STA	ATION								BOE	ING CAR	D NO.
TAI	L NO.		•	A 0	Ø.	BOEI	NG		21-R		
D	DATE		5	AS		767 Task caf	RD		AIR	LINE CAR	D NO.
SKILL	WORK AR	EA	REL	ATED TASK		INTERV	AL	PHASE	MPD REV	1	SK CARD VISION
AIRPL	A/C MIX	BAY							011	DEC	22/07
TAS	SK			TI	TLE		STRUCTURAL ILLUSTRATIO	N REFERENCE	AIRPLAN	PPLICABI	LITY ENGINE
REPLA	CE	RECI	RCULAT	TION AIR	FAN				AINILA	-	LNGINL
									PAS	S	ALL
	ZONES						ACCESS PANELS				
125	126			1251	821	NOTE					

MECH INSP

REPLACE THE RECIRCULATION AIR FAN.

21-25-01-4A

MPD ITEM NUMBER

ACCESS NOTE: SPECIAL ACCESS 1251 REQUIRES REMOVAL OF FORWARD CARGO COMPARTMENT AFT WALL PANELS.

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

- 1. Remove the Recirculation Air Fan (Fig. 401)
 - A. References
 - (1) 06-46-00/201, Entry, Service and Cargo Doors Access Doors and Panels
 - (2) 21-21-02/401, Conditioned Air Ground Connector
 - (3) 24-22-00/201, Electric Power Control
 - (4) 25-52-01/401, Sidewall Panels.
 - B. Access
 - (1) Location Zones

125 Area Aft of Forward Cargo Compartment (Left)

126 Area Aft of Forward Cargo Compartment (Right)

821 Forward Cargo Compartment

- C. Prepare for the Removal
 - (1) Supply electrical power (Ref 24-22-00).

REPLACE RECIRCULATION AIR FAN

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BOEING 767 TASK CARD

MECH	INSP
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- (2) Turn the L and R PACK selectors, on the pilot's overhead panel, P5, to the OFF position.
 - (a) Make sure the PACK OFF lights come on.
 - (b) Put a DO-NOT-OPERATE tag on the selectors.
- (3) Push the applicable (L or R) RECIRC FAN switch-light, on the P5 panel, to the off position.
 - (a) Make sure the ON light goes off.
 - (b) Put a DO-NOT-OPERATE tag on the switch-lights.
- (4) Put a DO-NOT-OPERATE tag on the ground air connector (Ref 21-21-02).
- Open and attach a DO-NOT-CLOSE tag to these circuit breakers:
 - (a) To remove the right recirculation air fan:
 - On the overhead circuit breaker panel, P11, 11R23, R RECIRC FAN
 - On the right miscellaneous electrical equipment panel, P37, 37G4 or 37C4, R RECIRC FAN
 - To remove the left recirculation air fan: (b)
 - On the overhead circuit breaker panel, P11, 11R14, L RECIRC FAN
 - On the left miscellaneous electrical equipment panel, P36, 36F2 or 36F4, L RECIRC FAN
- (6) Open the forward cargo door (Ref 06-46-00).
- Remove the endliner curtain at the aft end of the forward cargo compartment.
- Remove the fan
 - (1) RECIRCULATION AIR FAN (HONEYWELL P/N 606622) PRE-SB 21-0215; Disconnect the electrical connector (8) from the fan (2) (Fig. 401).
 - (2) RECIRCULATION AIR FAN (HONEYWELL P/N 606622) POST-SB 21-0215; Disconnect the aircraft-fan wiring [24] and electrical connector plug [24] from the vibration monitor [21] (Fig. 402).

EFFECTIVITY

REPLACE

RECIRCULATION AIR FAN

21-25-01-4A

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AIRLINE CARD NO.

SAS FOR TASK CARD

MECH	INSP
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- (a) Do the removal task in this procedure to remove the vibration monitor [21] from the recirculation air fan [31] (TASK 21-25-01-004-102).
- (3) Disconnect the bonding jumper (1) from the fan (2).
- (4) 767-200 AIRPLANES; Remove the couplings (4) on each side of the fan (2).
- (5) 767-300 AIRPLANES;

Remove the coupling (4) on the side of the fan (2) that is nearest the mix manifold.

- (6) Remove the clamp (9), on the other side of the fan (2), that is farthest from the filters.
- (7) Move the sleeves (3) away from the fan (2).
- (8) Remove the fan (2).
- (9) Put a cover on the duct openings.
- Install the Recirculation Air Fan (Fig. 401)
 - A. Equipment
 - (1) Bonding Meter Model T477W Microhm Bridge, Type W Bonding Meter Avtron Manufacturing, Inc., Cleveland, Ohio.
 - B. Parts
 - (1) Look at the Illustrated Parts Catalog (IPC) to find the part numbers and the effectivities of the items in the table that follows:
 - (a) 767-200 AIRPLANES; Refer to the table that follows:

EFFECTIVITY

REPLACE

RECIRCULATION AIR FAN

21-25-01-4A

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AIRLINE CARD NO.

SAS BOEIN
767
TASK CARD

MECH INSP

АММ			AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
401	2 3 4 5 6 7	Fan Sleeve Coupling Nut Washer Bolt	21-25-01	01	60 50 45 25 20 15

(b) 767-300 AIRPLANES; Refer to the table that follows:

AMI	М		AIPC				
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM		
401	2 3 4 5 5 6 6 7 7	Fan Sleeve Coupling Nut Nut Washer Washer Bolt	21-25-01	02	262 55 50 25 45 20 40 15		

C. Access

(1) Location Zones

Area Aft of Forward Cargo Compartment (Left)
Area Aft of Forward Cargo Compartment (Right)

821 Forward Cargo Door

- D. Install the fan
 - (1) Remove the covers from the duct openings.

EFFECTIVITY REPLACE RECIRCULATION AIR FAN

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SAS BOEING TASK CARD

MECH I	NSP
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- (a) Make sure there is no unwanted material in the ducts.
- Put the fan (2) into position with the flow arrow pointed to the mix manifold.
- Move part of the sleeves (3) on to each end of the fan (2).
- (4) 767-200 AIRPLANES; Install a coupling (4) on each end of the fan (2).
 - (a) Tighten the coupling nut to 40-45 pound-inches.
- 767-300 AIRPLANES; Install a coupling (4) on the end of the fan (2) that is nearest to the mix manifold.
 - (a) Tighten the coupling to 40-45 pound-inches.
- Install a clamp (9) on the other end of the fan (2).
 - (a) Tighten the clamp to 20-25 pound-inches.
- (7) Connect the bonding jumper (1) to the fan (2).
 - Use the bonding meter to make sure the bonding resistance is not more than 0.005 ohm.
- RECIRCULATION AIR FAN (HONEYWELL P/N 606622) PRE-SB 21-0215; Connect the electrical connector (8) to the fan (2) (Fig. 401).
- (9) RECIRCULATION AIR FAN (HONEYWELL P/N 606622) POST-SB 21-0215; Do the installation task in this procedure to install the vibration monitor [21] to the recirculation air fan [31] (TASK 21-25-01-404-112).
 - Connect the aircraft-fan wiring [24] and electrical connector plug [24] to the vibration monitor [21] (Fig. 402).
- Do the fan installation test
 - (1) Supply electrical power (Ref 24-22-00).
 - (2) Push the L and R UTILITY BUS switch-lights, on the P5 panel, to the off and then to the on position.
 - (3) Remove the DO-NOT-CLOSE tags and close these circuit breakers:

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RECIRCULATION AIR FAN

21-25-01-4A

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SAS FOR TASK CARD

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- (a) If the right recirculation air fan was installed:
 - 1) On the P11 panel, 11R23, R RECIRC FAN
 - 2) On the P37 panel, 37G4 or 37C4, R RECIRC FAN
- (b) If the left recirculation air fan was installed:
 - 1) On the P11 panel, 11R14, L RECIRC FAN
 - 2) On the P36 panel, 36F2 or 36F4, L RECIRC FAN
- (4) RECIRCULATION AIR FAN (HONEYWELL P/N 606622) PRE-SB 21-0215;
 Do these steps to test the operation of the recirculation air fan:
 - (a) Remove the DO-NOT-OPERATE tag from the applicable (L or R) RECIRC FAN switch-light, on the P5 panel.
 - 1) Push the switch-light to the on position.
 - 2) Listen for the fan to come on.
 - 3) Make sure there are no air leaks around the fan and sleeves.
- (5) RECIRCULATION AIR FAN (HONEYWELL P/N 606622) POST-SB 21-0215; Do these steps to reset the vibration monitor [21] and to test the operation of the recirculation air fan [31]:
 - (a) Open this circuit breaker for the applicable left/right recirculation air fan:
 - 1) P11 Pilot's Overhead Circuit Breaker Panel
 - a) 11R14, L RECIRC FAN
 - b) 11R23, R RECIRC FAN

EFFECTIVITY REPLACE RECIRCULATION AIR FAN

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SAS BOEING TASK CARD

MECH INSP

(b) Remove the DO-NOT-OPERATE tag and set the L/R RECIRC FAN switch-light, on the pilot's P5 overhead panel, to ON position.

The applicable left/right recirculation air fan should still be off. The INOP lamp for the L/R RECIRC FAN switch-light will illuminate, and the EICAS message L/R RECIRC FAN (Advisory) will also show.

(c) Push and hold the RESET button on the vibration monitor while you restore electrical power to the applicable left/right recirculation fan in the next step.

This is a two person operation. One person to push the NOTE: RESET button while a second person restores electrical power.

- Close this circuit breaker for the applicable left/right recirculation air fan:
 - 1) P11 Pilot's Overhead Circuit Breaker Panel
 - 11R14, L RECIRC FAN
 - 11R23, R RECIRC FAN
- Make sure the applicable left/right recirculation air fan now operates.

The INOP lamp for the L/R RECIRC FAN switch-light should NOTE: be off, and the EICAS message L/R RECIRC FAN (Advisory) should not show.

- (f) Release the RESET button on the vibration monitor after the fan operates, then within ten (10) seconds push and hold the RESET button again for three (3) to five (5) seconds until the STATUS light (LED) on the vibration monitor changes to 'green'.
- (a) Release the RESET button on the vibration monitor.

EFFECTIVITY

REPLACE

RECIRCULATION AIR FAN

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BOEING 767 TASK CARD

AIRLINE CARD NO.

MECH II	NSP
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Make sure the recirculation fan continues to operates for up to seven (7) minutes and that the fan does not shutdown.

During the seven (7) minutes, the STATUS light (LED) may blink 'amber' (yellow) on occassion which is acceptable. If the STATUS light (LED) blinks 'red' during the seven (7) minutes, the vibration monitor will initiate a shutdown of the fan. This is an indication that the fan should be replaced.

- (i) After the seven (7) minutes, make sure the recirculation air fan continues to operate without a shutdown, and that the STATUS light (LED) on the vibration monitor is blinking 'green' every two (2) seconds.
- (j) Make sure there are no air leaks around the fan and sleeves.
- Set the L/R RECIRC FAN switch-light to the off position (ON lamp is not illuminated).
 - 1) Make sure the recirculation air fan does not operate.
- F. Put the airplane back to its usual condition.
 - (1) Install the endliner curtain in the aft end of the forward cargo compartment.
 - (2) Close the forward cargo door, 821 (Ref 06-46-00).
 - (3) Push the L and R RECIRC FAN switch-lights, on the P5 panel, to the off position.
 - (4) Remove the DO-NOT-OPERATE tags from the L and R PACK selectors, on the P5 panel.
 - Remove the DO-NOT-OPERATE tag from the connector for the ground conditioned air (Ref 21-21-02).
 - (6) Remove the electrical power, if it is not necessary (Ref 24-22-00).

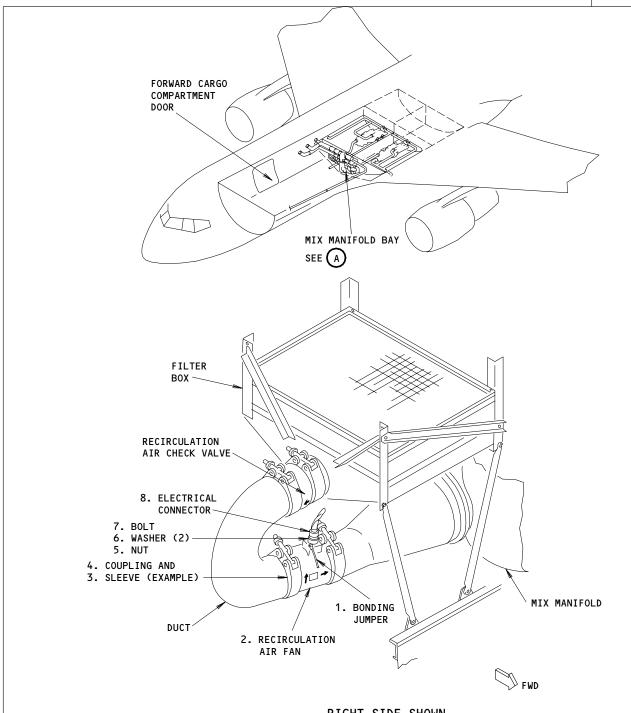
BOEING CARD NO.

21-R01

AIRLINE CARD NO.

SAS





RIGHT SIDE SHOWN (LEFT SIDE OPPOSITE)



Recirculation Air Fan Installation Figure 401 (Sheet 1)

EFFECTIVITY 767-200 AIRPLANES

REPLACE

RECIRCULATION AIR FAN

21-25-01-4A

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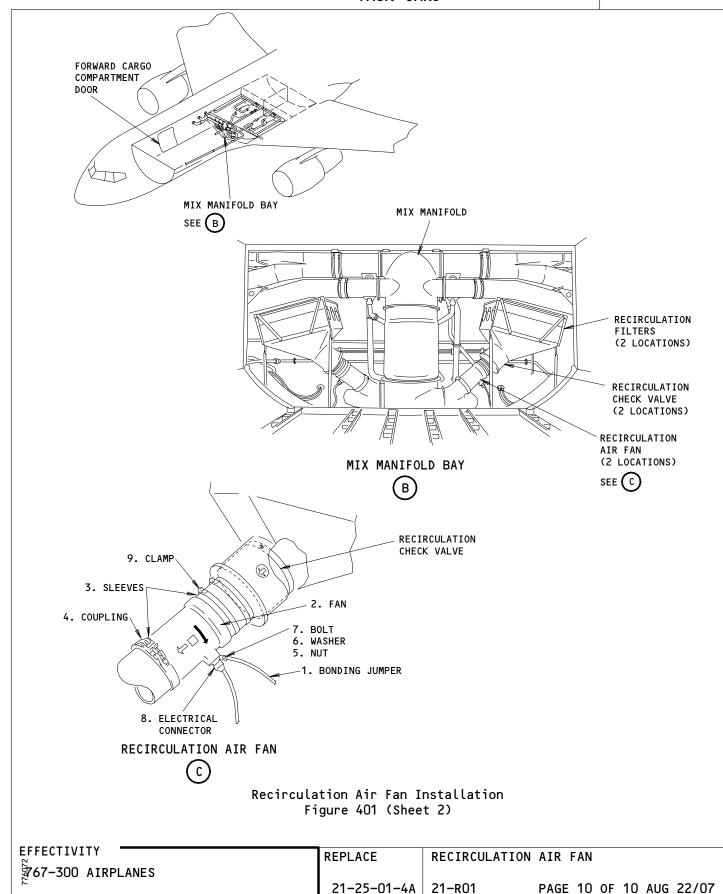
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BOEING 767 TASK CARD

SAS

21-R01

AIRLINE CARD NO.



STA	TION						B0E	ING CARD NO.	
TAI	L NO.			(BOEIN	VG		21-R	02	
			SAS	767			AIRI	INE CARD NO.	
D	ATE			TASK CARD					
SKILL	WORK ARE	A	RELATED TASK	INTERVAL		PHASE	MPD REV	TASK CAI REVISIO	
AIRPL	FUSELAG	Ε					003	DEC 22.	/08
TAS	K		TITL	_E	STRUCTURAL ILLUSTRATION RE	FERENCE		PLICABILITY	CTNE
REPLA	CE	CABI	N PRESSURE OUT	FLOW VALVE			AIRPLAN	E EN	IGINE
							ALL	ΑI	LL

NOTE

MECH INSP

165

ZONES

ACCESS PANELS

REPLACE THE CABIN PRESSURE OUTFLOW VALVE.

1651

21-31-03-2C

MPD ITEM NUMBER

ACCESS NOTE: SPECIAL ACCESS 1651 REQUIRES REMOVAL OF BULK CARGO COMPARTMENT AFT WALL PANELS.

811

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 Cabin Pressure Outflow Valve (Fig. 201)

A. General

- (1) The outflow valve can be removed through the aft end of the bulk cargo compartment or from out of the airplane. The valve is most easily removed through the cargo compartment. The procedure to remove the valve from out of the airplane is used when access through the bulk cargo compartment is not possible.
 - (a) To remove the valve from out of the airplane, the valve must be in the closed position.

B. References

- (1) AMM 06-46-00/201, Entry, Service, and Cargo Doors Access Doors and Panels
- (2) AMM 24-22-00/201, Electrical Power Control
- (3) AMM 25-52-01/401, Sidewall Lining
- C. Access

EFFECTIVITY	REPLACE	CABIN PRESSUR	E OUTF	LOW	VAL	_VE		
	21-31-03-2c	21-R02	PAGE	1 0	F	9 AUG	22/99	

21-R02

BOEING 767 TASK CARD

MECH	INSP
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- (1) Location Zones
 - Area Aft of the Bulk Cargo Compartment (Left) 165
 - 811 Bulk Cargo Door
- Prepare for the Removal
 - (1) Open these circuit breakers on the overhead circuit breaker panel, P11, and attach the DO-NOT-CLOSE tags:
 - (a) 11B14, CABIN ALTITUDE CONTROL MANUAL
 - (b) 11P15, CABIN ALTITUDE CONTROL AUTO 1
 - (c) 11P23, CABIN ALTITUDE CONTROL AUTO 2
 - If the outflow valve will be removed through the bulk cargo compartment, do the steps that follow:
 - (a) Open the bulk cargo door, 811 (AMM 06-46-00/201).
 - Remove the endliner at the aft end of the bulk cargo compartment (AMM 25-52-01/401).
 - AIRPLANES WITH THE DEBRIS SCREEN; Do the steps that follow:
 - Release the latches on the debris screen.
 - Remove the debris screen that is around the outflow valve.
 - (3) If you will remove the valve from out of the airplane, make sure the valve is in the closed position.
 - If you cannot close the valve, you must remove the valve through the bulk cargo compartment.
- Remove the Outflow Valve
 - (1) Remove the bolts (9) that are on the outer side of the airplane.
 - (2) Disconnect the bonding jumper (2) from the valve.
 - To access the bonding jumper from out of the airplane, carefully push the forward edge of the valve (10) inboard.

EFFECTIVITY

REPLACE

CABIN PRESSURE OUTFLOW VALVE

21-31-03-2C

21-R02

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AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

(3) Disconnect the electrical connectors from the valve.

NOTE: Identify the electrical connectors for installation.

- (4) Remove the outflow valve (10).
 - (a) To remove the valve from out of the airplane, turn the outflow valve assembly so that the actuator motor comes out first, with the valve diagonal to the skin opening.
- (5) Remove the gasket (8) from the outflow valve.
- (6) Save gasket (8) from the outflow valve for reinstallation if no visible damage is present on the gasket.

2. Install the Cabin Pressure Outflow Valve

A. General

- (1) You can install the outflow valve through the aft end of the bulk cargo compartment or from out of the airplane. The valve is most easily installed through the cargo compartment. The procedure to install the valve from out of the airplane is used when access through the bulk cargo compartment is difficult or not possible.
 - (a) To install the valve from out of the airplane, the valve must be in the closed position.
- B. Consumable Materials
 - (1) A00247 Sealant, Chromate, Type BMS 5-95
- C. Parts

EFFECTIVITY

REPLACE

CABIN PRESSURE OUTFLOW VALVE

21-31-03-2C

21-R02

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AIRLINE CARD NO.

MECH	INSP
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AMM			AIPC			
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM	
201	1	Screen Assembly	21-31-03	01	192	
	2	Jumper Assembly			20	
	3	Bolt			5	
	4	Washer			10	
	5	Washer			10	
	6	Washer			10	
	7	Nut			15	
	8	Gasket			191	
	9	Bolts			25	
	10	Valve Assembly			30	

D. References

- (1) AMM 06-46-00/201, Entry, Service, and Cargo Doors Access Doors and **Panels**
- (2) AMM 24-22-00/201, Electrical Power Control
- (3) AMM 25-52-01/401, Sidewall Lining

E. Access

- (1) Location Zones
 - 165 Area Aft of the Bulk Cargo Compartment (Left) 811 Bulk Cargo Door
- F. Prepare for Outflow Valve Installation
 - (1) Make sure that the outflow valve flapper doors can move freely:
 - Remove the cotter pin, nut, washers (qty 3), and bolt to (a) disconnect the connecting rod from the actuator arm.
 - Manually move the flapper doors to the fully open and fully closed positions, and make sure that the doors can move freely.
 - 1) If the flapper doors do not move freely, replace the outflow valve with a serviceable outflow valve.

EFFECTIVITY

CABIN PRESSURE OUTFLOW VALVE REPLACE

21-31-03-2C

21-R02

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21-R02

BOEING 767 TASK CARD

MECH	INSP
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- (c) Install the bolt, washers (qty 3), nut, and cotter pin to attach the connecting rod to the actuator arm.
 - Make sure that the head of the bolt is installed on the inboard side of the actuator arm.
 - Tighten the nut to 17 pound-inches (1.9 Newton-Meters).
 - 3) Install the cotter pin.
- Outflow Valve Installation
 - (1) Install a new gasket (8) in the outflow valve opening.
 - (2) Put the outflow valve (10) onto the gasket (8).
 - To install the valve from out of the airplane, do the steps that follow:
 - 1) Put the outflow valve through the skin opening and into the approximately installed position.
 - 2) Slowly push the valve inward to get access to the electrical connectors and the bonding jumper.
 - (3) Install the electrical connectors on the valve motors.
 - (4) Connect the bonding jumper (2) to the valve with a bolt (3), three washers (4, 5, 6), and a nut (7) (AMM 20-10-21/401).
 - (5) Tighten the bolt (3).
 - (6) Align the outflow valve holes with the fastener holes in the airplane skin.
 - (7) Apply BMS 5-95 sealant to the fastener holes on the outer side of the airplane.
 - (8) Install the bolts (9).
 - (9) Tighten the bolts (9) to 100 ±10 pound-inches.
- Do the outflow valve installation test.

EFFECTIVITY

REPLACE

CABIN PRESSURE OUTFLOW VALVE

21-31-03-2C

21-R02

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SAS BOEING TASK CARD

MECH INSP

- (1) Make sure that all persons, clothing and loose materials are kept clear of the outflow valve, actuator crank arm, push rods, and flapper doors before electrical power is supplied to the outflow valve actuator.
 - The outflow valve actuator will begin to operate and move when electrical power is supplied.
- Remove the DO-NOT-CLOSE tags and close these circuit breakers on the P11 panel:
 - (a) 11B14, CABIN ALTITUDE CONTROL MANUAL
 - (b) 11P15, CABIN ALTITUDE CONTROL AUTO 1
 - (c) 11P23, CABIN ALTITUDE CONTROL AUTO 2
- Supply electrical power (AMM 24-22-00/201).
- (4) Put the MODE SELECT selector, on the overhead panel, P5, to the MAN position.
- (5) Turn the MANUAL selector to the DESCEND position.
- Make sure the VALVE position indicator needle moves to the CL position within 25 seconds.
 - Different part number combinations of the cabin NOTE: pressure controller and the outflow valve installed on the aircraft can cause the VALVE position indicator needle to point differently at the "CL/OP" positions.
 - NOTE: Refer to AMM 21-31-00/501 for the normal position of the the VALVE position indicator needle at the "CL/OP" positions when different part number combinations of the cabin pressure controller and outflow valve are installed on the aircraft.
- (7) Put the MODE SELECT selector, on the P5 panel to the AUTO 1 position.

EFFECTIVITY

REPLACE

CABIN PRESSURE OUTFLOW VALVE

21-31-03-2C

21-R02

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SAS BOEING TASK CARD

MECH INSP

(8) Make sure the VALVE position indicator needle moves to the OP position within 13 seconds.

Different part number combinations of the cabin pressure controller and the outflow valve installed on the aircraft can cause the VALVE position indicator needle to point differently at the "CL/OP" positions.

Refer to AMM 21-31-00/501 for the normal position of the NOTE: VALVE position indicator needle at the "CL/OP" positions when different part number combinations of the cabin pressure controller and outflow valve are installed on the aircraft.

- (9) Put the MODE SELECT selector, on the P5 panel to the MAN position.
- (10) Turn the MANUAL selector to the DESCEND position.
- Make sure the VALVE position indicator needle moves to the CL position within 25 seconds.

Different part number combinations of the cabin pressure controller and the outflow valve installed on the aircraft can cause the VALVE position indicator needle to point differently at the "CL/OP" positions.

NOTE: Refer to AMM 21-31-00/501 for the normal position of the position of the VALVE position indicator needle at the "CL/OP" positions when different part number combinations of the cabin pressure controller and outflow valve are installed on the aircraft.

(12) Put the MODE SELECT selector, on the P5 panel, to the AUTO 2 position.

EFFECTIVITY

REPLACE

CABIN PRESSURE OUTFLOW VALVE

21-31-03-2C

21-R02

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21-R02

BOEING 767 TASK CARD

MECH INSP

(13) Make sure the VALVE position indicator needle moves to the OP position within 13 seconds.

Different part number combinations of the cabin pressure controller and the outflow valve installed on the aircraft can cause the VALVE position indicator needle to point differently at the "CL/OP" positions.

Refer to AMM 21-31-00/501 for the normal position of the NOTE: VALVE position indicator needle at the "CL/OP" positions when different part number combinations of the cabin pressure controller and outflow valve are installed on the aircraft.

- I. Put the airplane back to its usual condition.
 - If the valve was installed through the bulk cargo compartment, then do the steps that follow:
 - (a) AIRPLANES WITH THE DEBRIS SCREEN; Do the steps that follow:
 - 1) Make sure the insulation inboard of the debris screen is attached to velcro on the stringer below the debris screen.

NOTE: No insulation or loose equipment is permitted inside the debris screen.

- 2) Install the debris screen (1) over the outflow valve.
- Tighten the latches on the debris screen.
- Install the endliner on the aft end of the bulk cargo compartment (AMM 25-52-01/401).
- (c) Close the bulk cargo door, 811 (AMM 06-46-00/201).
- (2) Remove the electrical power if it is not necessary (AMM 24-22-00/201).

EFFECTIVITY

REPLACE

CABIN PRESSURE OUTFLOW VALVE

21-31-03-2C

21-R02

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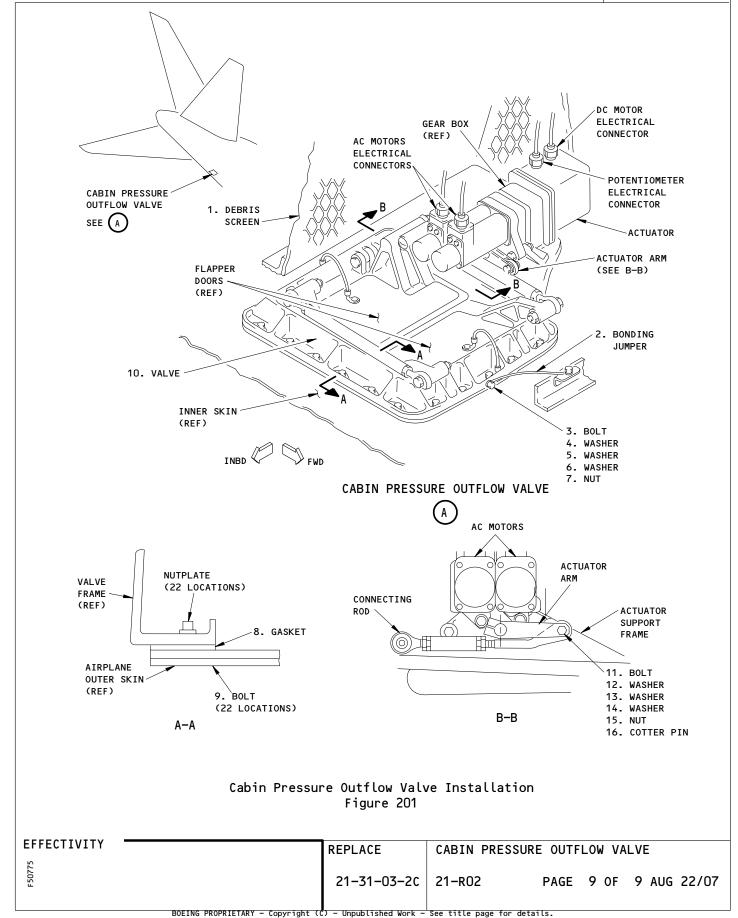
BOEING CARD NO.

SAS

BOEING 767 TASK CARD

21-R02

AIRLINE CARD NO.



STA	TION
TAI	L NO.
D	ATE
SKILL	WORK AREA



BOEING CARD NO.

21-RO3

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

AIRPL BULK CARGO

TASK

TITLE

REV REVISION

017 DEC 22/08

STRUCTURAL ILLUSTRATION REFERENCE
APPLICABILITY
AIRPLANE ENGINE

REPLACE OUTFLOW VALVE ACTUATOR AC MOTOR NOTE ALL

ZONES ACCESS PANELS

165 1651 811 822 NOTE

MECH INSP MPD ITEM NUMBER

REPLACE THE OUTFLOW VALVE ACTUATOR AC MOTOR.

21-31-05-4A

AIRPLANE NOTE: APPLICABLE TO 767-200/300 AIRPLANES.

ACCESS NOTE: SPECIAL ACCESS 1651 REQUIRES REMOVAL OF BULK CARGO COMPARTMENT AFT WALL PANELS.

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

- 1. Remove the AC Motors (Fig. 401)
 - A. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 25-52-01/401, Sidewall Panels
 - (3) AMM 52-35-00/201, Aft Cargo Door
 - (4) AMM 52-36-00/001, Bulk Cargo Door
 - B. Access

1

0

4

(1) Location Zones

165 Area aft of the bulk cargo compartment (Left)

811 Bulk Cargo Door

822 Aft Cargo Door

C. Prepare for the Removal

REPLACE OUTFLOW VALVE ACTUATOR AC MOTOR

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21-R03

SAS BOEING TASK CARD

|--|

- (1) Remove the electrical power (AMM 24-22-00/201).
- (2) Open these circuit breakers on the overhead circuit breaker panel, P11, and attach the DO-NOT-CLOSE tags:
 - (a) 11B14, CABIN ALTITUDE CONTROL MANUAL
 - (b) 11P15, CABIN ALTITUDE CONTROL AUTO 1
 - (c) 11P23, CABIN ALTITUDE CONTROL AUTO 2

WARNING: MAKE SURE THE ELECTRICAL POWER IS OFF, THE CIRCUIT BREAKERS ARE OPENED, AND THE "DO-NOT-CLOSE" TAGS ARE ATTACHED BEFORE USING THE ACCESS THROUGH THE CABIN PRESSURE OUTFLOW. IF ELECTRICAL POWER IS SUPPLIED TO THE VALVE WHEN IT IS IN THE FULLY OPEN POSITION, THE VALVE WILL MOVE TO THE NOT FULLY OPEN POSITION. THE MOVEMENT OF THE VALVE CAN CAUSE INJURY.

- (3) To remove the ac motor(7) from out of the airplane, make sure the cabin pressure outflow valve is fully open.
 - NOTE: If the cabin pressure outflow valve will not open, then you must remove the motors from in the bulk cargo compartment.
- (4) To remove the ac motors(7) from the bulk cargo compartment, do the steps that follow:
 - Open the aft cargo door, 822 (AMM 52-35-00/201), or the bulk cargo door, 811 (AMM 52-36-00/001).
 - (b) Remove the endliner at the aft end of the bulk cargo compartment (AMM 25-52-01/401).
 - (c) AIRPLANES WITH A DEBRIS SCREEN; Do the steps that follow:
 - Release the catches on the debris screen(3) that covers the cabin pressure outflow valve.
 - 2) Remove the debris screen(3).
- D. Remove the AC Motor(7)

EFFECTIVITY

REPLACE

OUTFLOW VALVE ACTUATOR AC MOTOR

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21-R03

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BOEING 767 TASK CARD

MECH INSP

- (1) Disconnect the electrical connector(4) from the applicable (AUTO 1 or AUTO 2) ac motor(7).
- (2) If both ac motors(7) are removed, put a tag on the electrical connectors(4) to show which motors(7) they were connected to.
- (3) Remove the screws(6) on the ac motor(7).
- (4) Remove the ac motor(7).
- <u>Install the AC Motors</u> (Fig. 401)
 - Α. References
 - (1) AMM 21-31-00/501, Cabin Pressure Control System
 - (2) AMM 24-22-00/201 Electrical Power Control
 - (3) AMM 25-52-01/401, Sidewall Panels
 - (4) AMM 52-35-00/201, Aft Cargo Door
 - (5) AMM 52-36-00/001, Bulk Cargo Door
 - Access B.
 - (1) Location Zones
 - 165 Area aft of the bulk cargo compartment (Left)
 - 811 Bulk Cargo Door
 - 822 Aft Cargo Door
 - Install the AC Motor
 - (1) Put the ac motor(7) into position against the mounting plate on the cabin pressure outflow valve actuator.
 - (2) Install the screws(6) at the base of the motor(7).
 - Connect the applicable (AUTO 1 or AUTO 2) electrical connector(4) to the ac motor(7).
 - (4) If both ac motors were removed, remove the tags from the electrical connectors.
 - D. Do the AC Motor Installation Test

EFFECTIVITY

OUTFLOW VALVE ACTUATOR AC MOTOR REPLACE

21-R03

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SAS BOEING TASK CARD

MECH INSP

- (1) Make sure that all persons, clothing and loose materials are kept clear of the outflow valve, actuator crank arm, push rods, and flapper doors before electrical power is supplied to the outflow valve actuator.
 - NOTE: The outflow valve actuator will begin to operate and move when electrical power is supplied.
- Remove the DO-NOT-CLOSE tags and close these circuit breakers on the P11 panel:
 - (a) 11B14, CABIN ALTITUDE CONTROL MANUAL
 - (b) 11P15, CABIN ALTITUDE CONTROL AUTO 1
 - (c) 11P23, CABIN ALTITUDE CONTROL AUTO 2
- (3) Supply electrical power (AMM 24-22-00/201)
- (4) Put the CABIN ALTITUDE CONTROL MODE SELECT selector on the P5 panel to the MAN position.
- (5) Turn the MANUAL selector to the DESCEND position.
- Make sure the outflow valve closes and that the VALVE position indicator needle moves to the CL position within 25 seconds.
 - NOTE: Different part number combinations of the cabin pressure controller and the outflow valve installed on the aircraft can cause the VALVE position indicator needle to point differently at the "CL/OP" positions.
 - NOTE: Refer to AMM 21-31-00/501 for the normal position of the VALVE position indicator needle at the "CL/OP" positions when different part number combinations of the cabin pressure controller and outflow valve are installed on the aircraft.
- (7) If the AUTO 1 ac motor was installed, put the CABIN ALTITUDE CONTROL MODE SELECT selector, on the P5 panel, to the AUTO 1 position.
- (8) If the AUTO 2 ac motor was installed, put the CABIN ALTITUDE CONTROL MODE SELECT selector, on the P5 panel, to the AUTO 2 position.

EFFECTIVITY

REPLACE OUTFLOW VALVE ACTUATOR AC MOTOR

21-31-05-4A

21-R03

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BOEING 767 TASK CARD

AIRLINE CARD NO.

MECH	INSP
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(9) Make sure the outflow valve moves to full open position and that the VALVE position indicator needle moves to the OP position.

Different part number combinations of the cabin pressure controller and the outflow valve installed on the aircraft can cause the VALVE position indicator needle to point differently at the "CL/OP" positions.

Refer to AMM 21-31-00/501 for the normal position of the NOTE: VALVE position indicator needle at the "CL/OP" positions when different part number combinations of the cabin pressure controller and outflow valve are installed on the aircraft.

- E. Put the airplane back to its usual condition.
 - If the ac motors(7) were installed from in the bulk cargo compartment, do the steps that follow:
 - (a) Install the debris screen(3) if it is necessary.
 - (b) Install the endliner on the aft end of the bulk cargo compartment (AMM 25-52-01/401).
 - Close the aft cargo door, 822, or the bulk cargo door, 811 (AMM 06-46-00/201).
 - Remove the electrical power if it is not necessary (AMM 24-22-00/201).

EFFECTIVITY

REPLACE

OUTFLOW VALVE ACTUATOR AC MOTOR

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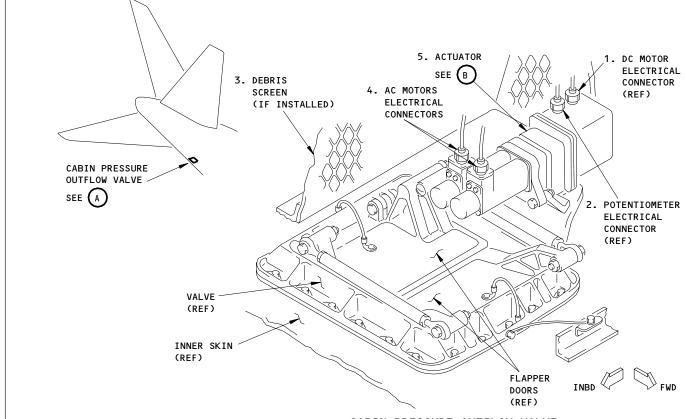
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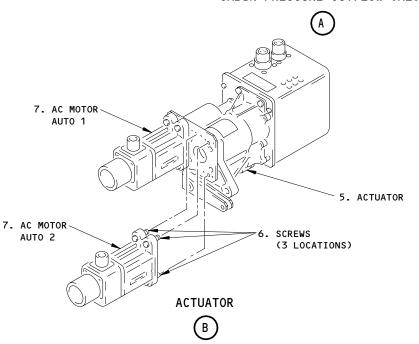


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AIRLINE CARD NO.



CABIN PRESSURE OUTFLOW VALVE



Cabin Pressure Outflow Valve Actuator AC Motors Installation Figure 401

REPLACE OUTFLOW VALVE ACTUATOR AC MOTOR

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STA	TION								BOE	ING CARD	NO.
TAII	L NO.		c	AS &	BO		G		21-R	O5	D NO.
D	ATE		3	AS C	7	67					
					TASK	CARD					
SKILL	WORK ARE	A	REL	ATED TASK		INTERVAL		PHASE	MPD REV		K CARD VISION
AIRPL	FUSELAG	E							011	DEC	22/06
TAS	K			TITLE			STRUCTURAL ILLUSTRATION RE	FERENCE	AIRPLAN	PLICABIL	LITY ENGINE
REPLA	CE	TRIM	I AIR M	ODULATING	VALVE				AIRPLAN	IE.	ENGINE
									PAS	S	ALL
	ZONES						ACCESS PANELS				
135				193FL							
MECH THED										MPD ITEM	NUMBER

MECH INSP

REPLACE THE TRIM AIR MODULATING VALVE.

