.

SAS BOEING 767 TASK CARD

MECH INSP

- (q) Move the control wheel switches full travel in one direction and then in the other direction.
 - 1) Make sure the stabilizer moves correctly.
- E. Put the Airplane Back to Its Usual Condition
 - (1) Remove the power from the left and center hydraulic systems (AMM 29-11-00/201).
 - (2) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 Panel:
 - (a) 11C12, STAB TRIM SHUTOFF L
 - (3) Put the LEFT and CENTER STAB TRIM SHUTOFF valve switches on the P10 panel in the NORM position.
 - (4) Remove electrical power (AMM 24-22-00/201).
 - (5) Close the access door, 312AR (AMM 06-42-00/201).

EFFECTIVITY

OPERATIONAL

STABILIZER TRIM SECONDARY BRAKES

27-41-00-5G

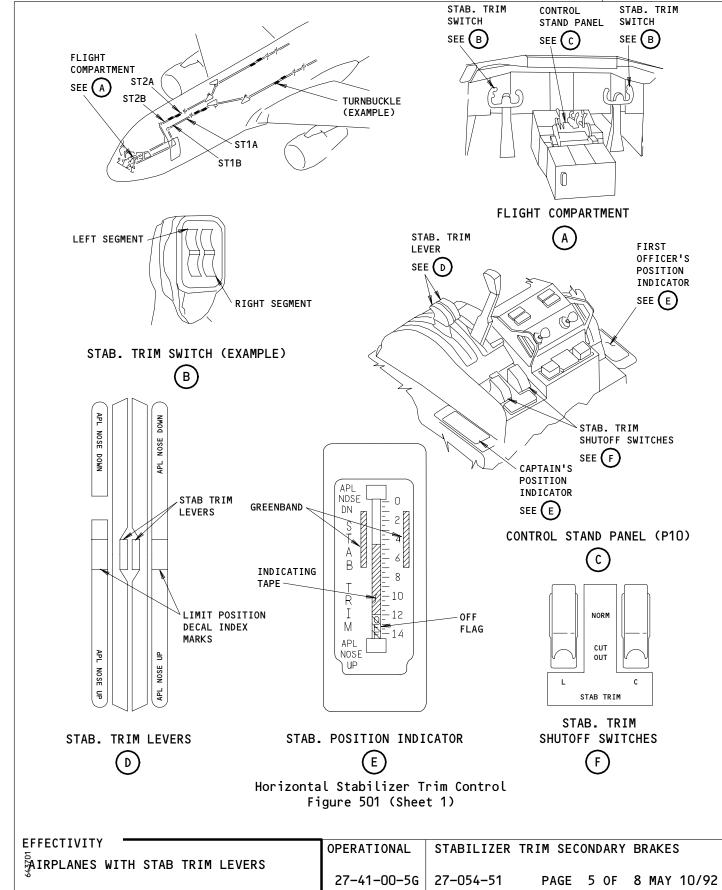
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AIRLINE CARD NO.

SAS

BOEING 767 TASK CARD



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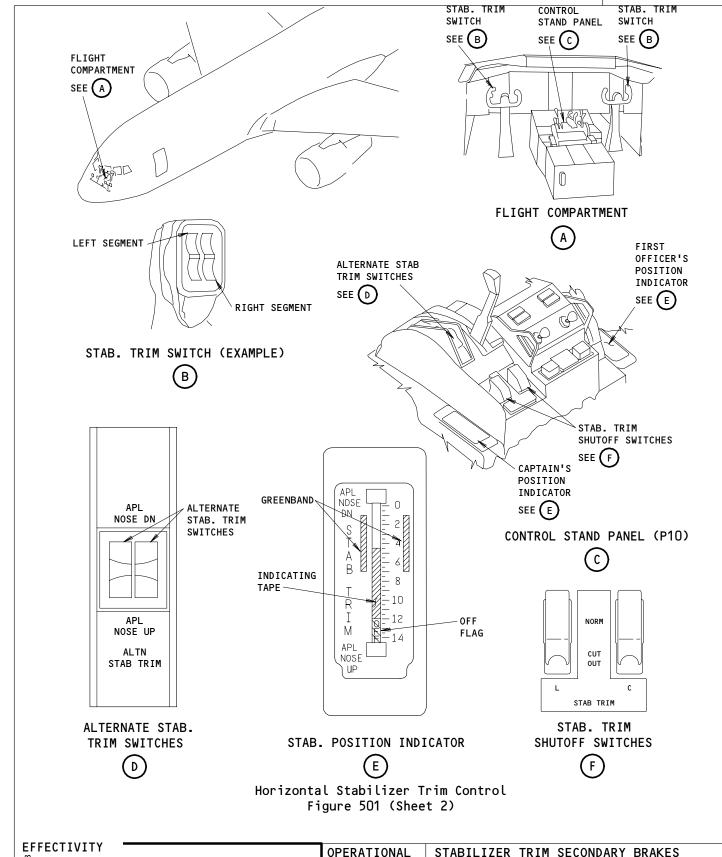
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BOEING CARD NO.

27-054-51

AIRLINE CARD NO.



SWITCHES

ÄAIRPLANES WITH ALTERNATE STAB TRIM

27-41-00-5G

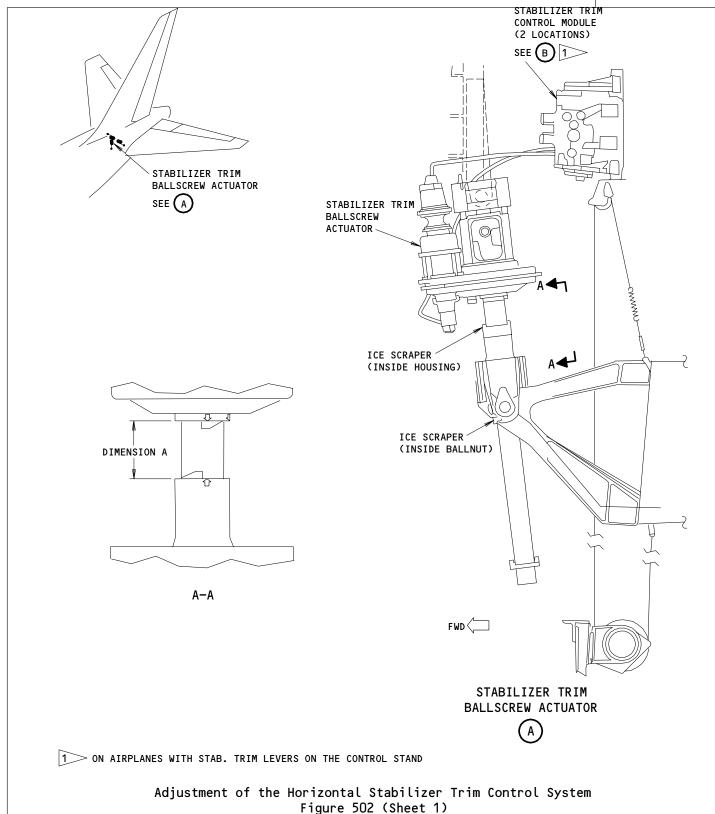
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PAGE 6 OF 8 MAY 10/92

AIRLINE CARD NO.

SAS

767 TASK CARD



EFFECTIVITY

OPERATIONAL

STABILIZER TRIM SECONDARY BRAKES

27-41-00-5G

27-054-51

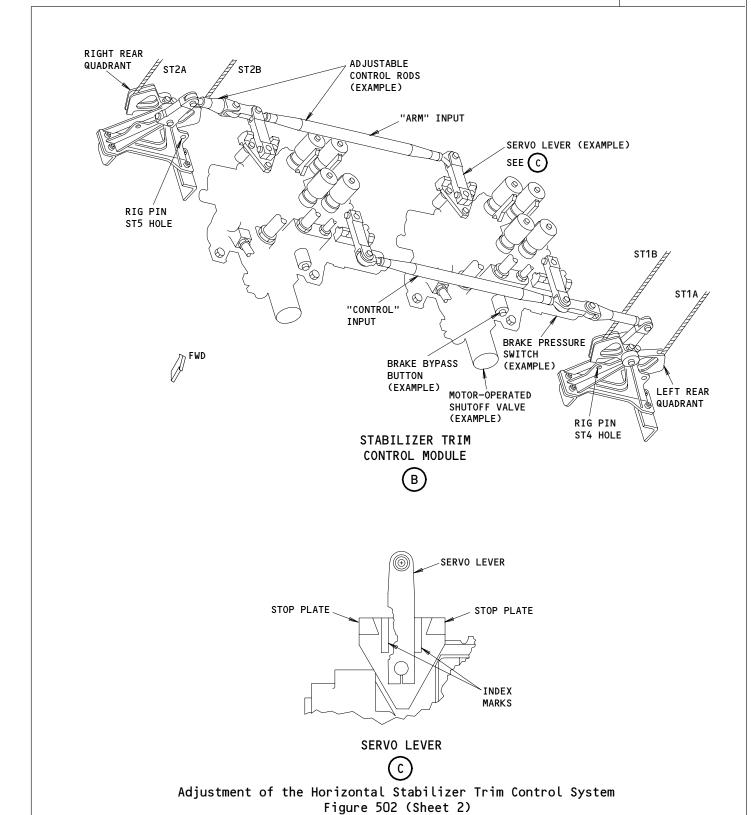
PAGE 7 OF 8 AUG 10/91

27-054-51

AIRLINE CARD NO.

SAS

767 TASK CARD



2

2

8

5

EFFECTIVITY

STATION
TAIL NO.
DATE



BOEING CARD NO. 27-055-01-1

AIRLINE CARD NO.

MPD TASK CARD

ALL

PHASE

SKILL			RELATED TASK	INIERVAL		THASE	REV	REVISION
AIRPL	L WING	LE		2C		12424	015	APR 22/08
TASI	K		TITLE		STRUCTURAL ILLUSTRATION RE	FERENCE	AF	PLICABILITY
FUNCT	IONAL	LE S	SLAT RETRACT/EXTE	ND STOP GAPS -L			AIRPLAN	E ENGINE

ZONES

ACCESS PANELS

TNTFRVAL

143 211 512 522 523 511EB 511FB 511KB

WORK AREA

524 525

MECH INSP

MPD ITEM NUMBER

ALL

FUNCTIONALLY CHECK THE INBOARD/OUTBOARD LE SLATS 1-6 EXTEND/RETRACT STOP GAPS.

27-81-20-2C

- 1. <u>Slat Retract and Extend Overtravel Stop Clearance Check</u>
 - A. Equipment
 - (1) Circuit Breaker Lockout Clip (4 Necessary) Commercially Available
 - B. Consumable Materials
 - (1) GO2020 Modeling Clay

RELATED TASK

- C. References
 - (1) AMM 06-44-00/201, Wing Access Doors and Panels
 - (2) AMM 24-22-00/201, Electrical Power Control
 - (3) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
 - (4) AMM 78-31-00/201, Thrust Reverser System
- D. Prepare for Check

WARNING: DO THE THRUST REVERSER DEACTIVATION PROCEDURE TO PREVENT THE OPERATION OF THE THRUST REVERSER. THE ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Do this procedure: Thrust Reverser Deactivation for Ground Maintenance (AMM 78-31-00/201).

EFFECTIVITY

FUNCTIONAL

LE SLAT RETRACT/EXTEND STOP GAPS -L

27-81-20-2c | 27-055-01-1

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AIRLINE CARD NO.

SAS BOEING TASK CARD

MECH INSP

- (2) Remove the pressure from the center hydraulic system (AMM 29-11-00/201).
- (3) Open these circuit breakers on the overhead panel, P11, and install circuit breaker locks and DO-NOT-CLOSE tags:
 - (a) 11H23, SLAT ALTN CONT INBD
 - (b) 11H24, SLAT ALTN CONT OUTBD
 - (c) 11J24, FLAPS ALTN CONT
- Open these circuit breakers on the main power distribution panel, P6, and install circuit breaker locks and D0-NOT-CLOSE tags:
 - (a) 6D21, ALTN SLAT INBD PWR
 - (b) 6D24, ALTN FLAP PWR
 - (c) 6F24, ALTN SLAT OUTBD PWR
- (5) Supply electrical power (AMM 24-22-00/201).
- Retract and Extend Overtravel Stop Clearance Check Inboard Slat (Detail A, Fig. 204)
 - WARNING: DO NOT LET OBJECTS GET IN THE HOUSING ASSEMBLY OF THE SLAT TRACK. THIS WILL HELP PREVENT A PUNCTURE OF THE HOUSING ASSEMBLY THAT COULD CAUSE A FUEL LEAK. THE FUEL LEAK COULD CAUSE A FIRE AND POSSIBLE DEATH OR INJURY TO PERSONNEL.
 - (1) Keep clean and free of all unwanted objects (FOD), the housing (can) assemblies of the slat main tracks, at all time.
 - KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN WARNING: HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

EFFECTIVITY

FUNCTIONAL

LE SLAT RETRACT/EXTEND STOP GAPS -L

27-81-20-2c | 27-055-01-1 PAGE 2 OF 10 APR 22/08

AIRLINE CARD NO.

SAS BOEING TASK CARD

MECH INSP

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (2) Pressurize the center hydraulic system (AMM 29-11-00/201).
- Move the flap control lever to the 25-unit detent, and make sure the slats move to the fully extended position.
- (4) Attach a DO-NOT-OPERATE tag to the flap control lever.
- (5) Remove the pressure from the center hydraulic system (AMM 29-11-00/201).
- Remove lower leading edge access panels 511EB, 511FB, 511KB on left wing and/or 611EB, 611FB, 611KB on right wing (AMM 06-44-00/201).
- (7) Do a check of the clearance between the actuator arm and the EXTEND overtravel stop (for the inboard slat), a clearance of more than 0.03 inch (0.8 mm) is needed at each rotary actuator.
- (8) Attach modeling clay to the RETRACT overtravel stop at the outboard rotary actuator only.

NOTE: Attach a piece of tape to the structure so that you can remove the clay easily.

KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN WARNING: HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

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

EFFECTIVITY FUNCTIONAL

LE SLAT RETRACT/EXTEND STOP GAPS -L

27-81-20-2c | 27-055-01-1 PAGE 3 OF 10 APR 22/08

AIRLINE CARD NO.

SAS BOEING TASK CARD

MECH INSP

- (10) Remove the DO-NOT-OPERATE tag from the flap control lever.
- (11) Move the flap control lever to the zero (FLAPS UP) detent and make sure the slats move to the fully retracted position.

NOTE: After the slats moved to the fully retracted position, stop for one minute before you do the next step.

- (12) Attach a DO-NOT-OPERATE tag to the flap control lever.
- (13) Remove the pressure from the center hydraulic system (AMM 29-11-00/201).
- (14) At the inboard rotary actuator, make sure the clearance between the actuator arm and the retract overtravel stop is 0.05 to 0.10 inch (1.3 to 2.5 mm).

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (15) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (16) Remove the DO-NOT-OPERATE tag from the flap control lever.
- Move the flap control lever to the 25-unit detent and make sure the (17) slats move to the fully extended position.
- (18) Attach a DO-NOT-OPERATE tag to the flap control lever.
- (19) Remove the pressure from the center hydraulic system (AMM 29-11-00/201).
- (20) Carefully remove the modeling clay from the outboard rotary actuator.

EFFECTIVITY

FUNCTIONAL

LE SLAT RETRACT/EXTEND STOP GAPS -L

27-81-20-2c | 27-055-01-1 PAGE 4 OF 10 APR 22/08

AIRLINE CARD NO.

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MECH INSP

(21) Measure the thickness of the clay and make sure the thickness is between 0.05 and 0.10 inch (1.3 to 2.5 mm).

The thickness of the modeling clay is the retract overtravel stop clearance for the outboard actuator.

KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN WARNING: HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (22) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (23) Remove the DO-NOT-OPERATE tag from the flap control lever.
- Move the flap control lever to the zero (FLAPS UP) detent and make (24) sure the slats move to the fully retracted position.
- (25) Attach a DO-NOT-OPERATE tag to the flap control lever.
- (26) Remove the pressure from the center hydraulic system (AMM 29-11-00/201).
- (27) If the retract or extend overtravel stop clearances are incorrect as specified in Fig. 204, adjust the stop clearance for the inboard slat (refer to the tasks for Retract and Extend Overtravel Stop Clearance Adjustment - Inboard and Outboard Rotary Actuators, Inboard Slat).
- (28) Install the access panels, 511EB, 511FB, 511KB on left wing and/or 611EB, 611FB, 611KB on right wing (AMM 06-44-00/201).
- Retract and Extend Overtravel Stop Clearance Check Outboard Slats (Detail B, Fig. 204)

EFFECTIVITY

FUNCTIONAL

LE SLAT RETRACT/EXTEND STOP GAPS -L

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AIRLINE CARD NO.

SAS BOEING TASK CARD

MECH INSP

KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR

WHEN HYDRAULIC POWER IS SUPPLIED.

MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN CAUTION: COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (1) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (2) Remove the DO-NOT-OPERATE tag from the flap control lever.
- (3) Move the flap control lever to the 25-unit detent, and make sure the slats move to the fully extended position.
- (4) Attach a DO-NOT-OPERATE tag to the flap control lever.
- (5) Remove the pressure from the center hydraulic system (AMM 29-11-00/201).
- Remove the access panels, 521BB, 521EB, 511JB, 511RB, 521ZB, 521AFB, 521ANB on the left wing and/or 621BB, 621EB, 621JB, 621ZB, 621AFB, 621ANB on the right wing (AMM 06-44-00/201).
- (7) Do a check of the clearance between the actuator arm and the EXTEND overtravel stop at each rotary actuator on the same slat (Fig. 204).
- (8) Attach modeling clay to the RETRACT overtravel stops on each rotary actuator.

Attach tape to the structure so the clay can be removed easily.

EFFECTIVITY

FUNCTIONAL

LE SLAT RETRACT/EXTEND STOP GAPS -L

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AIRLINE CARD NO.



MECH INSP

KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN WARNING: HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN CAUTION: COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (9) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (10) Remove the DO-NOT-OPERATE tag from the flap control lever.
- (11) Move the flap control lever to the zero (FLAPS UP) detent and make sure the slats move to the fully retracted position.

NOTE: After the slats move to the fully retracted position, stop for one minute before doing the next step.

- (12) Move the flap control lever to the 25-unit detent and make sure the slats move to the fully extended position.
- (13) Attach a DO-NOT-OPERATE tag to the flap control lever.
- (14) Remove the pressure from the center hydraulic system (AMM 29-11-00/201).
- (15) Carefully remove the modeling clay from each rotary actuator.
- Measure the thicknesses of each modeling clay and make sure the thickness is between 0.05 and 0.10 inch (1.3 and 2.5 mm).

The thickness of the modeling clay is the retract overtravel NOTE: stop clearance (Fig. 204).

EFFECTIVITY

FUNCTIONAL

LE SLAT RETRACT/EXTEND STOP GAPS -L

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AIRLINE CARD NO.



MECH INSP

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER,

FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR

WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN

COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS

BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

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

- (18) Remove the DO-NOT-OPERATE tag from the flap control lever.
- (19) Move the flap control lever to the zero (FLAPS UP) detent and make sure the slats move to the fully retracted position.
- (20) Attach a DO-NOT-OPERATE tag to the flap control lever.
- (21) Remove the pressure from the center hydraulic system (AMM 29-11-00/201).
- (22) If the retract or extend overtravel stop clearances are incorrect as specified in Fig. 204, adjust the stop clearance for the outboard slat (refer to the tasks for Retract and Extend Overtravel Stop Clearance Adjustment - Inboard and Outboard Rotary Actuators, Outboard Slat).
- (23) Install the access panels, 521BB, 521EB, 511JB, 511RB, 521ZB, 521AFB, 521ANB on the left wing and/or 621BB, 621EB, 621JB, 621ZB, 621AFB, 621ANB on the right wing (AMM 06-44-00/201).
- G. Put the Airplane Back to the Usual Condition

WARNING: DO NOT LET OBJECTS GET IN THE HOUSING ASSEMBLY OF THE SLAT TRACK. THIS WILL HELP PREVENT A PUNCTURE OF THE HOUSING ASSEMBLY THAT COULD CAUSE A FUEL LEAK. THE FUEL LEAK COULD CAUSE A FIRE AND POSSIBLE DEATH OR INJURY TO PERSONNEL.

EFFECTIVITY

FUNCTIONAL

LE SLAT RETRACT/EXTEND STOP GAPS -L

27-81-20-2c | 27-055-01-1

27-055-01-1 PAGE 8 OF 10 APR 22/08

AIRLINE CARD NO.