21-61-07-4A

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

- 1. Trim Air Modulating Valve Removal
 - A. References
 - (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
 - (2) AMM 24-22-00/201, Electrical Power Control
 - B. Access

 - (2) Access Panel 193FL ECS Components Access Panel
 - C. Prepare for the Removal
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Turn the two control selector switches for the air conditioning packs, on the pilot's overhead panel P5, to the OFF position.
 - (a) Make sure the PACK OFF light comes on.

REPLACE TRIM AIR MODULATING VALVE
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TASK CARD

MECH	INSP		
			(b) Attach the DO-NOT-OPERATE tags to the two pack control switches.
		(3)	Open these circuit breakers on the overhead circuit breaker panel, P11, and attach DO-NOT-CLOSE tags:
			(a) 11C33, TRIM AIR
			(b) 11P24, ZONE TEMP CONT MAN FLT DK
			(c) 11P25, ZONE TEMP CONT VLV CLOSE FWD
			(d) 11P26, ZONE TEMP CONT VLV CLOSE MID
			(e) 11P27, ZONE TEMP CONT VLV CLOSE AFT
			(f) SAS 153-999, AND ALL MTH AIRPLANES;
			11H2, ZONE TEMP CONT VLV CLOSE AUX FWD
			11H3, ZONE TEMP CONT VLV CLOSE AUX MID
			11H5, ZONE DUCT OVHT AUX FWD
			11H6, ZONE DUCT OVHT AUX MID
			(g) 11R24, ZONE DUCT OVHT FLT DK
			(h) 11R25, ZONE DUCT OVHT FWD
			(i) 11R26, ZONE DUCT OVHT MID
			(j) 11R27, ZONE DUCT OVHT AFT
		(4)	Open the access panel 193FL, forward of the left Environmental Control System (ECS) bay door 193NL (AMM 06-41-00/201).
			(a) Find the modulating valve (11).
		D. Remo	ve the Modulating Valve
		(1)	Disconnect the electrical connectors (10, 12) from the valve (11).
		(2)	Disconnect the bonding jumpers (2) from the valve (11).
		(3)	Loosen the couplings (7) on the two sides of the valve (11).
FFF	ECTI	/ITY 	
		* 1 1	REPLACE TRIM ATR MODULATING VALVE

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (a) Move the couplings (7) away from the valve (11).
- (4) Remove the valve (11).
- (5) Put a cover on the duct holes to keep out unwanted objects.

2. Trim Air Modulating Valve Installation

A. Parts

(1) Refer to the parts table which follows to find the Illustrated Parts Catalog (IPC) item numbers which correspond to the AMM item numbers in this procedure:

АММ			AIPC			
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM	
401 402	3 4 5 7 11 3 4 5 7	Bolt Washer Nut Coupling (Clamp) Valve Bolt Washer Nut Coupling (Clamp) Valve	21-61-05 21-61-05	02	105 110 115 170 435 105 110 115 170 435	

B. References

- (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
- (2) AMM 24-22-00/201, Electrical Power Control
- (3) AMM 36-00-00/201, Pneumatic General

C. Access

(1) Location Zone

135 Environmental Control System Bay (Left)

EFFECTIVITY

REPLACE TRIM AIR MODULATING VALVE

21-61-07-4A

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TASK CARD

AIRLINE CARD NO.

			TASK CARD
MECH	INSP	(2)	Access Panel
			193FL ECS Components Access Panel
		D. Prod	cedure
		(1)	Remove the covers on the ducts.
		(2)	Install the modulating valve (11) into the duct (6).
			(a) Make sure the flow arrow (9) points forward.
		(3)	Move each coupling (7) into its position on each side of the valve (11).
		(4)	Tighten the couplings 45 +5/-0 pound-inches.
		(5)	Install the bonding jumpers (2) to the valve (11) with a bolt (3), washer (4), and nut (5).
		(6)	Install the electrical connectors (10, 12) to the valve (11).
		(7)	Remove the DO-NOT-CLOSE tags and close these circuit breakers on the P11 panel:
			(a) 11C33, TRIM AIR
			(b) 11P24, ZONE TEMP CONT MAN FLT DK
			(c) 11P25, ZONE TEMP CONT VLV CLOSE FWD
			(d) 11P26, ZONE TEMP CONT VLV CLOSE MID
			(e) 11P27, ZONE TEMP CONT VLV CLOSE AFT
			(f) SAS 153-999, AND ALL MTH AIRPLANES;
			11H2, ZONE TEMP CONT VLV CLOSE AUX FWD
			11H3, ZONE TEMP CONT VLV CLOSE AUX MID
			11H5, ZONE DUCT OVHT AUX FWD
			11H6, ZONE DUCT OVHT AUX MID
			(g) 11R24, ZONE DUCT OVHT FLT DK
			19

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SAS FOEING
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TASK CARD

MECH INSP

- (h) 11R25, ZONE DUCT OVHT FWD
- (i) 11R26, ZONE DUCT OVHT MID
- (j) 11R27, ZONE DUCT OVHT AFT
- E. Do the trim air modulating valve operational test.
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Supply pneumatic power (AMM 36-00-00/201).
 - (3) Push the TRIM AIR switch-light, on the P5 panel, to the ON position.
 - (a) Make sure the ON light comes on.
 - (4) Remove the DO-NOT-OPERATE tags from the two control selector switches for the air conditioning packs.
 - (5) Turn the two control selector switches for the air conditioning packs, on the P5 panel, to the AUTO position.
 - (6) Turn the temperature selector switch, for the applicable zone, to the AUTO W position.
 - (7) Do a check of the valve flanges for leakage.
 - (a) Some leakage is permitted.
 - (b) If the leakage is strong, align the joint and tighten the coupling.
 - (8) Push the ECS MSG switch on the EICAS MAINT panel on the right side panel, P61.
 - (9) Make sure the applicable TRIM VALVE position shows between 0.90 and 1.00 on the EICAS display.
 - (10) Turn the two pack control switches, on the P5 panel, to the OFF position.
 - (a) Make sure the PACK OFF light comes on.
- F. Put the Airplane Back to Its Usual Condition
 - (1) Close the access panel 193FL (AMM 06-41-00/201).

EFFECTIVITY

REPLACE

TRIM AIR MODULATING VALVE

21-61-07-4A

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TASK CARD

AIRLINE CARD NO.

- (2) Remove pneumatic power if it is not necessary (AMM 36-00-00/201).
- (3) Remove electrical power if it is not necessary (AMM 24-22-00/201).
- 3. Forward Cargo Zone Trim Air Modulating Valve Removal (Fig. 402)
 - A. References
 - (1) AMM 06-46-00/201, Entry, Service and Cargo Doors Access Doors and Panels
 - (2) AMM 24-22-00/201, Electrical Power Control
 - (3) AMM 25-52-01/401, Containerized Cargo Compartment Sidewall Lining
 - B. Access
 - (1) Location Zone 125 Area aft of the Forward Cargo Compartment (Left)
 - C. Prepare for the Removal
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Turn the two control selector switches for the air conditioning packs, on the pilot's overhead panel P5, to the OFF position.
 - (a) Make sure the PACK OFF light comes on.
 - (b) Attach the DO-NOT-OPERATE tags on the two pack control switches.
 - (3) Push the FWD CARGO A/C switch-light on the P5 panel to the OFF position.
 - (a) Make sure the INOP light comes on.
 - (b) Attach a DO-NOT-OPERATE tag on the switch-light.
 - (4) Open these circuit breakers on the overhead circuit breaker panel, P11, and attach D0-NOT-CLOSE tags:
 - (a) 11C33, TRIM AIR
 - (b) 11N21, FWD CARGO TEMP CONT VLV CLOSE

EFFECTIVITY -	REPLACE	TRIM AIR MODUL	ATING	VAI VF
	21-61-07-4A			6 OF 12 DEC 22/06

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A BOEING 767 TASK CARD

MECH INSP

- (c) 11N22, FWD CARGO DUCT OVHT/INOP
- (5) Open the forward cargo door 821 (Ref 06-46-00).
- (6) Remove the aft end lining of the forward cargo compartment (Ref 25-52-01).
 - (a) Find the modulating valve (11).
- Remove the Modulating Valve
 - (1) Disconnect the electrical connectors (10, 12) from the valve (11).
 - (2) Disconnect the bonding jumpers (2) from the valve (11).
 - (3) Loosen the couplings (7) on the two sides of the valve (11).
 - (4) Move the couplings (7) away from the valve (11).
 - (5) Remove the valve (11).
 - (6) Put a cover on the duct holes to keep out unwanted objects.
- <u>Install the Forward Cargo Zone Trim Air Modulating Valve</u> (Fig. 402)

Parts

AMM			AIPC			
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM	
401	3 4 5 7 11 3 4 5 7	Bolt Washer Nut Coupling (Clamp) Valve Bolt Washer Nut Coupling (Clamp) Valve	21-61-05 21-61-05	02	105 110 115 170 435 105 110 115 170 435	

References

EFFECTIVITY REPLACE TRIM AIR MODULATING VALVE 21-61-07-4A 21-R05 PAGE 7 OF 12 DEC 22/06

AIRLINE CARD NO.

SAS BOEING
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TASK CARD

MECH INSP

- (1) AMM 06-46-00/201, Entry, Service and Cargo Doors Access Doors and Panels
- (2) AMM 24-22-00/201, Electrical Power Control
- (3) AMM 25-52-01/401, Containerized Cargo Compartment Sidewall Lining
- (4) AMM 36-00-00/201, Pneumatic General
- C. Access
 - (1) Location Zone 125 Area aft of Forward Cargo Compartment (Left)
- D. Procedure
 - (1) Remove the covers on the duct.
 - (2) Install the valve (11) into the duct (6).
 - (a) Make sure the flow arrow (9) points forward.
 - (3) Move each coupling (7) into its position on each side of the valve (11).
 - (4) Tighten the couplings to 45 pound-inches.
 - (5) Install the bonding jumpers (2) to the valve (11) with a bolt (3), washer (4), and nut (5).
 - (6) Install the electrical connectors (10, 12) to the valve (11).
 - (7) Remove the DO-NOT-CLOSE tags and close these circuit breakers on the P11 panel:
 - (a) 11C33, TRIM AIR
 - (b) 11N21, FWD CARGO TEMP CONT VLV CLOSE
 - (c) 11N22, FWD CARGO DUCT OVHT/INOP
- E. Do the trim air modulating valve operational test.
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Supply pneumatic power (AMM 36-00-00/201).

EFFECTIVITY

REPLACE

TRIM AIR MODULATING VALVE

21-61-07-4A

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BOEING 767 TASK CARD

MECH INSP

- (3) Push the TRIM AIR switch-light, on the P5 panel, to the ON position.
 - (a) Make sure the ON light comes on.
- (4) Remove the DO-NOT-OPERATE tags from the two control selector switches for the air conditioning packs, on the P5 panel.
- (5) Put the two control selector switches for the air conditioning packs, on the P5 panel, to the AUTO position.
- (6) Remove the DO-NOT-OPERATE tag from the FWD CARGO A/C switch-light.
- (7) Push the FWD CARGO A/C switch-light to the ON position.
 - (a) Make sure that the ON light comes on.
- Turn the temperature selector switch for the FWD CARGO A/C zone, on the P5 panel, to the AUTO W position.
- (9) Do a check of the valve flanges for leakage.
 - (a) Some leakage is permitted.
 - If the leakage is strong align the joint and tighten the coupling.
- Turn the two control selector switches for the air conditioning packs, on the P5 panel, to the OFF position.
 - (a) Make sure the PACK OFF light comes on.
- Put the Airplane Back to Its Usual Condition
 - (1) Install the aft end lining of the forward cargo compartment (Ref 25-52-01).
 - (2) Close the forward cargo door 821 (AMM 06-46-00/201).
 - Remove pneumatic power if it is not necessary (AMM 36-00-00/201).
 - (4) Remove electrical power if it is not necessary (AMM 24-22-00/201).

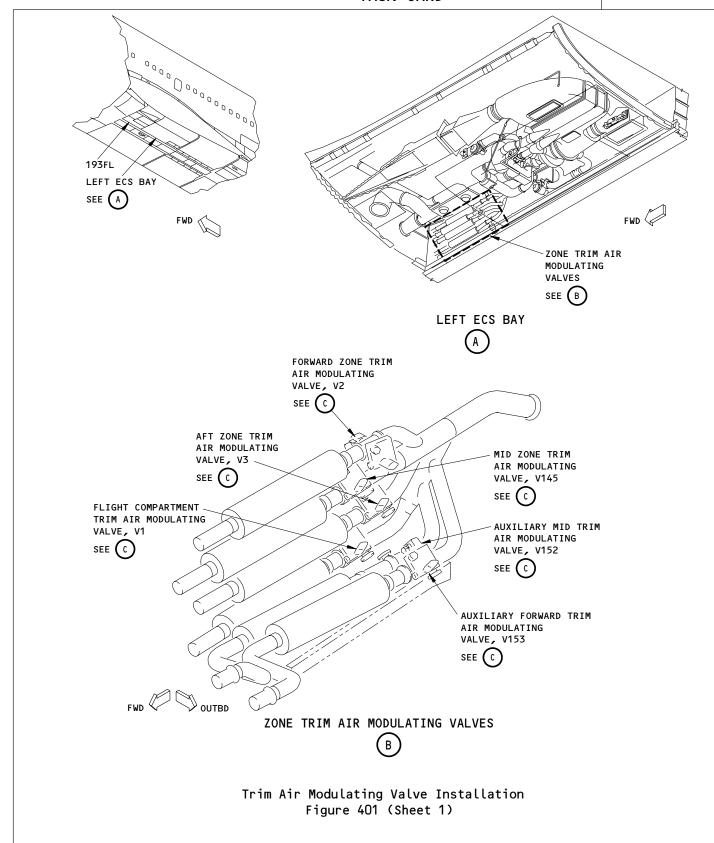
BOEING CARD NO.

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BOEING 767 TASK CARD

21-R05

AIRLINE CARD NO.



REPLACE

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TRIM AIR MODULATING VALVE

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BOEING CARD NO.

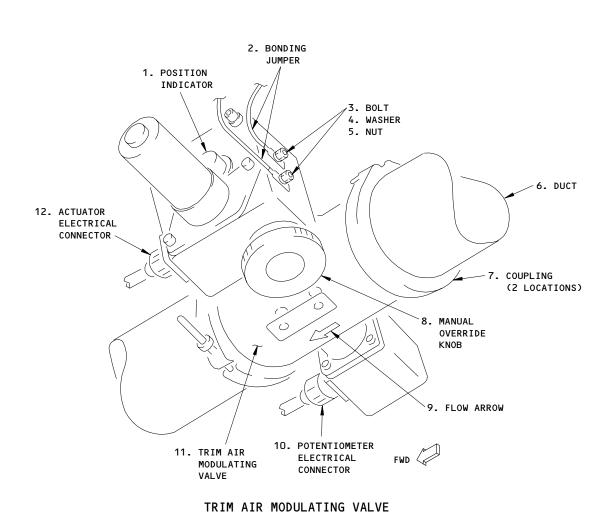
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BOEING TASK CARD

21-R05

AIRLINE CARD NO.



Trim Air Modulating Valve Installation Figure 401 (Sheet 2)

(EXAMPLE)

EFFECTIVITY REPLACE TRIM AIR MODULATING VALVE 21-61-07-4A 21-R05 PAGE 11 OF 12 AUG 22/06 BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

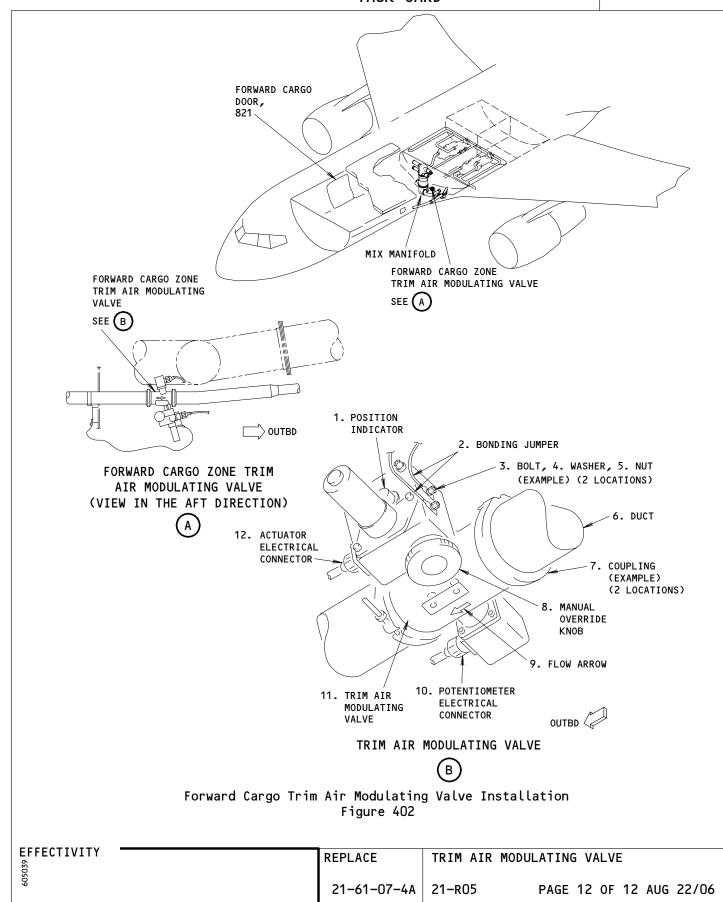
BOEING CARD NO.

767 TASK CARD

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AIRLINE CARD NO.



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STA	TION							BOE	ING CAR	D NO.
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		5	SAS &		767			AIRI	INE CAR	D NO.
D	ATE	_			< CARD					
SKILL	WORK ARE	A RI	ELATED TASK		INTERVAL		PHASE	MPD REV	l	SK CARD VISION
AIRPL	ECS BAY			4C			14848	011	DEC	22/08
TAS	K	·	TITLE			STRUCTURAL ILLUSTRATION RE	FERENCE		PLICABI	
CHECK	/INSP	CABIN AIR	SUPPLY CH	ECK VALVE				AIRPLAN	E	ENGINE
								ALL		ALL
	ZONES					ACCESS PANELS				

MECH INSP MPD ITEM NUMBER

VISUALLY CHECK CABIN AIR SUPPLY CHECK VALVE FLAPPER AND HINGE PIN FOR CONDITION (REMOVAL FROM DUCT REQUIRED).

193FL 193NL 194HR 194LR

21-51-15-6A

- 1. <u>Cabin Air Supply Check Valve Inspection</u> (Fig. 601)
 - A. General

135 136

- (1) This task is for a scheduled maintenance task.
- B. References
 - (1) AMM 21-51-15/401, Cabin Air Supply Check Valve
- C. Access
 - (1) Location Zones 135/136 Environmental Control System (ECS) Bay
 - (2) Access Panels 193NL/194LR ECS access doors
- D. Prepare to Examine the Check Valve
 - (1) Remove the check valve for the cabin air supply (AMM 21-51-15/401).
- E. Examine the Check Valve
 - (1) Examine the check valve for these conditions:
 - (a) Make sure there are no missing parts on the check valve.
 - (b) Make sure the check valve parts have no cracks.
 - (c) Make sure the check valve parts have no corrosion.

CHECK/INSP CABIN AIR SUPPLY CHECK VALVE

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BOEING CARD NO.

21-001-01

AIRLINE CARD NO.

				TASK CARD
MECH 1	INSP			
			(d)	Make sure there are no signs of leaks when the check valve flapper is in the closed position.
				 Make sure the mating surfaces of the check valve flapper and the check valve body are symmetrically worn.
				 Make sure there are no carbon particles near the mating surfaces of the check valve flapper and the check valve body.
			(e)	Make sure the thickness of the check valve flapper where it touches the flapper stop is more than 0.055-inches (1.4-millimeters).
			(f)) Make sure the check valve flapper moves smoothly and easily.
				place the check valve with a serviceable check valve if any of the ove conditions are not met (AMM 21-51-15/401).
		F.	Put the	airplane back to its usual condition
			(1) Ins	stall the check valve for the cabin air supply (AMM 21-51-15/401).

EFFECTIVITY

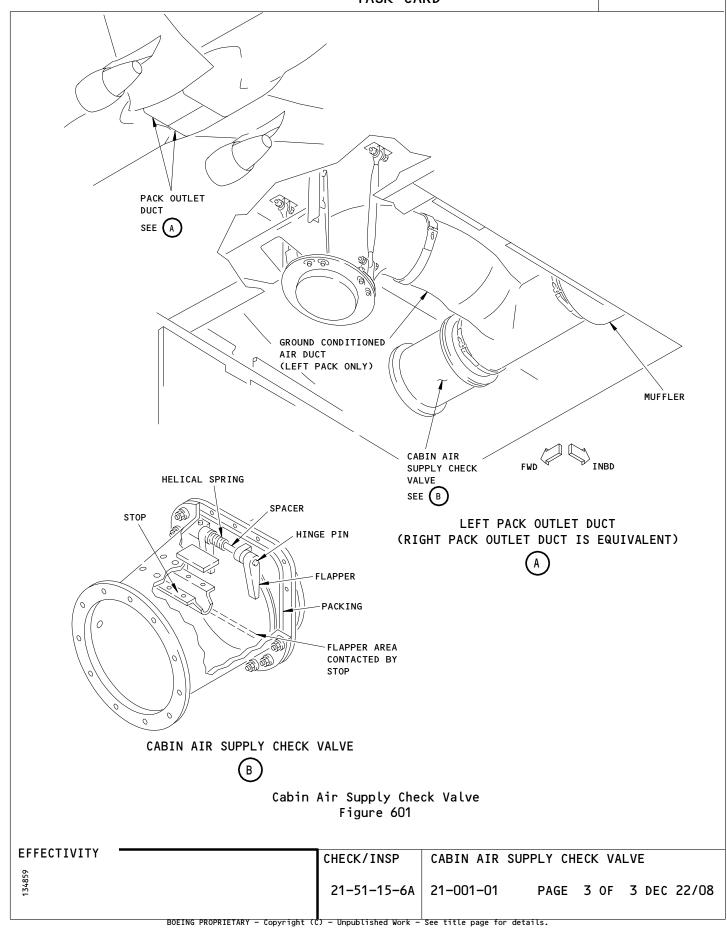
BOEING CARD NO.

AIRLINE CARD NO.

21-001-01

SAS

BOEING 767 TASK CARD



STATION
TAIL NO.
DATE

SKILL

MECH INSP



BOEING CARD NO. 21-002-01

AIRLINE CARD NO.

TASK CARD

REVISION

MPD

REV

PHASE

012 AUG 22/01 AIRPL PASS CABIN 1C 11212 APPLICABILITY
ANE ENGINE STRUCTURAL ILLUSTRATION REFERENCE AIRPLANE **CLEAN** RETURN AIR GRILLES/LOUVERS ALL ALL ZONES ACCESS PANELS

INTERVAL

220 230 240 250

WORK AREA

MPD ITEM NUMBER

CLEAN RETURN AIR GRILLES/LOUVERS.

RELATED TASK

21-23-05-2A

- 1. Return Air Grille Cleaning (Fig. 201, Fig. 201A)
 - A. Equipment
 - (1) Vacuum Cleaner commercially available
 - B. References
 - (1) AMM 25-25-01/201, Passenger Seats
 - Access C.
 - (1) Location Zones 221/222, 231/232, 241/242, 251/252 Passenger Cabin
 - Return Air Grille Cleaning
 - (1) Remove the passenger seats to get access to the return air grille (AMM 25-25-01/201).
 - (2) Remove the return air grille.
 - Use the vacuum cleaner to remove the dust, lint, and unwanted material from the return air grille.
 - (4) Use the vacuum cleaner to remove the dust, lint, or unwanted material from the airplane structure behind the return air grille.
 - (5) Install the return air grille.
 - (6) Install the passenger seats (AMM 25-25-01/201).

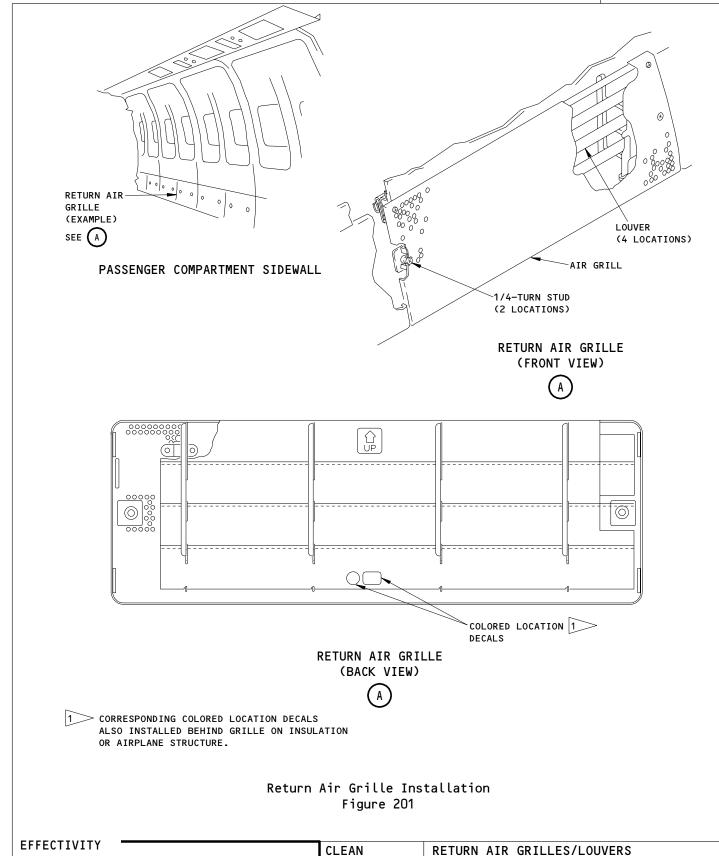
EFFECTIVITY CLEAN RETURN AIR GRILLES/LOUVERS 21-23-05-2A 21-002-01 PAGE 1 OF 3 AUG 22/01

AIRLINE CARD NO.

SAS



21-002-01



AIR GRILLES

₹67-200/300 AIRPLANES WITH METAL RETUR

21-23-05-2A

21-002-01

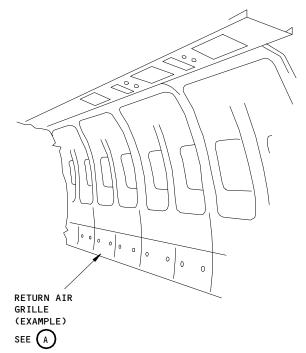
PAGE 2 OF 3 AUG 22/00

21-002-01

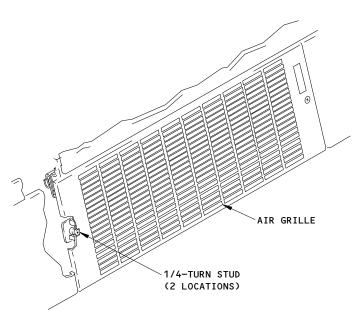
AIRLINE CARD NO.

SAS





PASSENGER COMPARTMENT SIDEWALL



RETURN AIR GRILLE



Return Air Grille Installation Figure 201A

EFFECTIVITY

ਕੂ67-200/300 AIRPLANES WITH INJECTION MOLDED ULTEM RETURN AIR GRILLES CLEAN

RETURN AIR GRILLES/LOUVERS

21-23-05-2A

21-002-01

PAGE 3 OF 3 AUG 22/00

STATION	
TATI NO	
TAIL NO.	
DATE	

SKILL

WORK AREA



BOEING CARD NO.
21-003-03

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

AIRPL A/C MIX BAY

TITLE

REV REVISION

10202 012 DEC 22/07

STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY

INTERVAL

TASK
REPLACE
RECIRCULATION AIR PREFILTERS
STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY AIRPLANE ENGINE
200 ALL

ZONES ACCESS PANELS

125 126 1251 821

MECH INSP MPD ITEM NUMBER

DISCARD THE DONALDSON RECIRCULATION AIR PRE-FILTER.

21-25-02-4A

(P/N: AB0468961)

ACCESS NOTE: SPECIAL ACCESS 1251 REQUIRES REMOVAL OF FORWARD CARGO COMPARTMENT AFT WALL PANELS.

1. Recirculation Air Filter Replacement

RELATED TASK

- A. Equipment
 - (1) Plastic disposal bags (38"x48", 1-2mil, 40-42 gal) (or equivalent)
 - (2) Personal protective equipment & clothing (PPE/PPC) (disposable) commercially available
 - (a) Particulate Respirator (NIOSH 42 CFR 84 Class N95, N99, N100) 3M model 8210 (or eqiuvalent)
 - (b) Safety Goggles 3M model 1621 (or equivalent)
 - (c) Latex or Nitrile Gloves Kimberly-Clark KleenGuard, SafeSkin, or ShieldMaster models (or equivalent)
 - (d) Coverall with hood Dupont 'Tyvek' style S1428 or 01414 (or equivalent)
- B. Parts

REPLACE RECIRCULATION AIR PREFILTERS
767-200 AIRPLANES
21-25-02-4A 21-003-03 PAGE 1 OF 6 DEC 22/07

SAS BOEING TASK CARD

AIRLINE CARD NO.

MECH INSP

АММ			AIPC			
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM	
401 401 401 401 401 401 401 401		Recirculation Air Filter	21-25-01 21-25-01 21-25-01 21-25-01 21-25-01 21-25-01 21-25-01 21-25-01	01 01 01 01 01 03 03	110 120 121 125 127 120 125 127	

C. References

- (1) AMM 24-22-00/201, Electrical Power
- (2) AMM 25-52-01/401, Containerized Cargo Compartment Sidewall Panels
- D. Access
 - (1) Location Zones

Area Aft of Forward Cargo Compartment (Left) 125 126 Area Aft of Forward Cargo Compartment (Right)

(2) Access Panels

821 Forward Cargo Door

- E. Prepare for Removal
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Do this step if you will remove the left recirculation air filter:
 - (a) Push the L RECIRC FAN switch-light, on the P5 overhead panel, to the off position and attach a DO-NOT-OPERATE tag.
 - 1) Make sure the ON light goes off.
 - (3) Do this step if you will remove the right recirculation air filter:

EFFECTIVITY REPLACE RECIRCULATION AIR PREFILTERS 767-200 AIRPLANES 21-25-02-4A 21-003-03 PAGE 2 OF 6 AUG 22/07

21-003-03

AIRLINE CARD NO.



MECH INSP

- (a) Push the R RECIRC FAN switch-light, on the P5 overhead panel, to the off position and attach a D0-N0T-OPERATE tag.
 - 1) Make sure the ON light goes off.
- (4) Open the forward cargo door, 821.
- (5) Remove the aft endwall (bulkhead) panels in the forward cargo compartment to get access to the recirculation air filters (AMM 25-52-01/401).

WARNING: PUT ON THE PERSONAL PROTECTIVE EQUIPMENT BEFORE YOU TOUCH THE FILTER. THE FILTER REMOVES SMALL PARTICLES (SMOKE, DUST, LINT, FIBERS, POLLEN) AND INFECTIOUS MATERIALS (BACTERIA, VIRUSES, MOLD SPORES, FUNGI) FROM THE AIR WHICH CAN CAUSE ILLNESSES.

- (6) Put on the personal protective equipment before you touch the filter.
- F. Prefilter Replacement (Fig. 401)

NOTE: Donaldson 'two-piece' prefilter/particulate filter combination is interchangeable with the Donaldson and Pall Land & Marine 'single-piece' HEPA filters (767-SL-21-058).

(1) Remove the filter retainer channel from the filter tray.

WARNING: DO NOT LET THE FILTER TOUCH YOUR SKIN. DO NOT SHAKE OR HIT THE FILTER. DO NOT LET THE FILTER FALL. DO NOT USE COMPRESSED AIR TO CLEAN THE FILTER OR FILTER HOUSING. THIS CAN CAUSE THE INFECTIOUS MATERIAL TO BECOME AIRBORNE. DISCARD THE FILTER IN A PLASTIC DISPOSAL BAG. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN CAUSE INJURIES TO PERSONS.

(2) Pull the 1-inch thick prefilter out from the top position of the filter tray.

NOTE: As an option the prefilter media can be replaced instead of replacement of the entire prefilter assembly (767-SL-21-053).

EFFECTIVITY

767-200 AIRPLANES

REPLACE

RECIRCULATION AIR PREFILTERS

21-25-02-4A

21-003-03

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21-003-03

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

(a) To replace the prefilter media, twist the corners of the prefilter frame then remove the prefilter media from the frame.

WARNING: PUT ALL AIR FILTERS THAT ARE REMOVED FROM THE AIRPLANE INTO PLASTIC DISPOSAL BAGS. OBEY THE AIRLINE POLICY, LOCAL HEALTH DEPARTMENT AND LAW ENFORCEMENT REGULATIONS FOR DISPOSAL OF MATERIAL.

- (b) Put the filter in a plastic disposal bag and discard in accord with airline, local health, safety and regulatory procedures for disposal of material.
- (c) Carefully put the new prefilter media (Donaldson p/n AB0470048) into the frame so that the "blue" side of the prefilter media faces the upstream side of the filter frame.

NOTE: An airflow arrow is on the prefilter frame to help determine which side is the upstream side of the frame.

- (3) Push a new 1-inch thick prefilter into the top position of the filter tray.
 - (a) Make sure the airflow arrow on the filter frame points down into the filter tray.
- (4) Reinstall the filter retainer channel to the filter tray.
- G. Restore the Airplane to Normal

WARNING: DISCARD ALL PERSONAL PROTECTIVE EQUIPMENT AFTER YOU USE IT ONE TIME. DO NO TRY TO CLEAN IT. DISCARD THE EQUIPMENT IN A PLASTIC DISPOSAL BAG.

(1) Remove the personal protective equipment and put them in a plastic disposal bag, and discard them in accord with airline, local health, safety and regulatory procedures for disposal of material.

<u>WARNING</u>: CLEAN YOUR HANDS WITH SOAP AND RUNNING HOT WATER. DIRTY HANDS WITH CONTAMINATION CAN CAUSE DISEASE AND ILLNESSES.

EFFECTIVITY

767-200 AIRPLANES

REPLACE

RECIRCULATION AIR PREFILTERS

21-25-02-4A

21-003-03

PAGE 4 OF 6 AUG 22/07

BOEING CARD NO.

21-003-03

AIRLINE CARD NO.



MECH INSP (2) CLean your hands with soap and running hot water. Reinstall the aft endwall (bulkhead) panels in the forward cargo compartment (AMM 25-52-01/401). (4) Close the forward cargo door, 821. (5) Remove the DO-NOT-OPERATE tag(s) from the L/R RECIRC FAN switch-light(s) on the P5 overhead panel. (6) Remove electrical power (AMM 24-22-00/201).

EFFECTIVITY

767-200 AIRPLANES

REPLACE

RECIRCULATION AIR PREFILTERS

21-25-02-4A

21-003-03

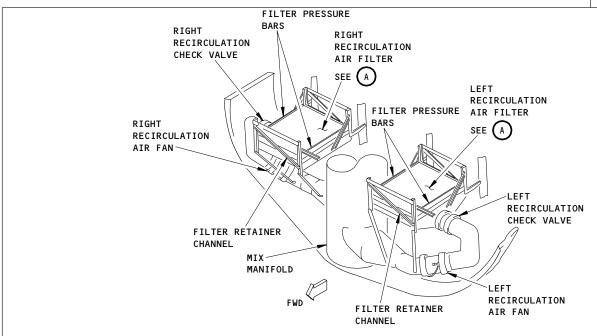
PAGE 5 OF 6 AUG 22/07

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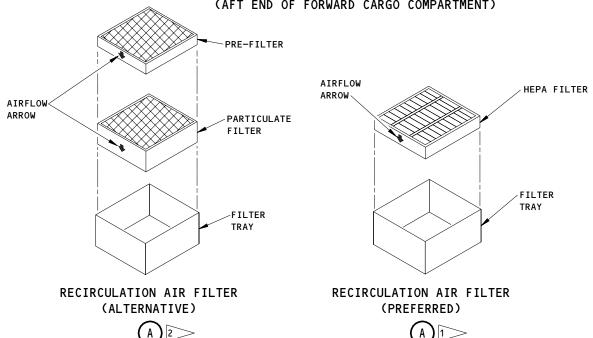
21-003-03

AIRLINE CARD NO.



MIX MANIFOLD BAY

(AFT END OF FORWARD CARGO COMPARTMENT)



SINGLE-PIECE HEPA FILTER (DONALDSON OR PALL-LAND & MARINE).

TWO-PIECE AIR FILTER COMBO (DONALDSON).

Recirculation Air Filter Installation Figure 401

REPLACE RECIRCULATION AIR PREFILTERS

21-25-02-4A 21-003-03 PAGE 6 OF 6 AUG 22/07

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STATION	
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TAIL NO.	
TAIL NO.	
DATE	
DATE	

SKILL



BOEING CARD NO.
21-003-04

AIRLINE CARD NO.

TASK CARD

ALL

MPD

300

PHASE

AIRPL A/C MIX BAY 01000 HRS 10202 012 DEC 22/07

TASK TITLE STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY AIRPLANE ENGINE

REPLACE RECIRCULATION AIR PREFILTERS

INTERVAL

ZONES ACCESS PANELS

125 126

WORK AREA

1251 821

RELATED TASK

MECH INSP MPD ITEM NUMBER

DISCARD THE DONALDSON RECIRCULATION AIR PRE-FILTER.

(P/N: AB0476901)

21-25-02-4A

ACCESS NOTE: SPECIAL ACCESS 1251 REQUIRES REMOVAL OF FORWARD CARGO COMPARTMENT AFT WALL PANELS.

1. Recirculation Air Filter Replacement

- A. Equipment
 - (1) Plastic disposal bags (38"x48", 1-2mil, 40-42 gal) (or equivalent)
 - (2) Personal protective equipment & clothing (PPE/PPC) (disposable) commercially available
 - (a) Particulate Respirator (NIOSH 42 CFR 84 Class N95, N99, N100) -3M model 8210 (or eqiuvalent)
 - (b) Safety Goggles 3M model 1621 (or equivalent)
 - (c) Latex or Nitrile Gloves Kimberly-Clark KleenGuard, SafeSkin, or ShieldMaster models (or equivalent)
 - (d) Coverall with hood Dupont 'Tyvek' style S1428 or 01414 (or equivalent)
- B. Parts

REPLACE RECIRCULATION AIR PREFILTERS
767-300 AIRPLANES
21-25-02-4A 21-003-04 PAGE 1 OF 6 DEC 22/07

AIRLINE CARD NO.

21-003-04

SAS BOEING TASK CARD

MECH INSP

AMM			,	AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM	
401		Recirculation Air Filter	21-25-01	02	264	
401		Recirculation Air Filter	21-25-01	02	265	
401	İ	Recirculation Air Filter	21-25-01	02	270	
401	İ	Recirculation Air Filter	21-25-01	02	272	
401		Recirculation Air Filter	21-25-01	02	273	
401		Recirculation Air Filter	21-25-01	02	275	
401		Recirculation Air Filter	21-25-01	04	185	
401		Recirculation Air Filter	21-25-01	04	190	
401		Recirculation Air Filter	21-25-01	04	195	
401		Recirculation Air Filter	21-25-01	04	197	
401		Recirculation Air Filter	21-25-01	04	300	

C. References

- (1) AMM 24-22-00/201, Electrical Power
- (2) AMM 25-52-01/401, Containerized Cargo Compartment Sidewall Panels
- Access
 - (1) Location Zones

125 Area Aft of Forward Cargo Compartment (Left)

126 Area Aft of Forward Cargo Compartment (Right)

(2) Access Panels

821 Forward Cargo Door

- E. Prepare for Removal
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Do this step if you will remove the left recirculation air filter:
 - (a) Push the L RECIRC FAN switch-light, on the P5 overhead panel, to the off position and attach a DO-NOT-OPERATE tag.
 - 1) Make sure the ON light goes off.

EFFECTIVITY REPLACE 767-300 AIRPLANES

21-003-04

21 005 04

SAS BOEING
767
TASK CARD

AIRLINE CARD NO.

MECH INSP

- (3) Do this step if you will remove the right recirculation air filter:
 - (a) Push the R RECIRC FAN switch-light, on the P5 overhead panel, to the off position and attach a D0-N0T-OPERATE tag.
 - 1) Make sure the ON light goes off.
- (4) Open the forward cargo door, 821.
- (5) Remove the aft endwall (bulkhead) panels in the forward cargo compartment to get access to the recirculation air filters (AMM 25-52-01/401).
- WARNING: PUT ON THE PERSONAL PROTECTIVE EQUIPMENT BEFORE YOU TOUCH THE FILTER. THE FILTER REMOVES SMALL PARTICLES (SMOKE, DUST, LINT, FIBERS, POLLEN) AND INFECTIOUS MATERIALS (BACTERIA, VIRUSES, MOLD SPORES, FUNGI) FROM THE AIR WHICH CAN CAUSE ILLNESSES.
- (6) Put on the personal protective equipment before you touch the filter.
- F. Prefilter Replacement (Fig. 401)
 - NOTE: Donaldson 'two-piece' prefilter/particulate filter combination is interchangeable with the Donaldson and Pall Land & Marine 'single-piece' HEPA filters (767-SL-21-058).
 - (1) Remove the two filter retainer brackets from the filter tray.
 - WARNING: DO NOT LET THE FILTER TOUCH YOUR SKIN. DO NOT SHAKE OR HIT THE FILTER. DO NOT LET THE FILTER FALL. DO NOT USE COMPRESSED AIR TO CLEAN THE FILTER OR FILTER HOUSING. THIS CAN CAUSE THE INFECTIOUS MATERIAL TO BECOME AIRBORNE. DISCARD THE FILTER IN A PLASTIC DISPOSAL BAG. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN CAUSE INJURIES TO PERSONS.
 - (2) Pull the 1-inch thick prefilter out from the top position of the filter tray.

<u>NOTE</u>: As an option the prefilter media can be replaced instead of replacement of the entire prefilter assembly (767-SL-21-053).

EFFECTIVITY

767-300 AIRPLANES

REPLACE

RECIRCULATION AIR PREFILTERS

21-25-02-4A

21-003-04

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21-003-04

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

(a) To replace the prefilter media, carefully twist the prefilter frame until you can pull the prefilter media out of the frame, then discard the prefilter media.

WARNING: PUT ALL AIR FILTERS THAT ARE REMOVED FROM THE AIRPLANE INTO PLASTIC DISPOSAL BAGS. OBEY THE AIRLINE POLICY, LOCAL HEALTH DEPARTMENT AND LAW ENFORCEMENT REGULATIONS FOR DISPOSAL OF MATERIAL.

- (b) Put the filter in a plastic disposal bag and discard in accord with airline, local health, safety and regulatory procedures for disposal of material.
- (c) Carefully put the new prefilter media (Donaldson p/n AB0476900) into the frame so that the "blue" side of the prefilter media faces the upstream side of the filter frame.

NOTE: An airflow arrow is on the prefilter frame to help determine which side is the upstream side of the frame.

- (3) Push a new 1-inch thick prefilter into the top position of the filter tray.
 - (a) Make sure the airflow arrow on the filter frame points down into the filter tray.
- (4) Reinstall the filter retainer brackets to the filter tray.
- G. Restore the Airplane to Normal

WARNING: DISCARD ALL PERSONAL PROTECTIVE EQUIPMENT AFTER YOU USE IT ONE TIME. DO NO TRY TO CLEAN IT. DISCARD THE EQUIPMENT IN A PLASTIC DISPOSAL BAG.

(1) Remove the personal protective equipment and put them in a plastic disposal bag, and discard them in accord with airline, local health, safety and regulatory procedures for disposal of material.

<u>WARNING</u>: CLEAN YOUR HANDS WITH SOAP AND RUNNING HOT WATER. DIRTY HANDS WITH CONTAMINATION CAN CAUSE DISEASE AND ILLNESSES.

EFFECTIVITY

767-300 AIRPLANES

REPLACE

RECIRCULATION AIR PREFILTERS

21-25-02-4A

21-003-04

PAGE 4 OF 6 AUG 22/07

BOEING CARD NO.

21-003-04

AIRLINE CARD NO.

	TASK CARD
CH INSP	
	(2) Clean your hands with soap and running hot water.
	(3) Reinstall the aft endwall (bulkhead) panels in the forward cargo compartment (AMM 25-52-01/401).
	(4) Close the forward cargo door, 821.
	(5) Remove the DO-NOT-OPERATE tag(s) from the L/R RECIRC FAN switch-light(s) on the P5 overhead panel.
	(6) Remove electrical power (AMM 24-22-00/201).

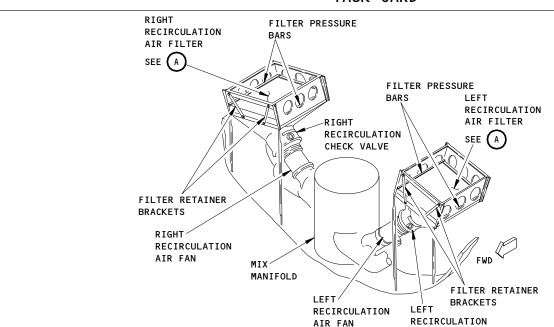
EFFECTIVITY

21-003-04

AIRLINE CARD NO.

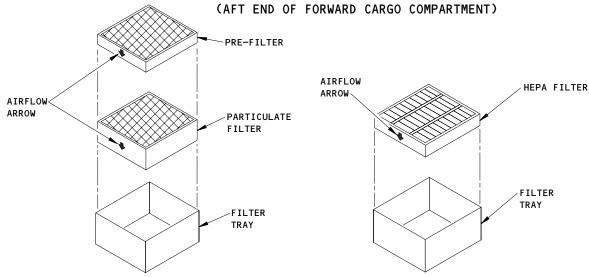
SAS

BOEING 767 TASK CARD



MIX MANIFOLD BAY (AFT END OF FORWARD CARGO COMPARTMENT)

CHECK VALVE



RECIRCULATION AIR FILTER (ALTERNATIVE)



RECIRCULATION AIR FILTER (PREFERRED)



> SINGLE-PIECE HEPA FILTER (DONALDSON OR PALL-LAND & MARINE).

TWO-PIECE AIR FILTER COMBO (DONALDSON).

Recirculation Air Filter Installation Figure 401

EFFECTIVITY RECIRCULATION AIR PREFILTERS REPLACE ₹67-300 AIRPLANES 21-25-02-4A 21-003-04 PAGE 6 OF 6 AUG 22/07

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STATION
TAIL NO.
DATE

WORK AREA



BOEING CARD NO. 21-004-03

AIRLINE CARD NO.

TASK CARD

MPD

RELATED TASK INTERVAL SKILL PHASE REVISION REV 1C 013 AUG 22/07 AIRPL A/C MIX BAY 11212

APPLICABILITY
AIRPLANE ENGINE STRUCTURAL ILLUSTRATION REFERENCE **REPLACE** RECIRC AIR HIGH EFFICIENCY FILTERS 200 ALL

ACCESS PANELS ZONES

125 126 1251 821

MPD ITEM NUMBER MECH INSP

DISCARD THE DONALDSON RECIRCULATION AIR PARTICULATE FILTER.

21-25-02-4B

(P/N: AB0468753)

ACCESS NOTE: SPECIAL ACCESS 1251 REQUIRES REMOVAL OF FORWARD CARGO COMPARTMENT AFT WALL PANELS.

1. Recirculation Air Filter Replacement

- Equipment
 - (1) Plastic disposal bags (38"x48", 1-2mil, 40-42 gal) (or equivalent)
 - Personal protective equipment & clothing (PPE/PPC) (disposable) commercially available
 - Particulate Respirator (NIOSH 42 CFR 84 Class N95, N99, N100) -3M model 8210 (or eqiuvalent)
 - Safety Goggles 3M model 1621 (or equivalent)
 - Latex or Nitrile Gloves Kimberly-Clark KleenGuard, SafeSkin, or ShieldMaster models (or equivalent)
 - Coverall with hood Dupont 'Tyvek' style S1428 or 01414 (or equivalent)
- B. Parts

EFFECTIVITY REPLACE RECIRC AIR HIGH EFFICIENCY FILTERS 767-200 AIRPLANES 21-25-02-4B 21-004-03 PAGE 1 OF 6 AUG 22/07

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

АММ			,	AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM	
401		Recirculation Air Filter	21-25-01	01	110	
401		Recirculation Air Filter	21-25-01	01	120	
401		Recirculation Air Filter	21-25-01	01	121	
401		Recirculation Air Filter	21-25-01	01	125	
401		Recirculation Air Filter	21-25-01	01	127	
401		Recirculation Air Filter	21-25-01	03	120	
401		Recirculation Air Filter	21-25-01	03	125	
401		Recirculation Air Filter	21-25-01	03	127	

C. References

- (1) AMM 24-22-00/201, Electrical Power
- (2) AMM 25-52-01/401, Containerized Cargo Compartment Sidewall Panels
- D. Access
 - (1) Location Zones

Area Aft of Forward Cargo Compartment (Left)
Area Aft of Forward Cargo Compartment (Right)

(2) Access Panels

821 Forward Cargo Door

- E. Prepare for Removal
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Do this step if you will remove the left recirculation air filter:
 - (a) Push the L RECIRC FAN switch-light, on the P5 overhead panel, to the off position and attach a DO-NOT-OPERATE tag.
 - 1) Make sure the ON light goes off.
 - (3) Do this step if you will remove the right recirculation air filter:

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SAS BOEING
767
TASK CARD

AIRLINE CARD NO.

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- (a) Push the R RECIRC FAN switch-light, on the P5 overhead panel, to the off position and attach a D0-N0T-OPERATE tag.
 - 1) Make sure the ON light goes off.
- (4) Open the forward cargo door, 821.
- (5) Remove the aft endwall (bulkhead) panels in the forward cargo compartment to get access to the recirculation air filters (AMM 25-52-01/401).

WARNING: PUT ON THE PERSONAL PROTECTIVE EQUIPMENT BEFORE YOU TOUCH THE FILTER. THE FILTER REMOVES SMALL PARTICLES (SMOKE, DUST, LINT, FIBERS, POLLEN) AND INFECTIOUS MATERIALS (BACTERIA, VIRUSES, MOLD SPORES, FUNGI) FROM THE AIR WHICH CAN CAUSE ILLNESSES.

- (6) Put on the personal protective equipment before you touch the filter.
- F. Particulate Filter Replacement (Fig. 401)

NOTE: Donaldson 'two-piece' prefilter/particulate filter combination is interchangeable with the Donaldson and Pall Land & Marine 'single-piece' HEPA filters (767-SL-21-058).

- (1) Remove the filter retainer channel from the filter tray.
- (2) Pull the 1-inch thick prefilter out from the top of the filter tray.
 - (a) Keep the 1-inch thick prefilter for re-installation.

WARNING: DO NOT LET THE FILTER TOUCH YOUR SKIN. DO NOT SHAKE OR HIT THE FILTER. DO NOT LET THE FILTER FALL. DO NOT USE COMPRESSED AIR TO CLEAN THE FILTER OR FILTER HOUSING. THIS CAN CAUSE THE INFECTIOUS MATERIAL TO BECOME AIRBORNE. DISCARD THE FILTER IN A PLASTIC DISPOSAL BAG. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN CAUSE INJURIES TO PERSONS.

(3) Pull the 3-inch thick particulate filter out from the filter tray.

EFFECTIVITY

767-200 AIRPLANES

REPLACE

RECIRC AIR HIGH EFFICIENCY FILTERS

21-25-02-4B

21-004-03

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1-004-03

SAS BOEING 767 TASK CARD

AIRLINE CARD NO.

MECH INSP

WARNING: PUT ALL AIR FILTERS THAT ARE REMOVED FROM THE AIRPLANE INTO PLASTIC DISPOSAL BAGS. OBEY THE AIRLINE POLICY, LOCAL HEALTH DEPARTMENT AND LAW ENFORCEMENT REGULATIONS FOR DISPOSAL OF MATERIAL.

- (a) Put the particulate filter in a plastic disposal bag and discard in accord with airline, local health, safety and regulatory procedures for disposal of material.
- (4) Examine the inside of the filter tray and remove any unwanted material that could prevent proper airflow through the check valve.
- (5) Push a new 3-inch thick particulate filter into the filter tray.
 - (a) Make sure the airflow arrow on the filter frame points down into the filter tray.
- (6) Reinstall the 1-inch thick prefilter into the top position of the filter tray.
 - (a) Make sure the airflow arrow on the filter frame points down into the filter tray.
- (7) Reinstall the filter retainer channel to the filter tray.
- G. Restore the Airplane to Normal

WARNING: DISCARD ALL PERSONAL PROTECTIVE EQUIPMENT AFTER YOU USE IT ONE TIME. DO NO TRY TO CLEAN IT. DISCARD THE EQUIPMENT IN A PLASTIC DISPOSAL BAG.

(1) Remove the personal protective equipment and put them in a plastic disposal bag, and discard them in accord with airline, local health, safety and regulatory procedures for disposal of material.

<u>WARNING</u>: CLEAN YOUR HANDS WITH SOAP AND RUNNING HOT WATER. DIRTY HANDS WITH CONTAMINATION CAN CAUSE DISEASE AND ILLNESSES.

(2) CLean your hands with soap and running hot water.

EFFECTIVITY

767-200 AIRPLANES

REPLACE

RECIRC AIR HIGH EFFICIENCY FILTERS

21-25-02-4B

21-004-03

PAGE 4 OF 6 AUG 22/07

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BOEING CARD NO.

21-004-03

AIRLINE CARD NO.

	TASK CARD
INSP	
	(3) Reinstall the aft endwall (bulkhead) panels in the forward cargo compartment (AMM 25-52-01/401).
	(4) Close the forward cargo door, 821.
	(5) Remove the DO-NOT-OPERATE tag(s) from the L/R RECIRC FAN switch-light(s) on the P5 overhead panel.
	(6) Remove electrical power (AMM 24-22-00/201).
	INSP

EFFECTIVITY

767-200 AIRPLANES

REPLACE

RECIRC AIR HIGH EFFICIENCY FILTERS

21-25-02-4B | 21-004-03 PAGE 5 OF 6 AUG 22/07

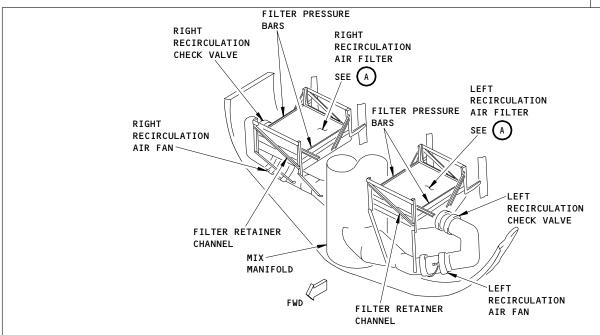
BOEING 767

SAS

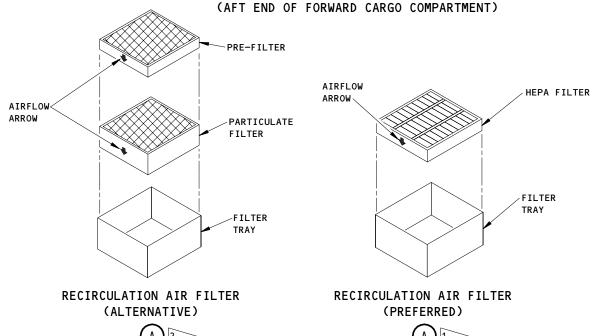
TASK CARD

AIRLINE CARD NO.

21-004-03



MIX MANIFOLD BAY
(AFT END OF FORWARD CARGO COMPARTMENT)



1 SINGLE-PIECE HEPA FILTER (DONALDSON OR PALL-LAND & MARINE).

2 TWO-PIECE AIR FILTER COMBO (DONALDSON).

Recirculation Air Filter Installation Figure 401

REPLACE RECIRC AIR HIGH EFFICIENCY FILTERS

21-25-02-4B 21-004-03 PAGE 6 OF 6 AUG 22/07

STATION	
TAIL NO.	
DATE	1

WORK AREA

SKILL



BOEING CARD NO.
21-004-04

AIRLINE CARD NO.

TASK CARD

AL<u>L</u>

MPD

300

PHASE

SKILL			KELATED TASK	INTERVAL		THASE	REV	REVISION
AIRPL	A/C MIX	BAY		1 C		11212	013	AUG 22/07
TASI	K		TITLE		STRUCTURAL ILLUSTRATION RE	FERENCE		PLICABILITY
REPLACE		REC1	RC AIR HIGH EFFI	CIENCY FILTERS			AIRPLAN	E ENGINE

TNTFRVAL

ZONES ACCESS PANELS

125 126

1251 821

RELATED TASK

MECH INSP MPD ITEM NUMBER

DISCARD THE DONALDSON RECIRCULATION AIR PARTICULATE FILTER.

21-25-02-4B

(P/N: AB0476902)

ACCESS NOTE: SPECIAL ACCESS 1251 REQUIRES REMOVAL OF FORWARD CARGO COMPARTMENT AFT WALL PANELS.

1. Recirculation Air Filter Replacement

A. Equipment

- (1) Plastic disposal bags (38"x48", 1-2mil, 40-42 gal) (or equivalent)
- (2) Personal protective equipment & clothing (PPE/PPC) (disposable) commercially available
 - (a) Particulate Respirator (NIOSH 42 CFR 84 Class N95, N99, N100) -3M model 8210 (or eqiuvalent)
 - (b) Safety Goggles 3M model 1621 (or equivalent)
 - (c) Latex or Nitrile Gloves Kimberly-Clark KleenGuard, SafeSkin, or ShieldMaster models (or equivalent)
 - (d) Coverall with hood Dupont 'Tyvek' style S1428 or 01414 (or equivalent)
- B. Parts

REPLACE RECIRC AIR HIGH EFFICIENCY FILTERS
767-300 AIRPLANES
21-25-02-4B 21-004-04 PAGE 1 OF 6 AUG 22/07

AIRLINE CARD NO.

SAS BOEIN
767
TASK CARD

MECH INSP

АММ			,	AIPC			
FIG ITEM		NOMENCLATURE	SUBJECT	FIG	ITEM		
401		Recirculation Air Filter	21-25-01	02	264		
401		Recirculation Air Filter	21-25-01	02	265		
401		Recirculation Air Filter	21-25-01	02	270		
401		Recirculation Air Filter	21-25-01	02	272		
401		Recirculation Air Filter	21-25-01	02	273		
401		Recirculation Air Filter	21-25-01	02	275		
401		Recirculation Air Filter	21-25-01	04	185		
401		Recirculation Air Filter	21-25-01	04	190		
401		Recirculation Air Filter	21-25-01	04	195		
401		Recirculation Air Filter	21-25-01	04	197		
401		Recirculation Air Filter	21-25-01	04	300		

C. References

- (1) AMM 24-22-00/201, Electrical Power
- (2) AMM 25-52-01/401, Containerized Cargo Compartment Sidewall Panels
- D. Access
 - (1) Location Zones

125 Area Aft of Forward Cargo Compartment (Left) 126 Area Aft of Forward Cargo Compartment (Right)

(2) Access Panels

821 Forward Cargo Door

- E. Prepare for Removal
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Do this step if you will remove the left recirculation air filter:
 - (a) Push the L RECIRC FAN switch-light, on the P5 overhead panel, to the off position and attach a DO-NOT-OPERATE tag.
 - 1) Make sure the ON light goes off.

REPLACE RECIRC AIR HIGH EFFICIENCY FILTERS
767-300 AIRPLANES
21-25-02-4B 21-004-04 PAGE 2 OF 6 AUG 22/07

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (3) Do this step if you will remove the right recirculation air filter:
 - (a) Push the R RECIRC FAN switch-light, on the P5 overhead panel, to the off position and attach a D0-N0T-OPERATE tag.
 - 1) Make sure the ON light goes off.
- (4) Open the forward cargo door, 821.
- (5) Remove the aft endwall (bulkhead) panels in the forward cargo compartment to get access to the recirculation air filters (AMM 25-52-01/401).
- WARNING: PUT ON THE PERSONAL PROTECTIVE EQUIPMENT BEFORE YOU TOUCH THE FILTER. THE FILTER REMOVES SMALL PARTICLES (SMOKE, DUST, LINT, FIBERS, POLLEN) AND INFECTIOUS MATERIALS (BACTERIA, VIRUSES, MOLD SPORES, FUNGI) FROM THE AIR WHICH CAN CAUSE ILLNESSES.
- (6) Put on the personal protective equipment before you touch the filter.
- F. Particulate Filter Replacement (Fig. 401)
 - NOTE: Donaldson 'two-piece' prefilter/particulate filter combination is interchangeable with the Donaldson and Pall Land & Marine 'single-piece' HEPA filters (767-SL-21-058).
 - (1) Remove the two filter retainer brackets from the filter tray.
 - (2) Pull the 1-inch thick prefilter out from the top of the filter tray.
 - (a) Keep the 1-inch thick prefilter for re-installation.
 - WARNING: DO NOT LET THE FILTER TOUCH YOUR SKIN. DO NOT SHAKE OR HIT THE FILTER. DO NOT LET THE FILTER FALL. DO NOT USE COMPRESSED AIR TO CLEAN THE FILTER OR FILTER HOUSING. THIS CAN CAUSE THE INFECTIOUS MATERIAL TO BECOME AIRBORNE. DISCARD THE FILTER IN A PLASTIC DISPOSAL BAG. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN CAUSE INJURIES TO PERSONS.
 - (3) Pull the 3-inch thick particulate filter out from the filter tray.

EFFECTIVITY

767-300 AIRPLANES

REPLACE

RECIRC AIR HIGH EFFICIENCY FILTERS

21-25-02-4B

21-004-04

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AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

WARNING: PUT ALL AIR FILTERS THAT ARE REMOVED FROM THE AIRPLANE INTO PLASTIC DISPOSAL BAGS. OBEY THE AIRLINE POLICY, LOCAL HEALTH DEPARTMENT AND LAW ENFORCEMENT REGULATIONS FOR DISPOSAL OF MATERIAL.

- (a) Put the particulate filter in a plastic disposal bag and discard in accord with airline, local health, safety and regulatory procedures for disposal of material.
- (4) Examine the inside of the filter tray and remove any unwanted material that could prevent proper airflow through the check valve.
- (5) Push a new 3-inch thick particulate filter into the filter tray.
 - (a) Make sure the airflow arrow on the filter frame points down into the filter tray.
- (6) Reinstall the 1-inch thick prefilter into the top position of the filter tray.
 - (a) Make sure the airflow arrow on the filter frame points down into the filter tray.
- (7) Reinstall the filter retainer brackets to the filter tray.
- G. Restore the Airplane to Normal

WARNING: DISCARD ALL PERSONAL PROTECTIVE EQUIPMENT AFTER YOU USE IT ONE TIME. DO NO TRY TO CLEAN IT. DISCARD THE EQUIPMENT IN A PLASTIC DISPOSAL BAG.

(1) Remove the personal protective equipment and put them in a plastic disposal bag, and discard them in accord with airline, local health, safety and regulatory procedures for disposal of material.

WARNING: CLEAN YOUR HANDS WITH SOAP AND RUNNING HOT WATER. DIRTY HANDS WITH CONTAMINATION CAN CAUSE DISEASE AND ILLNESSES.

(2) Clean your hands with soap and running hot water.

EFFECTIVITY

767-300 AIRPLANES

REPLACE

RECIRC AIR HIGH EFFICIENCY FILTERS

21-25-02-4B

21-004-04

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BOEING CARD NO.

21-004-04

AIRLINE CARD NO.

			TASK CARD				
MECH	INSP						
		(3)	Reinstall the aft endwall (bulkhead) panels in the forward cargo compartment (AMM 25-52-01/401).				
		(4) Close the forward cargo door, 821.					
		(5) Remove the DO-NOT-OPERATE tag(s) from the L/R RECIRC FAN switch-light(s) on the P5 overhead panel.					
1		(6)	Remove electrical power (AMM 24-22-00/201).				
	1	1					

EFFECTIVITY

767-300 AIRPLANES

REPLACE

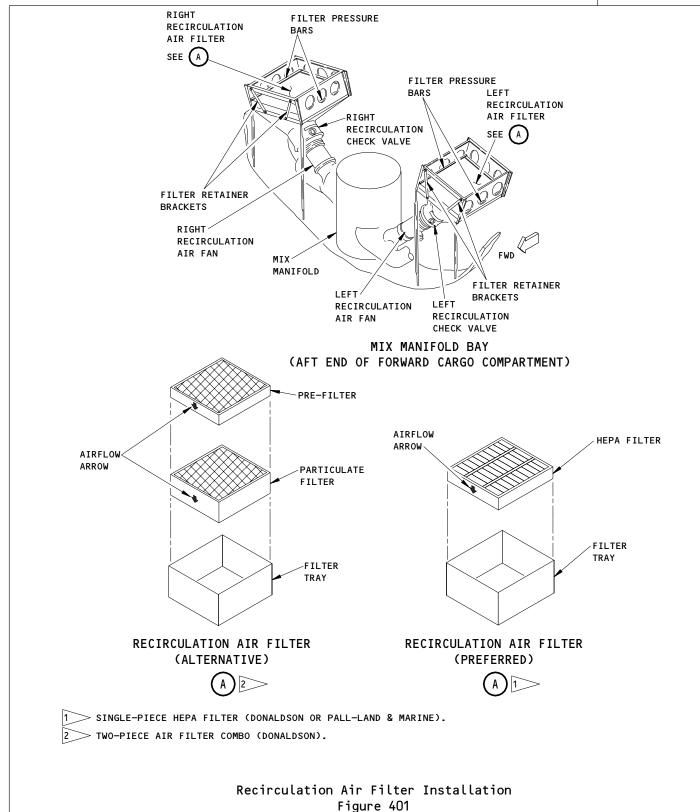
RECIRC AIR HIGH EFFICIENCY FILTERS

21-25-02-4B 21-004-04 PAGE 5 OF 6 AUG 22/07

AIRLINE CARD NO.







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EFFECTIVITY

₹67-300 AIRPLANES

21-25-02-4B

21-004-04

REPLACE

RECIRC AIR HIGH EFFICIENCY FILTERS

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STATION
TAIL NO.
DATE

SKILL

WORK AREA



BOEING CARD NO.
21-004-07

AIRLINE CARD NO.

TASK CARD

ALL

MPD

200

PHASE

AIRPL A/C MIX BAY

TASK
REPLACE
RECIRC AIR HIGH EFFICIENCY FILTERS

REV REVISION

11212
013 AUG 22/07

STRUCTURAL ILLUSTRATION REFERENCE AIRPLANE ENGINE

INTERVAL

ZONES ACCESS PANELS

125 126

1251 821

RELATED TASK

MECH INSP MPD ITEM NUMBER

DISCARD THE DONALDSON RECIRCULATION AIR HEPA-LIKE FILTER.

21-25-02-4F

(P/N: P512762)

ACCESS NOTE: SPECIAL ACCESS 1251 REQUIRES REMOVAL OF FORWARD CARGO COMPARTMENT AFT WALL PANELS.

1. Recirculation Air Filter Replacement

A. Equipment

- (1) Plastic disposal bags (38"x48", 1-2mil, 40-42 gal) (or equivalent)
- (2) Personal protective equipment & clothing (PPE/PPC) (disposable) commercially available
 - (a) Particulate Respirator (NIOSH 42 CFR 84 Class N95, N99, N100) 3M model 8210 (or eqiuvalent)
 - (b) Safety Goggles 3M model 1621 (or equivalent)
 - (c) Latex or Nitrile Gloves Kimberly-Clark KleenGuard, SafeSkin, or ShieldMaster models (or equivalent)
 - (d) Coverall with hood Dupont 'Tyvek' style S1428 or 01414 (or equivalent)

B. Parts

REPLACE RECIRC AIR HIGH EFFICIENCY FILTERS
767-200 AIRPLANES
21-25-02-4F 21-004-07 PAGE 1 OF 5 AUG 22/07

AIRLINE CARD NO.



MECH INSP

АММ			AIPC		
FIG ITEM		NOMENCLATURE	SUBJECT	FIG	ITEM
401 401 401 401 401 401 401 401		Recirculation Air Filter Recirculation Air Filter Recirculation Air Filter Recirculation Air Filter Recirculation Air Filter Recirculation Air Filter Recirculation Air Filter Recirculation Air Filter	21-25-01 21-25-01 21-25-01 21-25-01 21-25-01 21-25-01 21-25-01 21-25-01	01 01 01 01 01 03 03	110 120 121 125 127 120 125 127

C. References

- (1) AMM 24-22-00/201, Electrical Power
- (2) AMM 25-52-01/401, Containerized Cargo Compartment Sidewall Panels
- D. Access
 - (1) Location Zones

Area Aft of Forward Cargo Compartment (Left)
Area Aft of Forward Cargo Compartment (Right)

(2) Access Panels

821 Forward Cargo Door

- E. Prepare for Removal
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Do this step if you will remove the left recirculation air filter:
 - (a) Push the L RECIRC FAN switch-light, on the P5 overhead panel, to the off position and attach a DO-NOT-OPERATE tag.
 - 1) Make sure the ON light goes off.
 - (3) Do this step if you will remove the right recirculation air filter:

AIRLINE CARD NO.

SAS BOEING 767 TASK CARD

MECH INSP

- (a) Push the R RECIRC FAN switch-light, on the P5 overhead panel, to the off position and attach a D0-N0T-OPERATE tag.
 - 1) Make sure the ON light goes off.
- (4) Open the forward cargo door, 821.
- (5) Remove the aft endwall (bulkhead) panels in the forward cargo compartment to get access to the recirculation air filters (AMM 25-52-01/401).

WARNING: PUT ON THE PERSONAL PROTECTIVE EQUIPMENT BEFORE YOU TOUCH THE FILTER. THE FILTER REMOVES SMALL PARTICLES (SMOKE, DUST, LINT, FIBERS, POLLEN) AND INFECTIOUS MATERIALS (BACTERIA, VIRUSES, MOLD SPORES, FUNGI) FROM THE AIR WHICH CAN CAUSE ILLNESSES.

- (6) Put on the personal protective equipment before you touch the filter.
- F. Single-piece HEPA Filter Replacement (Fig. 401)

NOTE: Donaldson and Pall Land & Marine 'single-piece' HEPA filters are interchangeable with the Donaldson 'two-piece' prefilter/particulate filter combination (767-SL-21-058).

(1) Remove the filter retainer channel from the filter tray.

WARNING: DO NOT LET THE FILTER TOUCH YOUR SKIN. DO NOT SHAKE OR HIT THE FILTER. DO NOT LET THE FILTER FALL. DO NOT USE COMPRESSED AIR TO CLEAN THE FILTER OR FILTER HOUSING. THIS CAN CAUSE THE INFECTIOUS MATERIAL TO BECOME AIRBORNE. DISCARD THE FILTER IN A PLASTIC DISPOSAL BAG. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN CAUSE INJURIES TO PERSONS.

(2) Pull the 4-inch thick HEPA filter out from the filter tray.

WARNING: PUT ALL AIR FILTERS THAT ARE REMOVED FROM THE AIRPLANE INTO PLASTIC DISPOSAL BAGS. OBEY THE AIRLINE POLICY, LOCAL HEALTH DEPARTMENT AND LAW ENFORCEMENT REGULATIONS FOR DISPOSAL OF MATERIAL.

EFFECTIVITY

767-200 AIRPLANES

REPLACE

RECIRC AIR HIGH EFFICIENCY FILTERS

21-25-02-4F

21-004-07

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AIRLINE CARD NO.

21-004-07

SAS BOEING TASK CARD

MECH INSP

- (a) Put the filter in a plastic disposal bag and discard in accord with airline, local health, safety and regulatory procedures for disposal of material.
- (3) Examine the inside of the filter tray and remove any unwanted material that could prevent proper airflow through the check valve.
- (4) Push a new 4-inch thick HEPA filter into the filter tray.
 - Make sure the airflow arrow on the filter frame points down into the filter tray.
- (5) Reinstall the filter retainer channel to the filter tray.
- Restore the Airplane to Normal

DISCARD ALL PERSONAL PROTECTIVE EQUIPMENT AFTER YOU USE IT ONE WARNING: TIME. DO NO TRY TO CLEAN IT. DISCARD THE EQUIPMENT IN A PLASTIC DISPOSAL BAG.

(1) Remove the personal protective equipment and put them in a plastic disposal bag, and discard them in accord with airline, local health, safety and regulatory procedures for disposal of material.

WARNING: CLEAN YOUR HANDS WITH SOAP AND RUNNING HOT WATER. DIRTY HANDS WITH CONTAMINATION CAN CAUSE DISEASE AND ILLNESSES.

- (2) CLean your hands with soap and running hot water.
- (3) Reinstall the aft endwall (bulkhead) panels in the forward cargo compartment (AMM 25-52-01/401).
- (4) Close the forward cargo door, 821.
- Remove the DO-NOT-OPERATE tag(s) from the L/R RECIRC FAN switch-light(s) on the P5 overhead panel.
- (6) Remove electrical power (AMM 24-22-00/201).

EFFECTIVITY

767-200 AIRPLANES

REPLACE

RECIRC AIR HIGH EFFICIENCY FILTERS

21-25-02-4F

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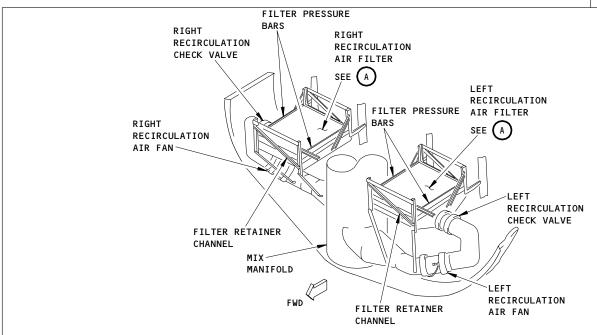
PAGE 4 OF 5 AUG 22/07

SAS

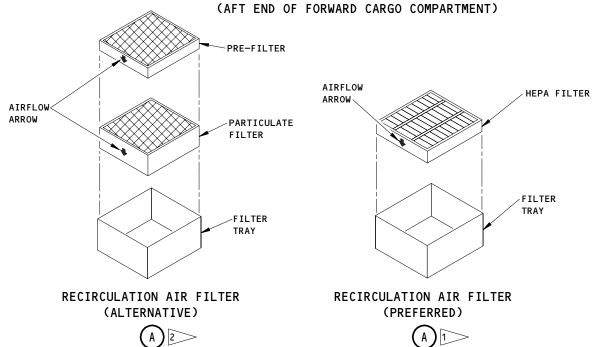


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AIRLINE CARD NO.



MIX MANIFOLD BAY



> SINGLE-PIECE HEPA FILTER (DONALDSON OR PALL-LAND & MARINE).

> TWO-PIECE AIR FILTER COMBO (DONALDSON).

Recirculation Air Filter Installation Figure 401

EFFECTIVITY	REPLACE	RECIRC AIR H	IIGH EFF	ICIENC	Y FILTERS
₹67-200 AIRPLANES	21-25-02-4F	21-004-07	PAGE	5 OF	5 AUG 22/07

STATION	
TAIL NO.	
DATE	



BOEING CARD NO. 21-004-08

AIRLINE CARD NO.

SKILL	WORK AREA		RELATED TASK	INTERVAL		PHASE	MPD	TASK CARD
							REV	REVISION
AIRPL	A/C MIX	BAY		1 C		11212	013	AUG 22/07
TASI	K		TITLE		STRUCTURAL ILLUSTRATION RE	EFERENCE	AF	PLICABILITY
REPLACE RECIRC AIR HIGH EFFI		CIENCY FILTERS			AIRPLAN	E ENGINE		
						300	ALL	

ZONES

125 126

1251 821

MPD ITEM NUMBER MECH INSP

DISCARD THE DONALDSON RECIRCULATION AIR HEPA-LIKE FILTER.

21-25-02-4F

(P/N: P512763)

ACCESS NOTE: SPECIAL ACCESS 1251 REQUIRES REMOVAL OF FORWARD CARGO COMPARTMENT AFT WALL PANELS.

1. Recirculation Air Filter Replacement

- Equipment
 - (1) Plastic disposal bags (38"x48", 1-2mil, 40-42 gal) (or equivalent)
 - Personal protective equipment & clothing (PPE/PPC) (disposable) commercially available
 - Particulate Respirator (NIOSH 42 CFR 84 Class N95, N99, N100) -(a) 3M model 8210 (or eqiuvalent)

ACCESS PANELS

- (b) Safety Goggles 3M model 1621 (or equivalent)
- (c) Latex or Nitrile Gloves Kimberly-Clark KleenGuard, SafeSkin, or ShieldMaster models (or equivalent)
- Coverall with hood Dupont 'Tyvek' style S1428 or 01414 (or equivalent)
- B. Parts

21-004-08

AIRLINE CARD NO.

SAS BOEING
767
TASK CARD

MECH INSP

АММ			,	AIPC			
FIG ITEM		NOMENCLATURE	SUBJECT	FIG	ITEM		
401		Recirculation Air Filter	21-25-01	02	264		
401		Recirculation Air Filter	21-25-01	02	265		
401		Recirculation Air Filter	21-25-01	02	270		
401		Recirculation Air Filter	21-25-01	02	272		
401		Recirculation Air Filter	21-25-01	02	273		
401		Recirculation Air Filter	21-25-01	02	275		
401		Recirculation Air Filter	21-25-01	04	185		
401		Recirculation Air Filter	21-25-01	04	190		
401		Recirculation Air Filter	21-25-01	04	195		
401		Recirculation Air Filter	21-25-01	04	197		
401		Recirculation Air Filter	21-25-01	04	300		

C. References

- (1) AMM 24-22-00/201, Electrical Power
- (2) AMM 25-52-01/401, Containerized Cargo Compartment Sidewall Panels
- D. Access
 - (1) Location Zones

125 Area Aft of Forward Cargo Compartment (Left) 126 Area Aft of Forward Cargo Compartment (Right)

(2) Access Panels

821 Forward Cargo Door

- E. Prepare for Removal
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Do this step if you will remove the left recirculation air filter:
 - (a) Push the L RECIRC FAN switch-light, on the P5 overhead panel, to the off position and attach a D0-N0T-OPERATE tag.
 - 1) Make sure the ON light goes off.