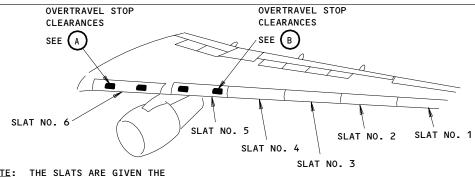
			TASK CARD
MECH	INSP		
		(1)	Remove the circuit breaker locks and the DO-NOT-CLOSE tags and close these circuit breakers on the overhead panel, P11:
			(a) 11H23, SLAT ALTN CONT INBD
			(b) 11H24, SLAT ALTN CONT OUTBD
			(c) 11J24, FLAPS ALTN CONT
		(2)	Remove the circuit breaker locks and the DO-NOT-CLOSE tags and close these circuit breakers on the main power distribution panel, P6:
			(a) 6D21, ALTN SLAT INBD PWR
			(b) 6D24, ALTN FLAP PWR
			(c) 6F24, ALTN SLAT OUTBD PWR
		(3)	Remove the power from the center hydraulic system (AMM 29-11-00/201).
		(4)	Remove electrical power (AMM 24-22-00/201).
		(5)	Do the activation procedure for the thrust reverser (AMM 78-31-00/201).

EFFECTIVITY

AIRLINE CARD NO.

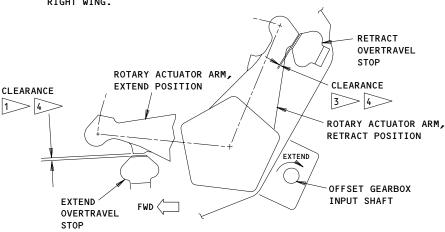
SAS

767 TASK CARD



NOTE: THE SLATS ARE GIVEN THE NUMBER FROM 1 THROUGH 12, FROM THE LEFT WING TO THE RIGHT WING.

LEFT WING (RIGHT WING IS OPPOSITE)



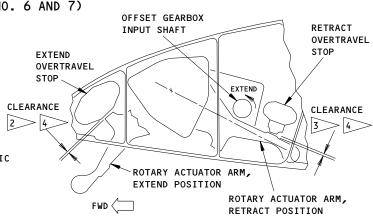
OVERTRAVEL STOP CLEARANCES, INBOARD SLAT (EXAMPLE, SLATS NO. 6 AND 7)

1 0.03 INCH (0.8 mm) MINIMUM CLEARANCE (INBOARD SLATS EXTENDED WITH HYDRAULIC POWER) AT THE EXTEND OVERTRAVEL STOP.

O.03 INCH (O.8 mm) MINIMUM CLEARANCE
(OUTBOARD SLATS EXTENDED WITH HYDRAULIC
POWER) AT THE EXTEND OVERTRAVEL STOP.

0.05 TO 0.10 INCH (1.3 TO 2.5 mm)
CLEARANCE (INBOARD OR OUTBOARD
SLATS RETRACTED WITH HYDRAULIC POWER)
AT THE RETRACT OVERTRAVEL STOP.

4 NOT LESS THAN 0.03 INCH (0.8 mm)
(SLATS RETRACTED OR EXTENDED WITH
ELECTRIC POWER) AT THE RETRACT OR
EXTEND OVERTRAVEL STOPS.



OVERTRAVEL STOP CLEARANCES, OUTBOARD SLAT (EXAMPLE, SLATS NO. 1-5 AND 8-12)

B

Retract and Extend Stop Clearances for the Leading Edge Slat Figure 204

FUNCTIONAL LE SLAT RETRACT/EXTEND STOP GAPS -L

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BOEING CARD NO. 27-055-01-2

AIRLINE CARD NO.

PHASE

TASK CARD

REV REVISION 20 015 APR 22/08 AIRPL R WING LE 12424 APPLICABILITY
ANF ENGINE STRUCTURAL ILLUSTRATION REFERENCE

INTERVAL

AIRPLANE **FUNCTIONAL** LE SLAT RETRACT/EXTEND STOP GAPS -R **ALL** ALL

ZONES

WORK AREA

ACCESS PANELS

143 211 612 622 623 611EB 611FB 611KB 624 625

MECH INSP

SKILL

MPD ITEM NUMBER

FUNCTIONALLY CHECK THE INBOARD/OUTBOARD LE SLATS 7-12 EXTEND/RETRACT STOP GAPS.

27-81-20-2C

- 1. <u>Slat Retract and Extend Overtravel Stop Clearance Check</u>
 - A. Equipment
 - (1) Circuit Breaker Lockout Clip (4 Necessary) Commercially Available
 - Consumable Materials
 - (1) GO2020 Modeling Clay

RELATED TASK

- References
 - (1) AMM 06-44-00/201, Wing Access Doors and Panels
 - (2) AMM 24-22-00/201, Electrical Power Control
 - (3) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
 - (4) AMM 78-31-00/201, Thrust Reverser System
- D. Prepare for Check

WARNING: DO THE THRUST REVERSER DEACTIVATION PROCEDURE TO PREVENT THE OPERATION OF THE THRUST REVERSER. THE ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Do this procedure: Thrust Reverser Deactivation for Ground Maintenance (AMM 78-31-00/201).

EFFECTIVITY

FUNCTIONAL

LE SLAT RETRACT/EXTEND STOP GAPS -R

27-81-20-2c | 27-055-01-2 PAGE 1 OF 10 DEC 22/01

AIRLINE CARD NO.

SAS BOEING TASK CARD

MECH INSP

- (2) Remove the pressure from the center hydraulic system (AMM 29-11-00/201).
- (3) Open these circuit breakers on the overhead panel, P11, and install circuit breaker locks and DO-NOT-CLOSE tags:
 - (a) 11H23, SLAT ALTN CONT INBD
 - (b) 11H24, SLAT ALTN CONT OUTBD
 - (c) 11J24, FLAPS ALTN CONT
- Open these circuit breakers on the main power distribution panel, P6, and install circuit breaker locks and D0-NOT-CLOSE tags:
 - (a) 6D21, ALTN SLAT INBD PWR
 - (b) 6D24, ALTN FLAP PWR
 - (c) 6F24, ALTN SLAT OUTBD PWR
- (5) Supply electrical power (AMM 24-22-00/201).
- Retract and Extend Overtravel Stop Clearance Check Inboard Slat (Detail A, Fig. 204)
 - WARNING: DO NOT LET OBJECTS GET IN THE HOUSING ASSEMBLY OF THE SLAT TRACK. THIS WILL HELP PREVENT A PUNCTURE OF THE HOUSING ASSEMBLY THAT COULD CAUSE A FUEL LEAK. THE FUEL LEAK COULD CAUSE A FIRE AND POSSIBLE DEATH OR INJURY TO PERSONNEL.
 - (1) Keep clean and free of all unwanted objects (FOD), the housing (can) assemblies of the slat main tracks, at all time.
 - KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN WARNING: HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

EFFECTIVITY

FUNCTIONAL

LE SLAT RETRACT/EXTEND STOP GAPS -R

27-81-20-2c | 27-055-01-2 PAGE 2 OF 10 APR 22/08

AIRLINE CARD NO.

SAS BOEING TASK CARD

MECH INSP

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (2) Pressurize the center hydraulic system (AMM 29-11-00/201).
- Move the flap control lever to the 25-unit detent, and make sure the slats move to the fully extended position.
- (4) Attach a DO-NOT-OPERATE tag to the flap control lever.
- (5) Remove the pressure from the center hydraulic system (AMM 29-11-00/201).
- Remove lower leading edge access panels 511EB, 511FB, 511KB on left wing and/or 611EB, 611FB, 611KB on right wing (AMM 06-44-00/201).
- (7) Do a check of the clearance between the actuator arm and the EXTEND overtravel stop (for the inboard slat), a clearance of more than 0.03 inch (0.8 mm) is needed at each rotary actuator.
- (8) Attach modeling clay to the RETRACT overtravel stop at the outboard rotary actuator only.

NOTE: Attach a piece of tape to the structure so that you can remove the clay easily.

KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN WARNING: HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

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

EFFECTIVITY

FUNCTIONAL

LE SLAT RETRACT/EXTEND STOP GAPS -R

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AIRLINE CARD NO.

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MECH INSP

- (10) Remove the DO-NOT-OPERATE tag from the flap control lever.
- (11) Move the flap control lever to the zero (FLAPS UP) detent and make sure the slats move to the fully retracted position.

NOTE: After the slats moved to the fully retracted position, stop for one minute before you do the next step.

- (12) Attach a DO-NOT-OPERATE tag to the flap control lever.
- (13) Remove the pressure from the center hydraulic system (AMM 29-11-00/201).
- (14) At the inboard rotary actuator, make sure the clearance between the actuator arm and the retract overtravel stop is 0.05 to 0.10 inch (1.3 to 2.5 mm).

KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN WARNING: HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (15) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (16) Remove the DO-NOT-OPERATE tag from the flap control lever.
- Move the flap control lever to the 25-unit detent and make sure the (17) slats move to the fully extended position.
- (18) Attach a DO-NOT-OPERATE tag to the flap control lever.
- (19) Remove the pressure from the center hydraulic system (AMM 29-11-00/201).
- (20) Carefully remove the modeling clay from the outboard rotary actuator.

EFFECTIVITY

FUNCTIONAL

LE SLAT RETRACT/EXTEND STOP GAPS -R

27-81-20-2c | 27-055-01-2 PAGE 4 OF 10 APR 22/08

AIRLINE CARD NO.

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MECH INSP

(21) Measure the thickness of the clay and make sure the thickness is between 0.05 and 0.10 inch (1.3 to 2.5 mm).

The thickness of the modeling clay is the retract overtravel stop clearance for the outboard actuator.

KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN WARNING: HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (22) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (23) Remove the DO-NOT-OPERATE tag from the flap control lever.
- Move the flap control lever to the zero (FLAPS UP) detent and make (24) sure the slats move to the fully retracted position.
- (25) Attach a DO-NOT-OPERATE tag to the flap control lever.
- (26) Remove the pressure from the center hydraulic system (AMM 29-11-00/201).
- (27) If the retract or extend overtravel stop clearances are incorrect as specified in Fig. 204, adjust the stop clearance for the inboard slat (refer to the tasks for Retract and Extend Overtravel Stop Clearance Adjustment - Inboard and Outboard Rotary Actuators, Inboard Slat).
- (28) Install the access panels, 511EB, 511FB, 511KB on left wing and/or 611EB, 611FB, 611KB on right wing (AMM 06-44-00/201).
- Retract and Extend Overtravel Stop Clearance Check Outboard Slats (Detail B, Fig. 204)

EFFECTIVITY FUNCTIONAL

LE SLAT RETRACT/EXTEND STOP GAPS -R

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MECH INSP

KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN CAUTION: COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (1) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (2) Remove the DO-NOT-OPERATE tag from the flap control lever.
- Move the flap control lever to the 25-unit detent, and make sure the slats move to the fully extended position.
- (4) Attach a DO-NOT-OPERATE tag to the flap control lever.
- (5) Remove the pressure from the center hydraulic system (AMM 29-11-00/201).
- Remove the access panels, 521BB, 521EB, 511JB, 511RB, 521ZB, 521AFB, 521ANB on the left wing and/or 621BB, 621EB, 621JB, 621ZB, 621AFB, 621ANB on the right wing (AMM 06-44-00/201).
- (7) Do a check of the clearance between the actuator arm and the EXTEND overtravel stop at each rotary actuator on the same slat (Fig. 204).
- (8) Attach modeling clay to the RETRACT overtravel stops on each rotary actuator.

Attach tape to the structure so the clay can be removed easily.

EFFECTIVITY

FUNCTIONAL

LE SLAT RETRACT/EXTEND STOP GAPS -R

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AIRLINE CARD NO.



MECH INSP

KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN WARNING: HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN CAUTION: COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

- (9) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (10) Remove the DO-NOT-OPERATE tag from the flap control lever.
- (11) Move the flap control lever to the zero (FLAPS UP) detent and make sure the slats move to the fully retracted position.

NOTE: After the slats move to the fully retracted position, stop for one minute before doing the next step.

- (12) Move the flap control lever to the 25-unit detent and make sure the slats move to the fully extended position.
- (13) Attach a DO-NOT-OPERATE tag to the flap control lever.
- (14) Remove the pressure from the center hydraulic system (AMM 29-11-00/201).
- (15) Carefully remove the modeling clay from each rotary actuator.
- Measure the thicknesses of each modeling clay and make sure the thickness is between 0.05 and 0.10 inch (1.3 and 2.5 mm).

The thickness of the modeling clay is the retract overtravel NOTE: stop clearance (Fig. 204).

EFFECTIVITY

FUNCTIONAL

LE SLAT RETRACT/EXTEND STOP GAPS -R

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AIRLINE CARD NO.



MECH INSP

KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN WARNING: HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER,

FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR

WHEN HYDRAULIC POWER IS SUPPLIED.

CAUTION: MAKE SURE THE ACCESS DOOR FOR THE ENGINE STRUT, THE INBOARD FAN

COWLING, AND THE THRUST REVERSER COWLING ARE CLEAR FROM THE

MOVEMENT OF THE SLATS. IF THE MOVEMENT OF THE SLATS IS BLOCKED, IT CAN CAUSE DAMAGE TO THE AIRPLANE.

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

- (18) Remove the DO-NOT-OPERATE tag from the flap control lever.
- (19) Move the flap control lever to the zero (FLAPS UP) detent and make sure the slats move to the fully retracted position.
- (20) Attach a DO-NOT-OPERATE tag to the flap control lever.
- (21) Remove the pressure from the center hydraulic system (AMM 29-11-00/201).
- If the retract or extend overtravel stop clearances are incorrect as specified in Fig. 204, adjust the stop clearance for the outboard slat (refer to the tasks for Retract and Extend Overtravel Stop Clearance Adjustment - Inboard and Outboard Rotary Actuators, Outboard Slat).
- (23) Install the access panels, 521BB, 521EB, 511JB, 511RB, 521ZB, 521AFB, 521ANB on the left wing and/or 621BB, 621EB, 621JB, 621ZB, 621AFB, 621ANB on the right wing (AMM 06-44-00/201).
- G. Put the Airplane Back to the Usual Condition

DO NOT LET OBJECTS GET IN THE HOUSING ASSEMBLY OF THE SLAT WARNING: TRACK. THIS WILL HELP PREVENT A PUNCTURE OF THE HOUSING ASSEMBLY THAT COULD CAUSE A FUEL LEAK. THE FUEL LEAK COULD CAUSE A FIRE AND POSSIBLE DEATH OR INJURY TO PERSONNEL.

EFFECTIVITY

FUNCTIONAL

LE SLAT RETRACT/EXTEND STOP GAPS -R

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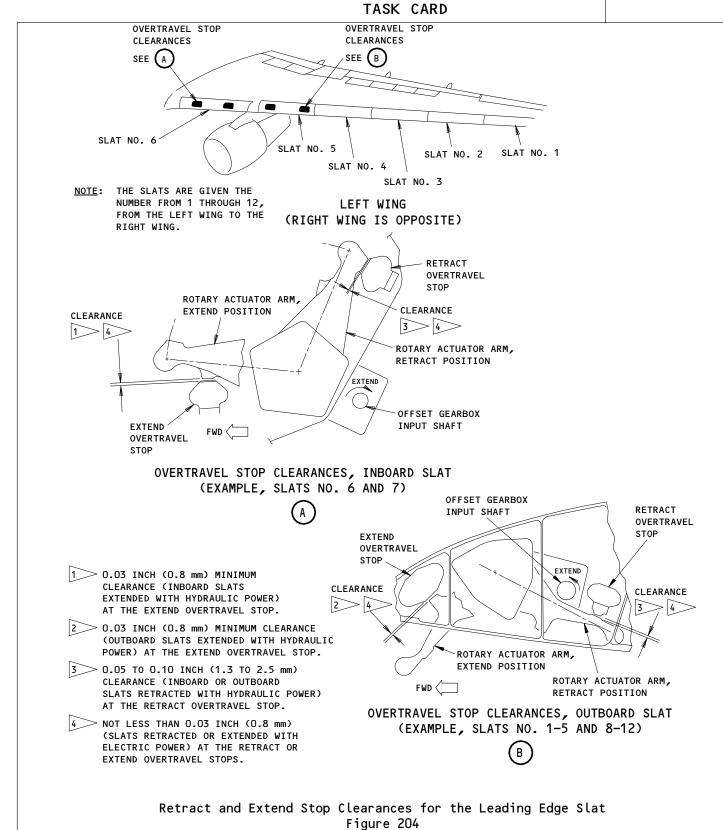
AIRLINE CARD NO.

		TASK CARD
MECH INSP		
	(1)	Remove the circuit breaker locks and the DO-NOT-CLOSE tags and close these circuit breakers on the overhead panel, P11:
		(a) 11H23, SLAT ALTN CONT INBD
		(b) 11H24, SLAT ALTN CONT OUTBD
		(c) 11J24, FLAPS ALTN CONT
	(2)	Remove the circuit breaker locks and the DO-NOT-CLOSE tags and close these circuit breakers on the main power distribution panel, P6:
		(a) 6D21, ALTN SLAT INBD PWR
		(b) 6D24, ALTN FLAP PWR
		(c) 6F24, ALTN SLAT OUTBD PWR
	(3)	Remove the power from the center hydraulic system (AMM 29-11-00/201).
	(4)	Remove electrical power (AMM 24-22-00/201).
	(5)	Do the activation procedure for the thrust reverser (AMM 78-31-00/201).

AIRLINE CARD NO.

SAS

BOEING 767



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5

EFFECTIVITY

STA	TION								B0E	ING CAR	NO.
TAII	L NO.			0	S BL	JEIN	G		27-0	55-51	
			S	AS &		767			AIRL	.INE CAR	D NO.
D.	ATE				TAS	SK CARD					
SKILL	WORK ARE	A	REL	ATED TASK		INTERVAL		PHASE	MPD REV		K CARD VISION
AIRPL	CREW CA	BIN			2C			12424	009	AUG	22/09
TAS	K			TITLE			STRUCTURAL ILLUSTRATION RE	FERENCE	AP AIRPLAN	PLICABII E	LITY ENGINE
OPERA	TIONAL	STAB	TRIM	OVERRIDE W	ITH SPLIT	COLUMN					
									NOT	<u> </u>	ALL
	ZONES						ACCESS PANELS				
211	212										

MECH INSP

MPD ITEM NUMBER

OPERATIONALLY CHECK STABILIZER TRIM OVERRIDE CAPABILITY WITH SPLIT CONTROL COLUMN COMMANDS.

27-41-00-5H

AIRPLANE NOTE: SB 767-27-0102. APPLICABLE TO 767 AIRPLANES INCORPORATING THIS SERVICE BULLETIN

OR EQUIVALENT.

1. SAS 050, 051, 150-166, 275-277, 279 POST-SB 27-102; SAS 167-274, 278, 280-999;

Stabilizer Trim Override Capability with Split Control Column Commands Test

<u>NOTE</u>: For this test, the stabilizer must be at no more than 8 units of trim.

This is a scheduled maintenance task.

- A. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic System
- B. Access
 - (1) Location Zones
 211/212 Control Cabin
- C. Procedure
 - (1) Supply electrical power (AMM 24-22-00/201).

27-055-51

AIRLINE CARD NO.

SAS BOEING
767
TASK CARD

MECH INSP

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

- (2) Pressurize the left and center hydraulic system (AMM 29-11-00/201).
- (3) Make sure these circuit breakers on the P11 panel are closed:
 - (a) 11C12, STAB TRIM SHUTOFF L
 - (b) 11C13, STAB TRIM SHUTOFF CENTER
 - (c) 11H17, FLT CONT SHUTOFF TAIL LEFT
 - (d) 11H27, FLT CONT SHUTOFF TAIL CTR
- (4) Put the LEFT and CENTER FLT CONT SHUTOFF TAIL valve switches on the right side panel, P61, in the OFF position.
- (5) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position.
- (6) Put the LEFT STAB TRIM SHUTOFF valve swtich on the P10 panel in the CUTOUT postion.
- (7) Push the captain's control column full forward and hold it in position.
 - (a) At the same time, pull the first officer's control column full aft and hold it in position.

NOTE: Approximately 100 pounds (445 newtons) are necessary to split the control columns.

- (8) Move the captain's or first officer's stabilizer trim control wheel switches to the APL NOSE UP position.
 - (a) Make sure the leading edge of the stabilizer moves down.
- (9) Release the stabilizer trim control wheel switches.

EFFECTIVITY

OPERATIONAL

STAB TRIM OVERRIDE WITH SPLIT COLUMN

27-41-00-5H

27-055-51

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AIRLINE CARD NO.

SAS BOEING
767
TASK CARD

- (10) With the control columns still split, move the captain's or first officer's stabilizer trim control wheel switches to the APL NOSE DN position.
 - (a) Make sure the leading edge of the stabilizer moves up.
- (11) Release the stabilizer trim control wheel switches.
- (12) Push the first officer's control column full forward and hold in position.
 - (a) At the same time, pull the captain's control column full aft and hold in position.

NOTE: Approximately 100 pounds (445 newtons) are necessary to split the control columns.