	_				
EFFECTIVITY	REPLACE	RECIRC AIR	HIGH EFF	ICIENCY	' FILTERS
767-300 AIRPLANES					
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AIRLINE CARD NO.

21-004-08

SAS BOEING TASK CARD

MECH INSP

- (3) Do this step if you will remove the right recirculation air filter:
 - (a) Push the R RECIRC FAN switch-light, on the P5 overhead panel, to the off position and attach a DO-NOT-OPERATE tag.
 - Make sure the ON light goes off.
- (4) Open the forward cargo door, 821.
- (5) Remove the aft endwall (bulkhead) panels in the forward cargo compartment to get access to the recirculation air filters (AMM 25-52-01/401).

WARNING: PUT ON THE PERSONAL PROTECTIVE EQUIPMENT BEFORE YOU TOUCH THE FILTER. THE FILTER REMOVES SMALL PARTICLES (SMOKE, DUST, LINT, FIBERS, POLLEN) AND INFECTIOUS MATERIALS (BACTERIA, VIRUSES, MOLD SPORES, FUNGI) FROM THE AIR WHICH CAN CAUSE ILLNESSES.

- (6) Put on the personal protective equipment before you touch the filter.
- Single-piece HEPA Filter Replacement (Fig. 401)

Donaldson and Pall Land & Marine 'single-piece' HEPA filters are interchangeable with the Donaldson 'two-piece' prefilter/particulate filter combination (767-SL-21-058).

(1) Remove the two filter retainer brackets from the filter tray.

WARNING: DO NOT LET THE FILTER TOUCH YOUR SKIN. DO NOT SHAKE OR HIT THE FILTER. DO NOT LET THE FILTER FALL. DO NOT USE COMPRESSED AIR TO CLEAN THE FILTER OR FILTER HOUSING. THIS CAN CAUSE THE INFECTIOUS MATERIAL TO BECOME AIRBORNE. DISCARD THE FILTER IN A PLASTIC DISPOSAL BAG. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN CAUSE INJURIES TO PERSONS.

(2) Pull the 4-inch thick HEPA filter out from the filter tray.

EFFECTIVITY

767-300 AIRPLANES

REPLACE

RECIRC AIR HIGH EFFICIENCY FILTERS

21-25-02-4F

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AIRLINE CARD NO.



MECH INSP

WARNING: PUT ALL AIR FILTERS THAT ARE REMOVED FROM THE AIRPLANE INTO PLASTIC DISPOSAL BAGS. OBEY THE AIRLINE POLICY, LOCAL HEALTH DEPARTMENT AND LAW ENFORCEMENT REGULATIONS FOR DISPOSAL OF MATERIAL.

- (a) Put the filter in a plastic disposal bag and discard in accord with airline, local health, safety and regulatory procedures for disposal of material.
- (3) Examine the inside of the filter tray and remove any unwanted material that could prevent proper airflow through the check valve.
- (4) Push a new 4-inch thick HEPA filter into the filter tray.
 - (a) Make sure the airflow arrow on the filter frame points down into the filter tray.
- (5) Reinstall the filter retainer brackets to the filter tray.
- G. Restore the Airplane to Normal

WARNING: DISCARD ALL PERSONAL PROTECTIVE EQUIPMENT AFTER YOU USE IT ONE TIME. DO NO TRY TO CLEAN IT. DISCARD THE EQUIPMENT IN A PLASTIC DISPOSAL BAG.

(1) Remove the personal protective equipment and put them in a plastic disposal bag, and discard them in accord with airline, local health, safety and regulatory procedures for disposal of material.

<u>WARNING</u>: CLEAN YOUR HANDS WITH SOAP AND RUNNING HOT WATER. DIRTY HANDS WITH CONTAMINATION CAN CAUSE DISEASE AND ILLNESSES.

- (2) Clean your hands with soap and running hot water.
- (3) Reinstall the aft endwall (bulkhead) panels in the forward cargo compartment (AMM 25-52-01/401).
- (4) Close the forward cargo door, 821.
- (5) Remove the DO-NOT-OPERATE tag(s) from the L/R RECIRC FAN switch-light(s) on the P5 overhead panel.

EFFECTIVITY

767-300 AIRPLANES

REPLACE

RECIRC AIR HIGH EFFICIENCY FILTERS

21-25-02-4F

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1

AIRLINE CARD NO.

21-004-08

SAS

767
TASK CARD

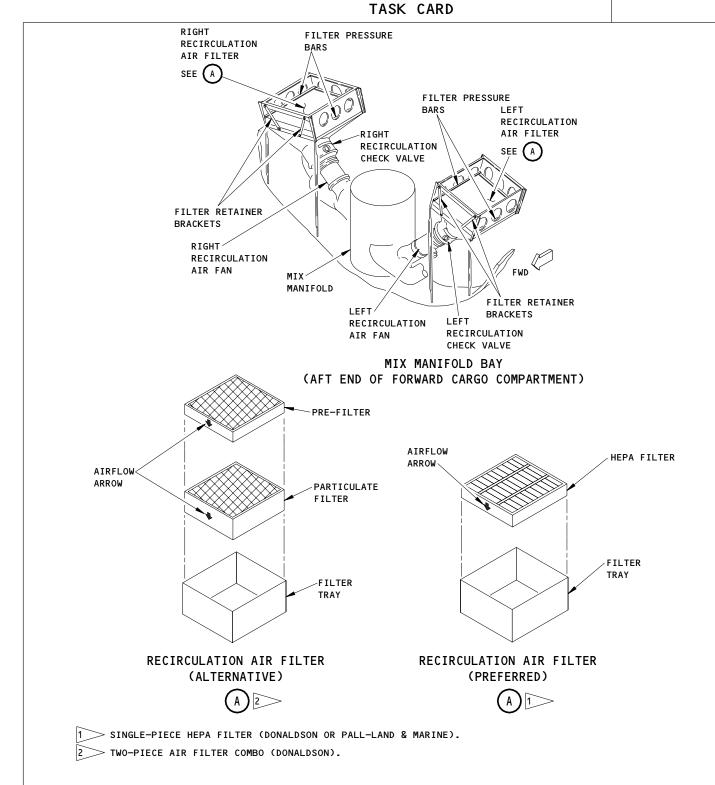
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			(6)	Remove	electrical	power	(AMM	24-22	2-00/20	1).				
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21-004-08

AIRLINE CARD NO.

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Recirculation Air Filter Installation Figure 401

EFFECTIVITY RECIRC AIR HIGH EFFICIENCY FILTERS REPLACE 767-300 AIRPLANES 21-25-02-4F 21-004-08 PAGE 6 OF 6 AUG 22/07

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BOEING CARD NO. 21-005-01

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

AIRPL ALL CABINS

2A

10202 011 APR 22/09

TASK

TITLE

STRUCTURAL ILLUSTRATION REFERENCE

APPLICABILITY

INTERVAL

TASK

REPLACE

CABIN ZONE TEMPERATURE SENSOR FILTER

CABIN ZONE TEMPERATURE SENSOR FILTER

NOTE ALL

ZONES

211 233 234 243 244 253 254

WORK AREA

ACCESS PANELS

MPD ITEM NUMBER

REPLACE CABIN ZONE TEMPERATURE SENSOR FILTERS.
CHECK TEMPERATURE SENSOR (BEHIND FILTER) FOR ACCUMULATION
OF DUST AND CLEAN AS REQUIRED.

21-61-09-4A

AIRPLANE NOTE: TASK APPLICABLE TO ALL AIRPLANES EXCEPT THE 767-400ER.

THE FOLLOWING PROCEDURE APPLIES TO FILTER REMOVAL AND REPLACEMENT:

- 1. Remove the Zone Temperature Sensor Filter (Fig. 401)
 - A. Prepare for Removal
 - (1) Locate the filter.

RELATED TASK

- B. Remove the zone temperature sensor filter.
 - (1) Hold the filter cover and pull it down to remove. The cover will unsnap.
 - (2) Remove the filter.
- 2. <u>Install the Zone Temperature Sensor Filter</u> (Fig. 401)
 - A. Consumable Materials
 - - (a) GO2123 Scott filter foam, 3/16 inch thick, Porosity grade 45 PPI, Grey color, Flame resistant
 - B. Procedure

REPLACE CABIN ZONE TEMPERATURE SENSOR FILTER

21-61-09-4A 21-005-01 PAGE 1 OF 3 APR 22/09

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21-005-01

AIRLINE CARD NO.



			I A	SK CARD		
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		(1)	Cut the new filter from filter is the same size			sure the new
			NOTE: Filter size - 3.2 foam to let the f			filter
		(2)	Position the filter over	the filter cover	r clips.	
		(3)	Install the filter cover	into position.		
ì						
EFF	ECTI	VITY —	DEDI	ACE CARIN :	70NE TEMPERATURE	SENSOD ETLTED

REPLACE

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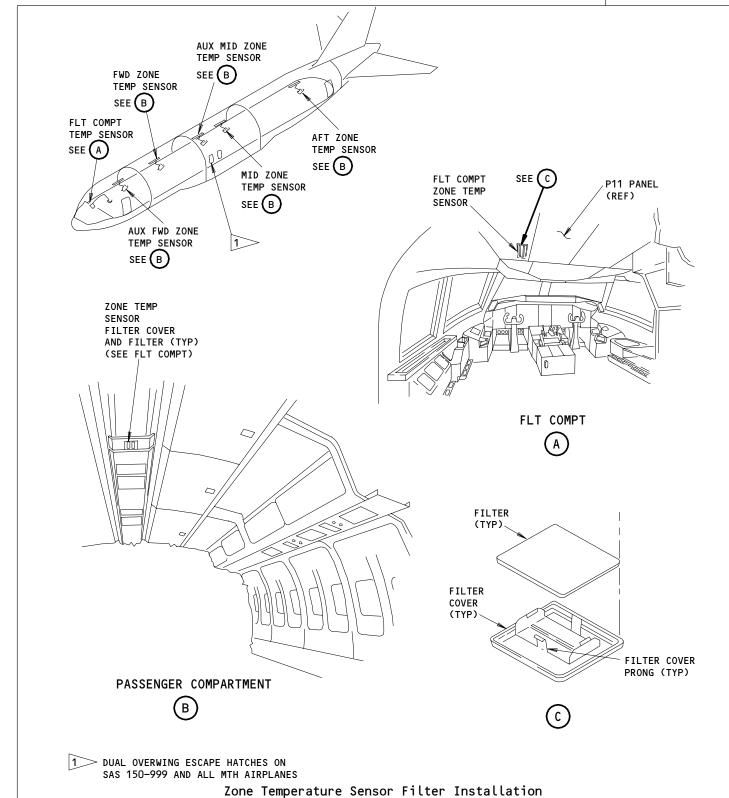


Figure 401

21-61-09-4A

21-005-01

CABIN ZONE TEMPERATURE SENSOR FILTER

PAGE 3 OF 3 NOV 10/89

REPLACE

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	DATE	S	SAS &	767			AIRL	LINE CARD	NO.
	DATE			TASK CARD					
SKILL	WORK ARI	EA RE	LATED TASK	INTERVAL		PHASE	MPD REV		K CARD /ISION
AIRPL	GALLEYS			3A		10303	017	DEC	22/07
TA	SK	·	TITLE		STRUCTURAL ILLUSTRATION RE	FERENCE	AP AIRPLAN	PPLICABIL	ITY ENGINE
REPL/	ACE	GALLEY VE	NTILATION F	ILTERS			AIN LAN	-	LNGINL
							PAS	S	ALL
	ZONES				ACCESS PANELS				
220	240 250	1							

MECH INSP

REPLACE GALLEY VENTILATION FILTERS.

21-26-03-4A

MPD ITEM NUMBER

- 1. Remove the Galley Ventilation Filters (Fig. 401)
 - A. Access
 - (1) Location Zones
 221/222, 241/242, 251,252 Passenger Cabin (Galleys)
 - B. Remove the galley ventilation filter
 - (1) Lower the cover from the galley light assembly.
 - (a) Push the quick release fasteners or remove the bolts on the light assembly cover.
 - (b) Lower the light assembly cover and let it hang by the cables.

CAUTION: DO NOT REMOVE THE COVER FROM THE CABLE HOOK THAT IS NEXT TO THE AIR HOSE. IF THE CABLE HOOK NEXT TO THE AIR HOSE IS REMOVED WHILE THE AIR HOSE IS ATTACHED TO THE COVER, THEN DAMAGE TO THE AIR HOSE MAY OCCUR.

- (c) Remove all the cable hooks, except the cable hook next to the air hose, from the light assembly cover.
- (2) Remove 8 bolts and washers from the sides of the vent inlet.
- (3) Pull the filter retainer out of the vent inlet.
- (4) Remove the galley ventilation filter.
- 2. <u>Install the Galley Ventilation Filters</u> (Fig. 401)

REPLACE GALLEY VENTILATION FILTERS

21-26-03-4A 21-006-01 PAGE 1 OF 3 DEC 22/07

21-006-01

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SAS BOEING 767 TASK CARD

AIRLINE CARD NO.

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A. Consumable Materials

(1) G02041 - Fiberglass Filter Material, P/N: 628-975-232 or FRONTLINE BLUE WITH SKIN DRY ROLL FIBERGLASS MEDIA, American Air Filter International, 215 Central Ave, Louisville, KY 40208-01406 (Phone 1-800-501-3146)

B. Access

(1) Location Zones
221/222, 241/242, 251/252 Passenger Cabin (Galleys)

C. Install the vent filter

- (1) If necesary, cut a new filter from the fiberglass filter material. Make sure it is the same size as the filter which is replaced.
- (2) Put the new filter into the galley vent inlet. Make sure the colored side of the filter is up, against the top of the vent inlet.

<u>NOTE</u>: The filter material is 2-inches thick, but compresses to 1 inch when it is installed.

- (3) Put the filter retainer into the galley vent inlet, against the filter, with the bolt holes pointed up.
- (4) Install eight bolts and washers in the side of the vent inlet to hold the retainer in position.
- (5) Attach the light assembly cover to the cable hooks.
- (6) Raise the light assembly cover into position.
- (7) Make sure the air hose is aligned correctly so that airflow is not prevented.
- (8) Install the guick release fasteners or the bolts.

EFFECTIVITY

REPLACE

GALLEY VENTILATION FILTERS

21-26-03-4A

21-006-01

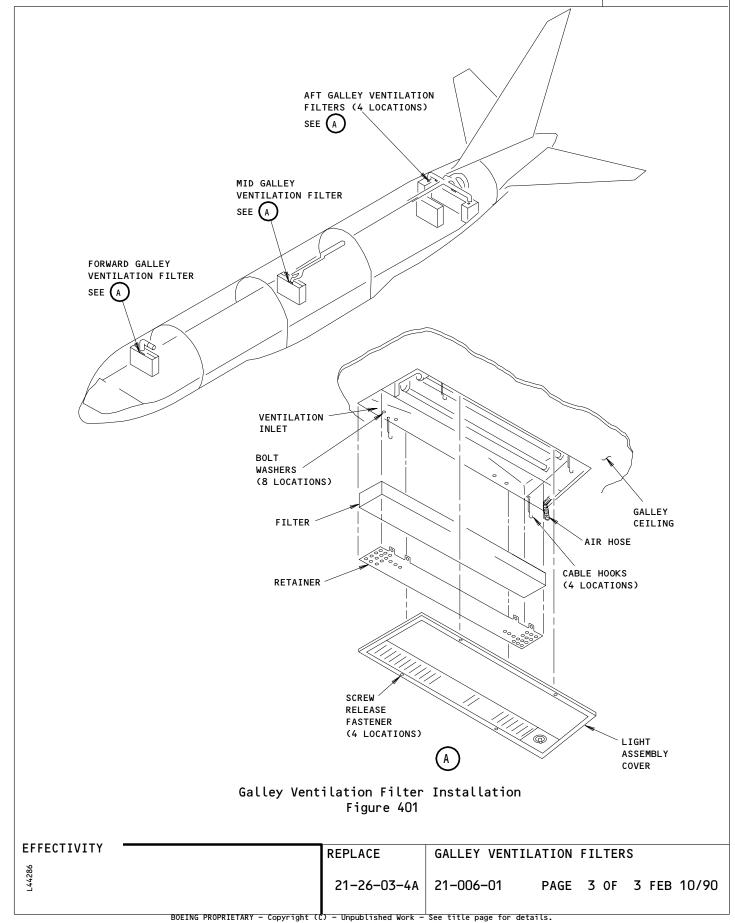
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AIRLINE CARD NO.



STATION	
TAIL NO.	
DATE	

SKILL

WORK AREA



BOEING CARD NO. 21-007-C1

AIRLINE CARD NO.

TASK CARD

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TAS	r	TITLE	•	STRUCTURAL TILLUSTRATION REFERENCE	Δ	PPI TCARTI TTY

INTERVAL

CLEAN/INSP CABIN PRESSURE OUTFLOW VALVE

NOTE ALL

ZONES ACCESS PANELS

165 1651 811 NOTE

RELATED TASK

MECH INSP MPD ITEM NUMBER

CLEAN CABIN PRESSURE OUTFLOW VALVE GATES AND SEALS.

21-31-03-2B 21-31-03-2A

21-31-03-2B

VISUALLY CHECK CABIN PRESSURE OUTFLOW VALVE DOORS, HINGES, CONNECTING RODS, AND ATTACHING HARDWARE.

21-31-03-2A

PHASE

ACCESS NOTE: SPECIAL ACCESS 1651 REQUIRES REMOVAL OF BULK CARGO COMPARTMENT AFT WALL PANELS.

DOEK CARGO COMPARTMENT ALL WALL PANLES.

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

MODELS EXCEPT THE 707-400EK.

Clean the Cabin Pressure Outflow Valve (Fig. 201)

A. General

- (1) You can clean the outflow valve from the aft end of the bulk cargo compartment or from out of the airplane. Access to the outflow valve is most easily done from out of the airplane. However, to clean the valve from out of the airplane, the valve must be fully open.
- B. Consumable Materials
 - (1) B00074 Solvent, MIL-PRF-680 (Supersedes P-D-680)
 - (2) G00268 Brush, soft bristle
 - (3) G00034 Cotton Wiper Process Cleaning Absorbent Wiper (Cheesecloth, Gauze) BMS 15-5

C. References

- (1) AMM 06-46-00/201, Entry, Service, and Cargo Doors Access Doors and Panels
- (2) AMM 24-22-00/201, Electrical Power Control

CLEAN/INSP CABIN PRESSURE OUTFLOW VALVE

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AIRLINE CARD NO.

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767
TASK CARD

MECH INSP

- (3) AMM 25-52-01/401, Sidewall Lining
- D. Access
 - (1) Location Zones

Area Aft of the Bulk Cargo Compartment (Left)
Bulk Cargo Door

- E. Prepare to clean.
 - (1) Open these circuit breakers on the overhead circuit breaker panel, P11, and attach DO-NOT-CLOSE tags:
 - (a) 11B14, CABIN ALTITUDE CONTROL MANUAL
 - (b) 11P15, CABIN ALTITUDE CONTROL AUTO 1
 - (c) 11P23, CABIN ALTITUDE CONTROL AUTO 2
 - (2) If you will clean the outflow valve from the bulk cargo compartment, do the steps that follow:
 - (a) Open the bulk cargo door, 811 (AMM 06-46-00/201).
 - (b) Remove the endliner at the aft end of the bulk cargo compartment (AMM 25-52-01/401).
 - (c) AIRPLANES WITH THE DEBRIS SCREEN;
 Do the steps that follow:
 - Release the latches on the debris screen.
 - 2) Remove the debris screen that is around the outflow valve.
 - (3) If you will clean the valve from out of the airplane, make sure that the valve is in the open position.
 - (a) If you cannot open the valve, you must clean it from in the bulk cargo compartment.
- F. Clean the outflow valve.
 - (1) Use the brush and the solvent to clean all of the outflow valve assembly.

CLEAN/INSP CABIN PRESSURE OUTFLOW VALVE

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21-007-c1

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (2) Rub the door gates and the seals of the outflow valve with the solvent.
- (3) Rub the outflow valve with the dry cloth.
- G. Put the airplane back to its usual condition.
 - (1) Make sure that all persons, clothing and loose materials are kept clear of the outflow valve, actuator crank arm, push rods, and flapper doors before electrical power is supplied to the outflow valve actuator.

<u>NOTE</u>: The outflow valve actuator will begin to operate and move when electrical power is supplied.

- (2) Close these circuit breakers on the overhead circuit breaker panel, P11, and remove DO-NOT-CLOSE tags:
 - (a) 11B14, CABIN ALTITUDE CONTROL MANUAL
 - (b) 11P15, CABIN ALTITUDE CONTROL AUTO 1
 - (c) 11P23, CABIN ALTITUDE CONTROL AUTO 2
- (3) If the valve was cleaned from in the bulk cargo compartment, do the steps that follow:
 - (a) AIRPLANES WITH THE DEBRIS SCREEN; Do the steps that follow:
 - 1) Make sure the insulation inboard of the debris screen is attached to velcro on the stringer below the debris screen.

<u>NOTE</u>: No insulation or loose equipment is permitted inside the debris screen.

- 2) Install the debris screen (1) over the outflow valve.
- Tighten the latches on the debris screen.
- (b) Install the endliner on the aft end of the bulk cargo compartment (Ref 25-52-01).
- (c) Close the bulk cargo door, 811 (Ref 06-46-00).

EFFECTIVITY

CLEAN/INSP

CABIN PRESSURE OUTFLOW VALVE

21-31-03-2A

21-007-C1

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AIRLINE CARD NO.

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MECH INSP

2. <u>Do a Check of the Cabin Pressure Outflow Valve</u> (Fig. 201)

A. General

(1) You can inspect the outflow valve from the aft end of the bulk cargo compartment or from the out side of the airplane. Access to the outflow valve is most easily done from out of the airplane. However, to inspect the valve from out of the airplane, the valve must be fully open.

B. References

- (1) AMM 06-46-00/201, Entry, Service, and Cargo Doors Access Doors and Panels
- (2) AMM 24-22-00/201, Electrical Power Control
- (3) AMM 25-52-01/401, Sidewall Lining

C. Access

(1) Location Zones

165 Area Aft of the Bulk Cargo Compartment (Left) 811 Bulk Cargo Door

- Prepare to do the check.
- (1) Open these circuit breakers on the overhead circuit breaker panel, P11, and attach DO-NOT-CLOSE tags:
 - (a) 11B14, CABIN ALTITUDE CONTROL MANUAL
 - (b) 11P15, CABIN ALTITUDE CONTROL AUTO 1
 - (c) 11P23, CABIN ALTITUDE CONTROL AUTO 2
- (2) If the outflow valve will be inspected from the bulk cargo compartment, then do the steps that follow:
 - (a) Open the bulk cargo door, 811 (AMM 06-46-00/201).
 - (b) Remove the endliner at the aft end of the bulk cargo compartment (AMM 25-52-01/401).
 - (c) AIRPLANES WITH THE DEBRIS SCREEN;
 Do the steps that follow:

EFFECTIVITY

CLEAN/INSP

CABIN PRESSURE OUTFLOW VALVE

21-31-03-2A

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SAS FOR TASK CARD

MECH INSP

- 1) Release the latches on the debris screen.
- Remove the debris screen that is around the outflow valve.
- (3) If the valve will be inspected from out of the airplane, make sure that the valve is in the open position.
 - (a) If the valve cannot be opened, it must be inspected from the bulk cargo compartment.
- E. Cabin pressure outflow valve check.
 - (1) Do these steps to make sure the outflow valve is serviceable:
 - (a) Make sure that there are no grease leaks from the gear box.
 - (b) Make sure the flapper doors and hinges do not have cracks or are loose.
 - (c) Make sure the connecting rods and connecting rod bolts are not damaged, worn, or corroded.
 - (d) Make sure the teflon and butyl rubber seals are not damaged, worn or have any grease on them.
 - (e) Make sure the actuator is not loose.
 - (f) Make sure the outflow valve frame is not cracked.
 - (g) Make sure the outflow valve bolts are not loose.
 - (h) Make sure that the Outflow Valve movement is not restricted.
 - Disconnect the Outflow Valve linkage from the Valve Actuator.
 - 2) Move the flapper doors and make sure that they move freely.
 - 3) Connect the Outflow Valve linkage to the Valve Actuator.
 - (2) If one or more of the above conditions has occurred, replace the worn or corroded parts and/or tighten the loose fasteners. If the flapper doors do not move freely, the valve must be replaced.
- F. Put the airplane back to its usual condition.

EFFECTIVITY

CLEAN/INSP | CABIN PRESSURE OUTFLOW VALVE

21-31-03-2A

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MECI	INSP	_	
		(1)	Make sure that all persons, clothing and loose materials are kept clear of the outflow valve, actuator crank arm, push rods, and flapper doors before electrical power is supplied to the outflow valve actuator.
			<u>NOTE</u> : The outflow valve actuator will begin to operate and move when electrical power is supplied.
		(2)	Close these circuit breakers on the overhead circuit breaker panel, P11, and remove DO-NOT-CLOSE tags:
			(a) 11B14, CABIN ALTITUDE CONTROL MANUAL
			(b) 11P15, CABIN ALTITUDE CONTROL AUTO 1
			(c) 11P23, CABIN ALTITUDE CONTROL AUTO 2
		(3)	If the valve was inspected from the bulk cargo compartment, then do the steps that follow:
			(a) AIRPLANES WITH THE DEBRIS SCREEN; Do the steps that follow:
			 Make sure the insulation inboard of the debris screen is attached to velcro on the stringer below the debris screen.
			<u>NOTE</u> : No insulation or loose equipment is permitted inside the debris screen.
			2) Install the debris screen (1) over the outflow valve.
			3) Tighten the latches on the debris screen.
			(b) Install the endliner on the aft end of the bulk cargo compartment (AMM 25-52-01/401).
			(c) Close the bulk cargo door, 811 (AMM 06-46-00/201).
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EFFECTIVITY

CLEAN/INSP

CABIN PRESSURE OUTFLOW VALVE

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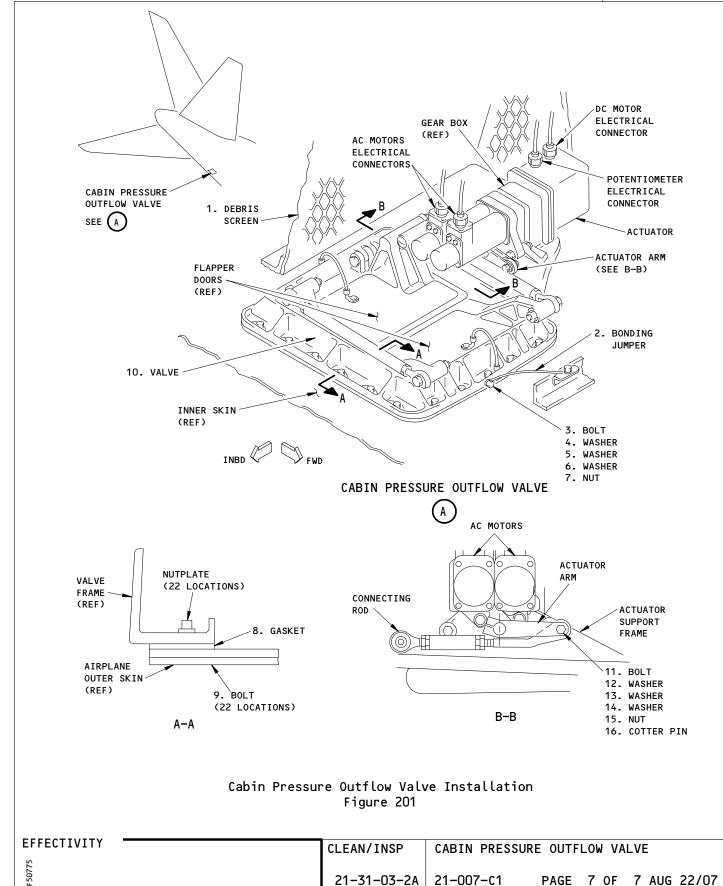
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DATE	



BOEING CARD NO. 21-009-01

AIRLINE CARD NO.

				IASN	CARD					
SKILL	WORK AR	EA R	ELATED TASK		INTERVAL		PHASE	MPD REV	l	SK CARD VISION
ELECT	CREW CA	ABIN A-21	-007-c1	1 C			11212	013	APR	22/09
TAS	SK		TITLE			STRUCTURAL ILLUSTRATION RE	FERENCE	AP	PLICABI	
00504	TT01141	AADTN BBE						AIRPLAN	E	ENGINE
OPERA	TIONAL	CARIN SKE	SSURE OUTF	LOW VALVE						
								NOT	E	ALL
	ZONES					ACCESS PANELS		•		
165	212		119AL							

MECH INSP

OPERATIONALLY CHECK MANUAL CONTROL OF THE CABIN PRESSURE OUTFLOW VALVE.

21-31-00-5A

MPD ITEM NUMBER

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

- 1. <u>Manual Mode Control Test Cabin Pressure Control System</u> (Fig. 501)
 - A. General
 - (1) This procedure is for a scheduled maintenance task.
 - B. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - C. Prepare for the Test
 - (1) Make sure that all persons, clothing and loose materials are kept clear of the outflow valve, actuator crank arm, push rods, and flapper doors before electrical power is supplied to the outflow valve actuator.

<u>NOTE</u>: The outflow valve actuator will begin to operate and move when electrical power is supplied.

- (2) Make sure these circuit breakers, on the pilots' overhead circuit breaker panel, P11, are closed:
 - (a) 11B14, CABIN ALTITUDE CONTROL MANUAL
 - (b) 11B15, CABIN ALTITUDE CONTROL SELECT
 - (c) 11P15, CABIN ALTITUDE CONTROL AUTO 1

OPERATIONAL CABIN PRESSURE OUTFLOW VALVE

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- (d) 11P23, CABIN ALTITUDE CONTROL AUTO 2
- (e) 11U15, AIR/GND SYS 1
- (f) 11U23 or 11U24, POSITION AIR/GND SYS 2
- (3) Supply electrical power (AMM 24-22-00/201).
- D. MANUAL Mode Test procedure
 - (1) Do the MANUAL Mode Test
 - (a) Turn the MODE SELECT selector, on the P5 panel, to the MAN position.
 - (b) Turn the MANUAL selector, on the P5 panel, to the DESCEND position and hold it.
 - 1) Make sure the VALVE position indicator needle moves to the CL position within 25 seconds.
 - (c) Release the MANUAL selector.
 - 1) Look at the outflow valve to make sure it is fully closed.
 - (d) Turn the MANUAL selector, on the P5 panel, to the CLIMB position and hold it.
 - 1) Make sure the VALVE position indicator needle moves within 2-3 needle widths of the OP position.
 - (e) Release the MANUAL selector.
 - 1) Look at the outflow valve to make sure it is fully open.
 - (f) Turn the MODE SELECT selector, on the P5 panel, to AUTO 1 or AUTO 2 position.
- 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

CABIN PRESSURE OUTFLOW VALVE

21-31-00-5A

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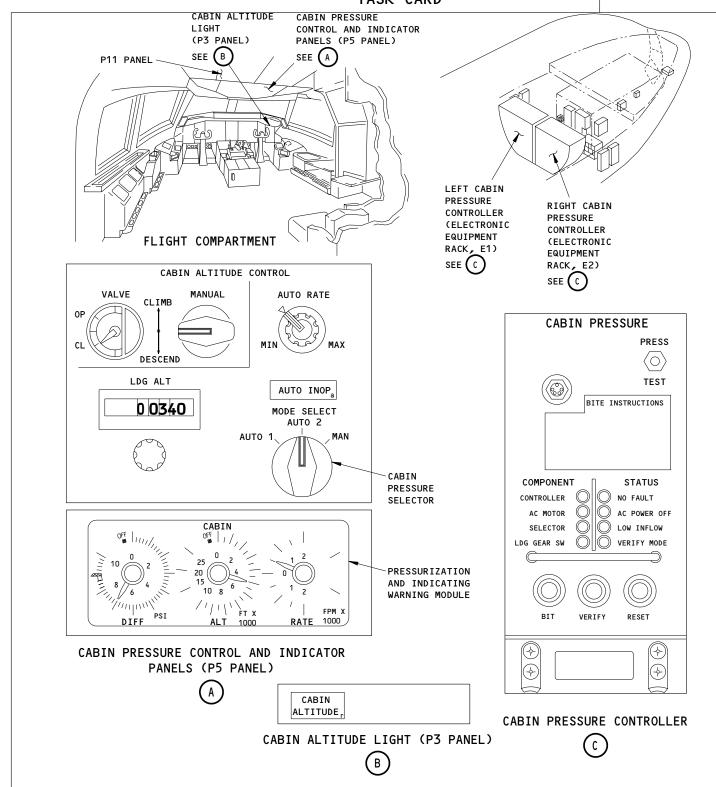


Figure 501 (Sheet 1)

EFFECTIVITY

OPERATIONAL

Pressurization Control System Test

CABIN PRESSURE OUTFLOW VALVE

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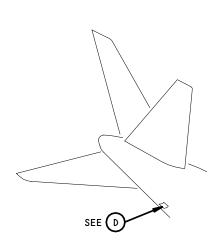
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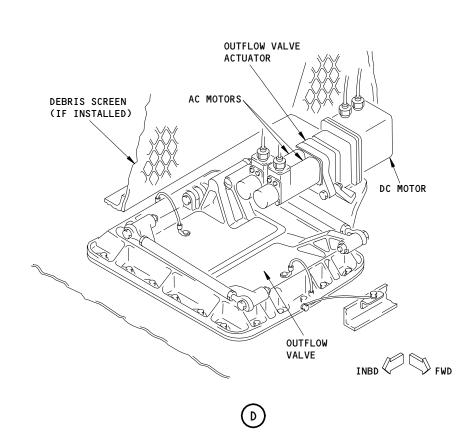
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Pressurization Control System Test Figure 501 (Sheet 2)

EFFECTIVITY

OPERATIONAL

CABIN PRESSURE OUTFLOW VALVE

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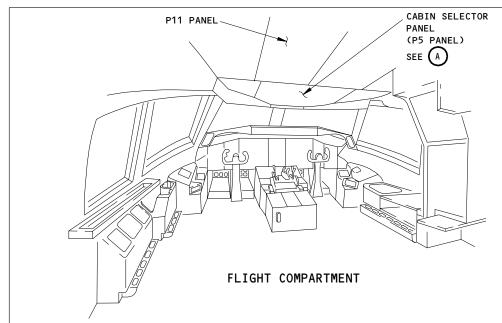
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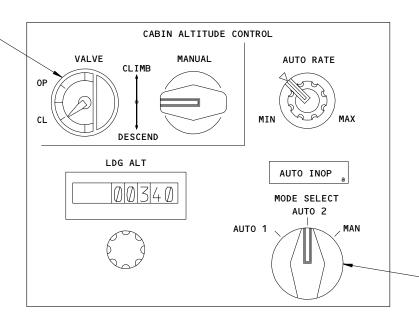


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VALVE POSITION INDICATOR SEE TABLE A



CABIN SELECTOR PANEL (EXAMPLE)



Valve Position Indications for Mixed Cabin Pressure Controller/ Outflow Valve Combinations Figure 502 (Sheet 1)

EFFECTIVITY H31553

OPERATIONAL

CABIN PRESSURE OUTFLOW VALVE

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CABIN PRESSURE SELECTOR

SAS



21-009-01

AIRLINE CARD NO.

CABIN PRESSURE	CABIN PRESSURE	VALVE POSITI	ON INDICATOR
CONTROLLER/OUTFLOW VALVE COMBINATIONS	SELECTOR PANEL	OPEN	CLOSED
S210T160-83, -113, -133 CPC S210T160-114 OFV	\$210T160-42 \$210T160-52 \$210T160-62	OP CL	OP CL
	S210T160-72	OP CL V	OP O O
S210T160-83, -113, -133 CPC S210T160-64, -74, -84, -94 OFV	\$210T160-42 \$210T160-52 \$210T160-62	OP CL	OP CL ACCEPTABLE RANGE
	S210T160-72	OP O O	OP OCL V
S210T160-33, -43, -53, -63, -73 CPC S210T160-64, -74, -84, -94, -114 OFV	\$210T160-42 \$210T160-52 \$210T160-62	OP CL	OP CL
	\$210T160-72	OP O O	OP A O

TABLE A
Valve Position Indications for Mixed Cabin Pressure Controller/
Outflow Valve Combinations
Figure 502 (Sheet 2)

EFFECTIVITY	OPERATIONAL	CABIN PRESSUR	E OUTF	LOW VA	LVE
н31559	21-31-00-5A	21-009-01	PAGE	6 OF	6 APR 22/09

STATION	
TAIL NO.	
DATE	\dashv



BOEING CARD NO.
21-010-01

AIRLINE CARD NO.

						TASK	CARD					
SKILL	WORK ARE	EA	RELATED T	ASK			INTERVAL		PHASE	MPD REV		SK CARD VISION
AIRPL	FWD CAR	GO				2C			12424	012	AUG	22/09
TASI	K			TITLE				STRUCTURAL ILLUSTRATION RE	FERENCE	AP AIRPLAN	PLICABI E	LITY ENGINE
FUNCT	IONAL	POSIT	IVE PRESS	SURE RE	LIEF V	/ALVES						
										ALL		ALL
	ZONES							ACCESS PANELS				
121												

MECH INSP

MPD ITEM NUMBER

FUNCTIONALLY CHECK THE RELIEF SETTING OF THE POSITIVE PRESSURE RELIEF VALVES.

21-32-01-5A

- 1. System Test Positive Pressure Relief Valve
 - A. General
 - (1) This procedure has instructions to do the positive pressure relief valve test. There are two parts to this test:
 - (a) The Remote Ambient Sensor Test
 - (b) The Integral Ambient Sensor Test
 - B. Equipment
 - (1) Vacuum Tank Pressure Relief Valve Test Equipment, A21010-70 (Recommended)

 - (3) Air compressor or air source capable of 60-80 psi at 22 scfm, commercially available.
 - C. Access
 - (1) Location Zones

121 Forward cargo compartment (Left)

<u>NOTE</u>: The relief valves are installed on the airplane skin.

This test can only be done from the out side of the airplane.

FUNCTIONAL POSITIVE PRESSURE RELIEF VALVES

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21-010-01

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

D. Positive Pressure Relief Valve Test (Fig. 501)

NOTE: Each valve must be tested separately.

- (1) Make sure there is no blockage or unwanted materials at these locations on the fuselage skin by the positive pressure relief valves:
 - (a) The static pressure port (fwd of the relief valves)
 - (b) The integral ambient sense tube opening (adjacent to each relief valve).
- (2) Connect the test equipment to the applicable relief valve.
 - (a) Make sure all the valves on the test equipment are closed.
 - (b) Connect the air pressure source to the quick-disconnect air connection on the vacuum tank assembly.
 - (c) Make sure the vacuum regulator valve on the vacuum tank assembly is turned fully clockwise.
 - (d) A21010-70,-69,-57 TEST EQUIPMENT; Adjust the air control valve until the indication on the pressure gage is 70 (+10/-10) psi.
 - (e) Adjust the vacuum regulator valve until the differential pressure is approximately 2.0 psi (4.07 inches Hg).

NOTE: Turn the vacuum regulator valve counter-clockwise to increase the vacuum (differential pressure). The arrow on the vacuum regulator valve indicates an increase of pressure not vacuum.

A21010-70 TEST EQUIPMENT AND SUBSEQUENT; The differential pressure will show as a negative value on the digital vacuum pressure gage.

- (f) Install the static port adapter to the remote sensor port on the airplane fuselage.
 - 1) Make sure the plunger is in the center hole of the port and that the adapter is over all of the port.

EFFECTIVITY

FUNCTIONAL

POSITIVE PRESSURE RELIEF VALVES

21-32-01-5A

21-010-01

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21-010-01

AIRLINE CARD NO.

			31	45	767	
					TASK CARD	
MECH	INSP					
			(g) (Open t	he remote sensor valve to the static port ada	pter.
			CAUTIO	<u> </u>	OLD THE VACUUM HEAD ASSEMBLY AGAINST THE AIRP	LANE
					USELAGE AS YOU DO THE TEST. THE VACUUM HEAD DAMAGED IF IT FALLS TO THE GROUND WHEN THERE I	
				L	NAMAGED IF IT FALLS TO THE GROUND WHEN THERE I	S NO VACOUM.
			<i>(</i> 1.)			
					nd hold the vacuum head assembly over the appl · valve and open the vacuum head assembly valv	
			,		ake sure the vacuum head assembly is sealed to rplane skin.	the
		(3)	Do the	e Remo	ote Ambient Sensor Test.	
			(a) /	Adjust	the vacuum regulator valve to increase the d	ifferential
			ı	oressu	re at the rates that follow:	
			ı	NOTE:	A21010-70 TEST EQUIPMENT AND SUBSEQUENT;	
					The differential pressure will show as a neg on the digital vacuum pressure gage.	ative value
			ŕ	(1	nen the differential pressure is less than 8.7 7.71 inches Hg), apply the vacuum at a rate n nan 5.00 psig/min (10.18 inches Hg/min).	
			•	2) Wh	nen the differential pressure is 8.70 - 9.10 p	eia
				(1	7.71 - 18.53 inches Hg), apply the vacuum at reater than 2.00 psig/min (4.07 inches Hg/min)	a rate not

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21-010-01

AIRLINE CARD NO.

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MECH	INSP	-				
			(b)	pressur pressur	closely the needle position on the difference gage to confirm the crackpoint pressure of e relief valve occurs at a differential presp. 15 psig (18.22 ±0.31 in-Hg).	the
					The crackpoint pressure of the valve occurs needle on the differential pressure gage sto increasing, then suddenly decreases slightly increases slightly again and then stabilizes necessary for the pressure relief valve to a the full open position (poppet action).	ps , and then . It is not
					The crackpoint pressure of the valve occurs sufficient differential pressure causes the to move away from the valve seat. Valve ope be observed from inside the airplane by remo section of the left sidewall lining in the f compartment.	valve poppet ration can ving a
			(c)	pressur there a	pressure relief valve cracks open at a diffe e more than 9.10 psig (18.53 in-Hg), make su are no leaks at any of the tubing connections tank assembly.	re that
					A21010-70 TEST EQUIPMENT AND SUBSEQUENT; The differential pressure will show as a neg on the digital vacuum pressure gage.	ative value
			(d)	pressur	the vacuum regulator valve until the differe e is approximately 2.0 psig (4.07 inches Hg) e than 4.0 psig/min (8.14 inches Hg/min).	
					A21010-70 TEST EQUIPMENT AND SUBSEQUENT; The differential pressure will show as a neg on the digital vacuum pressure gage.	ative value
		(4)	Do t	he Integ	ral Ambient Sensor Test	
			(a)	Close t	he remote sensor valve.	

EFFECTIVITY

FUNCTIONAL

POSITIVE PRESSURE RELIEF VALVES

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21-010-01

AIRLINE CARD NO.

SAS BOEING TASK CARD

MECH INSP

(b) Adjust the vacuum regulator valve to increase the differential pressure at the rates that follow:

NOTE: A21010-70 TEST EQUIPMENT AND SUBSEQUENT; The differential pressure will show as a negative value on the digital vacuum pressure gage.

- 1) When the differential pressure is 0 9.00 psig (0 - 18.33 inches Hg), apply the vacuum at a rate not more than 5.00 psig/min (10.18 inches Hg/min).
- When the differential pressure is 9.00 9.62 psig (18.33 - 19.59 inches Hg), apply the vacuum at a rate not more than 2.00 psig/min (4.07 inches Hg/min).
- (c) Monitor closely the needle position on the differential pressure gage to confirm the crackpoint pressure of the pressure relief valve occurs at a differential pressure of 9.42 ±0.20 psig (19.18 ±0.41 in-Hg).

The crackpoint pressure of the valve occurs when the NOTE: needle on the differential pressure gage stops increasing, then suddenly decreases slightly, and then increases slightly again and then stabilizes. It is not necessary for the pressure relief valve to actuate to the full open position (poppet action).

> The crackpoint pressure of the valve occurs when sufficient differential pressure causes the valve poppet to move away from the valve seat. Valve operation can be observed from inside the airplane by removing a section of the left sidewall lining in the forward cargo compartment.

(d) If the pressure relief valve cracks open at a differential pressure more than 9.62 psig (19.59 in-Hg), make sure that there are no leaks at any of the tubing connections on the vacuum tank assembly.

NOTE: A21010-70 TEST EQUIPMENT AND SUBSEQUENT;

The differential pressure will show as a negative value

on the digital vacuum pressure gage.

EFFECTIVITY

FUNCTIONAL

POSITIVE PRESSURE RELIEF VALVES

21-32-01-5A

21-010-01

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AIRLINE CARD NO.

				3/10	
				TASK CARD	
MECH	INSP				
			(5)	Adjust the vacuum regulator valve until the differential pressure i approximately 2.0 psig (4.07 inches Hg) at a rate not more than 4.0 psig/min (8.14 inches Hg/min).	is
				NOTE: A21010-70 TEST EQUIPMENT AND SUBSEQUENT; The differential pressure will show as a negative value on the digital vacuum pressure gage.	
			(6)	Close the vacuum head assembly valve and remove the vacuum head assembly.	
			(7)	Adjust the vacuum regulator valve fully clockwise and reduce the differential pressure to zero psi.	
			(8)	Do the remote ambient sensor test and the integral ambient sensor test for the other positive pressure relief valve.	
		E.	Put	the airplane back to its usual condition	
			(1)	Remove the test equipment from the airplane.	
			(2)	Indicator Flag Reset	
				(a) Locate the pressure relief valve that is open.	
				NOTE: You can see the red indicator flag if the valve is open	١.
				(b) Pull the flapper open.	
				(c) Push the indicator flag into the valve.	
				(d) Close the flapper.	
	1				

EFFECTIVITY	FUNCTIONAL	POSITIVE PRESSURE RELIEF VALVES

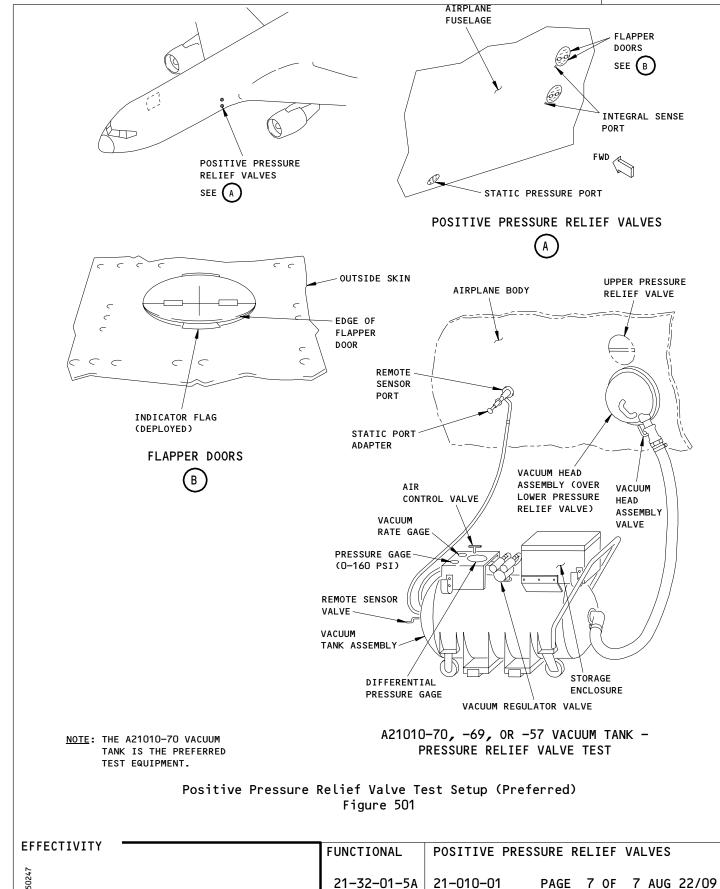
21-32-01-5A 21-010-01 PAGE 6 OF 7 AUG 22/09

SAS



21-010-01

AIRLINE CARD NO.



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STATION	
TAIL NO.	
DATE	1

WORK AREA



BOEING CARD NO.
21-011-01

AIRLINE CARD NO.

TASK CARD

ALL

MPD

ALL

PHASE

AIRPL FWD CARGO B-21-010-01 4C 14848 002 AUG 22/01

TASK TITLE STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY AIRPLANE ENGINE

REPLACE POSITIVE PRESS RELIEF VALVE FILTERS

INTERVAL

ZONES ACCESS PANELS

1211 821

RELATED TASK

MECH INSP

121

SKILL

MPD ITEM NUMBER

REPLACE POSITIVE PRESSURE RELIEF VALVE FILTERS.

21-32-02-4A

ACCESS NOTE: SPECIAL ACCESS 1211 REQUIRES REMOVAL OF FORWARD CARGO COMPARTMENT LEFT SIDEWALL PANELS PER MM REF 25-52-01.

- Remove the Relief Valve Filter (Fig. 401)
 - A. References
 - (1) 06-46-00/201 Entry, Service and Cargo Door Access Doors and Panels
 - (2) 25-52-01/401, Containerized Cargo Compartment Sidewall Lining
 - B. Access
 - C. Prepare for the Removal
 - (1) Open the forward cargo compartment door, 821 (Ref 06-46-00).
 - (2) Remove the sidewall lining on the left side of the cargo compartment, across from the aft end of the cargo door (Ref 25-52-01).
 - D. Remove the relief valve filter.
 - (1) Pull the filter cover off of the valve.
 - (2) Pull the filter out of valve.
- Install the Relief Valve Filter (Fig. 401)

REPLACE POSITIVE PRESS RELIEF VALVE FILTERS

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21-011-01

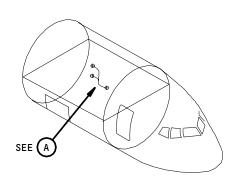
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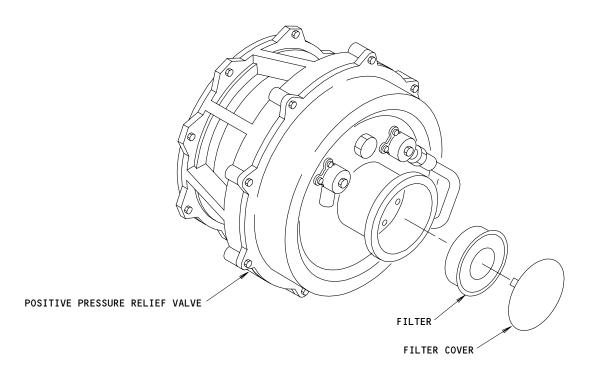
			TASK CARD
MECH	INSP		
		Α.	References
			(1) 06-46-00/201 Entry, Service and Cargo Door Access Doors and Panels
			(2) 25-52-01/401, Containerized Cargo Compartment Sidewall Lining
		В.	Access
			(1) Location Zone 121 Forward Cargo Compartment (Left)
		C.	Install the relief valve filter.
			(1) Put the filter into the relief valve.
			(2) Push the filter cover onto the relief valve until it snaps into position.
		D.	Put the Airplane Back to its Usual Condition
			(1) Install the sidewall lining on the left side of the cargo compartment, across from the aft end of the cargo door (Ref 25-52-01).
			(2) Close the forward cargo compartment door, 821 (Ref 06-46-00).

SAS

767 TASK CARD 21-011-01

AIRLINE CARD NO.







Positive Pressure Relief Valve Filter Installation Figure 401

EFFECTIVITY 55	REPLACE	POSITIVE PRESS RELIEF VALVE FILTERS			
27	21-32-02-4A	21-011-01	PAGE	3 OF	3 DEC 10/98

STATION								BOEING CARD NO.		
TA	IL NO.		O BOEING					21-012-01		
			SAS 767						AIRLINE CARD NO.	
DATE										
					TASK CARI)				
SKILL	WOR	K AREA	RE	LATED TASK	INTERVAL		PHASE	MPD REV	TASK CARD REVISION	
ELECT	MAIN	EE	CTR		4C		14848	017	DEC 22/05	
TASK			TITLE STRUCTURAL ILLUSTRATION REFERENCE						PLICABILITY	
FUNCTIONAL			CABIN ALTITUDE WARNING SWITCH					AIRPLAN	E ENGINE	
								ALL	ALL	
	ZONES					ACCESS PANELS				
119	211 2	212		119AL						
		- · -								

MECH INSP MPD ITEM NUMBER

FUNCTIONALLY CHECK THE ACTUATING SETTING OF THE CABIN ALTITUDE WARNING SWITCH.

21-33-00-5A

- 1. <u>System Test Cabin Altitude Warning System</u>
 - A. Equipment
 - (1) Portable Pressure Vacuum Pump, commercially available
 - (2) End fitting Compatible with the MS 33649-4 female thread on the Altitude Warning Switch (S431), commercially available
 - B. References
 - (1) AMM 24-22-00/201, Electrical Power Control.
 - C. Access
 - (1) Location Zones
 - 119 Main Equipment Center
 - 211 Control Cabin Section 41 (Left)
 - 212 Control Cabin Section 41 (Right)
 - (2) Access Panel

119AL Main Equipment Center Access Door

- D. Prepare for the Test
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Make sure these circuit breakers on the overhead circuit breaker panel, P11, are closed:
 - (a) 11A33, IND LTS 1

FUNCTIONAL CABIN ALTITUDE WARNING SWITCH

21-33-00-5A 21-012-01 PAGE 1 OF 4 AUG 22/99

21-012-01

SAS BOEING TASK CARD

MECH INSP

- (b) 11A34, IND LTS 2
- 11B14, CABIN ALTITUDE CONTROL MANUAL
- 11B15, CABIN ALTITUDE CONTROL SELECT (d)
- 11B16, AURAL WARN SPKR L (e)
- 11B18, WARN ELEX B (f)
- (g) 11H35, AURAL WARN SPKR R
- (h) 11J34, WARN ELEX A
- (i) 11P15, CABIN ALTITUDE CONTROL AUTO 1
- (j) 11P23, CABIN ALTITUDE CONTROL AUTO 2
- (k) 11R1, LEFT IND LTS 1
- (L) 11R28, RIGHT IND LTS 1
- (m) EICAS circuit breakers (6 locations)
- (3) Open the main equipment center access door, 119AL.
- (4) Connect the vacuum pump to the cabin altitude warning switch, S431, near the forward right hand corner of the E2 equipment rack.
- Increase the vacuum pressure (Pvac) to the equivalent cabin altitude of 10,000 \pm 300 ft (10.1 \pm 0.12 psia). Do not increase the altitude at a rate greater than 4000 ft/minute (2.0 psi/minute).

The vacuum pressure (Pvac) necessary to get the equivalent NOTE: cabin altitude of 10,000 ft (10.1 psia) is calculated as follows: Pvac = Pambient - 10.1 At sea level, Pamb = 14.7 psia. Thus, at sea level Pvac = 4.6 psig.

If you are not able to obtain the equivalent cabin altitude of 10,000 feet, make sure the mounting clamp for the cabin altitude warning switch is not too tight. The switch can be damaged if the mounting clamp is too tight.

EFFECTIVITY

FUNCTIONAL

CABIN ALTITUDE WARNING SWITCH

21-33-00-5A

21-012-01

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21-012-01

AIRLINE CARD NO.

			TASK CARD
MECH	INSP		<u>'</u>
		(6)	Make sure these conditions occur:
			(a) The CABIN ALTITUDE light, on the P5 panel, comes on.
			(b) The CABIN ALT light, on the P1 panel comes on.
			(c) The EICAS message CABIN ALTITUDE shows on the display.
			(d) The pilot's and first officer's master WARNING light, on the glareshield P7, comes on.
			(e) The aural warning signal comes on.
		(7)	Decrease the vacuum pressure on the cabin altitude warning switch to of $8,500\pm500$ ft (10.7 ±0.20 psia). Do not decrease the altitude at a rate greater than 4000 ft/minute (2.0 psi/minute).
		(8)	Make sure these conditions occur:
			(a) The CABIN ALTITUDE light, on the P5 panel goes off.
			(b) The CABIN ALT light, on the P1 panel, goes off.
			(c) The EICAS message CABIN ALTITUDE does not show on the display.
			(d) The pilot's and first officer's master WARNING light, on glareshield P7 panel, goes off.
			(e) The aural warning signal goes off.
		(9)	Decrease the vacuum to 0.00 psig (14.70 psia at sea level).
		(10)	Remove the vacuum pump from the cabin altitude warning switch.
		(11)	Close the main equipment center access door, 119AL.
		(12)	Remove electrical power if it is not necessary (AMM 24-22-00/201).

21-012-01

AIRLINE CARD NO.





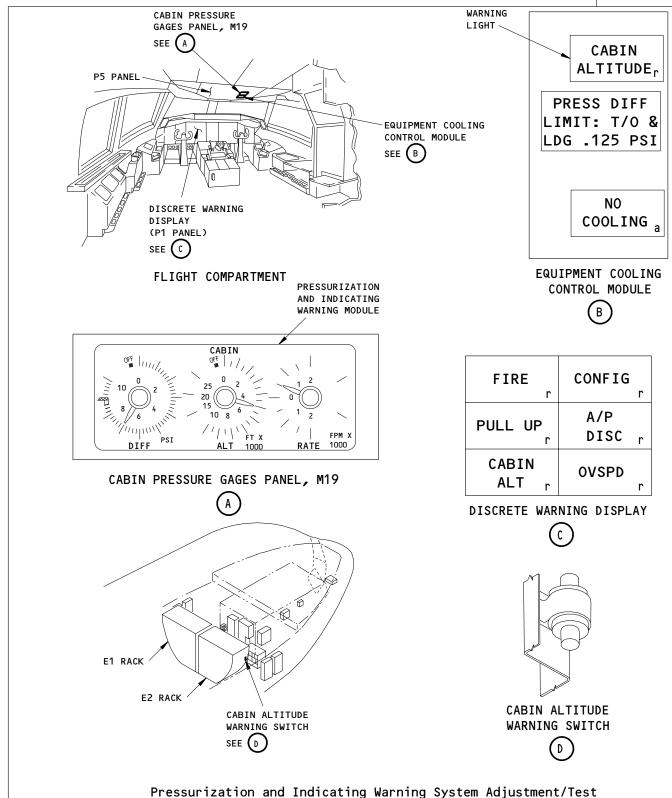


Figure 501

EFFECTIVITY

E2216

FUNCTIONAL

CABIN ALTITUDE WARNING SWITCH

21-33-00-5A

21-012-01

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1

STATION TAIL NO.			
TAIL NO.	STA	TION	
TAIL NO.			
	TAI	L NO.	
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BOEING CARD NO. 21-013-01

AIRLINE CARD NO.

					.,					
	SKILL	WORK ARI	A	RELATED TASK INTERVAL				PHASE	MPD	TASK CARD
									REV	REVISION
	ELECT	ECT CREW CABIN W-26-010-XX 4C		4C		14848	017	AUG 22/04		
	TASK		TITLE	TITLE		STRUCTURAL ILLUSTRATION REFERENCE		AP	PLICABILITY	
								AIRPLAN	E ENGINE	
	OPERATIONAL FWD CARGO		CARGO HEATING SH	HUTOFF V	/ALVE					
									PAS	S ALL
		ZONES					ACCESS PANELS			
	119 120 211		119AL 19	94LR 82	21					

MECH INSP

MPD ITEM NUMBER

OPERATIONALLY CHECK THE FORWARD CARGO HEATING SHUTOFF VALVE INCLUDING THE CARGO FIRE EXTINGUISHING SHUTOFF FUNCTION.

21-43-00-5A

- 1. Operational Test Forward Cargo Heating System
 - A. References
 - (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
 - (2) AMM 24-22-00/201, Electrical Power Control
 - B. Access
 - (1) Location Zones

121/122 Forward cargo compartment 123/124 Area below forward cargo compartment

(2) Access Panels

119AL Main Equipment Center 194LR ECS Access Door (Right)

- C. Prepare for the test
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Open the main equipment center access door, 119AL (AMM 06-41-00/201)
 - Make sure these circuit breakers on the overhead circuit breaker (3) panel, P11, are closed:
 - (a) 11R19, FWD CARGO HEAT CONTROL
 - (b) 11R21, FWD CARGO HEAT OVERRIDE

EFFECTIVITY OPERATIONAL FWD CARGO HEATING SHUTOFF VALVE 21-43-00-5A 21-013-01 PAGE 1 OF 8 AUG 22/04

AIRLINE CARD NO.

SAS BOEING 767 TASK CARD

MECH INSP

- (c) EICAS circuit breakers (6 locations)
- (4) Make sure this circuit breaker on the left miscellaneous electrical equipment panel, P36, is closed:
 - (a) 36L2 or 36K5, CARGO HEAT VALVE FWD CONT
- (5) If the temperature in the forward cargo compartment is greater than $40^{\circ}F$ (5°C), then apply a cold source to the forward cargo control switch.
 - (a) Remove the floor panel aft of the ball transfer panel, on the airplane centerline, to find the control and overheat temperature switches below the forward cargo deck.
- (6) If the temperature in the forward cargo compartment is greater than 80°F (32°C), then apply a cold source to the forward cargo overheat switch.
- (7) Open the right ECS access door 194LR (AMM 06-41-00/201) to find the forward cargo heating valves.
- (8) Push the ESC MSG button, on the P61 panel, to get the EICAS maintenance page.
- D. Operational Test Procedure
 - (1) Do the Operational Test
 - (a) Push the FWD CARGO HEAT switch-light on the overhead panel, P5, to the ON position.
 - 1) Make sure the ON light comes on.
 - (b) Make sure the EICAS message, FWD CARGO HEAT, shows on the bottom display.
 - (c) Make sure the position indicator on the shutoff valve is in the OPEN position.

CAUTION: OPEN THE CIRCUIT BREAKERS IN THE SUBSEQUENT STEP. IF THE CIRCUIT BREAKERS IN THE SUBSEQUENT STEP ARE NOT OPENED, THE CARGO FIRE EXTINGUISHER BOTTLES MAY DISCHARGE WHEN YOU DO THE STEPS THAT FOLLOW.

EFFECTIVITY

OPERATIONAL F

FWD CARGO HEATING SHUTOFF VALVE

21-43-00-5A

21-013-01

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AIRLINE CARD NO.

SAS FOEING 767 TASK CARD

MECH	INSP

- (2) Open these circuit breakers on the main power distribution panel, P6, and attach the DO-NOT-CLOSE tags:
 - (a) 6H5, FIRE EXTINGUISHING CARGO BTL 1
 - (b) 6H6, FIRE EXTINGUISHING CARGO BTL 2
- (3) Continue the procedure
 - (a) Push the CARGO FIRE FWD switch-light on the pilots control stand panel, P8, to the ARMED position.
 - 1) Make sure the ARMED light comes on.
 - (b) Make sure the EICAS message, FWD CARGO HEAT, does not show on the bottom display.
 - (c) Make sure the position indicator on the shutoff valve is in the CLOSE position.
 - (d) Make sure the position indicator on the control valve is in the CLOSE position.
 - (e) Push the CARGO FIRE FWD switch-light, on the P8 panel, to the off position.
 - 1) Make sure the ARMED light goes off.
 - (f) Remove the DO-NOT-CLOSE tags and close these circuit breakers on the P6 panel:
 - 1) 6H5, FIRE EXTINGUISHING CARGO BTL 1
 - 2) 6H6, FIRE EXTINGUISHING CARGO BTL 2
 - (g) Make sure the EICAS message, FWD CARGO HEAT, shows on the bottom display.
 - (h) Make sure the position indicator on the shutoff valve is in the OPEN position.
 - (i) Make sure the position indicator on the control valve is in the OPEN position.
 - (j) Push the FWD CARGO HEAT switch-light, on the P5 panel, to the off position.

EFFECTIVITY

OPERATIONAL | FWD CARGO HEATING SHUTOFF VALVE

21-43-00-5A

21-013-01

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21-013-01

AIRLINE CARD NO.

		TASK CARD
MECH	INSP	
		1) Make sure the ON light goes off.
		(k) Make sure the EICAS message, FWD CARGO HEAT, does not show on the bottom display.
		E. Put the Airplane Back to Its Usual Condition
		(1) If necessary, remove the cold source from the forward cargo temperature switches.
		(2) Re-install the applicable floor panel in the forward cargo compartment.
		(3) Close the right ECS access door, 194LR (AMM 06-41-00/201).
		(4) Close the main equipment center access door, 119AL, (AMM 06-41-00/201).
		(5) Remove the electrical power if it is not necesssary (AMM 24-22-00/201).

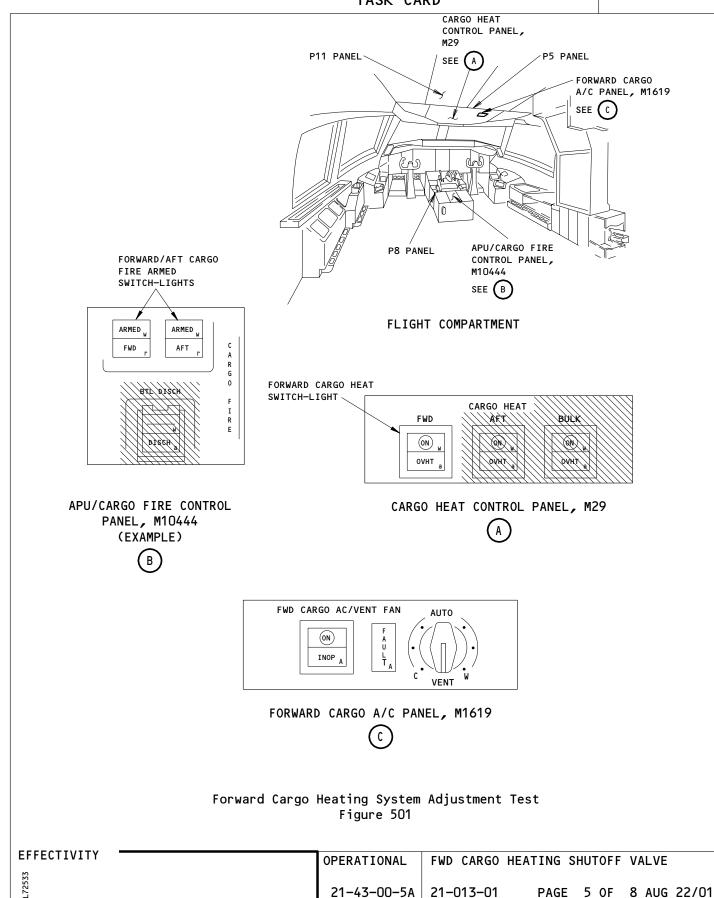
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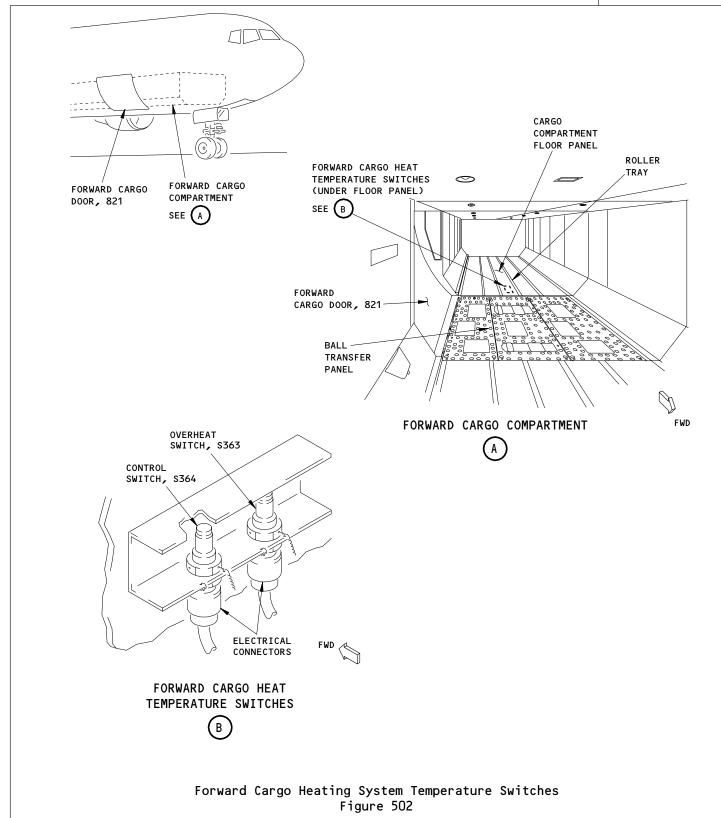


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AIRLINE CARD NO.

SAS





EFFECTIVITY

OPERATIONAL

21-43-00-5A

21-013-01

FWD CARGO HEATING SHUTOFF VALVE

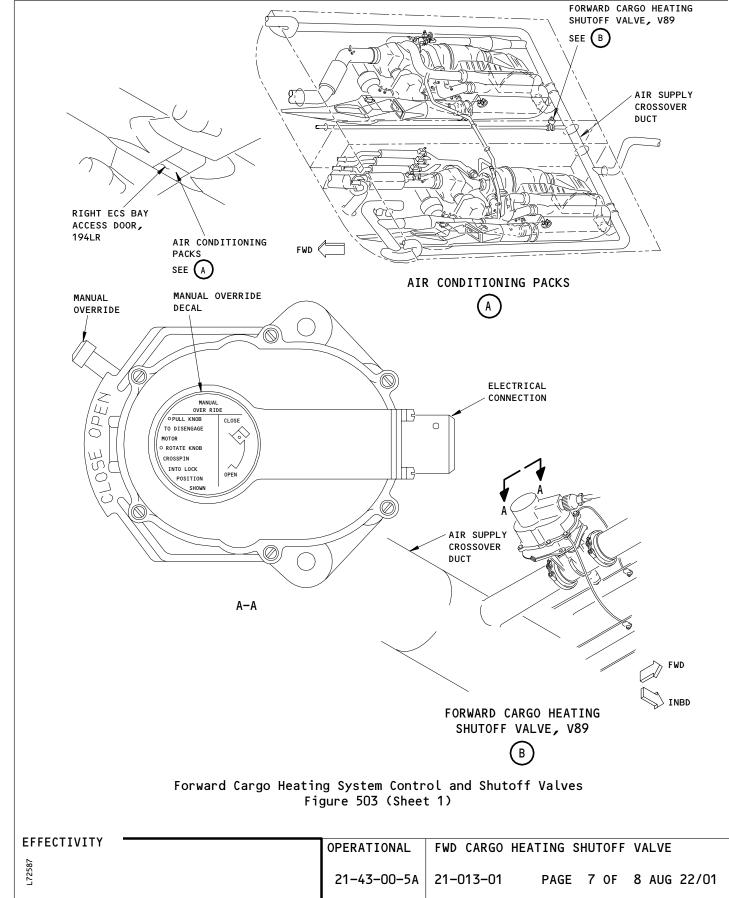
PAGE 6 OF 8 AUG 22/01

21-013-01

AIRLINE CARD NO.

SAS

767
TASK CARD



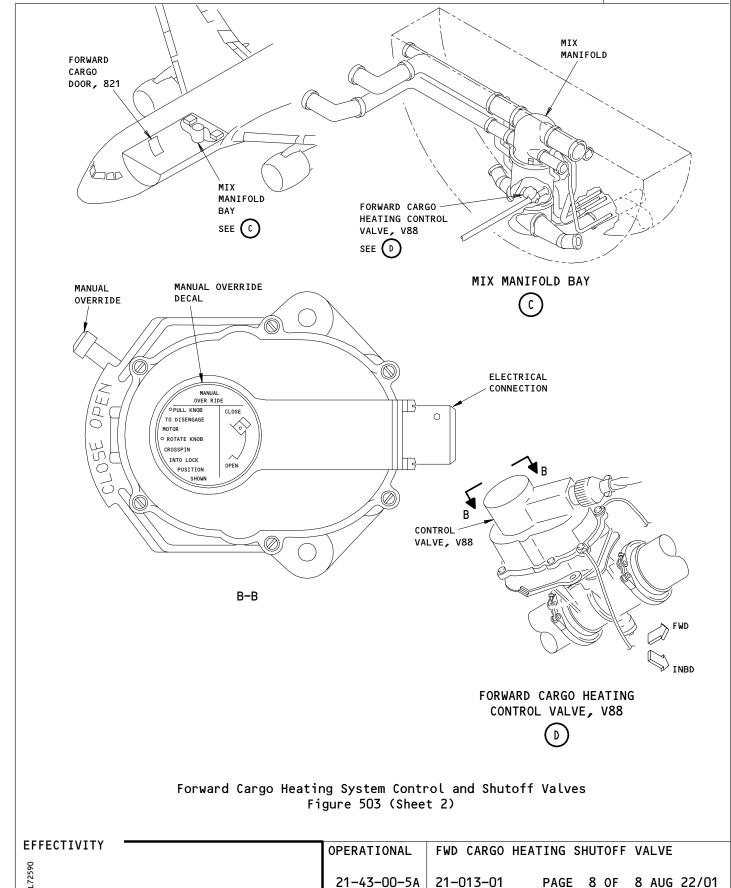
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21-013-01

AIRLINE CARD NO.

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BOEING CARD NO. 21-013-02

AIRLINE CARD NO.

	SKILL	WORK AREA RELATED TASK			INTERVAL			PHASE	MPD	TASK CARD	
										REV	REVISION
	ELECT	CREW CA	BIN	W-26-010-X	Χ	4C			14848	017	AUG 22/03
	TASK				TITLE			STRUCTURAL ILLUSTRATION RE	FERENCE	AF	PLICABILITY
										AIRPLAN	E ENGINE
	OPERA	TIONAL	AFT/	BULK CARGO I	HEATING	SHUTOFF	VALVE				

ZONES

ACCESS PANELS

PASS

ALL

MECH INSP

119 150 160 211

119AL

MPD ITEM NUMBER

OPERATIONALLY CHECK THE AFT AND BULK CARGO HEATING SHUTOFF VALVES INCLUDING THE CARGO FIRE EXTINGUISHER SHUTOFF FUNCTION.

21-44-00-5A

AFT/BULK CARGO COMPARTMENT HEATING SYSTEM - ADJUSTMENT/TEST

- Operational Test Aft Cargo Heating System (Fig. 501)
 - Equipment
 - (1) Cold source (ice pack), commercially available
 - Thermometer, range 0 to 120°F (0 to 49°C) commercially available
 - B. References
 - (1) 24-22-00/201, Electrical Power Control
 - (2) 25-52-01/401, Cargo Compartment Sidewall Panel
 - C. Access
 - (1) Location Zones

153 Aft Cargo Compartment (Left) 155/156 Area below aft cargo compartment

- Prepare for the Test
 - (1) Supply electrical power (Ref 24-22-00).
 - Make sure these circuit breakers on the overhead circuit breaker panel, P11, are closed:
 - (a) 11R2O, AFT CARGO HEAT CONTROL

EFFECTIVITY OPERATIONAL AFT/BULK CARGO HEATING SHUTOFF VALVE 21-44-00-5A 21-013-02 PAGE 1 OF 8 AUG 22/03

SAS FOEING
TASK CARD

AIRLINE CARD NO.

MECH	INSP		
			(b) 11R22, AFT CARGO HEAT OVERRIDE
			(c) EICAS circuit breakers (6 locations)
			(3) Make sure this circuit breaker on the left miscellaneous electrical equipment panel, P36, is closed:
			(a) 36L3 or 36K6 CARGO HEAT VALVE AFT CONT
			(4) Push the ECS MSG button, on the P61 panel, to get the EICAS maintenance page.
			(5) If the temperature in the cargo compartment is greater than 40°F (5°C), then apply a cold source to the aft cargo control switch.
			(6) If the temperature in the cargo compartment is greater than 80°F (27°C), then apply a cold source to the aft cargo overheat and control temperature switches.
			(7) Remove the sidewall panels on the left side of the aft cargo compartment, approximately 5 feet (1.6 meters) forward of the bulk cargo door (Ref 25-52-01).
		Ε.	Aft Cargo Heating Operational Test procedure
			(1) Do the Aft Cargo Heating Operational Test
			(a) Push the AFT CARGO HEAT switch-light, on the overhead panel,P5, to the ON position.
			(b) Make sure the ON light comes on.
	1 1		

CAUTION: IF THE CIRCUIT BREAKERS IN THE SUBSEQUENT STEP ARE NOT OPENED, THE CARGO FIRE EXTINGUISHER BOTTLES MAY DISCHARGE WHEN YOU DO THE STEPS THAT FOLLOW.

(c) Make sure the EICAS message, AFT CARGO HEAT, shows on the

- (d) Open these circuit breakers on the main power distribution panel, P6, and attach the DO-NOT-CLOSE tags:
 - 1) 6H5, FIRE EXTINGUISHING CARGO BTL 1

bottom display.

2) 6H6, FIRE EXTINGUISHING CARGO BTL 2

	_				
EFFECTIVITY	OPERATIONAL	AFT/BULK CAR	O HEAT	ING SH	UTOFF VALVE
	21-44-00-5A	21-013-02	PAGE	2 OF	8 AUG 22/03

TASK CARD

AIRLINE CARD NO.

			THER STILL
MECH	INSP		
			(e) Push the CARGO FIRE AFT switch-light, on the pilots' control stand panel, P8, to the ARMED position.
			(f) Make sure the ARMED light comes on.
			(g) Make sure the EICAS message, AFT CARGO HEAT, does not show on the bottom display.
			(h) Make sure the position indicator on the aft cargo shutoff valve is in the CLOSE position.
			(i) Push the CARGO FIRE AFT switch-light, on the P8 panel, to the unarmed position.
			(j) Make sure the ARMED light goes off.
			(k) Remove the DO-NOT-CLOSE tags and close these circuit breakers on the P6 panel:
			1) 6H5, FIRE EXTINGUISHING CARGO BTL 1
			2) 6H6, FIRE EXTINGUISHING CARGO BTL 2
			(l) Push the AFT CARGO HEAT switch-light, on the P5 panel, to the off position.
			(m) Make sure the ON light goes off.
		F. Pu	t the Airplane Back to Its Usual Condition
		(1	If applicable, remove the cold source from the overheat and the control temperature switches
		(2	Install the sidewall panel 5 feet (1.6 meters) forward of the bulk cargo door (25-52-01).
		(3	Remove the electrical power if it is no longer necessary (Ref 24-22-00).
	2.	<u>Operat</u>	ional Test - Bulk Cargo Heating System (Fig. 501)
		A. Eq	uipment
		(1	Cold source (ice pack), commercially available

B. References

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AIRLINE CARD NO.