- (13) Move the captain's or first officer's stabilizer trim control wheel switches to the APL NOSE UP position.
 - (a) Make sure that the leading edge of the stabilizer moves down.
- (14) Release the stabilizer trim control wheel switches.
- (15) With the control columns still split, move the captain's or first officer's stabilizer trim control wheel switches to the APL NOSE DN position.
 - (a) Make sure that the leading edge of the stabilizer move up.
- (16) Release the stabilizer trim control wheel switches.
- (17) Put the CENTER STAB TRIM SHUTOFF valve switch on the P10 panel in the CUTOUT position.
- (18) Put the LEFT STAB TRIM SHUTOFF valve switch on the P10 panel in the NORM position.
- (19) Do the steps (7) thru (17) again for the left hydraulic system.
- D. Put the Airplane Back to Its Usual Condition
 - (1) Remove the power from the left and center hydraulic system (AMM 29-11-00/201).
 - (2) Remove electrical power (AMM 24-22-00/201).

EFFECTIVITY

OPERATIONAL | STAB TRIM OVERRIDE WITH SPLIT COLUMN

27-41-00-5H

27-055-51

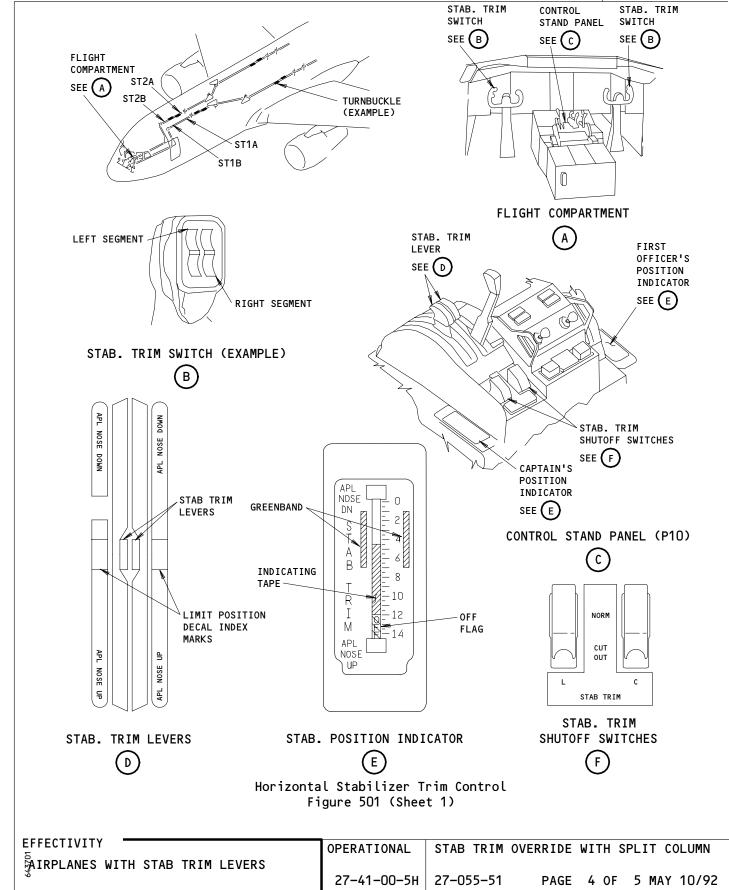
PAGE 3 OF 5 DEC 22/08

27-055-51

AIRLINE CARD NO.

SAS





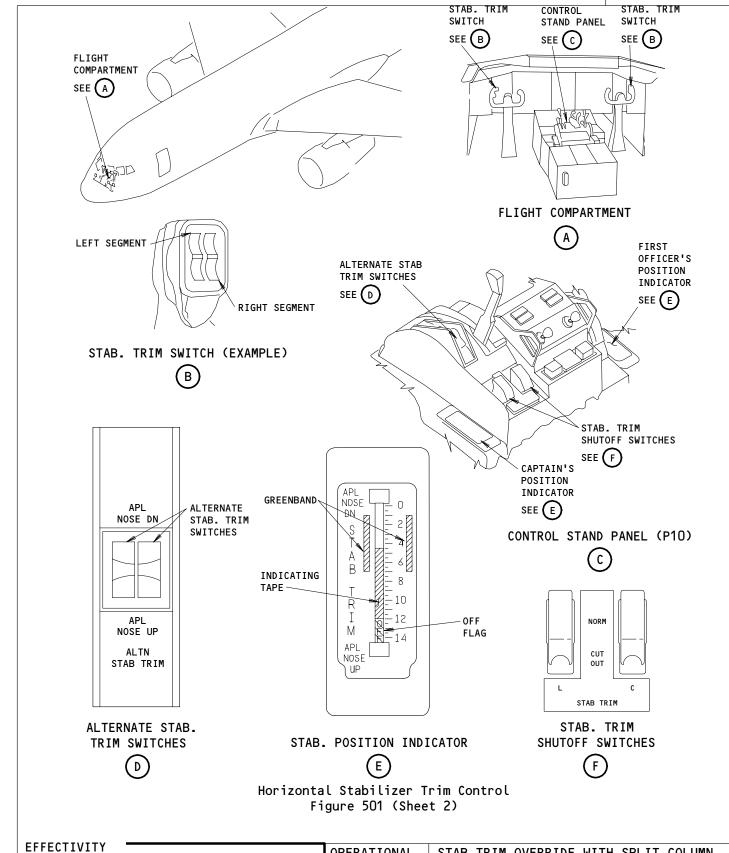
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SAS



BOEING CARD NO. 27-055-51

AIRLINE CARD NO.



SWITCHES

ÄAIRPLANES WITH ALTERNATE STAB TRIM

OPERATIONAL

27-41-00-5H

27-055-51

STAB TRIM OVERRIDE WITH SPLIT COLUMN

PAGE 5 OF 5 MAY 10/92

STATION
TAIL NO.
DATE



BOEING CARD NO. 27-058-01

AIRLINE CARD NO.

TASK CARD

RELATED TASK INTERVAL SKILL PHASE REVISION REV 007 1C APR 22/09 AIRPL CREW CABIN 11212 APPLICABILITY
AIRPLANE ENGINE STRUCTURAL ILLUSTRATION REFERENCE

CLEAN RUDDER TRIM KNOB NOTE ALL ACCESS PANELS

ZONES

WORK AREA

211 212

MECH INSP

MPD ITEM NUMBER

CLEAN THE SPACE BETWEEN THE RUDDER TRIM KNOB AND THE LIGHTPLATE.

27-21-23-2A

AIRPLANE NOTE: SB767-27-0134. APPLICABLE TO AIRPLANE LINE NUMBERS 1-570 THAT HAVE NOT INCORPORATED THIS SERVICE BULLETIN.

- (1) Relocate the existing rudder trim indicator to the new panel (AMM 27-28-05/401).
- Consumable Materials
 - (1) Detergents
 - (a) B00157 Spray White E or Equivalent
 - (b) B00460 Winsol APC-120-WX
- References В.
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 25-00-00/701, Equipment/Furnishings
 - (3) AMM 27-21-00/501, Rudder and Rudder Trim Control System
- Access
 - (1) Location Zones Control Cabin 211/212
- D. Prepare to Clean
 - (1) Supply Electrical Power (AMM 24-22-00/201).

EFFECTIVITY CLEAN RUDDER TRIM KNOB 27-21-23-2A 27-058-01 PAGE 1 OF 4 APR 22/09

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27-058-01

AIRLINE CARD NO.

SAS FOEING
767
TASK CARD

MECH INSP

- (2) Move the FLT CONTROL SHUTOFF TAIL L, R, and C switches on the right side panel, P61, to OFF. Attach DO-NOT-OPERATE tags and make sure the switch position lights come on.
- (3) Open these circuit breakers on the overhead panel, P11, and attach DO-NOT-CLOSE tags:
 - (a) 11C5, RUDDER TRIM
 - (b) 11H17, FLT CONT SHUTOFF TAIL LEFT
 - (c) 11H18, FLT CONT SHUTOFF TAIL CTR
 - (d) 11H27, FLT CONT SHUTOFF TAIL RIGHT
 - (e) 11K15, AILERON TRIM
 - (f) 11K17, RUDDER TRIM POS
- E. Clean the Rudder Trim Switch (Fig. 201)
 - (1) Loosen the two screws in the rudder trim knob.
 - (2) Remove the knob from the rudder trim switch.

CAUTION: MAKE SURE THE DETERGENT DOES NOT GO IN THE TRIM SWITCH. THE TRIM SWITCH CAN BECOME DAMAGED IF THE DETERGENT GOES IN THE TRIM SWITCH.

- (3) Use a sponge and the detergent to clean the lightplate surface and the bottom surface of the trim knob (AMM 25-00-00/701).
- (4) Install the knob on the rudder trim switch and tighten the two knob screws.
- (5) Remove the DO-NOT-CLOSE tags and close these circuit breakers on the P11 panel:
 - (a) 11C5, RUDDER TRIM
 - (b) 11H17, FLT CONT SHUTOFF TAIL LEFT
 - (c) 11H18, FLT CONT SHUTOFF TAIL CTR
 - (d) 11H27, FLT CONT SHUTOFF TAIL RIGHT

EFFECTIVITY

CLEAN

RUDDER TRIM KNOB

27-21-23-2A

27-058-01

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BOEING CARD NO.

27-058-01

AIRLINE CARD NO.

BOEING

		SAS 767	AIRLINE CARD NO.
		TASK CARD	
MECH	INSP		
		(e) 11K15, AILERON TRIM	
		(f) 11K17, RUDDER TRIM POS	
		(6) Remove the DO-NOT-OPERATE tags and move the FLT CONTRO L, R, and C switches on the P61 panel to ON.	L SHUTOFF TAIL
		(7) Do the operational test for the rudder trim system (Re	f 27-21-00).
		(8) SAS 050-051, 150-157, 162-167, 275-278, 280 PRE-SB 27-	0134;
		Make sure the clearance between the trim switch knob a lightplate is between a minimum of 0.02 inches (0.50 m maximum of 0.05 inches (1.27 mm).	
		F. Put the Airplane Back to Its Usual Condition	
		(1) Remove electrical power if it is not necessary (AMM 24	-22-00/201).

EFFECTIVITY

CLEAN

RUDDER TRIM KNOB

27-21-23-2A 27-058-01

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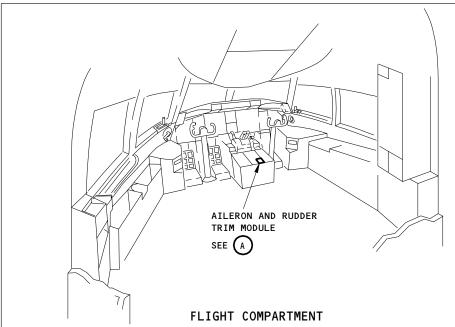
BOEING CARD NO.

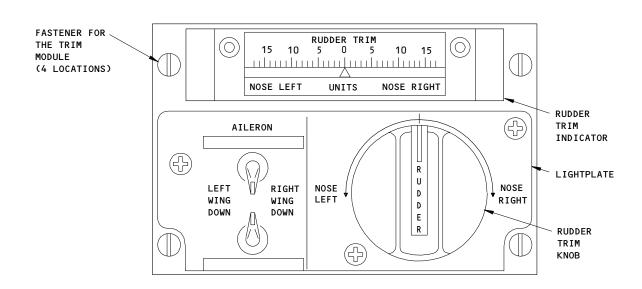
AIRLINE CARD NO.

27-058-01

SAS







AILERON AND RUDDER TRIM MODULE



Aileron and Rudder Trim Module Figure 201

EFFECTIVITY	CLEAN	RUDDER TRIM	KNOB		
824198	27-21-23-2A	27-058-01	PAGE	4 OF	4 NOV 10/92

TAIL NO.

WORK AREA



BOEING CARD NO. 27-059-01

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

AIRPL STAB COMPT W-27-060-01 4C 14848 011 DEC 22/00

TASK TITLE STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY AIRPLANE ENGINE

INTERVAL

ACCESS PANELS

FUNCTIONAL ELEVATOR HYDRAULIC RATE FUSES

ROTE ALL

ZONES

212 312 313 314 312AR 341AZ

RELATED TASK

211 341

SKILL

MECH INSP MPD ITEM NUMBER

FUNCTIONALLY CHECK THE ELEVATOR HYDRAULIC RATE FUSES FOR PROPER OPERATION (OFF-AIRCRAFT).

27-31-68-2A

AIRPLANE NOTE: SB 767-29A0038. APPLICABLE TO AIRPLANE LINE

NUMBERS 256 AND ON AND THOSE INCORPORATING

THIS SERVICE BULLETIN OR EQUIVALENT.

THE FOLLOWING PROCEDURE APPLIES ONLY TO THE ON-AIRCRAFT PORTION OF THIS TASK (REMOVAL/INSTALLATION).

THE PROCEDURE FOR THE OFF-AIRCRAFT FUNCTIONAL CHECK IS IN SUPPLIER'S (DOWTY AEROSPACE YAKIMA) CMM 2-7680.

1. Remove the Elevator Hydraulic Fuses

- A. References
 - (1) 06-42-00/201, Empennage Access Doors and Panels
 - (2) 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
- B. Access
 - (1) Location Zones

211/212 Control Cabin

312/313 Area Aft of Pressure Bulkhead to BS 1725

314 Horizontal Stabilizer - Center Section (Left)

341 Horizontal Stabilizer - Center Section (Right)

(2) Access Panels

312AR Forward Stabilizer Compartment

341AZ Horizontal Stabilizer Compartment

C. Prepare for the Removal

FUNCTIONAL ELEVATOR HYDRAULIC RATE FUSES

27-31-68-2A 27-059-01 PAGE 1 OF 5 DEC 22/99

27-059-01

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

(1) Remove the pressure from the left and right hydraulic systems and reservoir (Ref 29-11-00).

WARNING: STAY OFF THE SERVICE ACCESS DOOR, 312AR AND THE CONTROLS BAY ACCESS DOOR, 313AL. YOUR WEIGHT CAN RELEASE THE SPRING-LOADED LATCHES ON THE DOOR. IF YOU FALL THROUGH THE DOOR, INJURIES CAN OCCUR.

- (2) Open the access door for the forward stabilizer compartment, 312AR (Ref 06-42-00).
- (3) Open the access door to get access to the horizontal stabilizer compartment, 341AZ (Ref 06-42-00).
- D. Remove the Fuses (Fig. 201)
 - (1) Do the steps that follow to remove the fuse:
 - (a) Remove the hydraulic line clamps for movement of the lines while you remove the fuse.
 - (b) Remove the fuses from the hydraulic lines (2 locations).
 - (c) Put caps on the hydraulic lines.
- 2. Install the Elevator Hydraulic Fuses
 - A. Consumable Materials
 - (1) D00153 Hydraulic Fluid BMS 3-11
 - B. References
 - (1) 06-42-00/201, Empennage Access Doors and Panels
 - (2) 24-22-00/201, Electrical Power Control
 - (3) 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
 - (4) 31-41-00/201, EICAS
 - C. Access

AIRLINE CARD NO.



27-059-01

MECH INSP

(1) Location Zones

Control Cabin 211/212

312/313 Area Aft of Pressure Bulkhead to BS 1725 314 Horizontal Stabilizer - Center Section (Left)

341 Horizontal Stabilizer - Center Section (Right)

(2) Access Panels

312AR Forward Stabilizer Compartment 341AZ Horizontal Stabilizer Compartment

- Install the Fuses (Fig. 201)
 - (1) Do the steps that follow to install the fuse:
 - (a) Remove the caps from the hydraulic lines.
 - (b) Apply a thin layer of BMS 3-11 to the fittings before you install the fuse.
 - (c) Check the placard for flow direction.
 - (d) Install the new fuses to the hydraulic lines (2 locations).
 - (e) Install the hydraulic line clamps, if you removed them.
- Test for the Elevator Hydraulic Fuse
 - (1) Supply electrical power (Ref 24-22-00).
 - (2) Make sure these circuit breakers on the overhead panel, P11, are closed:
 - (a) 11H17, FLT CONT SHUTOFF TAIL LEFT
 - (b) 11L09, LEFT ENGINE OIL PRESS
 - (c) 11L36, RIGHT ENGINE OIL PRESS 2

KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN <u>WARNING:</u> HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR

WHEN HYDRAULIC POWER IS SUPPLIED.

EFFECTIVITY

FUNCTIONAL

ELEVATOR HYDRAULIC RATE FUSES

27-31-68-2A

27-059-01

PAGE 3 OF 5 DEC 22/00

27-059-01

AIRLINE CARD NO.



MECH INSP

- (3) Supply power to the left hydraulic system (Ref 29-11-00).
- (4) Do these steps to do a test for the hydraulic fuses in the elevator system:
 - (a) Make sure the L FLT CONTROL SHUTOFF TAIL valve switch on the right side panel, P61, is at the ON position.
 - (b) Move the control columns through full travel two times, then let the control columns go to the neutral position.
 - (c) Make sure the elevators move correctly with the control column movement.
- F. Put the Airplane Back to Its Usual Condition
 - (1) Remove the power from the left hydraulic system (Ref 29-11-00).
 - (2) Remove electrical power if it is not necessary (Ref 24-22-00).
 - (3) Close the access door for the forward stabilizer compartment, 312AR (Ref 06-42-00).
 - (4) Close the access door for the horizontal stabilizer compartment, 341AZ (Ref 06-42-00).

EFFECTIVITY

FUNCTIONAL

ELEVATOR HYDRAULIC RATE FUSES

27-31-68-2A

27-059-01

PAGE 4 OF 5 DEC 22/00

BOEING CARD NO.

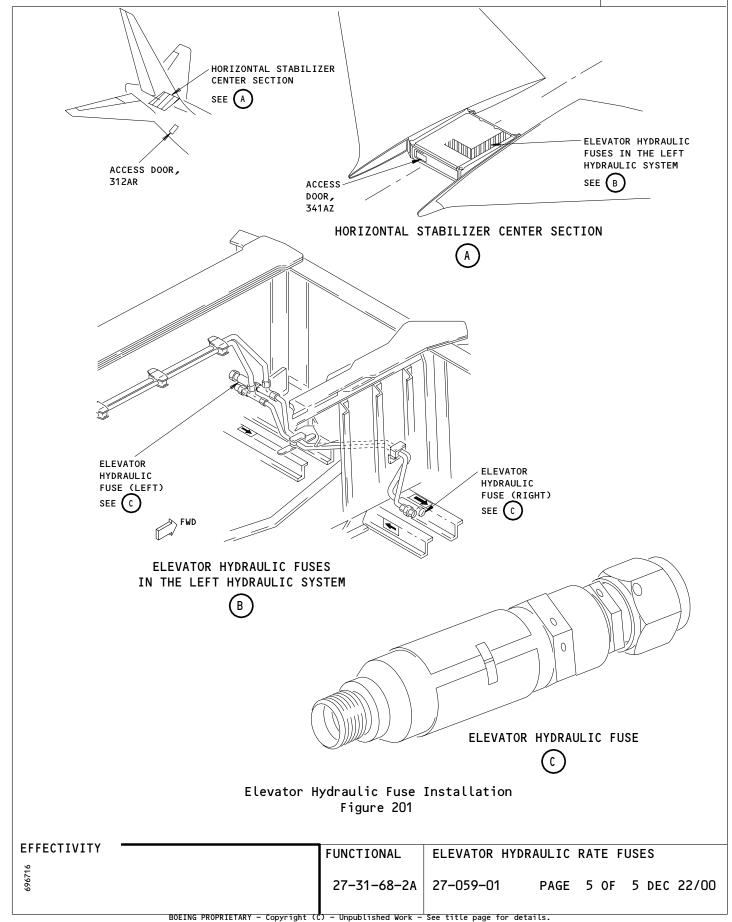
767

SAS

BOEING TASK CARD

27-059-01

AIRLINE CARD NO.



STATION	
TAIL NO.	
DATE	\dashv



BOEING CARD NO. 27-060-01

AIRLINE CARD NO.

WORK AREA RELATED TASK INTERVAL TASK CARD SKILL PHASE REV REVISION 011 DEC 22/00 AIRPL STAB COMPT W-27-059-014C 14848 STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY
AIRPLANE ENGINE **FUNCTIONAL** RUDDER HYDRAULIC RATE FUSES NOTE ALL ZONES ACCESS PANELS 311 312AR

MECH INSP

FUNCTIONALLY CHECK THE RUDDER HYDRAULIC RATE FUSE FOR PROPER OPERATION (OFF-AIRCRAFT).

27-23-51-2A

MPD ITEM NUMBER

AIRPLANE NOTE: SB 767-29A0038. APPLICABLE TO AIRPLANE LINE NUMBERS 256 AND ON AND THOSE INCORPORATING THIS SERVICE BULLETIN OR EQUIVALENT.

THE FOLLOWING PROCEDURE APPLIES ONLY TO THE ON-AIRCRAFT PORTION OF THIS TASK (REMOVAL/INSTALLATION).