SAS BOEING 767 TASK CARD

MECH INSP

- (1) 24-22-00/201, Electrical Power Control
- (2) 25-52-01/401, Cargo Compartment Sidewall Panel
- C. Access
 - (1) Location Zones

153 Aft Cargo Compartment (Left) 161/162 Bulk cargo compartment

- D. Prepare for the Test
 - (1) Supply the electrical power (Ref 24-22-00).
 - (2) Make sure these circuit breakers on the overhead circuit breaker panel, P11, are closed:
 - (a) 11N26, BULK CARGO HEAT CONT
 - (b) 11N27, BULK CARGO HEAT OVRD
 - (c) EICAS circuit breakers (6 locations)
 - (3) Make sure this circuit breaker on the left miscellaneous electrical equipment panel, P36, is closed:
 - (a) 36L1 or 36K4 CARGO HEAT VALVE BULK
 - (4) If the temperature in the cargo compartment is greater than 40°F (5°C), then apply a cold source to the normal heat temperature switch.
 - (5) If the temperature in the cargo compartment is greater than 80°F (27°C), then apply a cold source to the overheat temperature switch and the normal heat temperature switch.
 - (6) Turn the BULK CARGO HEAT selector, on the right side panel, P61, to the NORM position.
 - (7) Make sure the CARGO FIRE AFT switch, on the aft pilots control stand panel, P8, is not armed (the ARMED light is off).
 - (8) Remove the sidewall panel on the left side of the cargo compartment, approximately 4 feet (1.2 meters) forward of the bulk cargo door (Ref 25-52-01).

EFFECTIVITY

OPERATIONAL

AFT/BULK CARGO HEATING SHUTOFF VALVE

21-44-00-5A

21-013-02

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AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (9) Push the ECS MSG button, on the P61 panel, to get the EICAS maintenance page.
- E. Bulk Cargo Heating Operational Test procedure
 - (1) Do the Bulk Cargo Heating Operational Test
 - (a) Push the BULK CARGO HEAT switch-light, on the pilots' overhead control panel, P5, to ON. Make sure the ON light comes on.
 - (b) Make sure the EICAS message BULK CARGO HEAT shows on the lower display.

CAUTION: IF THE CIRCUIT BREAKERS IN THE SUBSEQUENT STEP ARE NOT OPENED, THE CARGO FIRE EXTINGUISHER BOTTLES MAY DISCHARGE WHEN YOU DO THE STEPS THAT FOLLOW.

- (c) Open these circuit breakers, on the main power distribution panel, P6, and attach the DO-NOT-CLOSE tags:
 - 1) 6H5, FIRE EXTINGUISHING CARGO BTL 1
 - 2) 6H6, FIRE EXTINGUISHING CARGO BTL 2
- (d) Push the CARGO FIRE AFT switch-light, on the P8 panel, to ARMED.
- (e) Make sure the ARMED light comes on.
- (f) Make sure the EICAS message, BULK CARGO HEAT, does not show on the bottom display.
- (g) Make sure the position indicator on the bulk cargo shutoff valve is in the CLOSE position.
- (h) Push the CARGO FIRE AFT switch-light, on the P8 panel, to unarmed. Make sure the ARMED light goes out.
- (i) Make sure the ARMED light goes out.
- (j) Remove the DO-NOT-CLOSE tags and close these circuit breakers, on the P6 panel:
 - 1) 6H5, FIRE EXTINGUISHING CARGO BTL 1

EFFECTIVITY

OPERATIONAL

AFT/BULK CARGO HEATING SHUTOFF VALVE

21-44-00-5A

21-013-02

PAGE 5 OF 8 MAY 10/95

21-013-02

AIRLINE CARD NO.

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				(1)	Push Make	the B sure				
				(m)	Make	sure	the O	N lig	ht g	joes
		F.	Put	the A	irplan	ne Bac	k to	Its U	sual	L Co
			(1)		pplica artmen	-				
			(2)		all th he bul			-	-	-

G CARGO BTL 2

- e, BULK CARGO HEAT, shows on the
- witch-light, on the P5 panel, to off. s out.
- s off.
- ondition
 - source from the bulk cargo
 - oximately 4 feet (1.2 meters) forward 52-01).
 - (3) Remove the electrical power if it is no longer necessary (Ref 24-22-00).

EFFECTIVITY

OPERATIONAL

AFT/BULK CARGO HEATING SHUTOFF VALVE

21-44-00-5A

21-013-02

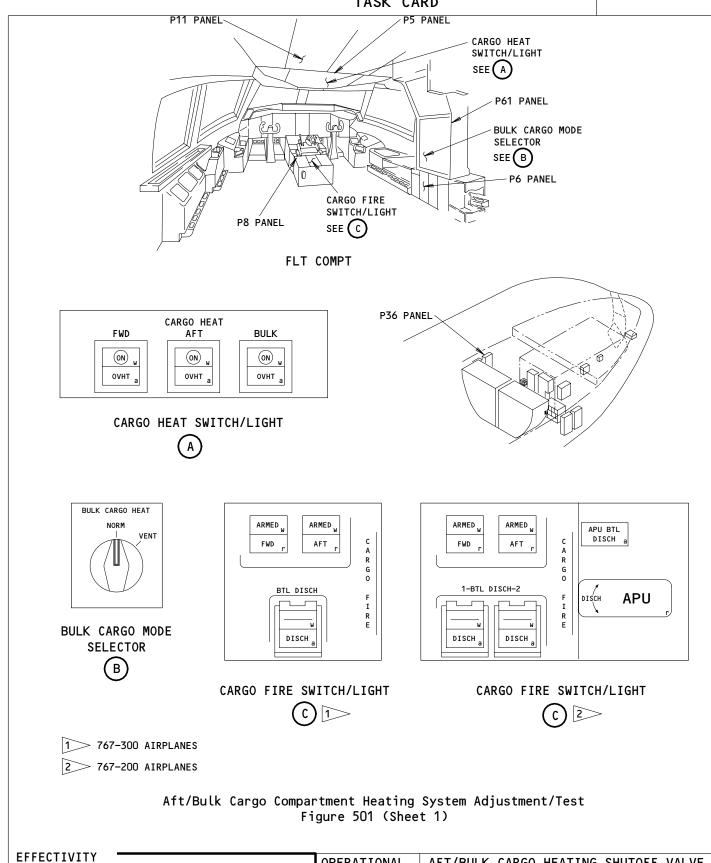
PAGE 6 OF 8 MAY 10/93

21-013-02

AIRLINE CARD NO.

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OPERATIONAL

21-44-00-5A

21-013-02

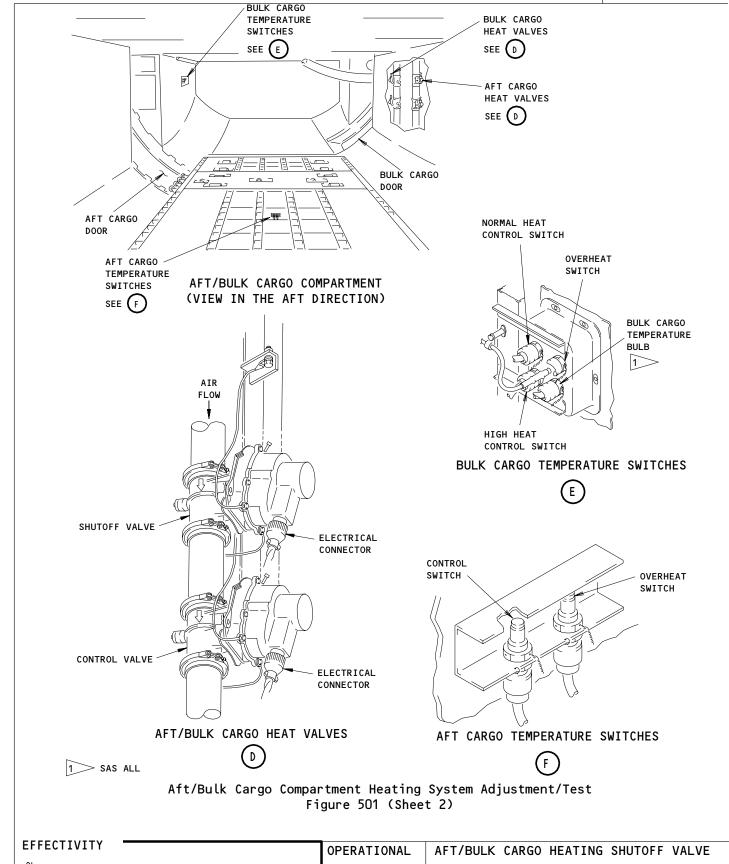
AFT/BULK CARGO HEATING SHUTOFF VALVE

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AIRLINE CARD NO.

SAS

767 TASK CARD



21-44-00-5A

21-013-02

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STATION	
TAIL NO.	
DATE	╛

WORK AREA



BOEING CARD NO. 21-014-01

AIRLINE CARD NO.

TASK CARD

RELATED TASK INTERVAL SKILL PHASE REVISION REV 4C 012 AUG 22/07 **ELECT** | **FUSELAGE** 14848 STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY
AIRPLANE ENGINE

FUNCTIONAL FWD CARGO OVERHEAT TEMP SWITCH NOTE ALL

ZONES ACCESS PANELS

124 136 1231 194LR 821

MPD ITEM NUMBER MECH INSP

FUNCTIONALLY CHECK THE SWITCH SETTING OF THE FORWARD CARGO OVERHEAT TEMPERATURE SWITCH.

21-43-00-5B

AIRPLANE NOTE: TASK APPLICABLE TO PASSENGER AND GMF

AIRPLANES.

ACCESS NOTE: SPECIAL ACCESS 1231 REQUIRES REMOVAL OF

FORWARD CARGO COMPARTMENT FLOOR PANELS

PER MM REF 25-53-03.

<u> Operational Test - Forward Cargo Overheat Test</u>

Equipment

- (1) Heat Source (blow dryer), commercially available.
- (2) Cold Source (ice pack), commercially available.
- (3) Thermometer, range 0 to 120°F (0 to 49°C) commercially available.
- (4) Mirror commercially available

References

- (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
- (2) AMM 24-22-00/201, Electrical Power Control

Access C.

(1) Location Zones

121/122 Forward cargo compartment

123/124 Area below the forward cargo compartment

EFFECTIVITY FUNCTIONAL FWD CARGO OVERHEAT TEMP SWITCH 21-43-00-5B 21-014-01 PAGE 1 OF 8 AUG 22/07

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TASK CARD

AIRLINE CARD NO.

			TASK CARD
MECH	INSP		
			136 Environmental control systems bay (Right) 821 Forward cargo door
		(2)	Access Panel 194LR ECS Access Door (Right)
		D. Prep	pare for the Test
		(1)	Make sure these circuit breakers on the overhead circuit breaker panel, P11, are closed:
			(a) 11R19, FWD CARGO HEAT CONTROL
			(b) 11R21, FWD CARGO HEAT OVERRIDE
			(c) EICAS circuit breakers (6 locations)
		(2)	Make sure this circuit breaker on the left miscellaneous electrical equipment panel, P36, is closed:
			(a) 36L2 or 36K5, CARGO HEAT VALVE FWD CONT
		(3)	Supply electrical power (AMM 24-22-00/201).
		(4)	Push the ECS MSG button, on the P61 panel, to get the EICAS maintenance page.
		(5)	Make sure the FWD CARGO HEAT switch-light, on the overhead control panel P5, is off (the ON light is not on).
		(6)	Make sure the CARGO FIRE FWD switch-light on the aft pilots control stand panel, P8, is off (the ARMED light is not on).
		(7)	Open the forward cargo door, 821 (AMM 52-33-00/201).
		(8)	Remove the floor panel aft of the ball transfer panel, on the airplane centerline to find the control and overheat control temperature switches below the forward cargo deck.
		(9)	Open the right ECS access door, 194LR, (Ref $06-41-00/201$) to find the forward cargo heating shutoff valve.
		(10)	Remove the curtain panel at the aft end of the forward cargo compartment to find the forward cargo heating control valve (which is installed below and to the right of the mix manifold).

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AIRLINE CARD NO.

SAS BOEING
767
TASK CARD

MECH INSP

- E. Forward Cargo Overheat Test Procedure
 - (1) Do the Forward Cargo Overheat Switch Test.
 - (a) If the temperature in the forward cargo compartment is greater than 50°F (10°C), then apply a cold source to the forward cargo temperature switches.
 - (b) Push the FWD CARGO HEAT switch-light, on the P5 panel, to the ON position.
 - 1) Make sure the ON light comes on.
 - (c) Disconnect the electrical connector from the control valve.
 - (d) If the temperature in the forward cargo compartment is less than 95°F (35°C), then apply a heat source to the forward cargo temperature switches.
 - (e) Make sure the position indicator on the shutoff valve moves to the CLOSED position.
 - (f) Make sure the FWD CARGO HEAT OVHT light, on the P5 panel, comes on.
 - (g) Make sure the EICAS message, CGO FLOOR OVHT, shows on the top display.
 - (h) Do the steps that follow:
 - 1) Connect the electrical connector to the control valve.
 - 2) Make sure the position indicator on the control valve moves to the CLOSED position.
 - 3) Make sure the EICAS message, CGO FLOOR OVHT, does not show on the top display.
 - 4) Make sure the FWD CARGO HEAT OVHT light, on the P5 panel, goes off.
 - Disconnect the electrical connector from the control valve.
 - 6) Make sure the FWD CARGO HEAT OVHT light, on the P5 panel, comes on.
 - (i) Remove the heating source from the temperature switches.

EFFECTIVITY

FUNCTIONAL

FWD CARGO OVERHEAT TEMP SWITCH

21-43-00-5B

21-014-01

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AIRLINE CARD NO.

SAS BOEING 767 TASK CARD

MECH	INSP

- (j) If the cargo compartment temperature is greater than 75°F (24°C), then apply a cold source to the temperature switches.
- (k) Make sure the position indicator on the shutoff valve moves to the OPEN position.
- (l) Make sure the FWD CARGO HEAT OVHT light, on the P5 panel, goes off.
- (m) Make sure the EICAS message, CGO FLOOR OVHT, does not show on the top display.
- (n) Connect the electrical connector to the control valve.
- (o) Push the FWD CARGO HEAT switch-light, on the P5 panel, to the off position.
 - 1) Make sure the ON light goes off.
- (p) Make sure the position indicators for the control valve and the shutoff valve move to the CLOSED positions.
- F. Put the Airplane Back to Its Usual Condition
 - (1) Install the curtain panel in the aft end of the forward cargo compartment.
 - (2) Install the floor panels above the temperature switches.
 - (3) Close the forward cargo door, 821 (AMM 52-33-00/201).
 - (4) Close the right ECS access door, 194LR (AMM 06-41-00/201).
 - (5) Remove the electrical power if it is no longer necessary (AMM 24-22-00/201).

EFFECTIVITY

FUNCTIONAL

FWD CARGO OVERHEAT TEMP SWITCH

21-43-00-5B

21-014-01

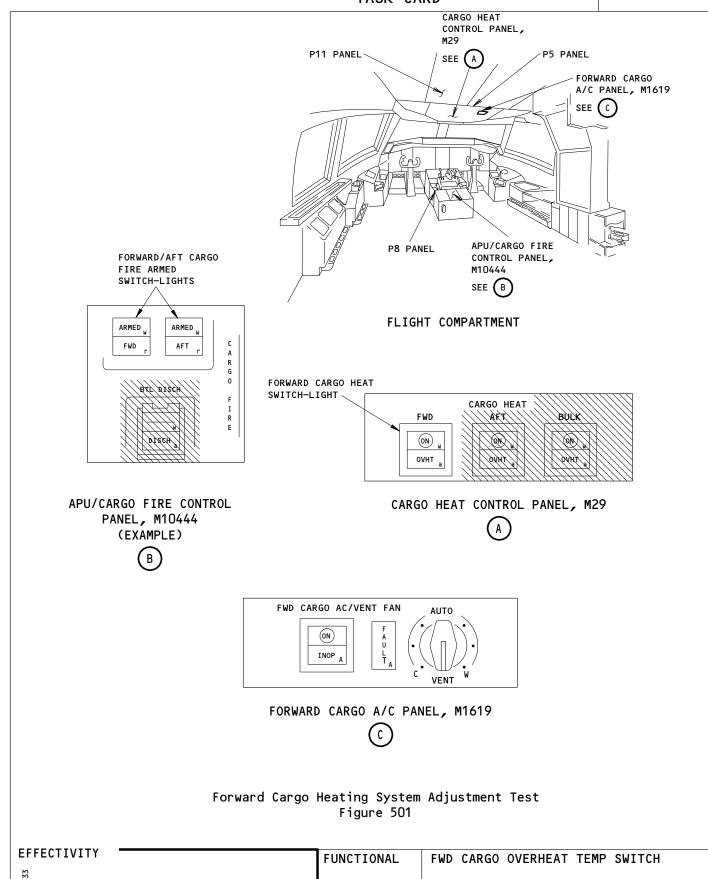
PAGE 4 OF 8 AUG 22/05

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21-014-01

AIRLINE CARD NO.



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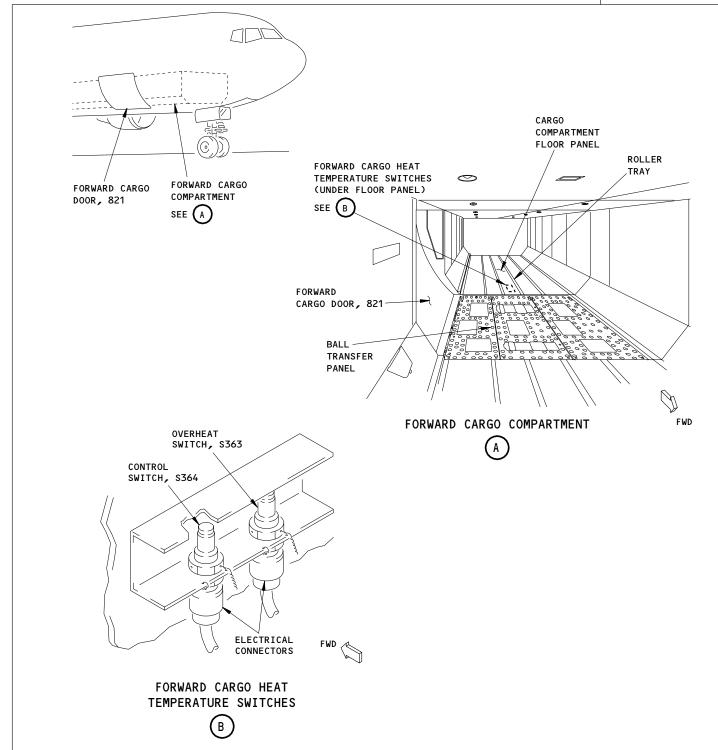
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BOEING 767

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AIRLINE CARD NO. TASK CARD



Forward Cargo Heating System Temperature Switches Figure 502

EFFECTIVITY FUNCTIONAL FWD CARGO OVERHEAT TEMP SWITCH 21-43-00-5B 21-014-01 PAGE 6 OF 8 AUG 22/01

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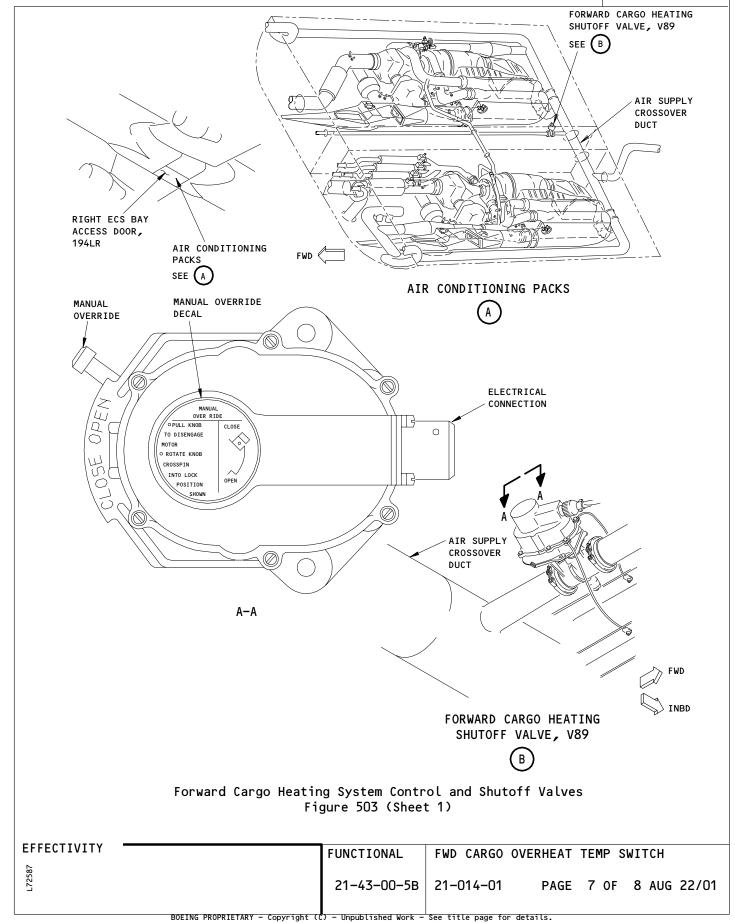
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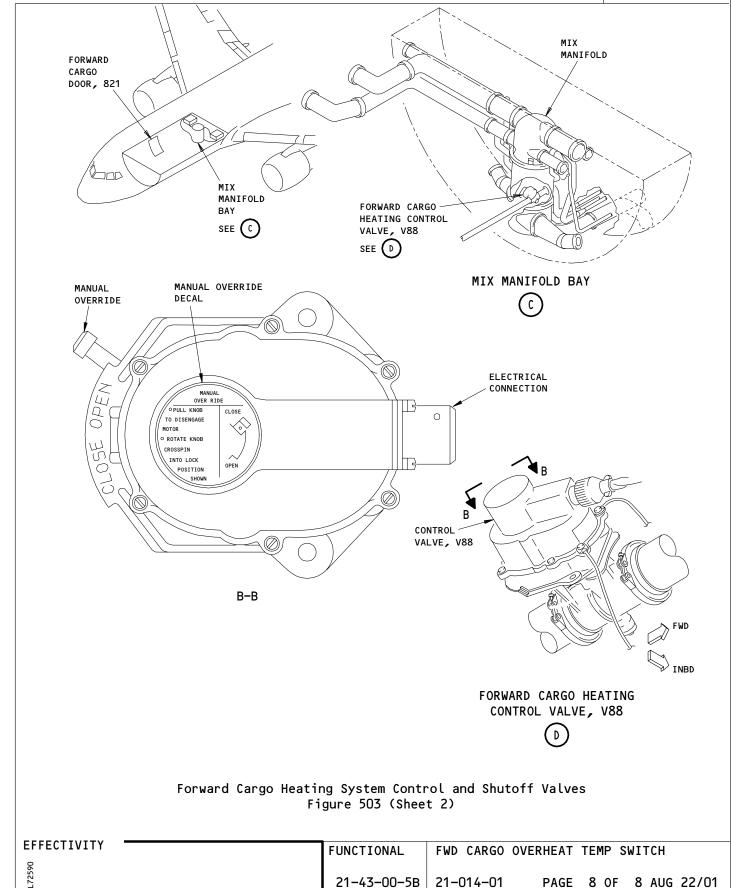


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BOEING CARD NO. 21-014-02

AIRLINE CARD NO.

WORK AREA RELATED TASK INTERVAL MPD TASK CARD SKILL PHASE REVISION REV 4C 017 AUG 22/03 **ELECT** | **FUSELAGE** 14848 STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY
AIRPLANE ENGINE **FUNCTIONAL** AFT/BULK CARGO OVERHEAT TEMP SWITCH **PASS** ALL ACCESS PANELS ZONES 822 119 153 155 163 119AL 1551 1631 811

MECH INSP

FUNCTIONALLY CHECK THE SWITCH SETTING OF THE AFT AND BULK CARGO OVERHEAT THERMAL SWITCHES.

21-44-00-5B

MPD ITEM NUMBER

ACCESS NOTE: SPECIAL ACCESS 1551 REQUIRES REMOVAL OF

AFT CARGO COMPARTMENT FLOOR PANELS PER

MM REF 25-53-03.

ACCESS NOTE: SPECIAL ACCESS 1631 REQUIRES REMOVAL OF

BULK CARGO COMPARTMENT FLOOR PANELS.

AFT/BULK CARGO COMPARTMENT HEATING SYSTEM - ADJUSTMENT/TEST

System Test - Aft Cargo Compartment Heating System

- A. Equipment
 - (1) Heat source (blow dryer), commercially available.
 - (2) Cold source (ice pack), commercially available.
 - (3) Thermometer, range 0 to 120°F (0 to 49°C) commercially available
- B. References
 - (1) 06-41-00/201, Entry, Service, and Cargo Doors Access Doors and Panels
 - (2) 24-22-00/201, Electrical Power Control
 - (3) 25-52-01/401, Cargo Compartment Sidewall Panel
- C. Access

EFFECTIVITY	FUNCTIONAL	AFT/BULK CARG	O OVER	HEAT TEMP	SWITCH
	21-44-00-5B	21-014-02	PAGE	1 OF 11 A	NUG 22/03

21-014-02

767 TASK CARD

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AIRLINE CARD NO.

MECH	INSP

(1) Location Zones

153 Aft cargo compartment (Left)
155/156 Area below aft cargo compartment

- D. Prepare for the Test
 - (1) Make sure these circuit breakers on the overhead circuit breaker panel, P11, are closed:
 - (a) 11R2O, AFT CARGO HEAT CONTROL
 - (b) 11R22, AFT CARGO HEAT OVERRIDE
 - (c) EICAS circuit breakers (6 locations)
 - (2) Make sure this circuit breaker on the left miscellaneous electrical equipment panel, P36, is closed:
 - (a) 36L3 or 36K6 CARGO HEAT VALVE AFT CONT
 - (3) Supply electrical power (Ref 24-22-00).
 - (4) Make sure the AFT CARGO HEAT switch-light on the overhead panel, P5, is off (the ON light is not on).
 - (5) Make sure the CARGO FIRE AFT switch-light on the pilots' aft control stand panel, P8, is not armed (the ARMED light is not on).
 - (6) Open the aft cargo compartment door, 822 (Ref 06-46-00).
 - (7) Remove the sidewall panels on the left side of the aft cargo compartment, approximately 5 feet (1.6 meters) forward of the bulk cargo door. (Ref 25-52-01).
 - (8) Make sure the position indicators on the aft cargo shutoff valve and control valve are in the CLOSED position.
 - (9) Remove the applicable floor panel to get access to the aft cargo compartment temperature switches. The switches are installed below the floor deck, approximately 67 inches forward from the middle of the aft cargo door.
 - (10) Push the ECS MSG button, on the P61 panel, to get the EICAS maintenance page.
- E. Aft Cargo Heat Control Valve and Aft Cargo Heat Shutoff Valve Test

EFFECTIVITY

FUNCTIONAL

AFT/BULK CARGO OVERHEAT TEMP SWITCH

21-44-00-5B

21-014-02

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AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (1) Do the steps that follow to do a test of the aft cargo heat control valve and the aft cargo heat shutoff valve.
 - (a) If the temperature in the aft cargo compartment is greater than $40^{\circ}F$ (5°C), then apply a cold source to the aft cargo control switch.
 - (b) If the temperature in the aft cargo compartment is greater than 80°F (27°C), then apply a cold source to the aft cargo overheat and control temperature switches.
 - (c) Push the AFT CARGO HEAT switch-light, on the P5 panel, to ON.
 - (d) Make sure the ON light comes on.
 - (e) Make sure the position indicator on the control valve and the shutoff valve move to the OPEN position.
 - (f) Make sure the EICAS message, AFT CARGO HEAT, shows on the bottom display.
- F. Aft Cargo Overheat Switch Test
 - (1) Do the steps that follow to do a test of the aft cargo overheat switch.
 - (a) Make sure the AFT CARGO HEAT switch-light, on the P5 panel, is in the ON position.
 - 1) Make sure the ON light is on.
 - (b) Disconnect the electrical connector from the aft cargo heating control valve.
 - (c) If the temperature in the aft cargo compartment is less than 95°F (35°C), then apply a heat source to the two aft cargo temperature switches.
 - (d) Make sure the position indicator on the shutoff valve moves to the CLOSED position.
 - (e) Make sure the OVHT light for the AFT CARGO HEAT switch-light, on the P5 panel, comes on.
 - (f) Make sure the EICAS message, AFT CARGO OVHT, shows on the top display.

EFFECTIVITY

FUNCTIONAL

AFT/BULK CARGO OVERHEAT TEMP SWITCH

21-44-00-5B

21-014-02

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21-014-02

			TASK CARD	
MECH	INSP			
		(g) Do the steps t	hat follow:	
		1) Connect th control va	ne electrical connector to the aft car alve.	go heating
			the position indicator on the control OSED position.	valve moves
		3) Make sure on the top	the EICAS message, AFT CARGO OVHT, do display.	es not show
			the OVHT light for the AFT CARGO HEAT ht, on the P5 panel, goes off.	
		5) Disconnect	the electrical connector from the co	ntrol valve.
		6) Make sure	the OVHT light, on the P5 panel, come	s on.
		(h) If applicable, switches.	remove the heat source from the two	temperature
			ature in the aft cargo compartment is then apply a cold source to the two af witches.	
		(j) Make sure the the OPEN posit	position indicator on the shutoff val	ve moves to
		(k) Make sure the on the P5 pane	OVHT light for the AFT CARGO HEAT swi	tch-light,
		(l) Make sure the the top displa	EICAS message, AFT CARGO OVHT, does n	ot show on
		(m) Connect the el control valve.	ectrical connector to the aft cargo h	eating
		(n) If applicable, temperature sw	remove the cold source from the aft vitches.	cargo
		(o) Turn the AFT C	CARGO HEAT switch-light, on the P5 pan	el, to off.
		(p) Make sure the	ON light goes off.	
		- I	position indicators on the control va are in the CLOSED position.	lve and the

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AIRLINE CARD NO.

SAS	767
	TASK CARD

MECH INSP

- Put the Airplane Back to Its Usual Condition
 - (1) Remove the pneumatic power if it is not necessary (Ref 36-00-00).
 - Install the floor panel that is above the aft cargo temperature switches.
 - (3) Install the sidewall panel 5 feet (1.6 meters) forward of the bulk cargo door (Ref 25-52-01).
 - (4) Close the aft cargo compartment door, 822 (Ref 06-46-00).
 - Remove the electrical power if it is no longer necessary (Ref 24-22-00).
- System Test Bulk Cargo Compartment Heating System
 - Equipment
 - (1) Heat source (blow dryer), commercially available
 - (2) Cold source (ice pack), commercially available
 - Thermometer, range 0 to 120°F (0 to 49°C) commercially available
 - References B.
 - (1) 06-41-00/201, Entry, Service, and Cargo Doors Access Doors and Panels.
 - (2) 24-22-00/201, Electrical Power Control
 - (3) 25-52-01/401, Cargo Compartment Sidewall Panel
 - Access С.
 - (1) Location Zones

153 Aft cargo compartment (Left)

162 Bulk cargo compartment (Right)

- Prepare for the Test
 - Make sure these circuit breakers on the overhead circuit breaker panel, P11, are closed:
 - (a) 11N26, BULK CARGO HEAT CONT

EFFECTIVITY

FUNCTIONAL

AFT/BULK CARGO OVERHEAT TEMP SWITCH

21-44-00-5B

21-014-02

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SAS FOR TASK CARD

MECH	INSP
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- (b) 11N27, BULK CARGO HEAT OVRD
- (c) EICAS circuit breakers (6 locations)
- (2) Make sure this circuit breaker, on the left miscellaneous electrical equipment panel, P36, is closed:
 - (a) 36L1 or 36K4 BULK CARGO HEAT VALVE
- (3) Supply electrical power (Ref 24-22-00).
- (4) Make sure the BULK CARGO HEAT switch-light, on the overhead panel, P5, is off (the ON light is not on).
- (5) Turn the BULK CARGO HEAT selector, on the right side panel, P61, to the NORM position.
- (6) Make sure the CARGO FIRE AFT switch-light, on the pilots' control stand panel, P8 is not armed (the ARMED light is not on).
- (7) Open the aft cargo compartment door, 822 (Ref 06-46-00).
- (8) Remove the sidewall panel is on the left side of the cargo compartment, approximately 4 feet (1.2 meters) forward of the bulk cargo door (Ref 25-52-01).
- (9) Make sure the position indicators on the control valve and the shutoff valve are in the CLOSED position.
- (10) Push the ECS MSG button, on the P61 panel, to get the EICAS maintenance page.
- E. Bulk Cargo Heat Control Valve and Bulk Cargo Heat Shutoff Valve Test
 - (1) Do the steps that follow to do a test of the bulk cargo heat control valve and the bulk cargo heat shutoff valve.
 - (a) If the temperature in the bulk cargo compartment is greater than 40°F (5°C), then apply a cold source to the normal heat temperature switch.
 - (b) Push the BULK CARGO HEAT switch-light, on the P5 panel, to ON.
 - (c) Make sure the ON light comes on.
 - (d) Make sure the position indicators on the control valve and the shutoff valve move to the OPEN position.

EFFECTIVITY

FUNCTIONAL

AFT/BULK CARGO OVERHEAT TEMP SWITCH

21-44-00-5B

21-014-02

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SAS BOEING TASK CARD

|--|

- (e) Make sure the EICAS message, BULK CARGO HEAT, shows on the bottom display.
- If applicable, remove the cold source from the bulk cargo temperature switches.
- If the temperature in the bulk cargo compartment is less than 80°F (27°C), then apply a heat source to the bulk cargo temperature switches.
- (h) Turn the BULK CARGO HEAT selector, on the P61 panel, to the VENT position.
- (i) Make sure the position indicator on the control valve moves to the CLOSED position.
- Make sure the EICAS message, BULK CARGO HEAT, does not show on the bottom display.
- (k) If applicable, remove the heat source from the bulk cargo temperature switches.
- (L) If the temperature in the bulk cargo compartment is greater than 60°F (16°C), then apply a cold source to the bulk cargo temperature switches.
- Make sure the EICAS message, BULK CARGO HEAT, shows on the bottom display.
- If applicable, remove the cold source from the temperature (n) switches.
- Bulk Cargo Overheat Switch Test
 - (1) Do the steps that follow to do a test of the bulk cargo overheat switch.
 - (a) Make sure the BULK CARGO HEAT switch-light, on the P5 panel, is in the ON position.
 - 1) Make sure the ON light is on.
 - Disconnect the electrical connector from the bulk cargo heating control valve.

EFFECTIVITY

FUNCTIONAL

AFT/BULK CARGO OVERHEAT TEMP SWITCH

21-44-00-5B

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BOEING 767 TASK CARD

MECH	INSP

- (c) If the temperature in the bulk cargo compartment is less than 95°F (35°C), then apply a heat source to the bulk cargo temperature switches.
- (d) Make sure the position indicator on the shutoff valve moves to the CLOSED position.
- (e) Make sure the OVHT light for the BULK CARGO HEAT switch-light, on the P5 panel, comes on.
- Make sure the EICAS message, BULK CARGO OVHT, shows on the top display.
- Do the steps that follow: (g)
 - Connect the electrical connector the bulk cargo heating control valve.
 - Make sure the position indicator on the control valve moves to the CLOSED position.
 - 3) Make sure the EICAS message, BULK CARGO OVHT, does not show on the top display.
 - 4) Make sure the OVHT light for the BULK CARGO HEAT switch-light, on the P5 panel, goes off.
 - Disconnect the electrical connector from the bulk cargo heating control valve.
 - 6) Make sure the OVHT light for the BULK CARGO HEAT switch-light comes on.
- (h) If applicable, remove the heat source from the temperature switches.
- If the temperature in the bulk cargo compartment is greater than 75°F (24°C), then apply a cold source to the bulk cargo temperature switches.
- (j) Make sure the position indicator on the shutoff valve moves to the OPEN position.
- Make sure the OVHT light for the BULK CARGO HEAT switch-light goes off.

EFFECTIVITY

FUNCTIONAL

AFT/BULK CARGO OVERHEAT TEMP SWITCH

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AIRLINE CARD NO.



	SAS 767 TASK CARD	CARD NO
MECH INSP		
	(l) Make sure the EICAS message, BULK CARGO OVHT, does not show the top display.	on
	(m) Connect the electrical connector to the bulk cargo heating control valve.	
	G. Put the Airplane Back to Its Usual Condition	
	(1) Turn the BULK CARGO HEAT selector, on the P61 panel, to the NORM position.	
	(2) Install the sidewall panel approximately 4 feet (1.2 meters) for of the bulk cargo door (Ref 25-52-01).	ward
	(3) Close the aft cargo compartment door, 822 (Ref 06-46-00).	
	(4) Remove the electrical power if it is no longer necessary (Ref 24-22-00).	

EFFECTIVITY FUNCTIONAL

AFT/BULK CARGO OVERHEAT TEMP SWITCH

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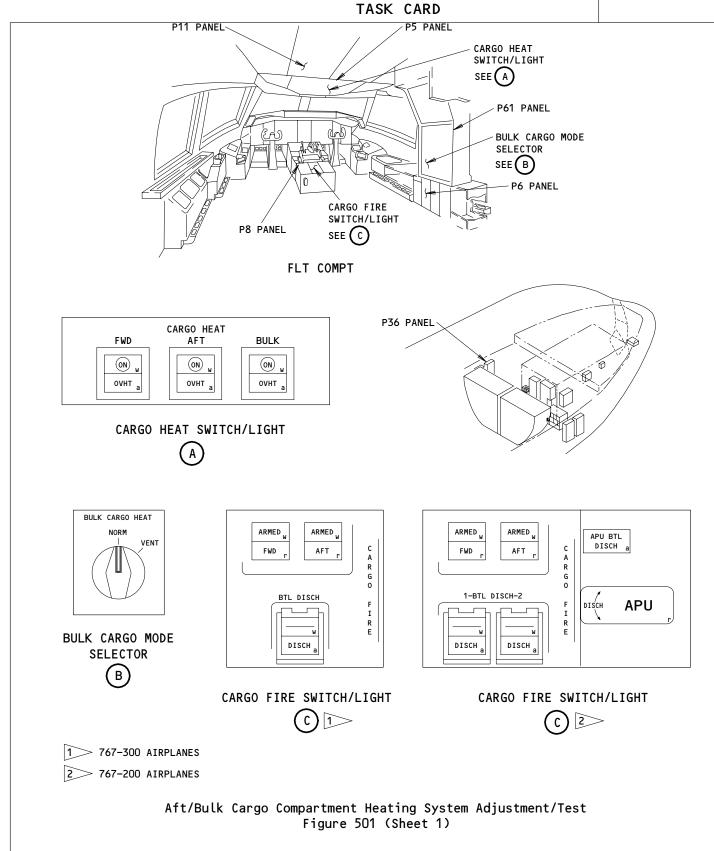
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AIRLINE CARD NO.