THE PROCEDURE FOR THE OFF-AIRCRAFT FUNCTIONAL CHECK IS IN THE SUPPLIER'S (DOWTY AEROSPACE YAKIMA) CMM 2-7679.

- Rudder Hydraulic Fuse Removal
 - A. References
 - (1) 06-42-00/201, Empennage Access Doors and Panels
 - (2) 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
 - B. Access
 - (1) Location Zone 312 Area Aft of Pressure Bulkhead to BS 1725
 - (2) Access Panel Stabilizer Jackscrew 312AR
 - C. Prepare for Removal
 - (1) Remove the pressure from the left hydraulic system and its reservoir (Ref 29-11-00).

EFFECTIVITY FUNCTIONAL RUDDER HYDRAULIC RATE FUSES 27-23-51-2A 27-060-01 PAGE 1 OF 5 AUG 10/95

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27-060-01

AIRLINE CARD NO.

MECH INSP

STAY OFF THE SERVICE ACCESS DOOR, 312AR, AND THE ACCESS DOOR WARNING: FOR THE CONTROLS BAY, 313AL. YOUR WEIGHT CAN CAUSE THE SPRING-LOADED LATCHES TO RELEASE. IF YOU FALL THROUGH THE DOOR, INJURY CAN OCCUR.

- (2) Open access door 312AR (Ref 06-42-00).
- Remove the Fuse (Fig. 201)
 - (1) Remove the clamps from the hydraulic lines to let them move during the fuse removal.
 - (2) Remove the fuse from the hydraulic lines and do this step:
 - (a) Seal the hydraulic lines with a cap.
- Rudder Hydraulic Fuse Installation
 - A. Consumable Materials
 - (1) D00153 Hydraulic Fluid, BMS 3-11
 - References
 - (1) 06-42-00/201, Empennage Access Doors and Panels
 - (2) 24-22-00/201, Electrical Power Control
 - (3) 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
 - C. Access
 - (1) Location Zone Area Aft of Pressure Bulkhead to BS 1725 312
 - (2) Access Panel Stabilizer Jackscrew 312AR
 - D. Install the Fuse
 - (1) Remove the caps from the hydraulic lines.

AIRLINE CARD NO.

27-060-01

SAS BOEING TASK CARD

MECH	INSP
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- (2) Apply a thin layer of hydraulic fluid to the fittings before installation.
- Make sure the fuse direction is correct and connect the fuse to the hydraulic lines at each end.
- (4) Install the hydraulic line clamps.
- Test the Fuse
 - (1) Supply electrical power (Ref 24-22-00).
 - (2) Make sure this circuit breaker on the P11 panel is closed:
 - (a) 11H17, FLT CONT SHUTOFF TAIL L

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRUALIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

- (3) Supply pressure to the left hydraulic system only (Ref 29-11-00).
- (4) Make sure the FLT CONTROL SHUTOFF TAIL L switch on the right side panel, P61, is ON.
- Make sure the amber RUDDER RATIO light on the pilot's overhead panel, P5, is OFF. To reset the RUDDER RATIO do these steps:
 - (a) Push the RRCM RESET switch on the RRCM.
 - Open and then close this circuit breaker on the P11 panel:
 - 1) 11G10, RUDDER RATIO
- Operate the rudder pedals through their full travel range two times and do these checks:
 - (a) Make sure the rudder moves through its full travel range.
 - (b) Make sure there are no leaks near the hydraulic fuse.
- (7) Close access door 312AR (Ref 06-42-00).

EFFECTIVITY

FUNCTIONAL

RUDDER HYDRAULIC RATE FUSES

27-23-51-2A

27-060-01

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BOEING CARD NO.

27-060-01

AIRLINE CARD NO.

			TASK CARD
MECH	INSP		
		F.	Put the Airplane Back to Its Usual Condition
			(1) Move the rudder pedals back to their neutral positions.
			(2) Remove the power from the left hydraulic system (Ref 29-11-00).
			(3) Remove electrical power if it is not necessary (Ref 24-22-00).
EFF	ECTI	ATIA _	FUNCTIONAL PUDDED HYDRAULTC PATE FUSES

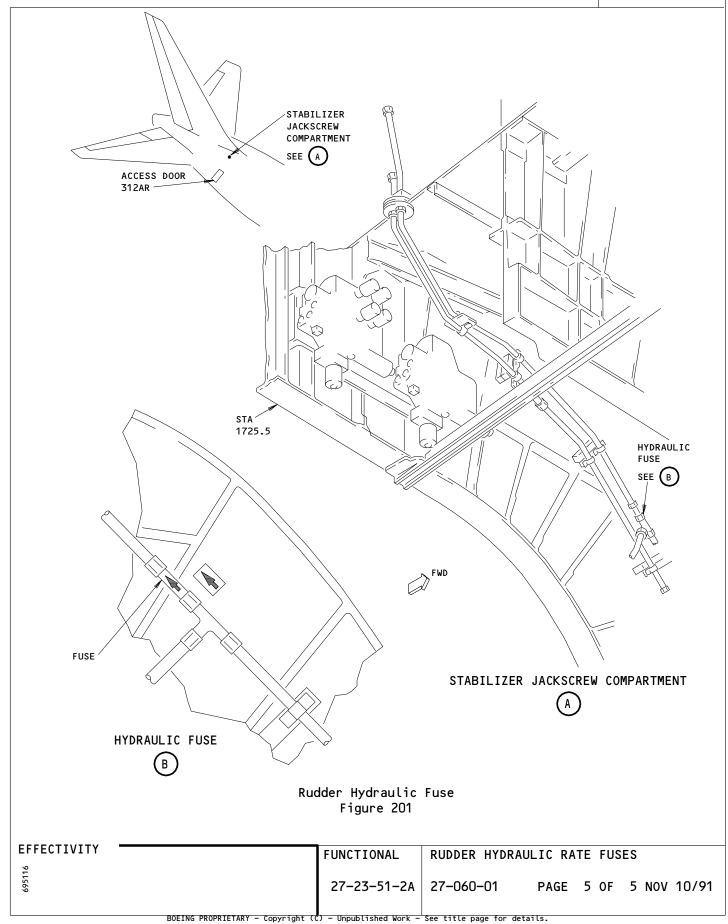
BOEING CARD NO.

27-060-01

AIRLINE CARD NO.

SAS

767
TASK CARD



STATION									BOE	ING CAR	D NO.		
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AIR	PL	WINGS				1 C				11212	018	AUG	22/08
	TASK				TITLE			STRUCTURAL	ILLUSTRATION RE	FERENCE	AP AIRPLAN	PLICABI E	LITY ENGINE
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		1											
LUBRICATE THE TURN GUIDES FOR THE SKEW/LOSS SWITCH CABLE.						ABLE.		12-2	1-08-	-3H			
AIRPLANE NOTE: SB 767-27A0140. APPLICABLE TO AIRPLANE LINE													
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THIS SERVICE BULLETIN OR EQUIVALENT.

AIRPLANE NOTE: SB 767-27-0165. NOT APPLICABLE TO AIRPLANES

INCORPORATING THIS SERVICE BULLETIN. THIS SB DEACTIVATES THE WING LEADING EDGE OUTBOARD

SLAT SKEW DETECTION SYSTEM.

WARNING: DO NOT LET OBJECTS GET IN THE HOUSING ASSEMBLY OF THE SLAT TRACK. THIS WILL HELP PREVENT A PUNCTURE OF THE HOUSING ASSEMBLY THAT COULD CAUSE A FUEL LEAK. THE FUEL LEAK COULD CAUSE A FIRE AND POSSIBLE DEATH OR INJURY TO PERSONNEL.

(1) Keep clean and free of all unwanted objects (FOD), the housing (can) assemblies of the slat main tracks, at all time.

WARNING: DO NOT LET OBJECTS GET IN THE HOUSING ASSEMBLY OF THE SLAT TRACK. THIS WILL HELP PREVENT A PUNCTURE OF THE HOUSING ASSEMBLY THAT COULD CAUSE A FUEL LEAK. THE FUEL LEAK COULD CAUSE A FIRE AND POSSIBLE DEATH OR INJURY TO PERSONNEL.

(2) Keep clean and free of all unwanted objects (FOD), the housing (can) assemblies of the slat main tracks, at all time.

LUBRICATE LE SLAT SKEW DETECTION SYSTEM

12-21-08-3H 27-063-02 PAGE 1 OF 1 AUG 22/08

STATION	
TAIL NO.	+
DATE	



BOEING CARD NO. 27-064-01-1

AIRLINE CARD NO.

27-11-00-E

TASK CARD

REVISION

APR 22/99

SKILL WORK AREA RELATED TASK INTERVAL PHASE MPD REV

AIRPL L WING TE 06000 HRS 11212 019

TASK TITLE STRUCTURAL ILLUSTRATION REFERENCE AIRPL

TASK

CHECK/INSP

L WING-LATERAL CNTRL SYSTEM BEARINGS

NOTE ALL

ZONES ACCESS PANELS

560 561AB 561LB 561RBX

MECH INSP MPD ITEM NUMBER

INSPECT LEFT WHEEL WELL TORQUE TUBE BEARINGS, WHEEL WELL CONTROL ROD BEARINGS AND OUTBOARD AILERON LOCKOUT MECHANISM BEARINGS FOR CORROSION USING INSPECTION PROCEDURES IN SB 767-27-0128.

AIRPLANE NOTE: SB767-27-0128. TASK IS APPLICABLE TO

AIRPLANES PRIOR TO LINE NUMBER 687 THAT HAVE NOT ACCOMPLISHED THE TERMINATING ACTION PER

THIS SERVICE BULLETIN.

MANHOUR NOTE: THE MANHOUR RANGE IS FROM 38.5 TO 13.0 HOURS.

GROUP 1: 38.5, GROUP 2: 29.5, GROUP 3: 22 AND

GROUP 4: 13. (SEE SB 767-27-0128).

CHECK/INSP L WING-LATERAL CNTRL SYSTEM BEARINGS

27-11-00-E 27-064-01-1 PAGE 1 OF 1 APR 22/99

STATION
TAIL NO.
DATE



BOEING CARD NO. 27-064-01-2

AIRLINE CARD NO.

27-11-00-E

TASK CARD

SKILL WORK AREA RELATED TASK INTERVAL PHASE REVISION REV 011 06000 HRS AUG 22/99 AIRPL | R WING TE 11212 STRUCTURAL ILLUSTRATION REFERENCE

APPLICABILITY
AIRPLANE ENGINE CHECK/INSP R WING-LATERAL CNTRL SYSTEM BEARINGS NOTE ALL

ZONES ACCESS PANELS

660 661AB 661LB 661RBX

MPD ITEM NUMBER MECH INSP

INSPECT RIGHT WHEEL WELL TORQUE TUBE BEARINGS, WHEEL WELL CONTROL ROD BEARINGS AND OUTBOARD AILERON LOCKOUT MECHANISM BEARINGS FOR CORROSION USING INSPECTION PROCEDURES IN SB 767-27-0128.

AIRPLANE NOTE: SB767-27-0128. TASK IS APPLICABLE TO

AIRPLANES PRIOR TO LINE NUMBER 687 THAT HAVE NOT ACCOMPLISHED THE TERMINATING ACTION PER

THIS SERVICE BULLETIN.

MANHOUR NOTE: THE MANHOUR RANGE IS FROM 38.5 TO 13.0 HOURS.

GROUP 1: 38.5, GROUP 2: 29.5, GROUP 3: 22 AND

GROUP 4: 13. (SEE SB 767-27-0128).

EFFECTIVITY CHECK/INSP R WING-LATERAL CNTRL SYSTEM BEARINGS 27-11-00-E 27-064-01-2 PAGE 1 OF 1 AUG 22/99

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TAIL NO.	+
DATE	



BOEING CARD NO. 27-068-01

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

REV REVISION 002 APR 22/08 AIRPL WINGS 20 12424 APPLICABILITY
AIRPLANE ENGINE STRUCTURAL ILLUSTRATION REFERENCE

INTERVAL

ACCESS PANELS

SERVICE LE SLAT DRIVE OFFSET GEARBOX NOTE ALL

ZONES

WORK AREA

212 510 520 610 511CB 611CB

730 740

RELATED TASK

MECH INSP

211

620

SKILL

CHECK SLAT DRIVE OFFSET GEARBOX OIL LEVEL AND SERVICE AS REQUIRED.

12-21-08-3J

MPD ITEM NUMBER

AIRPLANE NOTE: APPLICABLE TO AIRPLANES WITH LINE NUMBERS AFTER 758 AND 767-400ER.

- Consumable Materials
 - (1) AMM 06-44-00/201, Wing Access Doors and Panels
 - (2) AMM 27-81-00/201, Leading Edge Slat System
 - (3) AMM 32-00-15/201, Landing Gear Door Locks
 - (4) AMM 78-31-00/201, Thrust Reverser System

DO THE THRUST REVERSER DEACTIVATION PROCEDURE TO PREVENT THE WARNING: OPERATION OF THE THRUST REVERSER. ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURY TO PERSONS OR DAMAGE TO **EQUIPMENT.**

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

- (5) Do these procedures: Thrust Reverser Deactivation for Ground Maintenance (AMM 78-31-00/201) and open the doors for the landing gears and install the door locks (AMM 32-00-15/201).
- (6) Make sure that the TE flaps and LE slats are in the fully extended position, and that the flap control lever is in the 30-unit detent.

EFFECTIVITY

SERVICE LE SLAT DRIVE OFFSET GEARBOX

12-21-08-3J

27-068-01

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BOEING CARD NO.

27-068-01

AIRLINE CARD NO.

SAS FOR TASK CARD

TASK CARD

(7) Open these circuit breakers on the main power distribution panel, P6, and install locks and attach D0-NOT-CLOSE tags:

(a) 6F24, ALTN SLAT OUTBD PWR

(b) 11H23, SLAT ALTN CONT INBD

(8) Remove the power from the center hydraulic system (AMM 29-11-00/201), if the center hydraulic system is pressurized.

(9) Remove the access panel 511CB to get to the outboard slat PDU (AMM 06-44-00/201).

(10) Install a D0-NOT-OPERATE tag on the manual override lever.

B. Procedure

EFFECTIVITY

SERVICE

LE SLAT DRIVE OFFSET GEARBOX

12-21-08-3J

27-068-01

PAGE 2 OF 2 APR 22/08

STATION	
TAIL NO.	
DATE	1

SKILL

MECH INSP



BOEING CARD NO. 27-071-01

AIRLINE CARD NO.

TASK CARD

AIRPL R MLG W/W 2C 12424 011 DEC 22/07
TASK TITLE STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY

INTERVAL

TASK TITLE STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY AIRPLANE ENGINE

SERVICE ALT TE FLAP POWER DRIVE MOTOR

NOTE ALL

ZONES

144 211 212 710 730 740

WORK AREA

ACCESS PANELS

PHASE

MPD ITEM NUMBER

CHECK OIL LEVEL IN ALTERNATE FLAP DRIVE MOTORS AND SERVICE AS REQUIRED.

RELATED TASK

12-13-08-3A

AIRPLANE NOTE: APPLICABLE TO AIRPLANES THAT HAVE INSTALLED AN ALTERNATE DRIVE MOTOR WITH PART NUMBERS \$256T011-1 AND -10.

- Trailing Edge Flap Alternate Drive Motor Servicing
 - A. Consumable Materials
 - (1) D00070 Oil Hydraulic, Petroleum Base, MIL-H-5606
 - B. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 29-11-00/201, Main Hydraulic Supply System
 - (3) AMM 32-00-15/201, Landing Gear Door Locks
 - (4) AMM 32-00-20/201, Landing Gear Downlocks
 - C. Access
 - (1) Location Zones

144 MLG Wheel Well (Right)

211/212 Control Cabin

710 Nose Landing Gear and Doors 730/740 Main Landing Gear and Doors

- D. Prepare to Fill the Alternate Drive Motor
 - (1) Supply electrical power (AMM 24-22-00/201).

EFFECTIVITY

AIRPLANES WITH OIL-FILLED SERVICEABLE ALTERNATE MOTORS

SERVICE

ALT TE FLAP POWER DRIVE MOTOR

12-13-08-3A

27-071-01

PAGE 1 OF 4 DEC 22/07

2

AIRLINE CARD NO.

27-071-01

21 011 01

AS FOEING
TASK CARD

MECH INSP

(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 32-00-15/201 TO INSTALL THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

- (3) Open the doors for the landing gear and install the door locks (AMM 32-00-15/201).
- (4) Make sure the TE flaps and leading edge (LE) slats are fully retracted and the flap control lever is in the zero (FLAPS UP) detent.
- (5) Install a DO-NOT-OPERATE tag on the flap control lever.
- (6) Remove the pressure from the center hydraulic system and reservoir (AMM 29-11-00/201).
- (7) Open these circuit breakers on the main power distribution panel, P6, and attach D0-NOT-CLOSE tags:
 - (a) 6D21, ALTN SLAT INBD PWR
 - (b) 6D24, ALTN FLAP PWR
 - (c) 6F24, ALTN SLAT OUTBD PWR
- (8) Open these circuit breakers on the overhead panel, P11, and attach D0-NOT-CLOSE tags:
 - (a) 11H24, SLAT ALTN CONT OUTBD
- E. Fill the Alternate Drive motor.
 - (1) If it is necessary, remove the flap alternate drive motor from the flap PDU (Fig. 301). (AMM 27-51-34/201)

<u>NOTE</u>: Some alternate drive motors must be removed from the PDU to fill them with enough oil.

(2) Fill flap alternate drive motor P/N 4087T100 (spec. S256T011) with oil with the steps that follow (Fig. 301):

EFFECTIVITY

AIRPLANES WITH OIL-FILLED SERVICEABLE ALTERNATE MOTORS

SERVICE

ALT TE FLAP POWER DRIVE MOTOR

12-13-08-3A

27-071-01

PAGE 2 OF 4 AUG 22/07

27-071-01

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (a) Remove the plug from the higher oil port of the alternate drive motor installed on the airplane.
- (b) Add hydraulic fluid MIL-H-5606 to the alternate drive motor to the level of the bottom of the fill hole.
- (c) Install the plug in the oil port.
- (3) If removed, install the flap alternate drive motor on the flap PDU (Fig. 301).
- F. Put the Airplane Back to Its Usual Condition
 - (1) Supply electrical power (AMM 24-22-00/201).

WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO REMOVE THE DOOR LOCKS.

THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURIES TO
PERSONS OR 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 DO-NOT-OPERATE tag from the flap control lever.
- (4) Remove the DO-NOT-CLOSE tags and close these circuit breakers on the main power distribution panel, P6:
 - (a) 6D21, ALTN SLAT INBD PWR
 - (b) 6D24, ALTN FLAP PWR
 - (c) 6F24, ALTN SLAT OUTBD PWR
- (5) Remove the DO-NOT-CLOSE tags, and close these circuit breakers on the overhead panel, P11:
 - (a) 11H23, SLAT ALTN CONT INBD
 - (b) 11H24, SLAT ALTN CONT OUTBD
- (6) Remove the electrical power if it is not necessary (AMM 24-22-00/201).

EFFECTIVITY

AIRPLANES WITH OIL-FILLED SERVICEABLE ALTERNATE MOTORS

SERVICE

ALT TE FLAP POWER DRIVE MOTOR

12-13-08-3A

27-071-01

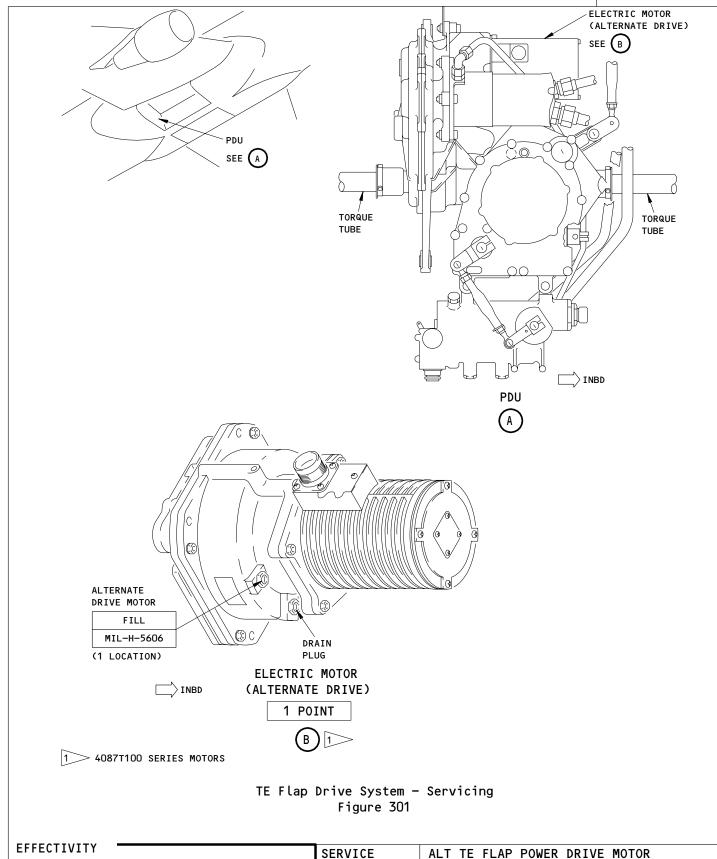
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≱IRPLANES WITH OIL-FILLED SERVICEABLE

ALTERNATE MOTORS

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AIRLINE CARD NO.

TASK CARD

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PHASE

AIRPL H STABLIZER 2C 12424 008 AUG 22/09
TASK TITLE STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY

INTERVAL

ACCESS PANELS

TASK

TITLE

STRUCTURAL ILLUSTRATION REFERENCE

APPLICABILITY
AIRPLANE
ENGINE

ALL

ALL

ZONES

211 212 336 337 346 347

WORK AREA

MPD ITEM NUMBER

MECH INSP

SKILL

FUNCTIONALLY CHECK ELEVATOR SURFACE FREEPLAY.

RELATED TASK

27-02-00-6A

- 1. Elevator Freeplay Check
 - A. Equipment
 - (1) Dial Indicator Accurate to 0.001 inch (0.03 mm) with a minimum range of 1 inch (25 mm).

<u>NOTE</u>: An analog-type dial indicator is recommended.

(2) Mounting device to hold the dial indicator tightly against the fuselage.

NOTE: A magnetic dial indicator base, and a piece of thin steel plate approximately 3 inches by 3 inches (80 mm by 80 mm) is recommended.

(3) Dial Indicator - Accurate to 0.001 inch (0.03 mm) with a 0.10 inch (2.5 mm) range.

NOTE: An analog-type dial indicator is recommended.

(4) Device to tightly attach the dial indicator to the piston rod of the elevator PCA (Figure 601).

<u>NOTE</u>: The mounting device should not damage the finish of the piston rod.

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- (5) Spring Force Scale, Push-Type or transducer with the following specifications:
 - (a) Specifications for the device to apply the force to the bottom surface of the elevator.

Range: 0-210 pounds (0-934 newtons), or

more

Accuracy: 5% of maximum range, or less Resolution: 1 pound (4 newtons), or less

(b) Specifications for the device to apply the force to the top surface of the elevator.

Range: 0-50 pound (0-222 newton), or more Accuracy: 5% of maximum range, or less Resolution - 1 pound (4 newtons), or less

NOTE: A spring force scale is recommended to measure the force on the top of the elevator. A force transducer and reader is recommended to measure the force on the bottom of the elevator.

- (c) Rig pin E1 or E2 (AMM 20-10-24/201)
- B. References
 - (1) AMM 06-42-00/201 Empennage Access Doors and Panels Maintenance Practices
 - (2) AMM 20-10-24/201 Rig Pins Maintenance Practices
 - (3) AMM 24-22-00/201, Electrical Power Control
 - (4) AMM 27-31-05/601, Elevator Power Control Actuator
 - (5) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
 - (6) AMM 27-31-01/401, Inboard Elevator
 - (7) AMM 27-31-02/401, Outboard Elevator

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(8) IPC 55-20-51, Elevator

C. Access

(1) Location Zones

336/346 Inboard Elevator 337/347 Outboard Elevator 211/212 Control Cabin

335/345 Horizontal Stabilizer, Rear Spar to Trailing Edge

- D. Prepare for the Inspection
 - (1) Open access panels 335EB, 345EB, 335GB, 345GB, 335HB, 345HB, 335AFB, and 345AFB to get access ti the elevator PCAs.
 - (2) AIRPLANES WITH A THREE-PIECE ELEVATOR SEAL;
 Open access panels 335AGB, 345AGB, 335AHB, and 345 AHB to get access to the elevator PCAs.
 - (3) If necessary, the trailing edge beams can be removed to access the elevator PCAs. Open these access panels to access the trailing edge beams: 335ANZ, 345ANZ, 335APZ, 345APZ, 335AQZ, 345AQZ.
 - (4) Supply electrical power (AMM 24-22-00/201).

WARNING: THE AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABLILIZER ARE FULLY POWERED SURFACES. MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE AWAY FROM THE CONTROL SURFACES BEFORE YOU SUPPLY HYDRAULIC POWER. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.

- (5) Supply power to the left, center, and right hydraulic systems (AMM 29-11-00/201).
- (6) Use the control wheel switches to move the horizontal stabilizer to approximately 2 units of trim.
- (7) Operate the control column to move the elevators fully up, then fully down. Do this approximately 30 times.

<u>NOTE</u>: This step will bleed the air from each hydraulic system for the elevator PCAs. Move the elevators slowly and continuously.

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- (8) Move the control column to the neutral position.
- (9) Move the LEFT STAB TRIM SHUTOFF and the CENTER STAB TRIM SHUTOFF switches on the control stand panel, P10, to their CUTOUT positions.
- (10) Open these circuit breakers on the overhead panel, P11, and attach D0-N0T-CLOSE tags:
 - (a) 11C12, STAB TRIM SHUTOFF LEFT
 - (b) 11c13, STAB TRIM SHUTOFF CENTER
- (11) Remove the power from the left, center, and right hydraulic systems (AMM 29-11-00/201).
- (12) Move the FLT CONTROL SHUTOFF TAIL L, R, and C switches on the right side panel, P61, to OFF. Attach DO-NOT-OPERATE tags and make sure the switch position lights come on.
- (13) Open these circuit breakers on the P11 panel and attach D0-N0T-CLOSE tags:
 - (a) 11H17, FLT CONT SHUTOFF TAIL LEFT
 - (b) 11H18, FLT CONT SHUTOFF TAIL CTR
 - (c) 11H27, FLT CONT SHUTOFF TAIL RIGHT
- E. Elevator Freeplay Inspection (Fig. 601)

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR

WHEN HYDRAULIC POWER IS SUPPLIED.

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- (1) Do the applicable group of steps to supply hydraulic power to one of the three PCAs for each elevator. Do only the steps for the PCA that you want to supply power to:
 - NOTE: Measure the freeplay for each of the three PCAs that move the elevator. During the freeplay measurement, make sure only the corresponding hydraulic system (for the elevator PCA that is being measured) has power.
 - NOTE: Each of the two elevators has an inboard and an outboard elevator section. The two elevator sections are permanently connected and act as one flight control surface. Taking freeplay measurements on the inner elevator measures freeplay for the outboard elevator.
 - (a) Do these steps to supply hydraulic power to the middle PCAs:
 - 1) Supply pressure to the right hydraulic system only (AMM 29-11-00/201).
 - 2) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
 - a) 11H27, FLT CONT SHUTOFF TAIL RIGHT
 - 3) Remove the DO-NOT-OPERATE tag and move the FLT CONTROL SHUTOFF TAIL R switch on the P61 panel to ON.
 - (b) Do these steps to supply hydraulic power to the outboard PCAs:
 - 1) Supply pressure to the left hydraulic system only (AMM 29-11-00/201).
 - 2) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
 - a) 11H17, FLT CONT SHUTOFF TAIL LEFT
 - 3) Remove the DO-NOT-OPERATE tag and move the FLT CONTROL SHUTOFF TAIL L switch on the P61 panel to ON.
 - (c) Do these steps to supply hydraulic power to the inboard PCAs:
 - 1) Supply pressure to the center hydraulic system only (AMM 29-11-00/201).

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			2) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
			a) 11H18, FLT CONT SHUTOFF TAIL CTR
			3) Remove the DO-NOT-OPERATE tag and move the FLT CONT SHUTOFF TAIL C switch on the P61 panel to ON.
		(2)	Do these steps to put the control column in its neutral position:
			(a) Operate the control column to move the elevators fully up.
			(b) Keep the elevators fully up for 10 seconds.
			(c) Operate the control column to move the elevators fully down.
			(d) Keep the elevators fully down for 10 seconds.
			(e) Move the control column to its neutral position.
			(f) Attach DO-NOT-OPERATE tags to the control columns.
			(g) Install rig pin E1 in the torque tube for the Captain's control column.
			(h) Install rig pin E2 in the torque tube for the First Officer's control column.
		(3)	Do these steps to attach a dial indicator to measure the movement of the elevator:
			(a) Attach a steel mounting plate for the dial indicator against the side of the fuselage above the surface of the elevator trailing edge.
			(b) Attach the magnetic base to the steel mounting plate.
			(c) Put the dial indicator plunger against the upper surface of the elevator 1.00 +/- 0.25 inch (25.4 +/- 6.4 mm) forward of the elevator trailing edge, and 2.00 +/- 0.25 inch (50.8 +/- 6.4 mm) outboard from the inboard edge of the elevator (Figure 601)
			NOTE: At this location, use a dial indicator that has a minimum 1 inch range.

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- Make sure the plunger of the dial indicator is aligned to measure the vertical movement of the trailing edge of the elevator.
- 2) Load the plunger so that its depressed no more than 0.2 inches (5 mm).

<u>CAUTION</u>: MAKE SURE THAT THE MOUNTING DEVICE FOR THE DIAL INDICATOR DOES NOT CAUSE DAMAGE TO THE FINISH OF THE PISTON ROD.

(4) Do these steps to attach a dial indicator to the piston rod of the elevator PCA that has hydraulic power.

CAUTION: USE A DIAL INDICATOR WITH AT LEAST 0.10 INCH (2.5 MM) OF TRAVEL TO PREVENT DAMAGE TO THE INDICATOR.

- (a) Attach a mounting device for a dial indicator to the piston rod (Figure 601).
- (b) Attach a dial indicator to the mounting device.
- (c) Do these steps to align the dial indicator to measure the movement of the piston rod:
 - 1) Put the plunger of the dial indicator against a flat area on the gland or on the manifold of the PCA.
 - Make sure the dial indicator is aligned parallel to the piston rod.
 - Make sure the dial indicator is set to approximately the middle of its travel.
 - 4) Make sure the dial indicator and the mounting device have a clearance of at least 0.10 inch (2.5 mm) to the adjacent structure.

CAUTION: USE SUFFICIENT PADDING ON THE FORCE SCALE TO PREVENT DAMAGE TO THE ELEVATOR SURFACE. USE A PAD THAT IS AT LEAST 5 INCHES (130 mm) LONG AND HAS A WIDTH OF AT LEAST 5 INCHES (130 mm).

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- (5) Apply a force of approximately 40 pounds (178 newtons) to the top surface of the elevator, down and perpendicular to the ground. Apply the force at the appropriate location:
 - (a) If the elevator inboard PCA has hydraulic power, apply the force on the rib aft of the inboard PCA, 16.1 +/- 0.5 inches (409 +/- 12 mm) forward of the elevator trailing edge (Figure 601). Use the longitudinal row of fasteners on the elevator skin to identify the location of the rib.
 - (b) If the elevator middle PCA has hydraulic power, apply the force on the rib aft of the middle PCA, 12.6 +/- 0.5 inches (320 +/- 12 mm) forward of the elevator trailing edge (Figure 601). Use the longitudinal row of fasteners on the elevator skin to identify the location of the rib.
 - (c) If the elevator outboard PCA has hydraulic power, apply the force on the rib aft of the outboard PCA, 9.0 +/- 0.5 inches (229 +/- 12 mm) forward of the elevator trailing edge (Figure 601). Use the longitudinal row of fasteners on the elevator skin to identify the location of the rib.
- (6) Keep this force constant for approximately 20 seconds.

NOTE: The function of this step is to make sure that the elevator surface moves freely through the hydraulic resistances of the two PCAs that are not hydraulically powered.

(7) Remove the force from the top of the elevator.

CAUTION: USE SUFFICIENT PADDING ON THE FORCE SCALE TO PREVENT DAMAGE TO THE ELEVATOR SURFACE. USE A PAD THAT IS AT LEAST 5 INCHES LONG (130 mm) AND HAS A WIDTH OF AT LEAST 5 INCHES (130 mm).

(8) Apply a force of 100 +/- 6 pounds (445 +/- 27 newtons) to the bottom surface of the elevator, up and perpendicular to the ground. Do not allow the force to increase to more than 106 pounds (472 newtons). If this occurs, you must release the force, and start the procedure again at the 40 pound (178 newton) force application. Apply the force at the appropriate location:

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			(a)	force or (409 +/- (Figure	elevator inboard PCA has hydraulic power, ap n the rib aft of the inboard PCA, 16.1 +/- 0 - 12 mm) forward of the elevator trailing ed 601). Use the longitudinal row of fastener r skin to identify the location of the rib.	.5 inches ge
			(b)	on the r (320 +/- (Figure	elevator middle PCA has hydraulic power, apprib aft of the middle PCA, 12.6 +/- 0.5 inch - 12 mm) forward of the elevator trailing ed 601). Use the longitudinal row of fastener skin to identify the location of the rib.	es ge
			(c)	force or (229 +/- (Figure	elevator outboard PCA has hydraulic power, an the rib aft of the outboard PCA, 9.0 +/- 0-12 mm) forward of the elevator trailing ed 601). Use the longitudinal row of fastener skin to identify the location of the rib.	.5 inches ge
		(9)			ce constant at 100 +/- 6 pounds (445 +/- 27 these steps.	Newtons)
			(a)		the value shown on the dial indicator at th g edge until it becomes stable.	e elevator
					Vibrations can cause the dial indicator to s continual movements. You can continue if th average is stable.	
			(b)		e value on the dial indicator at the elevato Record this value as the index point for the	•
					You can adjust the dial indicator to zero. this, record the index point as zero.	If you do
			(c)		e value on the dial indicator at the piston lue as the index point for the piston rod.	rod. Record
					You can adjust the dial indicator to zero. this, record the index point as zero.	If you do

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- (10) Increase the force to 200 +/- 6 pounds (890 +/- 27 newtons). Do not allow the force to increase to more than 206 pounds (917 newtons). If this occurs, you must release the force, and start the procedure again at the 40 pound (178 newton) force application.
- (11) Keep the force constant at 200 +/- 6 pounds (890 +/- 27 newtons) while you do these steps:
 - (a) Monitor the value shown on the dial indicator at the elevator trailing edge until it becomes stable.

NOTE: Vibrations can cause the dial indicator to show small continual movements. You can continue if the indication average is stable.

(b) Read the value shown on the dial indicator at the elevator trailing edge. Record the distance that the elevator moved up from the recorded index point.

<u>NOTE</u>: This is the distance that you will compare to the applicable freeplay limit.

(c) Read the value on the dial indicator at the piston rod. Record the distance that the piston rod moved from the recorded index point.

<u>NOTE</u>: This is the value that you will use to find the applicable freeplay limit.

- (12) Remove the force from the elevator.
- (13) Using Table 601, find the applicable minimum elevator movement value for the calculated piston rod movement (from the index point).

NOTE: For example, if the piston rod movement was 0.012 inches, the minimum elevator movement is 0.258 inches.

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(a) Make sure that the calculated elevator movement (from the index point) is more than, or equal to, the minimum elevator movement. If the calculated elevator movement is less than the minimum elevator movement, the measurement is not correct.

NOTE: The measurement may be incorrect due to incorrectly installed equipment, or incorrectly followed instructions.

(14) Using Table 601, find the applicable elevator freeplay limit for the calculated piston rod movement (from the index point).

<u>NOTE</u>: For example, if the piston rod movement was 0.012 inches, the elevator freeplay limit is 0.416 inches.

(a) Make sure that the calculated elevator movement (from the index point) is less than, or equal to, the elevator freeplay limit. If the calculated elevator movement is more than the elevator freeplay limit, then you must make repairs to the load path connections related to the elevator PCA.

NOTE: Possible causes of excessive freeplay include: worn or loose hanger link, reaction link, PCA rod end, or trunnion connections.

(b) If you make repairs, you must repeat the freeplay check for the applicable PCA.

Table 601 Elevator Freeplay Limit								
E	ELEVATOR FREEPLAY - INSPECTION							
Piston Rod Movement (inch)	Minimum Elevator Movement (inch)	Elevator Freeplay Limit (inch)						
0.000	0.098	0.256						
0.001	0.112	0.269						
0.002	0.125	0.283						
0.003	0.138	0.296						

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Table 601 Elevator Freeplay Limit

ELEVATOR FREEPLAY - INSPECTION							
Piston Rod Movement (inch)	Minimum Elevator Movement (inch)	Elevator Freeplay Limit (inch)					
0.004	0.152	0.309					
0.005	0.165	0.323					
0.006	0.178	0.336					
0.007	0.192	0.349					
0.008	0.205	0.363					
0.009	0.218	0.376					
0.010	0.231	0.389					
0.011	0.245	0.402					
0.012	0.258	0.416					
0.013	0.271	0.429					
0.014	0.285	0.442					
0.015	0.298	0.456					
0.016	0.311	0.469					
0.017	0.325	0.482					
0.018	0.338	0.496					
0.019	0.351	0.509					
0.020	0.365	0.522					
0.021	0.378	0.536					
0.022	0.391	0.549					

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Table 601 Elevator Freeplay Limit

EL	EVATOR FREEPLAY - INSPECTION	 ON
Piston Rod Movement (inch)	Minimum Elevator Movement (inch)	Elevator Freeplay Limit (inch)
0.023	0.405	0.562
0.024	0.418	0.575
0.025	0.431	0.589
0.026	0.444	0.602
0.027	0.458	0.615
0.028	0.471	0.629
0.029	0.484	0.642
0.030	0.498	0.655
0.031	0.511	0.669
0.032	0.524	0.682
0.033	0.538	0.695
0.034	0.551	0.709
0.035	0.564	0.722
0.036	0.578	0.736
0.037	0.591	0.749
0.038	0.604	0.762
0.039	0.617	0.775
0.040	0.631	0.788
0.0041	0.644	0.802

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Elevator Freeplay Limit **ELEVATOR FREEPLAY - INSPECTION**

Piston Rod Movement (inch)	Minimum Elevator Movement (inch)	Elevator Freeplay Limit (inch)
0.042	0.657	0.815
0.043	0.671	0.828
0.044	0.684	0.842
0.045	0.697	0.855
0.046	0.711	0.868
0.047	0.724	0.882
0.048	0.737	0.895
0.049	0.751	0.908
0.050	0.764	0.922
0.051	0.777	0.935

CAUTION: MAKE SURE THAT YOU REMOVE THE EQUIPMENT YOU ATTACHED TO THE ELEVATOR PCA BEFORE YOU REMOVE HYDRAULIC POWER. DAMAGE TO EQUIPMENT CAN OCCUR.

- (15) Do these steps to make sure that the elevator is clear to move.
 - (a) Remove the dial indicator and the mounting device from the elevator PCA.
 - (b) Move the dial indicator and mounting equipment away from the elevator trailing edge.
- (16) Remove the power from the hydraulic system that was pressurized (AMM 29-11-00/201).

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(17) Move the applicable FLT CONTROL SHUTOFF L, R, or C switch on the P61 panel to OFF. Attach a DO-NOT-OPERATE tag and make sure the switch position light comes on.

NOTE: Make sure all the switches are in their OFF positions.

- (18) Open these circuit breakers on the P11 panel and attach the D0-N0T-CLOSE tag:
 - (a) 11H17, FLT CONT SHUTOFF TAIL LEFT
 - (b) 11H18, FLT CONT SHUTOFF TAIL CTR
 - (c) 11H27, FLT CONT SHUTOFF TAIL RIGHT
- (19) Remove the rig pin E1 from the torque tube for the Captain's control column. Remove the rig pin E2 from the torque tube for the First Officer's control column.
- (20) Do the elevator freeplay check again for each of the remaining PCAs. Make sure only one PCA (for each of the two elevators) is pressurized during the check.

<u>NOTE</u>: Remove the dial indicator and magnetic base before you pressurize a different PCA. The elevator can move when you pressurize the hydraulic system and exceed the travel of the dial indicator.

- F. Put the Airplane Back to Its Usual Condition.
 - (1) Remove the dial indicators and mounting equipment from the airplane.
 - (2) If you removed them, install the trailing edge beams. Close these access panels: 335ANZ, 345ANZ, 335APZ, 345APZ, 335AQZ, and 345AQZ.
 - (3) Close access panels 335EB, 345EB, 335GB, 345GB, 335HB, 345HB, 335AFB, and 345AFB.
 - (4) AIRPLANES WITH A THREE-PIECE ELEVATOR SEAL; Close access panels 335AGB, 345AGB, 335AHB, and 345AHB.