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EFFECTIVITY

FUNCTIONAL

21-44-00-5B

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AFT/BULK CARGO OVERHEAT TEMP SWITCH

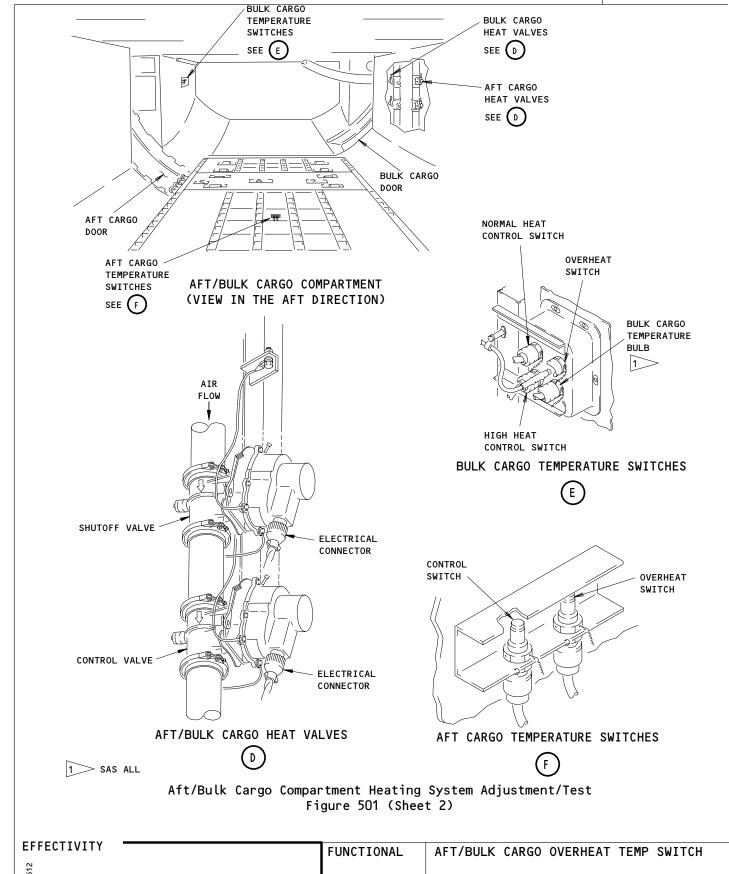
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767
TASK CARD

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AIRLINE CARD NO.



21-44-00-5B

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STATION	
TAIL NO.	
DATE	┪

WORK AREA



BOEING CARD NO. 21-015-C1

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

RELATED TASK SKILL REV REVISION 017 AUG 22/04 ELECT | MAIN EE CTR 1C 11212 STRUCTURAL ILLUSTRATION REFERENCE

INTERVAL

APPLICABILITY
AIRPLANE ENGINE **OPERATIONAL** PACK TEMPERATURE CONTROLLERS NOTE ALL

ACCESS PANELS ZONES

119 135 136 212 119AL 193NL 194LR

MPD ITEM NUMBER MECH INSP

PERFORM BITE TEST ON LEFT AND RIGHT PACK TEMPERATURE 21-51-00-5A 21-51-00-5A CONTROLLERS. 21-51-00-5B

PERFORM BITE TEST ON STANDBY PACK TEMPERATURE 21-51-00-5B CONTROLLER.

AIRPLANE NOTE: TASK APPLICABLE TO ALL AIRPLANES EXCEPT THE 767-400ER.

<u>BITE Tests - Pack Temperature and Pack Standby Controllers</u> (Fig. 501, 502)

Α. General

(1) When the pneumatic power is off, the BITE (Built In Test Equipment) does an electrical check of the pack temperature controller, the compressor outlet temperature sensor, the pack outlet temperature sensor, the mix manifold temperature sensor, the zone temperature sensors, the altitude switch, the low limit valve, and the flow control and shutoff valve. The BITE does an operational check of the temperature control valve, the ram air inlet actuator, and the ram air exhaust actuator by driving each component open and closed.

References B.

- (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
- (2) AMM 24-22-00/201, Electric Power Control
- (3) AMM 36-00-00/201, Pneumatic General
- (4) FIM 21-51-00/101, Cooling Pack System
- Access

EFFECTIVITY OPERATIONAL PACK TEMPERATURE CONTROLLERS 21-51-00-5A 21-015-C1 PAGE 1 OF 8 AUG 22/04

21-015-C1

TASK CARD

AIRLINE CARD NO.

ECH 1	INSP		
			(1) Location Zones 119/120 Main equipment center 135/136 Environmental control system bay
			(2) Access Panels 119AL Main Equipment Center 193NL/194LR Environmental Control Systems (ECS) Bay
		D.	Prepare for the test
			(1) Make sure these circuit breakers, on the overhead circuit breaker panel, P11, are closed:
			(a) 11A13, PACK FLOW CONT L
			(b) 11A26, PACK FLOW CONT R
			(c) 11N10, LEFT PACK AUTO PWR
			(d) 11N11, LEFT PACK AUTO CONT
			(e) 11N15, RIGHT PACK STANDBY PWR
			(f) 11N16, RIGHT PACK STANDBY CONT
			(g) 11N19, RIGHT PACK AUTO PWR
			(h) 11N2O, RIGHT PACK AUTO CONT
			(i) 11N24, LEFT PACK STANDBY PWR
			(j) 11N25, LEFT PACK STANDBY CONT
			(k) EICAS circuit breakers (6 locations)
			(2) Supply electrical power (AMM 24-22-00/201).
			(3) Make sure the pneumatic duct pressure is zero (AMM 36-00-00/201).
			(4) Open the main equipment center access door, 119AL (AMM 06-41-00/201).
		Ε.	Do the BITE Tests

EFFECTIVITY

21-015-c1

AIRLINE CARD NO.

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SAS	767	
	TASK CARD	

	SAS 767
	TASK CARD
MECH INSP	
	(1) Do the pack temperature controller BITE Test.
	NOTE: BITE will show the same indication for a component fault or an airplane wiring fault. Make sure the wiring is correct and the connector is in good condition before you replace a component.
	(a) Turn all of the zone temperature selectors, on the pilot's overhead control panel, P5, to the AUTO (12 o'clock) position.
	(b) Push the TRIM AIR switch-light, on the P5 panel, to the on position.
	(c) Turn the L and R PACK selectors, on the P5 panel, to the AUTO positions.
	(d) Find the pack temperature controllers in the main equipment center on the E3-1 shelf.
	(e) Do the BITE test on the applicable (left or right) pack temperature controller:
	1) Make sure the CONTROLLER fault light is off.

EFFECTIVITY

OPERATIONAL PACK TEMPERATURE CONTROLLERS

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21-015-c1

BOEING 767 TASK CARD

AIRLINE CARD NO.

			TASK CARD
MECH	INSP	-	
			a) If the CONTROLLER FAULT light is on, there is a problem with the pack temperature controller and/or a wiring problem with the temperature control valve or the ram air inlet/exhaust door actuators.
			NOTE: An electrical short in the circuit wiring for the temperature control valve or the ram air inlet/exhaust door actuators can cause the pack temperature controller to blow a fuse. An electrical resistance check of the circuit wiring must be done first before you replace the PTC in order to isolate the cause of the electrical short to prevent future occurrences of a blown fuse in new PTCs (FIM 21-51-00/101 Figure 103).
			AIRPLANES WITH PTC P/N S210T130-69 OR EARLIER PTC DASH NUMBERS; If the pack temperature controller has a blown
			fuse, the CONTROLLER FAULT light will only show.
			AIRPLANES WITH PTC P/N S210T130-79 AND SUBSEQUENT PTC DASH NUMBERS; If the pack temperature controller has a blown fuse, the CONTROLLER FAULT light will illuminate in addition to the TEMP CONT VALVE, RAM INLET ACTR, or RAM OUTLET ACTR fault light.
		2)	Push the PRESS/TEST button.
			a) Make sure all of the lights on the controller face come on.
		3)	Push the BIT button.
			a) Make sure the BIT light comes on for 2 to 3 seconds.
			b) Make sure that the GO light comes on and that none of the fault (red) lights come on.
			<u>NOTE</u> : The GO light indicates that there are no controller faults and that no faults were detected the last time the pack was operated.

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4) Push the PREVIOUS FLIGHTS button.

SAS BOEING TASK CARD

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AIRLINE CARD NO.

MECH INSP

- a) Make sure the PREVIOUS FLIGHTS light comes on for 2 to 3 seconds.
- Make sure the GO light comes on and that none of the fault (red) lights come on.

NOTE: The GO light indicates that no faults were detected during the previous nine flights.

WARNING: MOVE ALL PERSONS AND EQUIPMENT AWAY FROM THE RAM-AIR INLET DOOR, THE RAM-AIR OUTLET DOOR AND THE TEMPERATURE CONTROL VALVE. WHEN YOU PUSH THE "VERIFY" BUTTON, THESE COMPONENTS WILL MOVE AND COULD CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

- 5) Push the VERIFY button.
 - Make sure the VERIFY light comes on for 25 to 35 seconds.
 - b) Make sure the GO light comes on and that none of the fault (red) lights come on.

NOTE: The GO light indicates that no LRU faults were detected.

6) Push the RESET button while the VERIFY and GO lights are still on. The RESET light will come on for 6 to 10 seconds.

NOTE: Pushing the RESET button clears all of the faults from the controller memory.

- (f) Do the BITE test on the other pack temperature controller.
- (2) Do the BITE test on the pack standby controller.

NOTE: This test does an electrical check of the pack standby controller, the pack temp 2 sensor, and the compressor outlet temp 2 sensor.

EFFECTIVITY

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OPERATIONAL PACK TEMPERATURE CONTROLLERS

21-51-00-5A

21-015-C1

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21-015-C1

AIRLINE CARD NO.

		TASK CARD
MECH	INSP	
		(a) Turn the L and R PACK selectors, on the P5 panel, to the STBY-N position.
		(b) Push all the GO and NO GO lamps on the pack standby controller.
		1) Replace any lamps that do not come on.
		2) If any lights do not come on after you replace them, replace the controller.
		(c) Do these steps for all seven (7) positions of the test switch on the pack standby controller:
		1) Turn the test switch to the applicable position.
		2) Push the test switch.
		3) Make sure the two GO lights come on.
		4) If one of the NO-GO lights comes on, then replace the applicable component.
		(d) Return the test switch to position 1.

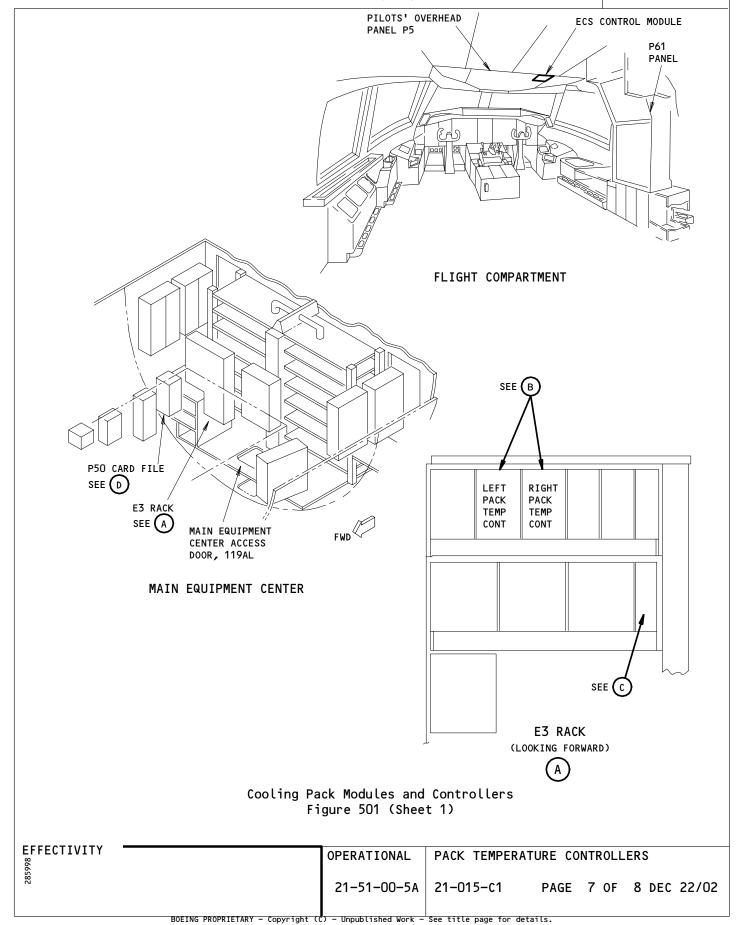
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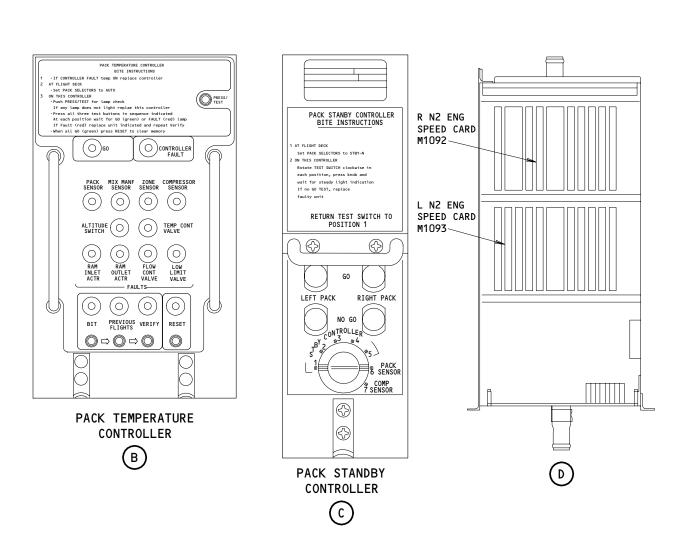
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BOEING CARD NO.

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AIRLINE CARD NO.



Cooling Pack Modules and Controllers Figure 501 (Sheet 2)

EFFECTIVITY

OPERATIONAL

PACK TEMPERATURE CONTROLLERS

21-51-00-5A

21-015-C1

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	STAT	ION								BOE	EING CARD NO.
	TAIL NO.				X AN	EIA			21-0	17-01	
				S	SAS E		767			AIR	LINE CARD NO.
	DA.	TE					.c. CARD				
SKII	L	WORK ARE	EA .	RE	LATED TASK		INTERVAL		PHASE	MPD REV	TASK CARD REVISION
AIR	PL	ECS BAY				20			12424	012	DEC 22/07
61	TASK		6001	TNC D	TITLE	VOLLANCEDO		STRUCTURAL ILLUSTRATION RE	FERENCE	AIRPLAN	PPLICABILITY NE ENGINE
CL	EAN		COOL	ING P	ACK HEAT E	XCHANGERS				NOT	E ALL
		ZONES						ACCESS PANELS			
MECH	INSP									ı	MPD ITEM NUMBER
		CLEAN HEAT E			Y AND SECO	NDARY COOLI	NG PACK			21-5	1-02-7A
	NOTE: PRIMARY HEAT EXCHANGER SHOULD BE CLEANED PER SUPPLIER CMM.										
		AIRPLA	NE NO		TASK APPLI 767-400ER.	CABLE TO ALI	_ AIRPL/	ANES EXCEPT THE			
		1. <u>Cle</u>	an th	<u>ne Pri</u>	mary Heat I	Exchanger (I	Fig. 70′	1)			
		Α.	Refe	erences	S						
			(1)	AMM 2	21-51-02/40	D1, Heat Exc	changers	S			

EFFECTIVITY

B. Procedure

A. General

off-aircraft.

2. <u>Clean the Secondary Heat Exchanger</u> (Fig. 701)

COOLING PACK HEAT EXCHANGERS

CLEAN

(1) Remove the Primary Heat Exchanger (AMM 21-51-02/401).

(2) Return the primary heat exchanger to the shop to be cleaned

(3) Install a new primary heat exchanger or one that was previously cleaned off-aircraft and is serviceable (AMM 21-51-02/401).

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

CAUTION: DO NOT USE THIS PROCEDURE TO CLEAN THE PRIMARY HEAT EXCHANGER.

DAMAGE TO THE PRIMARY HEAT EXCHANGER CORE FINS WILL OCCUR. IF
THE PRIMARY HEAT EXCHANGER NEEDS TO BE CLEANED, YOU MUST REMOVE
THE PRIMARY HEAT EXCHANGER FROM THE AIRPLANE AND CLEAN IT PER
THE VENDOR COMPONENT MAINTENANCE MANUAL.

(1) This procedure uses compressed air to clean the secondary heat exchanger. You can use this procedure to remove dirt, sand and/or gravel from the secondary heat exchanger.

B. Equipment

- (1) Cleaning Wand Equipment Heat Exchanger, B21005-1 (alternate), B21005-10 (preferred)
 - (a) Cleaning Wand Inlet, B21005-3 (preferred)
 - (b) Cleaning Wand Outlet, B21005-2 (alternate), B21005-11 (preferred)
- (2) Air compressor (80 to 100 psi) commercially available
- (3) Spray gun commercially available
- (4) Steam Cleaner, 80 to 100 psi (alternate) commercially available
- C. Consumable Materials
 - (1) B00074 Solvent Degreasing, MIL-PRF-680 (Supersedes P-D-680)

NOTE: The solvent is used for the alternate cleaning procedure.

- D. References
 - (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
- E. Access
 - (1) Location Zones 135/136 Environmental Control Systems (ECS) Bay

CLEAN COOLING PACK HEAT EXCHANGERS

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SAS BOEING 767 TASK CARD

AIRLINE CARD NO.

MECH	INSP

- (2) Access Panels
 193NL/194LR ECS Bay Access Doors
- F. Prepare to Clean the Secondary Heat Exchanger
 - (1) Turn the applicable (L or R) PACK selector, on the pilot's overhead panel, P5, to the OFF position.
 - (a) Make sure the PACK OFF light is on.
 - (b) Put a DO-NOT-OPERATE tag on the selector.
 - (2) Open the applicable (left or right) ECS access door, 193NL or 194LR (AMM 06-41-00/201).
 - (3) Remove the access door that is found in the ram air inlet duct.
 - (4) Remove the access door that is found between the primary heat exchanger and the secondary heat exchanger.
- G. Clean the Secondary Heat Exchanger (preferred)
 - (1) Do these steps to clean the secondary heat exchanger:
 - (a) Attach the outlet cleaning wand to the compressed air source.
 - CAUTION: MAKE SURE THE AIR PRESSURE GAGE DOES NOT MEASURE MORE THAN 80 PSI DURING OPERATION OF THE TOOL. IF THE AIR PRESSURE GAGE MEASURES MORE THAN 80 PSI, THE CORE FINS OF THE HEAT EXCHANGER CAN BE DAMAGED.
 - (b) Use the outlet cleaning wand to blow air at the outlet side of the secondary heat exchanger.
 - NOTE: Make sure the air pressure gage on the cleaning wand does not measure more than 80 Psi during operation of the tool. Also, follow the suggested cleaning path shown in Fig. 701.
 - (c) Attach the inlet cleaning wand to the compressed air source.

EFFECTIVITY

CLEAN

COOLING PACK HEAT EXCHANGERS

21-51-02-7A

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AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

CAUTION: DO NOT PUT THE TIP OF THE INLET CLEANING WAND INTO THE HAIL SCREEN OF THE HEAT EXCHANGER. THE CORE FINS OF THE HEAT EXCHANGER ARE EASILY DAMAGED. IF THE CORE FINS ARE DAMAGED, THE HEAT EXCHANGER WILL NOT OPERATE CORRECTLY.

(d) Use the inlet cleaning wand to blow air at the inlet side of the secondary heat exchanger.

NOTE: Quickly move the cleaning wand back and forth and side to side. This helps to loosen any dirt, sand and/or gravel that may be stuck. Also, follow the suggested cleaning path in Fig. 701.

(e) Attach the outlet cleaning wand to the compressed air source.

CAUTION: MAKE SURE THE AIR PRESSURE GAGE DOES NOT MEASURE MORE THAN 80 PSI DURING OPERATION OF THE TOOL. IF THE AIR PRESSURE GAGE MEASURES MORE THAN 80 PSI, THE CORE FINS OF THE HEAT EXCHANGER CAN BE DAMAGED.

(f) Use the outlet cleaning wand to blow air at the outlet side of the secondary heat exchanger.

NOTE: Make sure the air pressure gage on the cleaning wand does not measure more than 80 Psi during operation of the tool. Also, follow the suggested cleaning path shown in Fig. 701.

(g) Do the above steps again as necessary until the secondary heat exchanger is clean.

NOTE: To determine if the heat exchanger is clean, put your hand on the opposite side of the heat exchanger that is being cleaned. While you blow air through the fins of the heat exchanger, feel for sand and/or gravel that exits the other side. If you do not feel any sand and/or gravel, the heat exchanger is clean.

(h) Make sure you remove any loose dirt, sand and/or gravel from the ram air inlet, and from between the heat exchangers.

EFFECTIVITY

CLEAN

COOLING PACK HEAT EXCHANGERS

21-51-02-7A

21-017-01

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AIRLINE CARD NO.



MECH INSP

H. Clean the Secondary Heat Exchanger (alternate)

NOTE: The equipment used in this procedure can cause the core fins on the outlet side of the secondary heat exchanger to bend. Use a mirror and a flashlight during this procedure to see if the core fins become bent. Do not continue to use this procedure if the core fins become bent or if the secondary heat exchanger is not fully cleaned with this procedure. Use the preferred procedure for cleaning the secondary heat exchanger or remove the secondary heat exchanger and clean it per the vendor component maintenance manual.

WARNING: DO NOT BREATHE THE FUMES FROM THE SOLVENT AND DO NOT LET THE SOLVENT TOUCH YOUR SKIN. KEEP THE SOLVENT AWAY FROM FLAMES, HEAT, OR SPARKS. THE SOLVENT IS POISONOUS AND FLAMMABLE, AND CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (1) If you use solvent to clean the heat exchanger, do the steps that follow:
 - (a) Attach the spray gun and the solvent to the air compressor.
 - (b) Attach the spray nozzle to the spray gun.
- (2) If you use steam to clean the heat exchanger, do this step:
 - (a) Attach the spray nozzle to the steam cleaner.
- (3) Do these steps to clean the heat exchanger:

CAUTION: DO NOT RUB OR TOUCH THE CORE FINS WHEN YOU CLEAN THE HEAT EXCHANGER. THE CORE FINS CAN BE DAMAGED EASILY. IF THE CORE FINS ARE DAMAGED, THE HEAT EXCHANGER WILL NOT OPERATE CORRECTLY.

- (a) Put the air nozzle through the access opening between the heat exchangers.
 - 1) Blow air through the secondary heat exchanger (back flush).

CLEAN COOLING PACK HEAT EXCHANGERS

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AIRLINE CARD NO.



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						TASK CARD		
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FILCH	TNSI	1						
				(b)		the spray nozzle through the access opening in the ram air		
					inl	et duct.		
					1)	Move the spray nozzle in the direction of the cleaning path		
						shown in Figure 701, to clean the secondary heat exchanger.		
				(c)		the air nozzle through the access opening in the ram air		
					inl	et duct.		
					4.			
					1)	Blow air through the secondary heat exchanger until it is		
						dry.		
		I.	Du+	tho o	innl	ane back to its usual condition.		
		1.	rut	tile a	прс	alle back to its usuat condition.		
			(1)	Inst	all '	the access door in the ram air inlet duct.		
			(1)	2.1.0		and accept acci. In the rain arr inter acci.		
			(2)	Inst	all	the access door that goes between the heat exchangers.		
		(3) Close the applicable (left or right) ECS access door, 193NL or 194LR						
			(AMM 06-41-00/201).					
			(4)			he DO-NOT-OPERATE tag from the L and R PACK selectors, on		
				the	P5 p	anel.		
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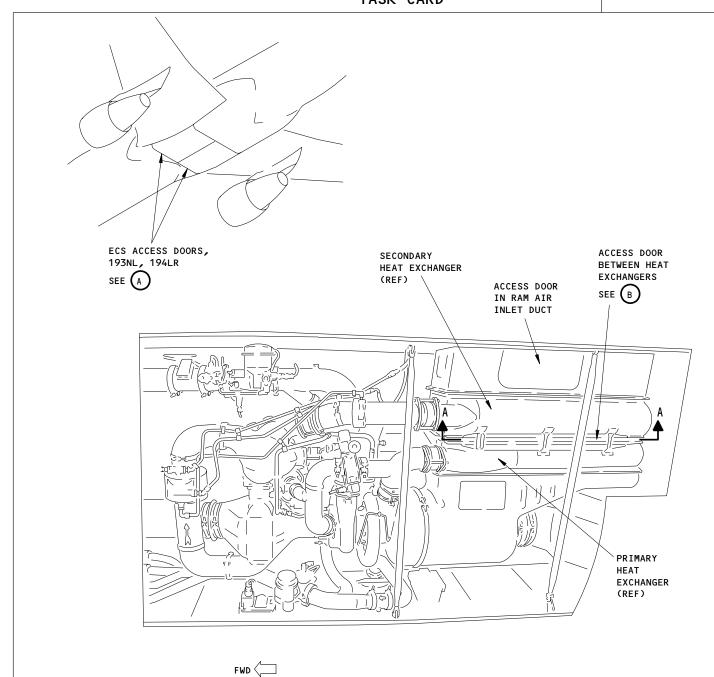
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AIRLINE CARD NO.



LEFT COOLING PACK (RIGHT COOLING PACK EQUIVALENT)



Heat Exchangers Cleaning Figure 701 (Sheet 1)

EFFECTIVITY

CLEAN

COOLING PACK HEAT EXCHANGERS

21-51-02-7A

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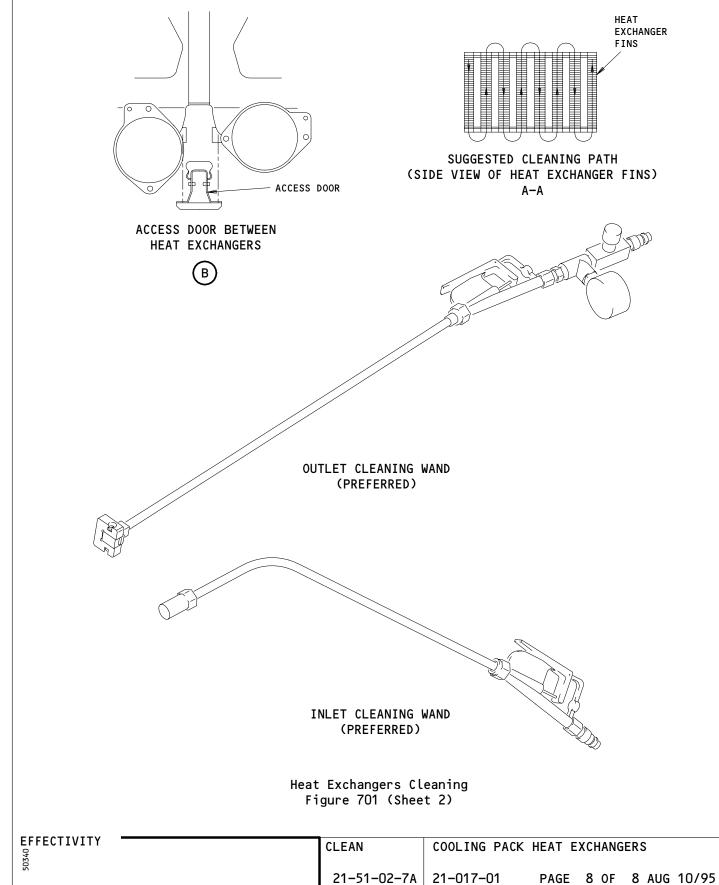
BOEING 767

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TASK CARD

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STATION	
TAIL NO.	
DATE	



BOEING CARD NO. 21-018-01

AIRLINE CARD NO.

SKILL	. WORK AREA		RELATED TASK	INTERVAL		PHASE	MPD REV	TASK CARD REVISION
ELECT	ECS BAY	•		4C		14848	012	DEC 22/08
TASK			TITLE	STRUCTURAL ILLUSTRATION REFERENCE		AP	APPLICABILITY	
FUNCTIONAL		COMF	RESSOR OUTLET OV	ERHEAT SWITCH			AIRPLAN	E ENGINE
							NOT	E ALL

ZONES

ACCESS PANELS

135 136

MECH INSP

193NL 194LR

FUNCTIONALLY CHECK THE SWITCH SETTING OF THE COMPRESSOR
OUTLET OVERHEAT SWITCH (OFF AIRCRAFT) AND THE CIRCUIT

767-400ER.

21-51-19-2A

MPD ITEM NUMBER

VERIFICATION.

AIRPLANE NOTE: TASK APPLICABLE TO ALL AIRPLANES EXCEPT THE

THE FOLLOWING PROCEDURE APPLIES TO THE ON-AIRCRAFT PORTION OF THIS CHECK (CIRCUIT VERIFICATION). THIS PROCEDURE SHOULD BE PERFORMED AFTER SWITCH REMOVAL/INSTALLATION.

- 1. Remove the Compressor Outlet Overheat Switches (Fig. 201)
 - A. References
 - (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
 - B. Access

 - (2) Access Panels
 193NL/194LR Environmental Control Systems (ECS) Bay
 - C. Prepare for the Removal
 - (1) Turn the applicable (L or R) PACK selectors, on the pilot's overhead panel, P5, to the OFF position.
 - (a) Make sure the pack is off.
 - (b) Put a DO-NOT-OPERATE tag on the selector.
 - (2) Open the applicable (left or right) ECS access door, 193NL or 194LR (AMM 06-41-00/201).

FUNCTIONAL COMPRESSOR OUTLET OVERHEAT SWITCH

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21-018-01

AIRLINE CARD NO.

SAS BOEING 767 TASK CARD

MECH INSP

- D. Remove the switch
 - (1) Disconnect the electrical connector from the switch.
 - (2) Cut and remove the lockwire from the switch.

CAUTION: USE TWO WRENCHES TO REMOVE THE SWITCH. IF YOU ONLY USE ONE WRENCH TO REMOVE THE SWITCH, YOU COULD CAUSE DAMAGE TO THE DUCT.

(3) Use two wrenches to remove the switch.

<u>NOTE</u>: Use one wrench to hold the boss and the other wrench to turn the switch.

- (4) Put a cover on the duct opening.
- 2. <u>Install the Compressor Outlet Overheat Switches</u> (Fig. 201)
 - A. Consumable Materials
 - (1) D00006, Never-Seez, Pure Nickel Special, NSBT-8N (High temperature anti-seize compound)
 - (2) COO852 Antiseize Compound, Molybdenum Disulfide-Petrolatum, MIL-PRF-83483 (preferred)
 - B. References
 - (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
 - (2) AMM 20-10-23/401 Standard Practices Lockwire
 - C. Access

 - (2) Access Panels 193NL/194LR ECS bay access door
 - D. Install the switch

FUNCTIONAL COMPRESSOR OUTLET OVERHEAT SWITCH

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21-018-01

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (1) Remove the cover from the duct opening.
- (2) Clean the mating surfaces of the boss and the switch nut, to make sure there is an electrical ground.
- (3) Apply a thin layer of the anti-seize lubricant or compound to the threads of the switch.
- (4) Put a new packing on the switch.

CAUTION: USE TWO WRENCHES TO INSTALL THE SWITCH. IF YOU ONLY USE ONE WRENCH TO INSTALL THE SWITCH, YOU COULD CAUSE DAMAGE TO THE DUCT.

(5) Use two wrenches to install the switch.

NOTE: Use one wrench to hold the boss and the other wrench to turn the switch.

- (a) Tighten the switch to a torque value of 210-240 pound-inches.
- (6) Install a lockwire on the switch (AMM 20-10-23/401).
- (7) Connect the electrical connector to the switch.
- (8) Close the applicable (left or right) ECS access door, 193NL or 194LR (AMM 06-41-00/201).
- 3. <u>Compressor Outlet Overheat Switch Adjustment Test</u> (Fig. 201)
 - A. General
 - (1) This test makes sure that the electrical circuit for the compressor outlet overheat switch operates correctly. A calibration test of the overheat switch must be done off of the airplane.
 - B. References
 - (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
 - (2) AMM 24-22-00/201, Electric Power Control
 - C. Prepare for the Test

FUNCTIONAL COMPRESSOR OUTLET OVERHEAT SWITCH

21-51-19-2A 21-018-01 PAGE 3 OF 6 DEC 22/08

21-018-01

AIRLINE CARD NO.

SAS FOEING 767 TASK CARD

MECH INSP

- (1) Supply electrical power (AMM 24-22-00/201).
- (2) Make sure these circuit breakers, on the overhead circuit breaker panel, P11, are closed:
 - (a) EICAS circuit breakers (6 places)
 - (b) 11A13, PACK FLOW CONT L
 - (c) 11A26, R PACK FLOW CONT
 - (d) 11N10, LEFT PACK AUTO PWR
 - (e) 11N11, LEFT PACK AUTO CONT
 - (f) 11N19, RIGHT PACK AUTO PWR
 - (g) 11N2O, RIGHT PACK AUTO CONT
- (3) Open the applicable (left or right) ECS access door, 193NL or 194LR (AMM 06-41-00/201).

D. Procedure

- (1) Do the Compressor Outlet Overheat Switch Test
 - (a) Turn the applicable (L or R) PACK selector, on the P5 pilot's overhead panel, to the STBY-N or STBY-C position.
 - Make sure that the position indicator on the applicable (left or right) pack temperature control valve moves to the CLOSE position.
 - (b) Remove the electrical connector from the compressor outlet overheat switch.
 - (c) Connect a jumper between pin 1 and pin 2 of the electrical connector.
 - (d) Make sure these conditions occur:
 - 1) The applicable PACK INOP light, on the P5 panel, comes on.
 - 2) The ram air inlet and exhaust doors remain open.
 - 3) The position indicator on the temperature control valve moves to the OPEN position.

EFFECTIVITY

FUNCTIONAL COMPRESSOR OUTLET OVERHEAT SWITCH

21-51-19-2A

21-018-01

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1

21-018-01

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- 4) The solenoid plunger B, on the flow control valve, clicks off.
- 5) The EICAS messages L (R) PACK TEMP shows on the upper display.
- (e) Remove the jumper from the electrical connector.
- (f) Connect the electrical connector to the overheat switch.
- (g) Push the applicable PACK RESET switch-light, on the P5 panel.
- (h) Make sure these conditions occur:
 - 1) The applicable PACK INOP light, on the P5 panel, goes off.
 - The solenoid plunger B, on the flow control valve, moves to the ON position.
 - 3) The EICAS messages L (R) PACK TEMP does not show on the display.
- E. Put the airplane back to its usual condition.
 - (1) Close the ECS access doors, 193NL or 194LR (AMM 06-41-00/201).
 - (2) Turn the L and R PACK selectors, on the P5 panel, to the OFF positions.
 - (3) Remove the electrical power, if it is not necessary (AMM 24-22-00/201).

EFFECTIVITY

FUNCTIONAL | COMPRESSOR OU

COMPRESSOR OUTLET OVERHEAT SWITCH

21-51-19-2A

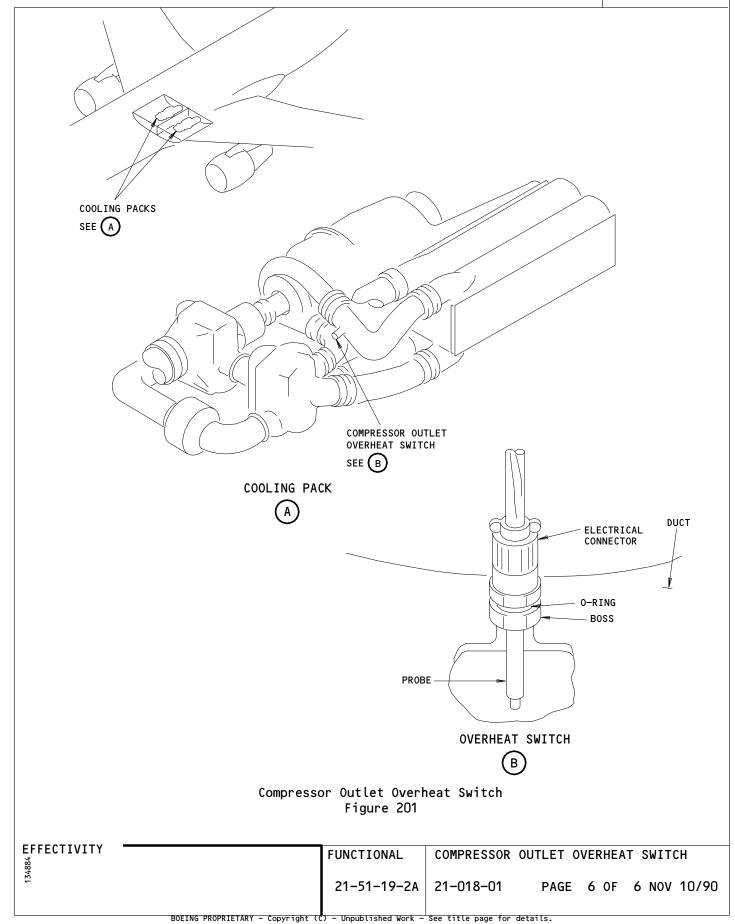
21-018-01

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21-018-01

AIRLINE CARD NO.

SAS FOEING
TASK CARD



STATION	
TAIL NO.	
DATE	

SKILL

WORK AREA



BOEING CARD NO.
21-019-01

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

ELECT ECS BAY

TASK

TITLE

AC

STRUCTURAL ILLUSTRATION REFERENCE

APPLICABILITY

REV REVISION

14848 017 APR 22/02

STRUCTURAL ILLUSTRATION REFERENCE

APPLICABILITY

INTERVAL

TASK

FUNCTIONAL

PACK OVERHEAT SWITCH

STRUCTURAL ILLUSTRATION REFERENCE

APPLICABILITY
AIRPLANE
ENGINE

NOTE ALL

ZONES ACCESS PANELS

135 136 190 193LL 194HR

RELATED TASK

MECH INSP MPD ITEM NUMBER

FUNCTIONALLY CHECK THE SWITCH SETTING OF THE PACK OVERHEAT SWITCH (OFF AIRCRAFT) AND THE CIRCUIT VERIFICATION.

21-51-18-2A

AIRPLANE NOTE: TASK APPLICABLE TO ALL AIRPLANES EXCEPT THE 767-400ER.

THE FOLLOWING PROCEDURE APPLIES TO THE ON-AIRCRAFT PORTION OF THIS CHECK (CIRCUIT VERIFICATION). THIS PROCEDURE SHOULD BE PERFORMED AFTER SWITCH REMOVAL/INSTALLATION.

- Remove the Pack Overheat Switch (Fig. 201)
 - A. References
 - (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
 - B. Access
 - (1) Location Zones 135/136 Environmental Control Systems (ECS) Bay
 - (2) Access Panels 193LL Ground Air Service Connection 194HR ECS Components - Pressure Relief Panel
 - C. Prepare for the Removal
 - (1) To remove the right pack overheat switch:
 - (a) Turn the R PACK selector, on the pilot's overhead panel, P5, to the OFF position.
 - 1) Make sure the pack is off.
 - 2) Put a DO-NOT-OPERATE tag on the selector.

FUNCTIONAL PACK OVERHEAT SWITCH

21-51-18-2A 21-019-01 PAGE 1 OF 7 AUG 22/99

AIRLINE CARD NO.