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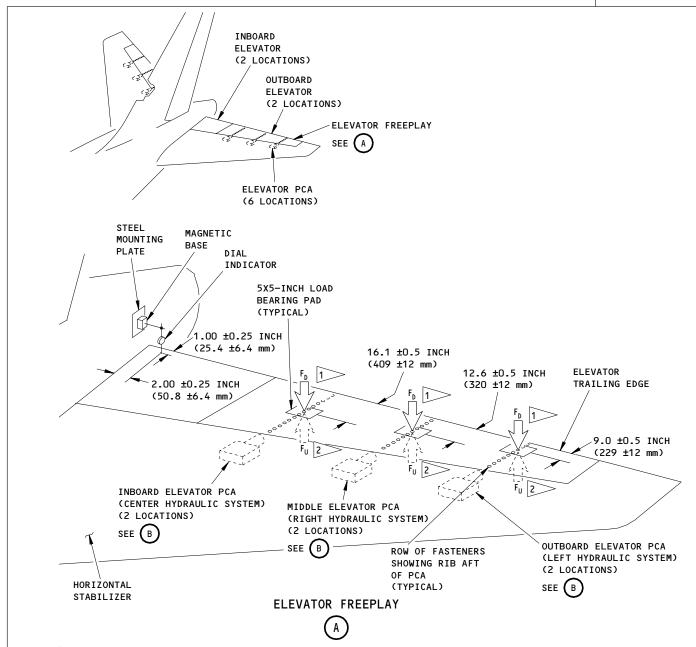
MECH INSP THE AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND WARNING: STABILIZER ARE FULLY POWERED SURFACES. MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE AWAY FROM THE CONTROL SURFACES BEFORE YOU SUPPLY HYDRAULIC POWER. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR. (5) Remove the DO-NOT-CLOSE tags and close these circuit breakers on the P11 panel: (a) 11H17, FLT CONT SHUTOFF TAIL LEFT (b) 11H18, FLT CONT SHUTOFF TAIL CTR (c) 11H27, FLT CONT SHUTOFF TAIL RIGHT Move the LEFT STAB TRIM SHUTOFF and the CENTER STAB TRIM SHUTOFF switches on the P10 panel to their NORM positions. (7) Remove the DO-NOT-OPERATE tags and move the FLT CONTROL SHUTOFF TAIL L, R, and C switches on the P61 panel to ON. (8) Remove the DO-NOT-OPERATE tags from the control columns. (9) Remove electrical power, if it is not necessary (AMM 24-22-00/201).

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APPLY THE DOWNWARD FORCE (FD) TO THE RIB AFT OF THE PCA THAT HAS HYDRAULIC POWER APPROXIMATELY AS SHOWN. USE THE LONGITUDINAL ROW OF FASTENERS ON THE ELEVATOR SKIN TO IDENTIFY THE RIB. MAKE SURE TO PROTECT THE ELEVATOR SURFACE WITH A PAD THAT DISTRIBUTES THE FORCE OVER A SURFACE AREA OF 25 SQUARE-INCHES (170 SQUARE-CENTIMETERS), OR MORE.

APPLY THE UPWARD FORCE (F) TO THE RIB AFT OF THE PCA THAT HAS HYDRAULIC POWER, AS SHOWN. USE THE LONGITUDINAL ROW OF FASTENERS ON THE ELEVATOR SKIN TO IDENTIFY THE RIB. MAKE SURE TO PROTECT THE ELEVATOR SURFACE WITH A PAD THAT DISTRIBUTES THE FORCE OVER A SURFACE AREA OF 25 SQUARE-INCHES (170 SQUARE-CENTIMETERS), OR MORE.

Inboard and Outboard Elevator Freeplay Check Figure 601 (Sheet 1)

EFFECTIVITY FUNCTIONAL ELEVATOR SURFACE FREEPLAY 27-02-00-6A 27-073-01 PAGE 17 OF 18 APR 22/08

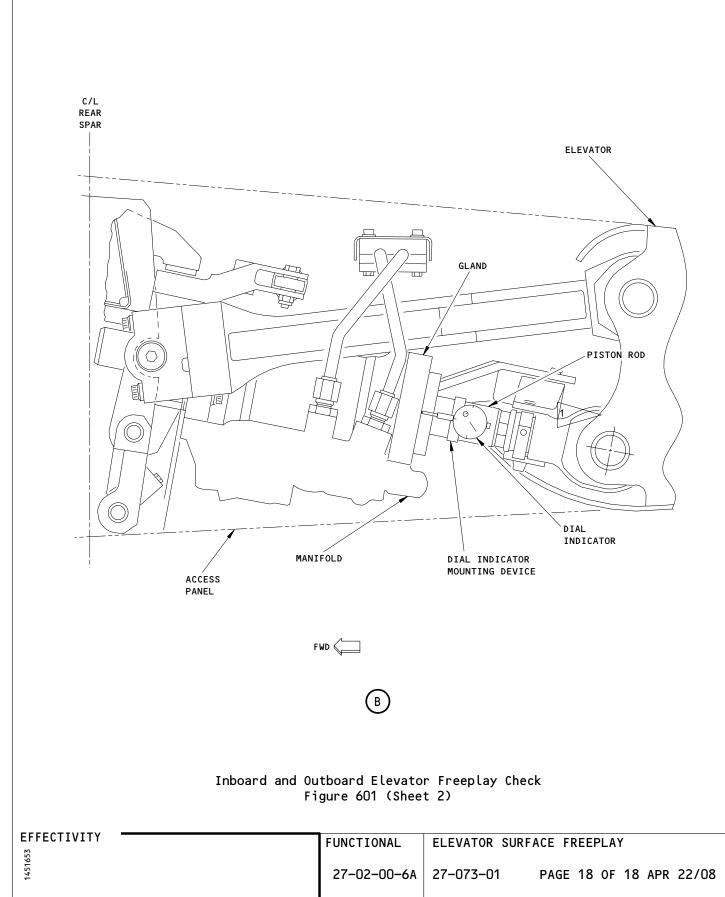
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STATION
TAIL NO.
DATE

SKILL



BOEING CARD NO. 27-076-01

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TASK CARD

MPD

PHASE

							REV	REVISION
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TASI	K		TITLE		STRUCTURAL ILLUSTRATION RE	FERENCE	AF	PLICABILITY
FUNCT	IONA	L RUDI	DER SURFACE FREEP	LAY			AIRPLAN	E ENGINE

INTERVAL

ACCESS PANELS

ZONES

WORK AREA

211 212 325

MPD ITEM NUMBER

MECH INSP

FUNCTIONALLY CHECK RUDDER SURFACE FREEPLAY.

RELATED TASK

27-02-00-6B

- 1. Rudder Freeplay Inspection
 - A. General
 - (1) During this check, the wind/air velocities at the rudder must be below 4 mph. If it is necessary, perform this check indoors to avoid excessive wind/air velocities.
 - B. Equipment
 - (1) Dial Indicator Accurate to 0.001 inch (0.03 mm) with a 1 inch (25 mm) range.

<u>NOTE</u>: An analog-type dial indicator is recommended.

(2) Device to hold the dial indicator tightly against the fuselage

NOTE: A magnetic indicator base, and a flat piece of steel approximately 3 inches (80 mm) long by 3 inches (80 mm) long is

recommended.

(3) Dial Indicator - Accurate to 0.001 inch (0.03 mm) with a 0.1 inch (2.5 mm) range.

NOTE: An analog-type dial indicator is recommended.

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			(4) Device to tightly attach the dial indicator to the piston rod of the rudder PCA (Figure 602).
			<u>NOTE</u> : The mounting device should not damage the finish of the piston rod.
			(5) Spring Force Scale or Force Transducer, Push-Type (Commercially Available):
			(a) Range: 0 to 150 Pound (0 - 670 newtons), or more
			(b) Resolution - 1 pound (5 newton), or less
			(c) Accuracy - 5% of maximum indicated value.
			(6) Rig pin R1 or R2 (AMM 20-10-24/201).
		С.	References
			(1) AMM 06-42-00/201 Empennage Access Doors and Panels - Maintenance Practices
			(2) AMM 24-22-00/201, Electrical Power - Control
			(3) AMM 20-10-24/201, Rig Pins - Maintenance Practices
			(4) AMM 27-21-01, Rudder
			(5) AMM 27-21-02, Rudder Power Control (PCA) and Reaction Link
			(6) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
			(7) IPC 55-40-55, Rudder
		D.	Access
			(1) Location Zone 211/212 Control Cabin 324 Vertical Stabilizer 325 Rudder
		Ε.	Prepare for the Inspection
			(1) Open access panels 324LL, 324ML, 324JL, 324KL, 324GL, and 324HL to get access to the rudder PCAs.

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- (2) If necessary, the trailing edge beam can be removed to access the rudder PCAs (Figure 602).
- (3) Supply electrical power (AMM 24-22-00/201).

WARNING: THE AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND THE STABILIZER ARE FULLY POWERED SURFACES. MAKE SURE THAT ALL EQUIPMENT AND PERSONS ARE AWAY FROM THE CONTROL SURFACES BEFORE YOU SUPPLY THE HYDRAULIC POWER. INJURY TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (4) Supply pressure to the left, center, and right hydraulic systems (AMM 29-11-00/201).
- (5) Operate the rudder pedals to move the rudder fully left, then fully right. Repeat 30 times.
- (6) Move the rudder pedals to the neutral position.
- (7) Do this check to make sure the rudder is in it's neutral position:
 - (a) Operate the rudder trim switch on the aft electronic control panel, P8, until the rudder trim indicator shows zero units of trim
 - (b) Make sure the rudder pedals are in their neutral positions.
- (8) Attach DO-NOT-OPERATE tags to the rudder pedals.
- (9) Open these circuit breakers on the overhead panel, P11, and attach D0-NOT-CLOSE tags:
 - (a) 11C5, RUDDER TRIM
 - (b) 11K17, RUDDER TRIM POS
- (10) Remove the power from the left, center, and right hydraulic systems (AMM 29-11-00/201).
- (11) Move the FLT CONTROL SHUTOFF L, R, and C switches on the right side panel, P61, to OFF. Attach DO-NOT-OPERATE tags and make sure the switch position lights come on.
 - (a) Attach DO-NOT-OPERATE tags and make sure the switch position lights come on.

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- (12) Open these circuit breakers on the overhead panel, P11, and attach D0-N0T-CLOSE tags:
 - (a) 11H17, FLT CONT SHUTOFF TAIL LEFT
 - (b) 11H18, FLT CONT SHUTOFF TAIL CTR
 - (c) 11H27, FLT CONT SHUTOFF TAIL RIGHT
- F. Rudder Freeplay Inspection (Fig. 602)

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

(1) Do the applicable group of steps to supply hydraulic power to one of the three PCAs for the rudder. Do only the steps for the PCA that you want to supply power to:

NOTE: Measure the freeplay independently for each of the three PCAs that move the rudder. During the measurement, make sure only one of the three rudder PCAs has power at a time.

- (a) Do these steps to supply hydraulic power to the lower PCA:
 - 1) Supply pressure to the right hydraulic system only (AMM 29-11-00/201).
 - 2) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
 - a) 11H27, FLT CONT SHUTOFF TAIL RIGHT
 - 3) Remove the DO-NOT-OPERATE tag and move the FLT CONTROL SHUTOFF TAIL R switch on the P61 panel to ON.
- (b) Do these steps to supply hydraulic power to the middle PCA:
 - 1) Supply pressure to the left hydraulic system only (AMM 29-11-00/201).

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			2)	Remove the DO-NOT-CLOSE tag and close this circ on the P11 panel:	cuit breaker
				a) 11H17, FLT CONT SHUTOFF TAIL LEFT	
			3)	Remove the DO-NOT-OPERATE tag and move the FLT SHUTOFF TAIL L switch on the P61 panel to ON.	CONTROL
			(c) Do	these steps to supply hydraulic power to the upp	er PCA:
			1)	Supply pressure to the center hydraulic system (AMM 29-11-00/201).	only
			2)	Remove the DO-NOT-CLOSE tag and close this circ on the P11 panel:	cuit breaker
				a) 11H18, FLT CONT SHUTOFF TAIL CTR	
			3)	Remove the DO-NOT-OPERATE tag and move the FLT TAIL C switch on the P61 panel to ON.	CONT SHUTOFF
		(2)		steps to decrease the remaining pressure in the to not have power.	e two rudder
			NOTE: M	love the rudder pedals slowly.	
			(a) Rem	nove the DO-NOT-OPERATE tags from the rudder peda	als.
			(b) 0pe	rate the rudder pedals to move the rudder fully	right.
			(c) Kee	p the rudder fully right for 10 seconds.	
			(d) Ope	rate the rudder pedals to move the rudder fully	left.
			(e) Kee	p the rudder fully left for 10 seconds.	
		(3)	Do this	check to make sure the rudder is in it's neutral	position:
			•	erate the rudder trim switch on the aft electronicel, P8, until the rudder trim indicator shows zerm.	
			(b) Mak	e sure the rudder pedals are in their neutral po	sitions.
			(c) Mak	e sure the rudder is in it's neutral position.	

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- (4) Attach DO-NOT-OPERATE tags to the rudder pedals.
- (5) Install rig pin R1 in the captain's rudder pedals. Install rig pin R2 in the first officer's rudder pedals.
- (6) Stop for three minutes to let the rudder position become stable.

WARNING: DO NOT MOVE THE RUDDER PEDALS DURING THE RUDDER FREEPLAY MEASUREMENT. THE RUDDER MOVES VERY QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(7) Do the steps that follow to attach a dial indicator next to the rudder lower trailing edge (Fig. 602):

CAUTION: USE A DIAL INDICATOR WITH AT LEAST 1-INCH (25 MM) OF TRAVEL TO PREVENT DAMAGE TO THE INDICATOR.

- (a) Use high strength tape (that will not damage painted surfaces when removed) and a steel mounting plate to attach the magnetic base to the fuselage near the rudder trailing edge.
- (b) Use adjustable rods to attach the dial indicator to the fixed rod of the magnetic base.
- (c) Put the indicator plunger approximately 1.00 +/- 0.25 inch (25.4 +/- 6.4 mm) forward of the rudder trailing edge and 2.00 +/- 0.25 inch (50.8 +/- 6.4 mm) above the bottom edge of the rudder (Fig. 602).
- (d) Give a load to the dial indicator plunger until the needle moves approximately to half of it's total travel.
- (e) Adjust the dial indicator to zero.
- (8) Do these steps to attach a dial indicator to the piston rod of the rudder PCA.

CAUTION: USE A DIAL INDICATOR WITH AT LEAST 0.10 INCH (2.5 MM) OF TRAVEL TO PREVENT DAMAGE TO THE INDICATOR.

(a) Attach a mounting device for a dial indicator to the piston rod (Figure 602).

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- (b) Attach a dial indicator to the mounting device.
- (c) Do these steps to align the dial indicator to measure the movement of the piston rod:
 - 1) Put the plunger of the dial indicator against a flat area on the gland of the PCA.
 - 2) Make sure the dial indicator is aligned parallel to the piston rod.
 - 3) Make sure the dial indicator is set to approximately the middle of its travel.
 - 4) Make sure the dial indicator and the mounting device have a clearance of at least 0.10 inch (2.5 mm) to the adjacent structure.

CAUTION: USE SUFFICIENT PADDING ON THE FORCE SCALE TO PREVENT DAMAGE TO THE RUDDER SURFACE. USE A PAD THAT IS AT LEAST 5 INCHES (130 mm) LONG AND HAS A WIDTH OF AT LEAST 5 INCHES (130 mm), OR MORE.

- (9) Use the force scale to apply a 100 +/- 6 pound (445 +/- 27 Newton) force to the left side of the rudder. Apply this force perpendicular to the surface of the rudder, at the appropriate location.
 - (a) If the upper rudder PCA has hydraulic power, apply the force on the rudder rib aft of the upper rudder PCA, 11.0 +/- 0.5 inches (279 +/- 12 mm) forward of the rudder trailing edge (Fig. 602). Use the horizontal row of fasteners on the rudder skin to identify the location of the rib.
 - (b) If the middle or lower rudder PCA has hydraulic power, apply the force on the rudder rib aft of the lower rudder PCA, 18.9 +/- 0.5 inches (480 +/- 12 mm) forward of the rudder trailing edge (Fig. 602). Use the horizontal row of fasteners on the rudder skin to identify the location of the rib.

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(10) Keep the force constant at 100 +/- 6 pounds (445 +/- 27 newtons) until the value indicated on the dial indicator becomes stable.

NOTE: This force should be applied for a minimum of 2.5 minutes. This is to ensure that the rudder moves fully through the hydraulic resistance of the two PCAs that do not have hydraulic power.

- (11) Decrease the force to 30 +/- 3 pounds (133 +/- 13 Newtons). Do not allow the force to decrease to less than 27 pounds (120 Newtons). If this occurs , you must release the force, and start the procedure again at the 100 pound (445 Newton) force application.
- (12) Keep the force constant at 30 +/- 3 pounds (133 +/- 3 Newtons) while you do these steps.
 - (a) Monitor the value shown on the dial indicator at the rudder trailing edge until it becomes stable.

<u>NOTE</u>: Vibrations can cause the dial indicator to show small continual movements. You can continue if the indication average is stable.

(b) Read the value on the dial indicator at the rudder trailing edge. Record this value as the index point for the rudder.

NOTE: You can adjust the dial indicator to zero. If you do this, record the index point as zero.

(c) Read the value on the dial indicator at the piston rod. Record this value as the index point for the piston rod.

NOTE: You can adjust the dial indicator to zero. If you do this, record the index point as zero.

(13) Slowly remove the load from the left side of the rudder.

CAUTION: USE SUFFICIENT PADDING ON THE FORCE SCALE TO PREVENT DAMAGE TO THE RUDDER SURFACE. USE A PAD THAT IS AT LEAST 5 INCHES LONG (130 MM) AND HAS A WIDTH OF AT LEAST 5 INCHES (130 MM).

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- (14) Use the force scale to apply a 60 + 3 pound (267 + 13 Newton) force to the right side of the rudder. Apply this force perpendicular to the surface of the rudder, at the appropriate location. Do not allow the force to increase to more than 63 pounds (280 Newtons). If this occurs , you must release the force, and start the procedure again at the 100 pound (445 Newton) force application.
 - (a) If the upper rudder PCA has hydraulic power, apply the force on the rudder rib aft of the upper rudder PCA, 11.0 + - 0.5 inches (279 + / - 12 mm) forward of the rudder trailing edge (Fig. 602). Use the horizontal row of fasteners on the rudder skin to identify the location of the rib.
 - (b) If the middle or lower rudder PCA has hydraulic power, apply the force on the rudder rib aft of the lower rudder PCA, 18.9 + - 0.5 inches (480 + - 12 mm) forward of the rudder trailing edge (Fig. 602). Use the horizontal row of fasteners on the rudder skin to identify the location of the rib.
 - Monitor the value shown on the dial indicator at the rudder trailing edge until it becomes stable.
 - NOTE: Vibrations can cause the dial indicator to show small continual movements. You can continue if the indication average is stable.
 - (d) Read the value shown on the dial indicator at the rudder trailing edge. Record the distance that the rudder moved to the left of the recorded index point.

NOTE: This is the distance that you will compare to the applicable freeplay limit.

Read the value on the dial indicator at the piston rod. Calculate the distance and direction that the piston rod moved from the recorded index point.

NOTE: This is the value that you will use to find the applicable freeplay limit.

1) If the piston rod retracted (moved forward), the value is positive. If the piston rod extended (moved aft), the value is negative.

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		(45)	
		(15)	Slowly remove the force from the right side of the rudder.
		(16)	Using Table 602, find the applicable minimum rudder movement value
			for the calculated piston rod movement (from the index point).
			NOTE: For example, if the piston rod movement was 0.012 inches, the
			minimum rudder movement is 0.260 inches.
			(a) Make sure that the calculated rudder movement (from the index
			point) is more than, or equal to, the minimum rudder movement.
			If the calculated rudder movement is less than the minimum
			rudder movement, the measurement is not correct.
			NOTE: The measurement may be incorrect due to incorrectly
			installed equipment, or incorrectly followed instructions.
		(47)	
		(17)	Using Table 602, find the applicable rudder freeplay limit for the calculated piston rod movement (from the index point).
			catcutated piston rod movement throm the index points.
			NOTE: For example, if the piston rod movement was 0.012 inches, the
			rudder freeplay limit is 0.470 inches.
			(a) Make sure that the calculated rudder movement (from the index
			point) is less than, or equal to, the rudder freeplay limit.
			If the calculated rudder movement is more than the freeplay
			limit, then you must make repairs to the load path connections
			for the rudder PCA.
			NOTE: Describle course of executive freedom includes were on
			<u>NOTE</u> : Possible causes of excessive freeplay include: worn or loose hanger link, reaction link, PCA rod end, or
			trunnion connections.
			(b) If you make repairs, you must repeat the freeplay check for the applicable PCA.
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	Table 602 Rudder Freeplay Limit					
	RUDDER FREEPLAY - INSPECTION					
Piston Rod Movement (inch)	Minimum Rudder Movement (inch)	Rudder Freepla Limit (inch)				
-0.022	0.000	0.001				
-0.021	0.000	0.015				
-0.020	0.000	0.029				
-0.019	0.000	0.043				
-0.018	0.000	0.057				
-0.017	0.000	0.070				
-0.016	0.000	0.084				
-0.015	0.000	0.098				
-0.014	0.000	0.112				
-0.013	0.000	0.125				
-0.012	0.000	0.139				
-0.011	0.000	0.153				
-0.010	0.000	0.167				
-0.009	0.000	0.181				
-0.008	0.000	0.194				
-0.007	0.000	0.208				
-0.006	0.012	0.222				
-0.005	0.026	0.236				
-0.004	0.039	0.250				

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٦	Table 602	
Rudder	Freeplay	Limit

	RUDDER FREEPLAY - INSPECTIO	N .
Piston Rod Movement (inch)	Minimum Rudder Movement (inch)	Rudder Freeplay Limit (inch)
-0.003	0.053	0.263
-0.002	0.067	0.277
-0.001	0.081	0.291
0.000	0.095	0.305
0.001	0.108	0.319
0.002	0.122	0.332
0.003	0.136	0.346
0.004	0.150	0.360
0.005	0.164	0.374
0.006	0.177	0.388
0.007	0.191	0.401
0.008	0.205	0.415
0.009	0.219	0.429
0.010	0.233	0.443
0.011	0.246	0.457
0.012	0.260	0.470
0.013	0.274	0.484
0.014	0.288	0.498
0.015	0.302	0.512

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Rι	udder	Free	play	Limit
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	RUDDER FREEPLAY - INSPECTION						
Piston Rod Movement (inch)	Minimum Rudder Movement (inch)	Rudder Freeplay Limit (inch)					
0.016	0.315	0.526					
0.017	0.329	0.539					
0.018	0.343	0.553					
0.019	0.357	0.567					
0.020	0.371	0.581					
0.021	0.384	0.595					
0.022	0.398	0.608					
0.023	0.412	0.622					
0.024	0.426	0.636					
0.025	0.440	0.650					
0.026	0.453	0.664					
0.027	0.467	0.677					
0.028	0.481	0.691					
0.029	0.495	0.705					
0.030	0.509	0.719					
0.031	0.522	0.733					
0.032	0.536	0.746					
0.033	0.550	0.760					
0.034	0.564	0.774					

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	Table 602 Rudder Freeplay Limit	
	RUDDER FREEPLAY - INSPECTION	DN
Piston Rod Movement (inch)	Minimum Rudder Movement (inch)	Rudder Freeplay Limit (inch)
0.035	0.578	0.788
0.036	0.591	0.802
0.037	0.605	0.815
0.038	0.619	0.829
0.039	0.633	0.843
0.040	0.647	0.857
0.041	0.660	0.871
0.042	0.674	0.884
0.043	0.688	0.898
0.044	0.702	0.912
0.045	0.716	0.926
0.046	0.729	0.940
0.047	0.743	0.953
0.048	0.757	0.967
0.049	0.771	0.981
0.050	0.785	0.995

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<u>CAUTION</u>: MAKE SURE THAT YOU REMOVE THE EQUIPMENT YOU ATTACHED TO THE ELEVATOR PCA BEFORE YOU REMOVE HYDRAULIC POWER. DAMAGE TO EQUIPMENT CAN OCCUR.

- (18) Do these steps to make sure that the rudder is clear to move:
 - (a) Remove the dial indicator and the mounting device from the rudder PCA piston rod.
 - (b) Move the dial indicator and the mounting equipment away from the rudder trailing edge.
 - (c) Make sure the rudder is clear to move through its full travel.
- (19) Remove the power from the hydraulic system that was pressurized (AMM 29-11-00/201).
- (20) Move the applicable FLT CONTROL SHUTOFF L, R, or C switch on the P61 panel to OFF. Attach a DO-NOT-OPERATE tag and make sure the switch position light comes on.

NOTE: Make sure all the switches are in their OFF positions.

- (21) Make sure these circuit breakers on the P11 panel are open:
 - (a) 11H17, FLT CONT SHUTOFF TAIL LEFT
 - (b) 11H18, FLT CONT SHUTOFF TAIL CTR
 - (c) 11H27, FLT CONT SHUTOFF TAIL RIGHT
- (22) Remove rig pin R1 from the captain's rudder pedals. Remove rig pin R2 from the first officer's rudder pedals.

WARNING: MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE AWAY FROM THE RUDDER BEFORE YOU CHANGE HYDRAULIC SYSTEMS. RIGGING DIFFERENCES BETWEEN THE PCAS CAN CAUSE THE RUDDER TO MOVE SUDDENLY. INJURY TO PERSONS OR DAMAGE TO THE EQUIPMENT CAN OCCUR.

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- (23) Do the rudder freeplay check again for each of the remaining PCAs.

 Make sure only one PCA (that is to be measured) is pressurized during the check.
 - (a) Remove the dial indicator before you pressurize a different PCA.
 - (b) Make sure that only the applicable hydraulic system has power for each PCA.
- G. Put the Airplane Back to its Usual Condition.
 - (1) Remove the dial indicators and mounting equipment from the rudder PCA and rudder trailing edge.
 - (2) If you removed them, install the trailing edge beams (Figure 602).
 - (3) Close access panels 324LL, 324ML, 324JL, 324KL, 324Gl, and 324HL.

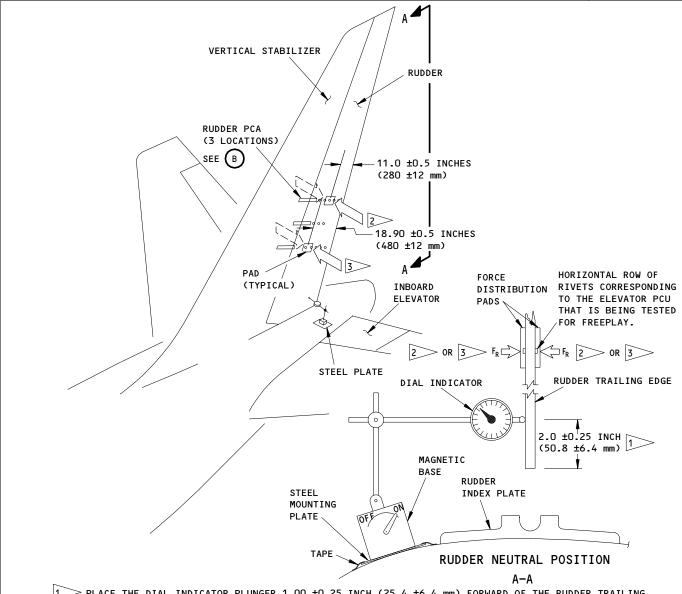
WARNING: THE AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE AWAY FROM THE CONTROL SURFACES BEFORE YOU SUPPLY HYDRAULIC POWER. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.

- (4) Remove the DO-NOT-CLOSE tags and close these circuit breakers on the P11 panel:
 - (a) 11C5, RUDDER TRIM
 - (b) 11H17, FLT CONT SHUTOFF TAIL LEFT
 - (c) 11H18, FLT CONT SHUTOFF TAIL CTR
 - (d) 11H27, FLT CONT SHUTOFF TAIL RIGHT
 - (e) 11K17, RUDDER TRIM POS
- (5) Remove the DO-NOT-OPERATE tag from the rudder pedals.
- (6) Remove the DO-NOT-OPERATE tags and move the FLT CONTROL SHUTOFF L, R, and C switches on the P61 panel to ON.
- (7) Remove electrical power, if it is not necessary (AMM 24-22-00/201).

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- > PLACE THE DIAL INDICATOR PLUNGER 1.00 ± 0.25 INCH (25.4 ± 6.4 mm) FORWARD OF THE RUDDER TRAILING EDGE AND 2.00 ± 0.25 INCH (50.8 ± 6.4 mm) FROM THE BOTTOM OF THE RUDDER.
- THE UPPER PCA HAS HYDRAULIC PRESSURE: APPLY THE FORCE TO THE RIB AFT OF THE UPPER PCA, AS SHOWN. USE THE HORIZONTAL ROW OF FASTENERS ON THE RUDDER SKIN TO IDENTIFY THE RIB. APPLY THE FORCE TO THE LEFT SIDE OF THE RUDDER FIRST, THEN THE RIGHT SIDE OF THE RUDDER. BE SURE TO PROTECT THE RUDDER SURFACE WITH A PAD THAT DISTRIBUTES THE FORCE OVER A SURFACE AREA OF 25 SQUARE INCHES OR MORE (5 INCH BY 5 INCH MINIMUM).
- 3 THE MIDDLE PCA OR THE LOWER PCA HAS HYDRAULIC PRESSURE: APPLY THE FORCE TO THE RIB AFT OF THE LOWER PCA AS SHOWN. USE THE HORIZONTAL ROW OF FASTENERS ON THE RUDDER SKIN TO IDENTIFY THE RIB. APPLY THE FORCE TO THE LEFT SIDE OF THE RUDDER FIRST, THEN THE RIGHT SIDE OF THE RUDDER. BE SURE TO PROTECT THE RUDDER SURFACE WITH A PAD THAT DISTRIBUTES THE FORCE OVER A SURFACE AREA OF 25 SQUARE INCHES OR MORE (5 INCH BY 5 INCH MINIMUM).

Rudder Freeplay Inspection Figure 602 (Sheet 1)

EFFECTIVITY	FUNCTIONAL	RUDDER SURFAC	E FREEPLAY
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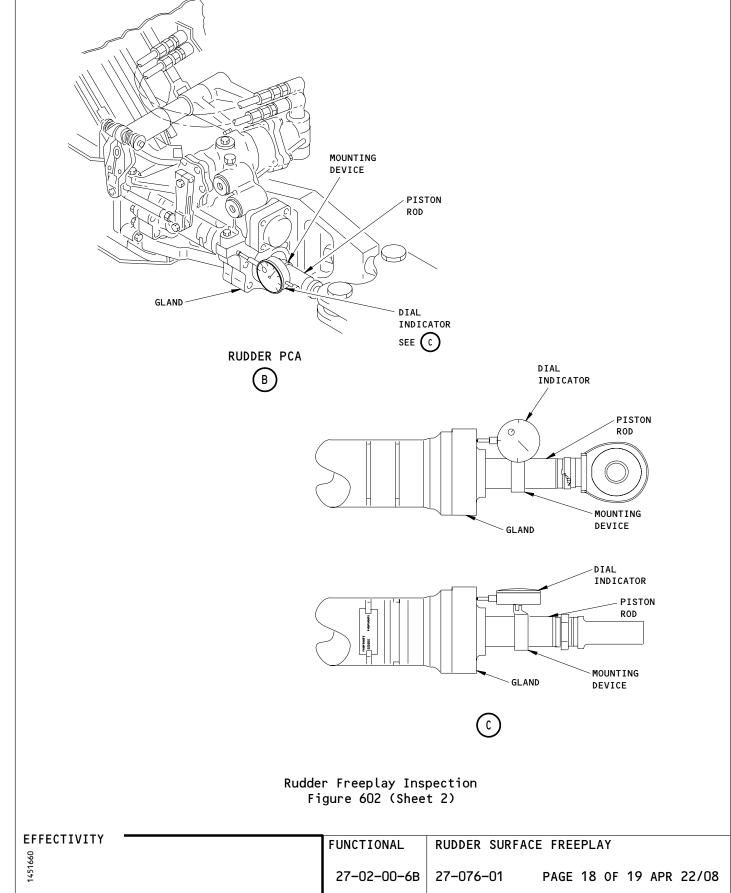
BOEING CARD NO.

27-076-01

AIRLINE CARD NO.

SAS

767 TASK CARD



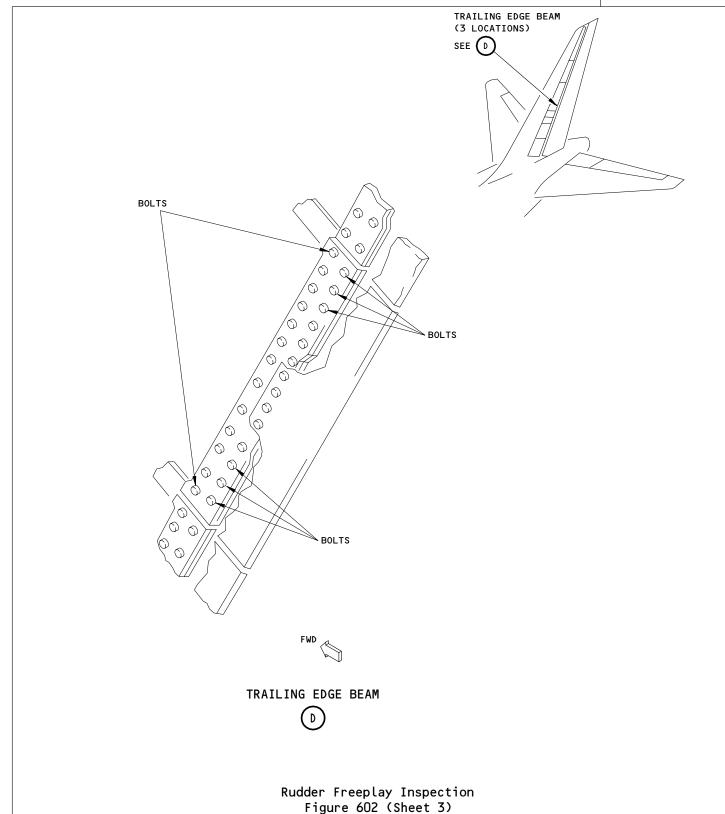
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BOEING CARD NO.

27-076-01

AIRLINE CARD NO.



EFFECTIVITY

FUNCTIONAL

27-02-00-6B

RUDDER SURFACE FREEPLAY

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STATION	
TAIL NO.	\dashv
DATE	\dashv



BOEING CARD NO. 27-077-01

AIRLINE CARD NO.

		IASK CARD								
SKILL WORK AREA RE		RELATED TASK		INTERVAL		PHASE	MPD REV	TASK CARD REVISION		
AIRPL	STAB CO	MPT			18000 HRS		NOTE	136XX	800	AUG 22/08
TAS	K		TITL	.E			STRUCTURAL ILLUSTRATION RE	FERENCE	AP	PLICABILITY
FUNCTIONAL		STAB TRIM BALLSCREW		W AND	AND BALLNUTS			AIRPLAN	E ENGINE	
									ALL	ALL
ZONES					•	ACCESS PANELS				
211 212 311 312		312AR								

MECH INSP

MPD ITEM NUMBER

FUNCTIONALLY CHECK THE STABILIZER BALLNUT TO BALLSCREW FREEPLAY.

27-41-10-6A

INTERVAL NOTE: 18000 HOURS OR 5 YEARS, WHICHEVER COMES FIRST

Stabilizer Ballscrew to Ballnut Freeplay Check (Figs. 602 & 603)

NOTE: This is a scheduled maintenance task.

NOTE: If this task will be performed at the same time as the stabilizer ballscrew assembly detailed visual inspection (AMM 27-41-10/601), perform the detailed visual inspection first.

- (1) Load Equipment, Horizontal Stabilizer A55001-47 (Recommended)

A. References

- (1) AMM 06-42-00/201, Empennage Access Panels and Doors
- (2) AMM 27-41-10/401, Stabilizer Trim Actuator Removal/Installation
- (3) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
- (4) AMM 12-21-05/301, Stabilizer Trim Control System Lubrication
- (5) AMM 24-22-00/201, Electrical Power Control.
- B. Access

FUNCTIONAL STAB TRIM BALLSCREW AND BALLNUTS

27-41-10-6A 27-077-01 PAGE 1 OF 8 AUG 22/08

AIRLINE CARD NO.



MECH INSP

- (1) Location Zones
 311/312 Area Aft of the Pressure Bulkhead to BS 1725
- (2) Access Panel
 312AR Service Access Door
- C. Prepare for the Check
 - (1) Supply electrical power (AMM 24-22-00/201).

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

- (2) Pressurize the center hydraulic system (AMM 29-11-00/201).
- (3) Use the STAB TRIM levers or switches to move the stabilizer to approximately 4 units of trim, as shown on the stabilizer position indicators that are on the control stand panel.
- (4) Remove the pressure from the center hydraulic system (AMM 29-11-00/201).
- (5) Put the L and C STAB TRIM shutoff switches on the P10 panel to the CUTOUT position.
- (6) Open these circuit breakers on the overhead panel, P11, and attach D0-NOT-CLOSE tags:
 - (a) 11A36, ALT STAB TRIM (IF INSTALLED)
 - (b) 11C12, STAB TRIM SHUTOFF L
 - (c) 11C13, STAB TRIM SHUTOFF CENTER
- (7) Remove Electrical Power (AMM 24-22-00/201).

FUNCTIONAL STAB TRIM BALLSCREW AND BALLNUTS

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WARNING: STAY OFF THE SERVICE ACCESS DOOR, 312AR. YOUR WEIGHT CAN RELEASE THE SPRING-LOADED LATCHES ON THE DOOR. IF YOU FALL THROUGH THE DOOR, INJURIES CAN OCCUR.

- (8) Get access to the stabilizer trim actuator through the Service Access Door, 312AR (AMM 06-42-00/201).
- (9) Do the steps that follow to install the test equipment A55001-47, between the horizontal stabilizer and the upper fuselage structure (Fig. 602):
 - (a) Install the clamp assembly, A55001-17, and clamp fitting, A55001-6, on the upper bulkhead.
 - (b) Install the test equipment A55001-47, between the stabilizer and the upper bulkhead fitting using the quick release pins.
- (10) Do the steps that follow to install the dial indicator between the stabilizer ballscrew and the ballnut (Fig. 603):
 - (a) Install the magnetic base for the dial indicator on the ballscrew above the ballnut.
 - (b) Install the dial indicator to the magnetic base so that the tip of the dial indicator touches the flat spot on the top of the ballnut.

NOTE: The dial indicator is installed to measure the downward movement of the ballnut relative to the ballscrew.

D. Stabilizer Ballnut Freeplay Procedure (Fig. 603)

CAUTION: DO NOT APPLY MORE THAN THE SPECIFIED LOADS TO THE STABILIZER WHILE USING THE TEST EQUIPMENT A55001-47. DO NOT APPLY POWER TO THE STABILIZER TRIM ACTUATOR WITH THE TEST ASSEMBLY INSTALLED. IF YOU DO, DAMAGE TO THE EQUIPMENT OR AIRCRAFT CAN OCCUR.

EFFECTIVITY

FUNCTIONAL | STAB TRIM BALLSCREW AND BALLNUTS

27-41-10-6A

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MECH	INSP

(1) Use the test equipment A55001-47, to slowly apply an upward force of 750 \pm 0 pounds (3340 \pm 0 newtons) to the ballscrew, as shown on the load cell.

<u>NOTE</u>: At 4 units of trim, the aft stabilizer center of gravity loads the ballscrew in the upward direction, putting the ballscrew in compression.

To apply the upward force to the ballscrew, the stabilizer tool must be turned in the direction that shortens the tool length. This will apply an upward force on the ballnut and move the leading edge of the stabilizer up, thus assuring that there is no residual system freeplay in the upward direction.

- (2) Zero the dial indicator.
- (3) Use the test equipment A55001-47, to slowly release the upward force applied in the previous step and continue adjusting the load tool to apply a downward force of 2450 +/- 50 pounds (10,900 +/- 220 newtons).

NOTE: To apply a downward force on the stabilizer, the tool must be turned in a direction that lengthens the tool. This will apply a downward force on the ballnut and move the leading edge of the stabilizer down.

- (a) Make a note of the quantity shown on the dial indicator.
- (4) Remove the dial indicator and the magnetic base from the ballscrew.
- (5) Do the steps that follow for installation of the dial indicator between the stabilizer ballscrew and the ballnut:
 - (a) Install the magnetic base for the dial indicator on the ballscrew above the ballnut 180 degrees from the position the first indication is taken.
 - (b) Install the dial indicator to the magnetic base until the tip of the dial indicator touches the flat spot on the top of the ballnut (Fig. 603, View B).
 - (c) Repeat steps 1 through 3.

EFFECTIVITY

FUNCTIONAL

STAB TRIM BALLSCREW AND BALLNUTS

27-41-10-6A

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TASK CARD

MECH INSP

- (d) Use the average of the two dial indicator indications that you recorded. This is the stabilizer ballscrew to ballnut free play.
- (6) Use the test equipment A55001-47, to slowly release the downward force that was applied.
- (7) If the ballscrew to ballnut freeplay is less than 0.001 inch (0.03 mm), then the measurement may be in error. Do the following to verify that the measurement was not made in error:
 - (a) Check that the stabilizer was loaded in the correct direction for each of the previous steps.
 - (b) Make sure the dial indicator is functioning properly.
- (8) If the ballscrew to ballnut free play is more than or equal to 0.001 inch (0.03 mm), and less than or equal to 0.012 inch (0.30 mm), the ballscrew to ballnut free play is in the satisfactory limits.
- (9) If the ballscrew to ballnut free play is more than 0.012 inch (0.30 mm), the stab trim actuator wear is more than the maximum permitted worn limits. Do the steps that follow:

NOTE: If the ballscrew to ballnut freeplay is greater than 0.035 inch (0.89 mm), the stabilizer trim actuator has excessive wear, or is damaged. Please notify The Boeing Company of any freeplay measurements beyond 0.035 inch (0.89 mm).

(a) Remove the old stabilizer trim actuator and replace it with a known good unit (AMM 27-41-10/401).

NOTE: If you replace a worn horizontal stabilizer actuator

with a serviceable actuator that is not new or not overhauled, then you must do the Ballscrew to Ballnut Detailed Visual Inspection and the Ballscrew to Primary Brake Housing Freeplay Check, for the replacement actuator before further flight.

- E. Put the Airplane Back to Its Usual Condition
 - (1) Remove the test equipment A55001-47, from the horizontal stabilizer and the upper fuselage (Fig. 602).

EFFECTIVITY

FUNCTIONAL

STAB TRIM BALLSCREW AND BALLNUTS

27-41-10-6A

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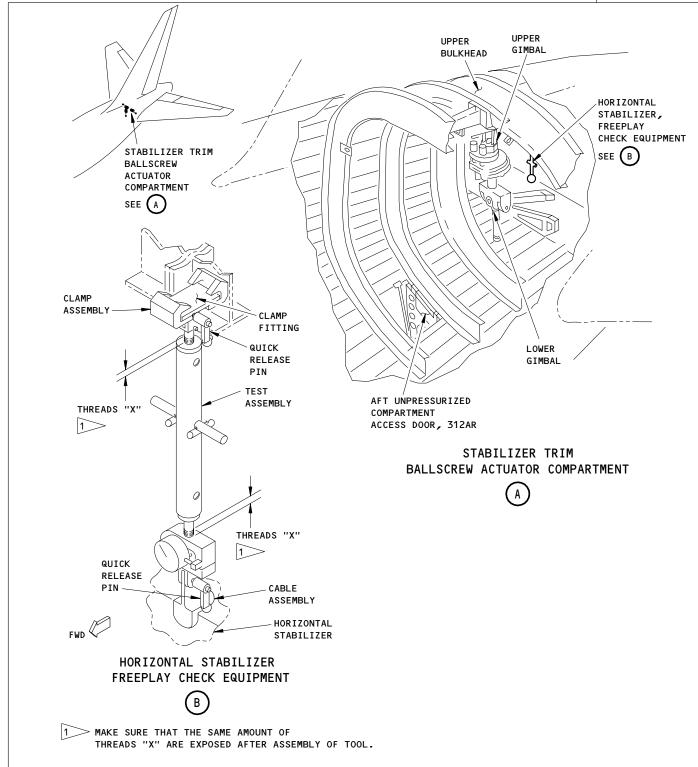
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		(2)	Remove the clamp fittings from the attach points on the bulkheads.
		(3)	Remove the dial indicator and the magnetic base from the ballnut and ballscrew.
		(4)	Lubricate the stabilizer ballscrew and ballnut (AMM 12-21-05/301).
		(5)	Close the Service Access Door for the forward stabilizer compartment, 312AR (AMM 06-42-00/201).
		(6)	Set the C STAB TRIM shutoff switch and L STAB TRIM shutoff switch to the NORM position.
		(7)	Remove the DO-NOT-CLOSE tags and close the following circuit breakers:
			(a) 11A36, ALT STAB TRIM (IF INSTALLED)
			(b) 11C12, STAB TRIM SHUTOFF L
			(c) 11C13, STAB TRIM SHUTOFF CENTER

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Installation Of Horizontal Stabilizer Freeplay Check Equipment Figure 602

FUNCTIONAL STAB TRIM BALLSCREW AND BALLNUTS

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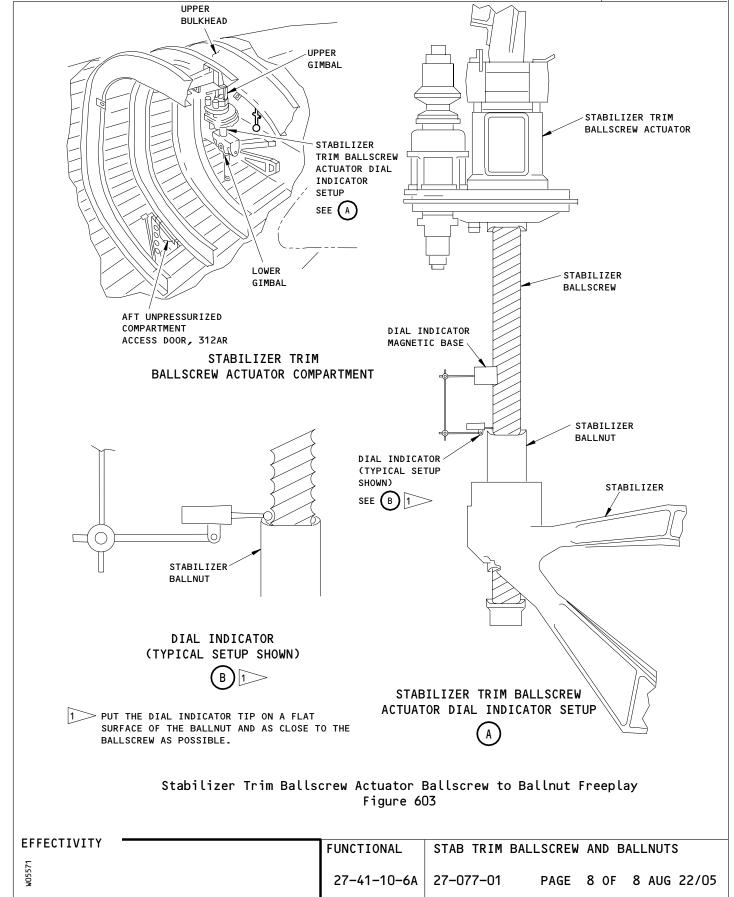
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AIRLINE CARD NO.

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767 TASK CARD



STATION	
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BOEING CARD NO. 27-078-01

AIRLINE CARD NO.

SKILL	WORK ARI	A	RELATED TASK		INTERVAL			PHASE	MPD	TAS	K CARD
									REV	RE'	VISION
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TASI	K	•	TITLE	•		STRUCTURAL	ILLUSTRATION R	EFERENCE	AF	PLICABI	_ITY
									AIRPLAN	E	ENGINE
FUNCT	IONAL	ELEV	ATOR PCA INPUT C	ONTROL ROD							
									ALL		ALL
	ZONES					ACCESS PAN	IELS				
335	345		335AFB 33	5AGB 335EB	335GB	335HB	345AFB 3	45AGB	345EB	3450	зB

MECH INSP

MPD ITEM NUMBER

FUNCTIONALLY CHECK (OFF-AIRCRAFT) THE PCA INPUT CONTROL RODS.

27-31-07-4A

NOTE: THE INSTRUCTIONS FOR THE FUNCTIONAL CHECK OF THE PCA INPUT CONTROL RODS ARE FOUND IN CMM 27-31-64, PAGE 101 SECTION B (FOR UNITS IN SERVICE), OR ON PAGE 702, (PROCEDURE FOR RESTORED UNITS).

ELEVATOR POWER CONTROL ACTUATOR (PCA) INPUT CONTROL ROD -**REMOVAL/INSTALLATION**

General

This procedure contains steps to remove and install the input control rod on the elevator power control actuators (PCAs).

Remove the PCA Input Control Rod

345HB

- References
 - (1) AMM 06-42-00/201, Empennage Access Doors and Panels
 - (2) AMM 27-31-05/201, Elevator Power Control Actuator/Reaction Link
 - (3) AMM 24-22-00/201, Electrical Power Control
 - (4) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
- B. Access
 - (1) Location Zones 335/345 Horizontal Stabilizer - Rear Spar to Trailing Edge

EFFECTIVITY ELEVATOR PCA INPUT CONTROL ROD FUNCTIONAL 27-31-07-4A 27-078-01 PAGE 1 OF 6 APR 22/08

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BOEING 767 TASK CARD

MECH INSP

(2) Access Panels

335EB, 335GB, 335HB, 335AFB PCA Linkage on the Left

Elevator

345EB, 345GB, 345HB, 345AFB PCA Linkage on the Right

Elevator

- C. Prepare for the Removal
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Put the LEFT and CENTER STAB TRIM SHUTOFF TAIL valve switches on the control stand panel, P10, to the CUTOUT position.
 - (3) Remove the power from the left, right, and center hydraulic systems (AMM 29-11-00/201).
 - Put the RIGHT, LEFT, and CENTER FLT CONT SHUTOFF TAIL valve switches on the right side panel, P61, to the OFF position.
 - (5) Open these circuit breakers on the overhead panel, P11, and attach DO-NOT-CLOSE tags:
 - (a) AIRPLANES WITH ALTERNATE STAB TRIM SWITCHES ON THE CONTROL STAND;

11A36, ALT STAB TRIM

- 11C12, STAB TRIM SHUTOFF L
- (c) 11C13, STAB TRIM SHUTOFF CENTER
- (d) 11H17, FLT CONT SHUTOFF TAIL LEFT
- (e) 11H18, FLT CONT SHUTOFF TAIL CTR
- (f) 11H27, FLT CONT SHUTOFF TAIL RIGHT
- Remove these access panels (AMM 06-42-00/201):
 - 335EB, 335GB, 335HB, and 335AFB for the PCA linkage on the left elevator.
 - 345EB, 345GB, 345HB, and 345AFB for the PCA linkage on the right elevator.
- (7) Install the elevator PCA lock tool (AMM 27-31-05/201):

EFFECTIVITY

FUNCTIONAL ELEVATOR PCA INPUT CONTROL ROD

27-31-07-4A

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767
TASK CARD

MECH INSP

D. Remove the PCA Input Control Rod

WARNING: DO NOT SUPPLY HYDRAULIC POWER DURING THE REMOVAL/INSTALLATION OF THE PCA CONTROL ROD. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Remove the nut (4), washer (3), bolt (1), and bushing (2), from the forward end of the PCA input control rod (8).
 - (a) Support the disconnected end of the input control rod (8).

CAUTION: MAKE SURE THE ENDS OF THE CONTROL ROD ARE DISCONNECTED. IF ONE END OF THE ROD IS CONNECTED, DAMAGE TO THE BEARING CAN OCCUR TO THAT ROD END.

- (2) Remove the bolt (5), washer (6), and nut (7) from the aft end of the PCA input control rod (8).
 - (a) Remove the input control rod (8) from the aircraft.

NOTE: Do not change the adjustment of the input control rod during the removal/installation procedure. Make a note of the position of the elevator surface and the PCA position that the input control rod was removed from so that re-installation will be easier.

- Install the PCA Input Control Rod
 - A. Consumable Materials
 - (1) D00633 Grease BMS 3-33 (Preferred)
 - (2) D00015 Grease BMS 3-24 (Alternate)
 - B. References
 - (1) AMM 06-42-00/201, Empennage Access Doors and Panels
 - (2) AMM 27-31-05/201, Elevator Power Control Actuator/Reaction Link
 - (3) AMM 24-22-00/201, Electrical Power Control

FUNCTIONAL ELEVATOR PCA INPUT CONTROL ROD

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			(4) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
		С.	Access
			(1) Location Zones 335/345 Horizontal Stabilizer - Rear Spar to Trailing Edge
			(2) Access Panels 335EB, 335GB, 335HB, 335AFB PCA Linkage on the Left Elevator
			345EB, 345GB, 345HB, 345AFB PCA Linkage on the Right Elevator
		D.	Install the PCA Input Control Rods (Fig. 401)
			(1) Apply grease to the bushings (2) and bolts (1) and bolts (5).
			WARNING: DO NOT SUPPLY HYDRAULIC POWER DURING THE REMOVAL/INSTALLATION OF THE PCA CONTROL ROD. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.
			(2) Put the control rod (8) in its correct position and install the aft bolt (5) while supporting the forward end of the control rod (8).
			NOTE: Install the control rod that is marked in the correct surface and PCA position. This can reduce the amount of time required to properly rig the elevator PCAs.
			(3) Install the bushing (2) and then the bolt (1) at the forward connection of the input control rod (8).
			<u>NOTE</u> : Be sure to install the bolt (1) with the head in the up position.
			(4) Install the washers (6) and (3) and the nuts (7) and (4) onto their respective bolts.
			(5) Remove the elevator PCA lock tool (AMM 27-31-05/201).
			(6) Do the task, Adjust the Power Control Actuator (PCA) Input Rods (AMM 27-31-00/501).

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	TASK CARD	

			TASK CARD
 (1) Install these access panels (AMM 06-42-00/201): (a) 335EB, 335GB, 335HB, 335AFB for the PCA linkage on the left elevator. (b) 345EB, 345GB, 345HB, 345AFB for the PCA linkage on the right elevator. (2) Remove the electrical power, if it is not necessary 	MECH	INSP	THERE STATES
 (1) Install these access panels (AMM 06-42-00/201): (a) 335EB, 335GB, 335HB, 335AFB for the PCA linkage on the left elevator. (b) 345EB, 345GB, 345HB, 345AFB for the PCA linkage on the right elevator. (2) Remove the electrical power, if it is not necessary 			C. Dut the Airplane Deals to The Heyel Condition
 (a) 335EB, 335GB, 335HB, 335AFB for the PCA linkage on the left elevator. (b) 345EB, 345GB, 345HB, 345AFB for the PCA linkage on the right elevator. (2) Remove the electrical power, if it is not necessary 			
elevator. (b) 345EB, 345GB, 345HB, 345AFB for the PCA linkage on the right elevator. (2) Remove the electrical power, if it is not necessary			
elevator. (2) Remove the electrical power, if it is not necessary			(a) 335EB, 335GB, 335HB, 335AFB for the PCA linkage on the left elevator.
(2) Remove the electrical power, if it is not necessary (AMM 24-22-00/201).			(b) 345EB, 345GB, 345HB, 345AFB for the PCA linkage on the right elevator.
			(2) Remove the electrical power, if it is not necessary (AMM 24-22-00/201).

EFFECTIVITY

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1. BOLT 2. BUSHING 3. WASHER 5. BOLT 4. NUT (3 LOCATIONS) (3 LOCATIONS) ELEVATOR PCAs SEE (A) RIG PIN HOLE INPUT CONTROL SUMMING ROD LEVER (3 LOCATIONS) 6. WASHER Ź. NUT (3 LOCATIONS) (3 LOCATIONS) THERMAL ISOLATION RODS

ELEVATOR PCAs
(LEFT SIDE IS SHOWN, RIGHT SIDE IS OPPOSITE)

1 APPLY GREASE TO ALL SURFACES

A

> INSTALL BOLT WITH HEAD OF BOLT ON TOP.

> THESE THERMAL ISOLATION RODS ARE OPTIONAL AND MAY NOT BE INCLUDED IN THE AIRCRAFT CONFIGURATION.

Elevator Power Control Actuator (PCA) Input Control Rod Installation Figure 401

FUNCTIONAL ELEVATOR PCA INPUT CONTROL ROD

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STATION
TAIL NO.
DATE

SKILL

MECH INSP



BOEING CARD NO. 27-079-01

AIRLINE CARD NO.

TASK CARD

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FUNCT	IONAL	ELEVAT	OR PCA MIS-RIG					AIRPLAN	ΙE	ENGINE
								ALL		ALL
	ZONES				_	ACCESS PANELS				

INTERVAL

336 337 346 347

WORK AREA

MPD ITEM NUMBER

FUNCTIONALLY CHECK THE ELEVATOR CONTROL ACTUATORS FOR A MIS-RIG.

RELATED TASK

27-31-00-5D

A. General

- (1) This task contains a procedure that will detect the gross mis-rig of the elevator PCAs.
 - (a) The outboard PCA is powered by the left hydraulic system.
 - (b) The middle PCA is powered by the right hydraulic system.
 - (c) The inboard PCA is powered by the center hydraulic system.
- B. Equipment
 - (1) Ruler or Tape Measure Accurate to 0.1 inch (3 mm)
 - (2) Masking Tape
- C. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 27-31-05/601, Elevator PCA Bellcrank Shear Rivet Inspection
 - (3) AMM 29-11-00/201, Main (Left, Right, and Center) Hydraulic Systems
 - (4) AMM 27-31-00-501, Adjust the PCA Input Rods
- D. Access

FUNCTIONAL ELEVATOR PCA MIS-RIG

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AIRLINE CARD NO.



MECH INSP

(1) Location Zones

336/346 Inboard Elevator 337/347 Outboard Elevator

- E. Prepare for the Gross Mis-rig Inspection
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Put the LEFT and CENTER STAB TRIM SHUTOFF valve switches on the control stand panel, P10, to the NORM position.

WARNING: THE AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABLILIZER ARE FULLY POWERED SURFACES. MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE AWAY FROM THE CONTROL SURFACES BEFORE YOU SUPPLY HYDRAULIC POWER. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.

(3) Supply pressure to the left hydraulic system only (AMM 29-11-00/201).

<u>NOTE</u>: The stabilizer will move at half the normal speed with only the left hydraulic system pressurized.

- (4) Put the LEFT, RIGHT, and CENTER FLT CONT SHUTOFF TAIL valve switches on the right side panel, P61, to the ON position.
- (5) Use the control wheel switches to move the horizontal stabilizer to the neutral position (2 units of trim on the position indicator).
 - (a) Ensure that the inboard trailing edge of the elevator is positioned on the elevator index plate.
- (6) Move the LEFT STAB TRIM SHUTOFF and the CENTER STAB TRIM SHUTOFF switches on the control stand panel, P10, to their CUTOUT positions.
- (7) Remove the pressure from the left hydraulic system (AMM 29-11-00/201).
- F. Verify the Elevator PCA Rig

EFFECTIVITY

FUNCTIONAL

ELEVATOR PCA MIS-RIG

27-31-00-5D

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AIRLINE CARD NO.

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TASK CARD

MECH INSP

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

(1) Supply pressure to the right hydraulic system only (AMM 29-11-00/201).

NOTE: The right hydraulic system supplies power to the middle PCA.

- (2) Move the elevator from the neutral position to the nose up position and then to the nose down position.
 - (a) Make sure that the elevators move correctly with the control column movement.
 - (b) Move the elevator to the nose down position and then let it go back to center at the neutral position.

NOTE: Lightly shake the control column forward and aft to make sure it is centered.

- (c) Put tape on the index plate and make a mark for the position of the top surface of the elevator trailing edge.
 - 1) Make a mark on the tape 1.0 inch (25 mm) above and 1.0 inch (25 mm) below the elevator neutral mark that was just made.
- (3) Remove the pressure from the right hydraulic system (AMM 29-11-00/201).

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

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

NOTE: The center hydraulic system supplies power to the inboard PCA.

EFFECTIVITY

FUNCTIONAL | ELEVATOR PCA MIS-RIG

27-31-00-5D

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AIRLINE CARD NO.

SAS BOEING 767 TASK CARD

MECH INSP

- (5) Move the elevator from the neutral position to the nose up position and then back to the nose down position.
 - (a) Make sure that the elevators move correctly to the control column movement.
 - (b) Move the elevator to the nose down position and then let it go back to center at the neutral position.

<u>NOTE</u>: Lightly shake the control column forward and aft to make sure it is centered.

- 1) Verify that the elevator is within the 1.0 inch (25 mm) marks above or below the elevator neutral mark that was made on the tape.
- (6) Remove the pressure from the center hydraulic system. (AMM 29-11-00/201).

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

(7) Pressurize the left hydraulic system (AMM 29-11-00/201).

<u>NOTE</u>: The left hydraulic system supplies power to the outboard PCA.

- (a) Allow enough time for the center hydraulic system to drop below 100 psi (690 kPa).
- (8) Move the elevator from the neutral position to the nose up position, back to the nose down position, and then back to the neutral position.
 - (a) Make sure that the elevators move correctly to the control column movement.
 - 1) Verify that the elevator is within the 1.0 inch (25 mm) marks above or below the elevator neutral mark that was made on the tape.

EFFECTIVITY

FUNCTIONAL

ELEVATOR PCA MIS-RIG

27-31-00-5D

27-079-01

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BOEING CARD NO.

27-079-01

AIRLINE CARD NO.

TAIL



			TASK CARD
MECH	INSP		
		(9)	Remove the pressure from the left hydraulic system (AMM 29-11-00/201).
		(10)	If, in the previous checks, either elevator surface was higher or lower than the 1.0 inch (25 mm) marks above and below the neutral index mark marked on the tape, then do the following:
			(a) Elevator PCA Shear Rivet Inspection (AMM 27-31-05/601).
			(b) Adjust the Power Control Actuator (PCA) Input Rods (AMM 27-31-00/501).
		G. Put	the Airplane Back to Its Usual Condition.
		(1)	Remove the DO-NOT-OPERATE tags and move the FLT CONTROL SHUTOFF TAIL, R, and C switches on the P61 panel to ON.
		(2)	Remove electrical power, if it is not necessary (AMM 24-22-00/201).