SAS BOEING 767 TASK CARD

MECH INSP

- (b) Open and attach a DO-NOT-CLOSE tag to these circuit breakers, on the overhead circuit breaker panel, P11:
 - 1) 11A26, R PACK FLOW CONT
- (c) Open the ECS components Pressure Relief Panel, 194HR (AMM 06-41-00/201).
- (2) To remove the left pack overheat switch:
 - (a) Turn the L PACK selector, on the pilot's overhead panel, P5, to the OFF position.
 - 1) Make sure the pack is off.
 - 2) Put a DO-NOT-OPERATE tag on the selector.
 - (b) Open and attach a DO-NOT-CLOSE tag to these circuit breakers, on the overhead circuit breaker panel, P11:
 - 1) 11A13, PACK FLOW CONT L
 - (c) Open the ground air service connection panel, 193LL (AMM 06-41-00/201).
- D. Remove the Overheat Switch
 - (1) Disconnect the electrical connector from the switch.
 - (2) Cut and remove the lockwire from the switch.

CAUTION: USE TWO WRENCHES TO REMOVE THE SWITCH. IF YOU ONLY USE ONE WRENCH TO REMOVE THE SWITCH, YOU COULD CAUSE DAMAGE TO THE DUCT.

(3) Use two wrenches to remove the switch.

NOTE: Use one wrench to hold the boss. Use the other wrench to turn the switch.

- (4) Put a cover on the duct opening.
- 2. Install the Pack Overheat Switch (Fig. 201)

EFFECTIVITY

FUNCTIONAL

PACK OVERHEAT SWITCH

21-51-18-2A

21-019-01

PAGE 2 OF 7 AUG 22/99

AIRLINE CARD NO.

SAS BOEING 767 TASK CARD

MECH INSP

- A. Consumable Materials
 - (1) D00386, Lubricant, Anti-seize, MIL-L-23398 Solid Film
 - (2) D00006, Never-Seez, Pure Nickel Special, NSBT-8N (High temperature anti-seize compound)
- B. References
 - (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
 - (2) AMM 20-10-23/401, Standard Practices Lockwire
- C. Access
 - (1) Location Zones 135/136 Environmental Control Systems (ECS) Bay
 - (2) Access Panels
 193LL Ground Air Service Connection
 194HR ECS Componets Pressure Relief Panel
- D. Install the Overheat Switch
 - (1) Remove the cover from the duct opening.
 - (2) Put a new 0-ring on the switch.
 - (3) Clean the mating surfaces of the boss and the switch nut, to make sure there is an electrical ground.
 - (4) Apply a thin layer of the anti-seize lubricant or compound to the threads of the switch.
 - CAUTION: USE TWO WRENCHES TO INSTALL THE SWITCH. IF YOU ONLY USE ONE WRENCH TO INSTALL THE SWITCH, YOU COULD CAUSE DAMAGE TO THE DUCT.
 - (5) Use two wrenches to install the switch.
 - <u>NOTE</u>: Use one wrench to hold the boss. Use the other wrench to turn the switch.
 - (a) Tighten the switch to a torque value of 210-240 pound-inches.

EFFECTIVITY

FUNCTIONAL PACK OVERHEAT SWITCH

21-51-18-2A

21-019-01

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AIRLINE CARD NO.

SAS FOEING 767 TASK CARD

MECH INSP

- (6) Put a lockwire on the switch (AMM 20-10-23/401).
- (7) Connect the electrical connector to the switch.
- E. Put the airplane back to its usual condition
 - (1) If the right pack overheat switch was installed, do these steps:
 - (a) Remove the DO-NOT-CLOSE tag and close these circuit breakers, on the P11 panel:
 - 1) 11A26, R PACK FLOW CONT
 - (b) Close the ECS components pressure relief panel, 194HR (AMM 06-41-00/201).
 - (2) If the left pack overheat switch was installed, do these steps:
 - (a) Remove the DO-NOT-CLOSE tag and close these circuit breakers, on the P11 panel:
 - 1) 11A13, PACK FLOW CONT L
 - (b) Close the ground air service connection panel, 193LL (AMM 06-41-00/201).
- 3. Pack Overheat Switch Test (Fig. 201)
 - A. General
 - (1) This procedure does a test of the electrical circuit for the pack overheat switch. This procedure does not make sure that the pack overheat switch is calibrated correctly.
 - B. References
 - (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
 - (2) AMM 24-22-00/201, Electrical Power Control
 - C. Access
 - (1) Location Zones 135/136 Environmental Control Systems (ECS) Bay

EFFECTIVITY

FUNCTIONAL PACK OVERHEAT SWITCH

21-51-18-2A

21-019-01

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AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

(2) Access Panels
193LL Ground Air Service Connection
194HR ECS Componets - Pressure Relief Panel

- D. Prepare for the Test
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Turn the applicable (L or R) PACK selector, on the pilot's overhead panel, P5, to the AUTO position.
 - (3) Make sure the EICAS circuit breakers (6 places), on the overhead circuit breaker panel, P11, are closed.
 - (4) Push the ECS MSG switch on the EICAS MAINT panel, on the right side panel, P61.
 - (5) Open the ground air service connection panel 193LL, or the ECS components pressure relief panel, 194HR (AMM 06-41-00/201).

E. Procedure

(1) Do the Test

NOTE: To do the test on the left pack overheat switch, ignore the data that is in the parentheses. To do the test on the right pack overheat switch, use the data that is in the parentheses.

- (a) Disconnect the electrical connector from the left (right) pack overheat switch.
- (b) Install a jumper wire between pin 1 and pin 2 of the electrical connector.
 - Make sure the L (R) PACK INOP light, on the P5 panel, comes on.
 - 2) Make sure the EICAS message, L (R) PACK TEMP, shows on the top display.
- (c) Make sure these values show on the bottom EICAS display:
 - 1) L (R) TEMP VALVE is between 0.00 and 0.05

EFFECTIVITY

FUNCTIONAL PACK

PACK OVERHEAT SWITCH

21-51-18-2A

21-019-01

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21-019-01

AIRLINE CARD NO.



MECH INSP

- 2) L (R) RAM IN DOOR is between 0.00 and 0.05
- (d) Remove the jumper wire from the electrical connector.
- (e) Connect the electrical wire to the left (right) pack overheat switch.
- (f) Push the L (R) PACK RESET switch-light, on the P5 panel.
 - 1) Make sure the PACK INOP light goes off.
- F. Put the airplane back to its usual condition
 - (1) Close the ground air service connection panel 193LL, or the ECS compontents pressure relief panel, 194HR (AMM 06-41-00/201).
 - (2) Turn the applicable (L or R) PACK selector, on the P5 panel, to the OFF position.
 - (3) Remove the electrical power, if it is not necessary (AMM 24-22-00/201).

EFFECTIVITY

FUNCTIONAL

PACK OVERHEAT SWITCH

21-51-18-2A

21-019-01

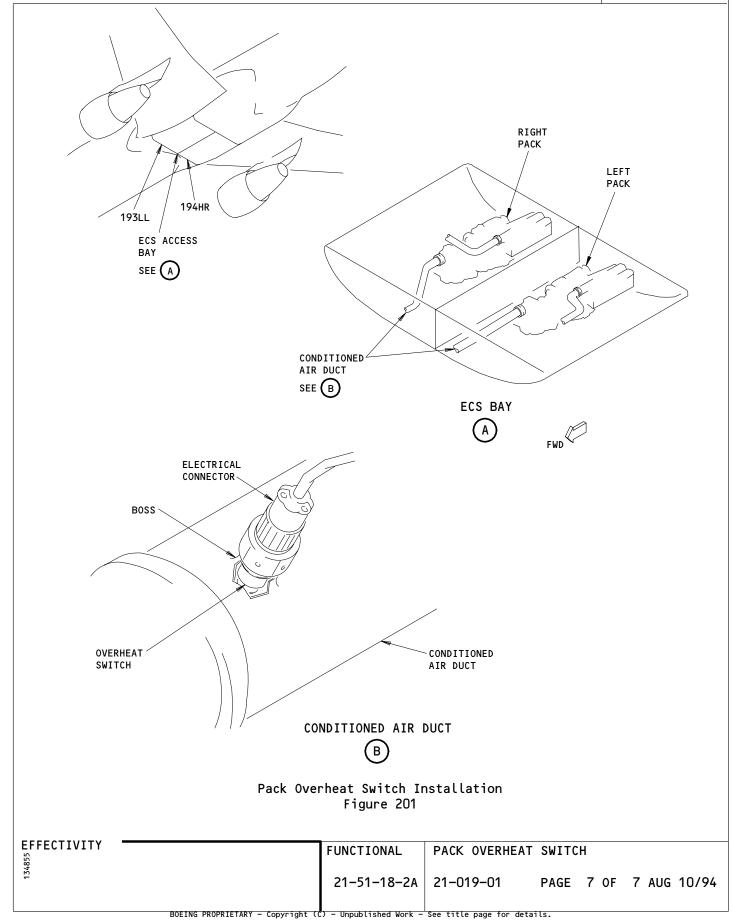
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SAS 767

BOEING TASK CARD

21-019-01

AIRLINE CARD NO.



STATION
TAIL NO.
DATE

SKILL

MECH INSP

WORK AREA



BOEING CARD NO. 21-020-C4

AIRLINE CARD NO.

REVISION REV 20 017 AUG 22/08 ELECT | CREW CABIN 12424 STRUCTURAL ILLUSTRATION REFERENCE

INTERVAL

OVERRIDE/MANIFOLD INTERCONNECT VALVE **PASS** ALL

APPLICABILITY
ANE ENGINE AIRPLANE

TASK CARD

ZONES ACCESS PANELS

119 121 212

OPERATIONAL

119AL 1211 821 NOTE

MPD ITEM NUMBER

OPERATIONALLY CHECK THE E/E COOLING MANIFOLD INTERCONNECT VALVE BY SELECTING OVERRIDE MODE.

RELATED TASK

21-58-00-5A 21-58-00-5A 21-58-00-5B

PHASE

OPERATIONALLY CHECK THE E/E COOLING OVERRIDE VALVE BY 21-58-00-5B SELECTING OVERRIDE MODE.

ACCESS NOTE: SPECIAL ACCESS 1211 REQUIRES REMOVAL OF FORWARD CARGO COMPARTMENT LEFT SIDEWALL PANELS PER MM REF 25-52-01.

Operational Test - Manifold Interconnect Valve and Override Valve

- A. General
 - (1) This operational test is for a scheduled maintenance task.
- References
 - (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
 - (2) AMM 24-22-00/201, Electrical Power Control
 - (3) AMM 25-52-01/401, Containerized Cargo Compartment Sidewall Lining
 - (4) AMM 52-33-00/201, Large Forward Cargo Door
- C. Access
 - (1) Location Zones
 - 118 Area Outbd and Above NLG Wheel Well, Right
 - 121 Forward Cargo Compartment, Left
 - 212 Flight Compartment, Right

EFFECTIVITY OPERATIONAL OVERRIDE/MANIFOLD INTERCONNECT VALVE 21-58-00-5A 21-020-c4 PAGE 1 OF 7 AUG 22/08

21-020-C4

TASK CARD

AIRLINE CARD NO.

MECH INSP		
	(2)	Access Panels 119AL Main Equipment Center Access Door 821 Forward Cargo Compartment Door
	D. Prep	pare for Test
	(1)	Make sure these circuit breakers on the main power distribution panel P6 are closed:
		(a) 6D6, EQUIP COOL GND WARN
		(b) 6H18, EQUIP COOL SUPPLY FAN 1
		(c) 6H21, FWD EXH EQUIP COOL FAN
	(2)	Make sure these circuit breakers on the overhead circuit breaker panel P11 are closed:
		(a) 11B8, STBY EQUIP COOL
		(b) 11C19, EQUIP COOL OVRD
		(c) 11D15, ENGINE SPEED SENSE L2
		(d) 11D16, ENGINE SPEED SENSE R2
		(e) 11D23, ENGINE SPEED SENSE L1
		(f) 11D24, ENGINE SPEED SENSE R1
		(g) 11P11, EQUIPMENT COOLING SUPPLY FAN 1
		(h) 11P13, EQUIPMENT COOLING OUTBD VALVES
		(i) 11P21, EQUIP COOL OVHT/SMOKE VALVE IND
		(j) 11P22, EQUIPMENT COOLING EXH FAN FWD
		(k) EICAS circuit breakers (6 places)
	(3)	Put the EQUIP COOLING mode selector on the pilots' overhead P5 panel to AUTO.
	(4)	Supply electrical power (AMM 24-22-00/201).

EFFECTIVITY

21-020-C4

SAS BOEING
767
TASK CARD

AIRLINE CARD NO.

MECH	INSP				
			(5)		access to the manifold interconnect valve (V90) along the right wall in the main equipment center.
				(a)	Open the main equipment center door 119AL (AMM 06-41-00/201).
				(b)	Find the manifold interconnect valve on the right side of the nose gear wheel well bulkhead.
				(c)	Make sure the manifold interconnect valve position indicator is in the "A TO B" (closed) position.
			(6)		access to the smoke clearance/override valve (V140) along the sidewall in the forward cargo compartment.
				(a)	Open the forward cargo door (AMM 52-33-00/201).
				(b)	Remove the left cargo compartment sidewall lining approximately four feet aft of forward bulkhead (AMM 25-52-01/401).
				(c)	Find the override valve.
				(d)	Make sure the override valve manual override handle is in CLOSE.
		Ε.	Do a	Test	of the Manifold Interconnect Valve and Override Valve
			<u>CAUT I</u>	<u>: ON</u>	DO NOT KEEP THE EQUIP COOLING MODE SELECTOR IN "OVRD" POSITION FOR MORE THAN FIVE (5) MINUTES. IN "OVRD" POSITION, THE

- EQUIPMENT COOLING FANS STOP OPERATING. EXTENDED OPERATION OF THE AVIONICS ELECTRICAL EQUIPMENT WITHOUT SUFFICIENT COOLING AIR FROM THE EQUIPMENT COOLING FANS CAN CAUSE DAMAGE TO THE AVIONICS ELECTRICAL EQUIPMENT.
- (1) Put the EQUIP COOLING mode selector on P5 panel to OVRD.
 - (a) After one minute, make sure the following occurs:
 - 1) Override valve manual override handle has moved to OPEN.
 - 2) Manifold interconnect valve position indicator is in the "C TO B" (open) position.
- (2) Put the EQUIP COOLING mode selector on the P5 panel to AUTO.
 - (a) After one minute, make sure the following occurs:

EFFECTIVITY	OPERATIONAL	OVERRIDE/MANI	FOLD I	NTERCO	NNECT VALVE
	21-58-00-5A	21-020-c4	PAGE	3 OF	7 AUG 22/08

21-020-C4

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH	INSP		
			-
		Г	٠.

- 1) Override valve manual override handle has moved to CLOSE.
- 2) Manifold interconnect valve position indicator is in the "A TO B" (closed) position.
- F. Put the Airplane Back to Its Usual Condition
 - (1) Install the cargo compartment sidewall lining that was removed (AMM 25-52-01/401).
 - (2) Close the forward cargo door (AMM 52-33-00/201).
 - (3) Close the main equipment center door, 119AL.
 - (4) Remove electrical power if it is not necessary (AMM 24-22-00/201).

EFFECTIVITY

OPERATIONAL

OVERRIDE/MANIFOLD INTERCONNECT VALVE

21-58-00-5A

21-020-c4

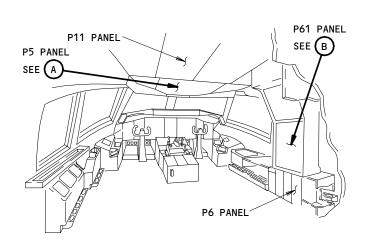
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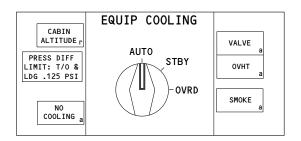
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AIRLINE CARD NO.

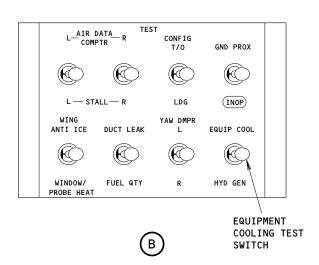
SAS

FOEING 767 TASK CARD





EQUIPMENT COOLING CONTROL MODULE



Equipment Cooling System Flight Deck Test Components Figure 501

EFFECTIVITY

OPERATIONAL

OVERRIDE/MANIFOLD INTERCONNECT VALVE

21-58-00-5A

21-020-C4

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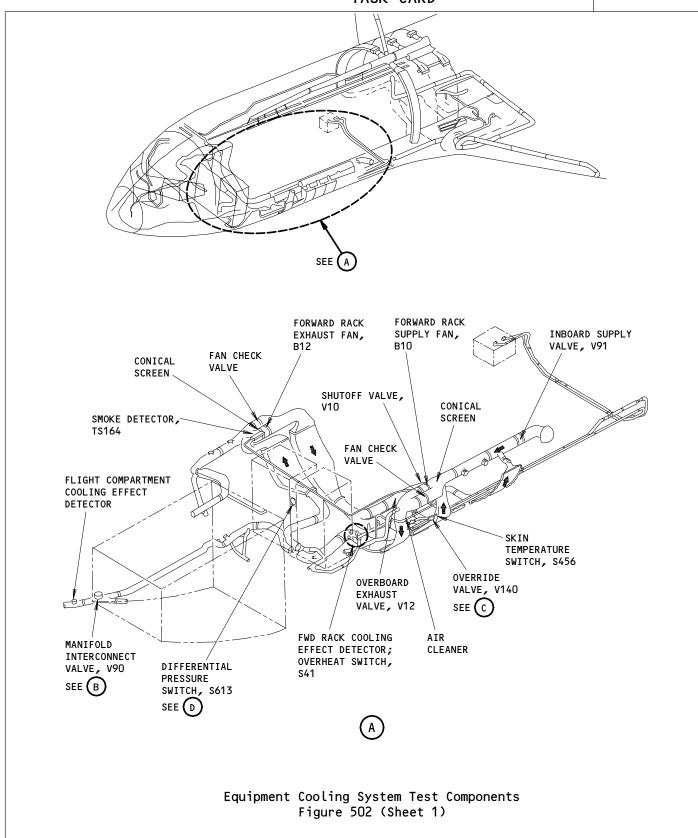
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21-020-C4

AIRLINE CARD NO.

SAS





EFFECTIVITY

OPERATIONAL

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OVERRIDE/MANIFOLD INTERCONNECT VALVE

21-58-00-5A

21-020-C4

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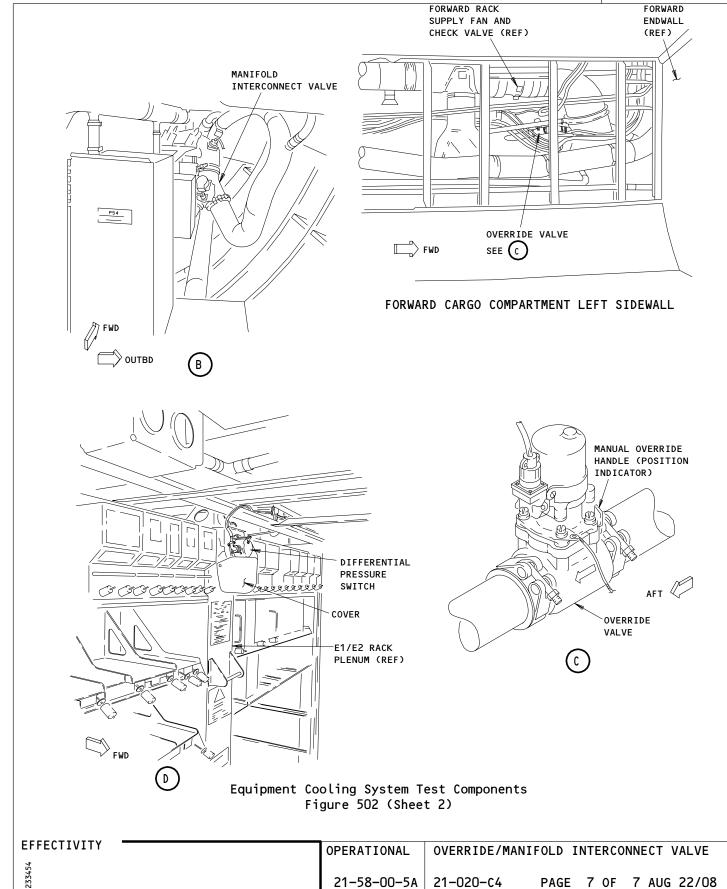
SAS



BOEING CARD NO.

21-020-C4

AIRLINE CARD NO.



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STATION	
TAIL NO.	
DATE	1

SKILL

WORK AREA



BOEING CARD NO. 21-021-01

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

							REV	REVISION
AIRPL	FWD CAR	(GO	B-21-024-01	4C		14848	011	APR 22/05
TASI	K		TITLE		STRUCTURAL ILLUSTRATION RE	FERENCE	AF	PLICABILITY

AIRPLANE ENGINE E/E COOLING SUP/EXH FAN CHECK VALVES CHECK/INSP ALL ALL

INTERVAL

ZONES ACCESS PANELS

121 122 1211 1221 821

RELATED TASK

MPD ITEM NUMBER MECH INSP

VISUALLY CHECK E/E COOLING SUPPLY AND EXHAUST FAN CHECK VALVE FLAPPER AND HINGE PIN FOR WEAR AND CONDITION (REMOVAL FROM DUCT REQUIRED).

21-58-02-6A

ACCESS NOTE: SPECIAL ACCESS 1211 REQUIRES REMOVAL OF

FORWARD CARGO COMPARTMENT LEFT SIDEWALL

PANELS PER MM REF 25-52-01.

SPECIAL ACCESS 1221 REQUIRES REMOVAL OF FORWARD CARGO COMPARTMENT RIGHT SIDEWALL

PANELS PER MM REF 25-52-01.

- Fan Check Valve Inspection
 - A. References
 - (1) AMM 21-58-02/401, Fan Check Valves
 - В. Access
 - (1) Location Zones

Forward Cargo Compartment, Left 121 122

- Forward Cargo Compartment, Right
- C. Procedure
 - (1) Remove the fan check valve (AMM 21-58-02/401).
 - (2) Examine the fan check valve as follows:

NOTE: You must replace the fan check valve if you find that the fan check valve does not satisfactorily meet the conditions which follow (AMM 21-58-02/401).

(a) Make sure that all of the check valve parts are installed.

EFFECTIVITY CHECK/INSP E/E COOLING SUP/EXH FAN CHECK VALVES 21-58-02-6A 21-021-01 PAGE 1 OF 4 MAY 10/95

21-021-01

AIRLINE CARD NO.



			TASK CARD	
MECH	INSP		<u>'</u>	
		(b) Make sure there are no cracks or corrosion in the cl housing.	neck valve
		(c) Make sure there is no damage to the mating surfaces check valve flapper and the check valve housing.	of the
		(d) Make sure that the check valve flapper can move smooth freely.	othly and
		(e) Make sure there is no damage to the check valve flag torsion spring or the hinge pin.	oper,
ĺ			nstall the fan check valve if it is satisfactory AMM 21-58-02/401).	

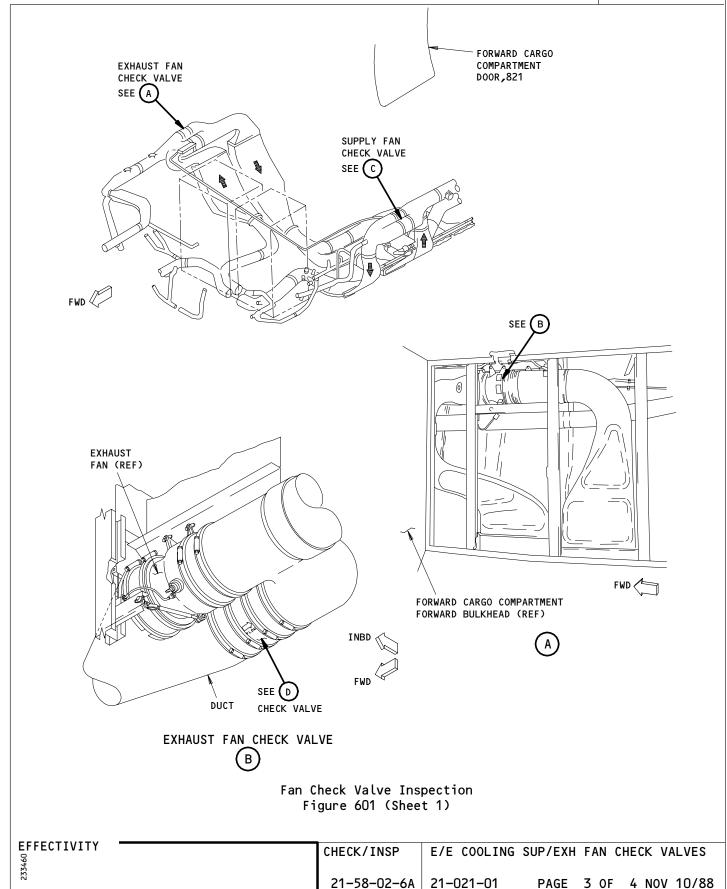
EFFECTIVITY

21-021-01

AIRLINE CARD NO.

SAS





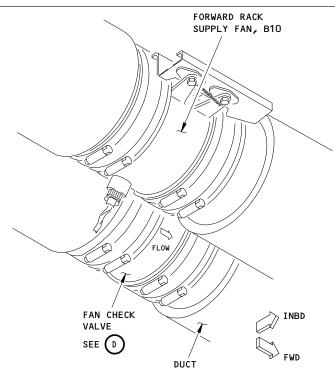
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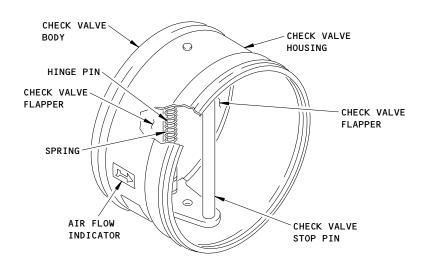
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767 TASK CARD



SUPPLY FAN CHECK VALVE





FAN CHECK VALVE



Fan Check Valve Inspection Figure 601 (Sheet 2)

EFFECTIVITY

CHECK/INSP

E/E COOLING SUP/EXH FAN CHECK VALVES

21-58-02-6A

21-021-01

PAGE 4 OF 4 APR 22/05

;	STATION	
1	AIL NO.	
	DATE	

WORK AREA



BOEING CARD NO. 21-023-01

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

ELECT FWD CARGO

TASK

TITLE

REV REVISION

14848 012 DEC 22/04

STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY AIRPLANE ENGINE

FUNCTIONAL E/E COOLING SKIN TEMPERATURE SENSOR

E/E COOLING SKIN TEMPERATURE SENSOR

AIRPLANE ENGINE

ALL ALL

INTERVAL

ZONES ACCESS PANELS

121 1211 821

RELATED TASK

MECH INSP

SKILL

MPD ITEM NUMBER

FUNCTIONALLY CHECK THE SWITCH SETTING OF THE E/E COOLING SKIN TEMPERATURE SENSOR (OFF AIRCRAFT) AND THE CIRCUIT VERIFICATION.

21-58-21-4A

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

ACCESS NOTE: SPECIAL ACCESS 1221 REQUIRES REMOVAL OF FORWARD CARGO COMPARTMENT LEFT SIDEWALL PANELS PER MM REF 25-52-01.

- 1. Remove Equipment Cooling Skin Temperature Sensor (Fig. 401)
 - A. References
 - (1) AMM 52-33-00/201, Large Forward Cargo Door.
 - (2) AMM 25-52-01/401, Sidewall Panels
 - B. Access
 - (1) Location Zone 800 Entry, Service, and Cargo doors.
 - C. Procedure for the Removal of Skin Temperature Sensor
 - (1) Open this circuit breaker on the overhead panel P11 and attach D0-NOT-CLOSE tag:
 - (a) 11C19, EQUIP COOL OVRD
 - (2) Open forward cargo compartment door 821 (AMM 52-33-00/201).
 - (3) Remove the left sidewall panel approximately four feet aft of the forward endliner and find the sensor (AMM 25-52-01/401).

FUNCTIONAL E/E COOLING SKIN TEMPERATURE SENSOR

21-58-21-4A 21-023-01 PAGE 1 OF 4 DEC 22/04

1

BOEING 767 TASK CARD

AIRLINE CARD NO.

- (4) Remove the electrical connector from the temperature sensor.
- (5) Remove the skin temperature sensor and 0-ring from the boss.
- <u>Install Equipment Cooling Skin Temperature Sensor</u> (Fig. 401)
 - A. Consumable Materials
 - (1) A00062 Sealant DC 340, (AMM 20-30-04/201).
 - References
 - (1) AMM 24-22-00/201, Electric Power Control
 - (2) AMM 25-52-01/401, Sidewall Panels
 - C. Access
 - (1) Location Zone 800 Entry, Service, and Cargo doors.
 - Procedure to install Skin Temperature Sensor
 - (1) Install sealant into boss just above the level of the bleed hole.
 - (2) Put a new 0-ring onto the skin temperature sensor and install temperature sensor into boss.
 - Tighten the skin temperature sensor 10-15 pound-inches (1.13-1.70 Newton-meters).
 - (3) Make sure the sealant comes through the bleed hole when you tighten the temperature sensor.
 - (4) Install the lockwire (AMM 20-10-23/401).
 - (5) Attach electrical connector to skin temperature sensor.
 - E. Procedure to do a Test on Sensor (Circuit)
 - Make sure that the calibration testing of the skin temperature NOTE: sensor is done by a bench test.
 - (1) For ambient temperatures greater than 45°F (7.2°C) do the steps that follow:

EFFECTIVITY

FUNCTIONAL

E/E COOLING SKIN TEMPERATURE SENSOR

21-58-21-4A 21-023-01

PAGE 2 OF 4 DEC 22/04

1

21-023-01

TASK CARD

AIRLINE CARD NO.

MECH	INSP			
				Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
				1) 11C19, EQUIP COOL OVRD
				Open this P11 panel circuit breaker and attach DO-NOT-CLOSE tag:
				1) 11P13, EQUIPMENT COOLING OUTBD VALVES
				Insert a 3/8 inch drive wrench into the overboard exhaust valve manual drive collar.
			(d)	Push the manual drive collar in approximately 3/8 inch.
				Rotate the manual drive wrench counterclockwise to close the valve.
				Do a visual check of the valve flapper position and make sure the valve closes.
			(g)	Supply electrical power (AMM 24-22-00/201).
			(h)	Put the EQUIP COOLING selector on P5 panel in AUTO.
				Remove DO-NOT-CLOSE tag and close circuit breaker on the P11 panel:
				1) 11P13, EQUIPMENT COOLING OUTBD VALVES
			(j)	Make sure that the overboard exhaust valve flapper has opened.
		(2)	For a	mbient temperature less than 45°F (7.2°C) do the steps that w:
				Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
				1) 11C19, EQUIP COOL OVRD
				Open this P11 panel circuit breaker and attach DO-NOT-CLOSE tag:
				1) 11P13, EQUIPMENT COOLING OUTBD VALVES
				Put a 3/8 inch drive wrench into the overboard exhaust valve manual drive collar.
1				

EFFECTIVITY

21-023-01

AIRLINE CARD NO.

			TASK CARD
MECH	INSP		
			(d) Push the manual drive collar in approximately 3/8 inch.
			(e) Rotate the manual drive wrench clockwise to open the valve.
			(f) Do a visual check of the flapper position and make sure the valve opens.
			(g) Supply electrical power (AMM 24-22-00/201).
			(h) Put the EQUIP COOLING selector on the P5 panel in AUTO.
			(i) Remove DO-NOT-CLOSE tag and close this circuit breaker on the P11 panel:
			1) 11P13, EQUIPMENT COOLING OUTBD VALVES
			(j) Make sure that the overboard exhaust valve flapper has closed.
		(3)	Replace the sidewall panel (AMM 25-52-01/401).
		(4)	Close forward cargo compartment door 821 (AMM 52-33-00/201).
		(5)	Remove the electrical power if it is not necessary (AMM 24-22-00/201).

STATION
TAIL NO.
DATE

WORK AREA

SKILL



BOEING CARD NO. 21-024-01

AIRLINE CARD NO.

TASK CARD

ALL

MPD

ALL

PHASE

SKILL			RELATED TASK	1	INTERVAL	THASE	REV	REVISION
AIRPL	FWD CAR	GO	A-21-021-01	2C		12424	011	DEC 22/04
TASI	<		TITLE		STRUCTURAL ILLUSTRATION RE	FERENCE	AF	PLICABILITY
							AIRPLAN	E ENGINE

TNTFRVAL

E/E COOLING SYSTEM CONICAL SCREENS ZONES ACCESS PANELS

RELATED TASK

121 122

MECH INSP

CHECK/INSP

1211 1221 821

MPD ITEM NUMBER

VISUALLY CHECK E/E COOLING SYSTEM CONICAL SCREENS FOR CONDITION AND BLOCKAGE.

21-58-22-2A

ACCESS NOTE: SPECIAL ACCESS 1211 REQUIRES REMOVAL OF

FORWARD CARGO COMPARTMENT LEFT SIDEWALL

PANELS PER MM REF 25-52-01.

SPECIAL ACCESS 1221 REQUIRES REMOVAL OF FORWARD CARGO COMPARTMENT RIGHT SIDEWALL

PANELS PER MM REF 25-52-01.

1. Supply Fan Screen Inspection

- A. References
 - (1) AMM 25-52-01/401, Containerized Cargo Compartment Sidewall Linings
- B. Access
 - (1) Location Zones

121 Forward Cargo Compartment (Left)

(2) Access Panels

Forward Cargo Door 821

- Supply Fan Screen Inspection (Fig. 201)
 - (1) Open forward cargo compartment door 821 (AMM 52-33-00/201).
 - (2) To get access to the supply fan screen,
 - (a) Remove the left sidewall lining between the forward cargo door opening and the forward bulkhead (AMM 25-52-01/401).

EFFECTIVITY CHECK/INSP E/E COOLING SYSTEM CONICAL SCREENS 21-58-22-2A 21-024-01 PAGE 1 OF 6 DEC 22/04

21-024-01

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (b) Remove the inspection door from the duct which is adjacent to the fan.
 - 1) Remove the eight bolts and washers that hold the inspection door to the duct.
- (3) Use a flashlight to inspect the condition of the screen through the inspection door opening in the supply duct.

NOTE: If you are not able to sufficiently inspect the condition of the screen, you will need to remove the screen from the duct.

- (4) After inspecting the screen, do the following steps:
 - (a) Clean the screen if there are unwanted materials that prevent airflow movement through the screen mesh.
 - (b) Replace the screen if there are holes in the screen mesh larger than 3/4-inch (1.9-cm) diameter.
 - (c) Small dents which do not stop the airflow are satisfactory.
- (5) Put the Airplane Back to Its Usual Condition
 - (a) Install the inspection door to the duct with the eight bolts and washers.
 - (b) Install the applicable left sidewall linings (AMM 25-52-01/401).
 - (c) Close forward cargo compartment door 821 (AMM 52-33-00/201).

2. Exhaust Fan Screen Inspection

- A. References
 - (1) AMM 25-52-01/401, Containerized Cargo Compartment Sidewall Linings
- B. Access
 - (1) Location Zones
 - 122 Forward Cargo Compartment (Right)

CHECK/INSP E/E COOLING SYSTEM CONICAL SCREENS

21-58-22-2A 21-024-01 PAGE 2 OF 6 DEC 22/04

21-024-01

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (2) Access Panels 821 Forward Cargo Door
- C. Exhaust Fan Screen Inspection (Fig. 202A)
 - (1) Open the forward cargo compartment door, 821.
 - (2) To get access to the exhaust fan screen,
 - (a) Remove the right sidewall lining between the forward cargo door opening and the forward bulkhead (AMM 25-52-01/401).
 - (b) Remove the insulation that covers the exhaust fan and exhaust duct forward the exhaust fan.
 - (c) Remove the inspection door from the duct which is adjacent to the fan.
 - 1) Remove the eight bolts and washers that hold the inspection door to the duct.
 - (3) Use a flashlight to inspect the condition of the screen through the inspection door opening in the supply/exhaust duct.
 - NOTE: If you are not able to sufficiently inspect the condition of the screen, you will need to remove the screen from the duct.
 - (4) After inspecting the screen, do the following steps:
 - (a) Clean the screen if there are unwanted materials that prevent airflow movement through the screen mesh.
 - (b) Replace the screen if there are holes in the screen mesh larger than 3/4-inch (1.9-cm) diameter.
 - (c) Small dents which do not stop the airflow are satisfactory.
 - (5) Put the Airplane Back to Its Usual Condition
 - (a) Install the inspection door to the duct with the eight bolts and washers.
 - (b) Install the insulation that was removed from the exhaust duct.

EFFECTIVITY

CHECK/INSP | E/E COOLING SYSTEM CONICAL SCREENS

21-58-22-2A

21-024-01

PAGE 3 OF 6 AUG 22/03

21-024-01

AIRLINE CARD NO.

SAS BOEING
767
TASK CARD

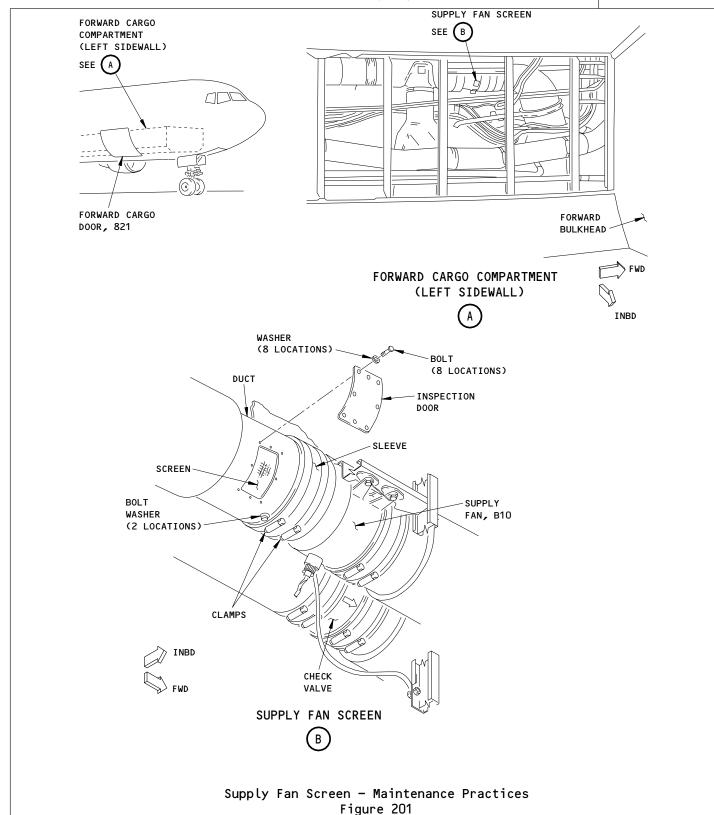
MECH INSP (c) Install the applicable right sidewall linings (AMM 25-52-01/401). (d) Close the forward cargo compartment door, 821. **EFFECTIVITY** CHECK/INSP E/E COOLING SYSTEM CONICAL SCREENS 21-58-22-2A 21-024-01 PAGE 4 OF 6 AUG 22/03

21-024-01

AIRLINE CARD NO.

SAS





CHECK/INSP

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21-024-01

E/E COOLING SYSTEM CONICAL SCREENS

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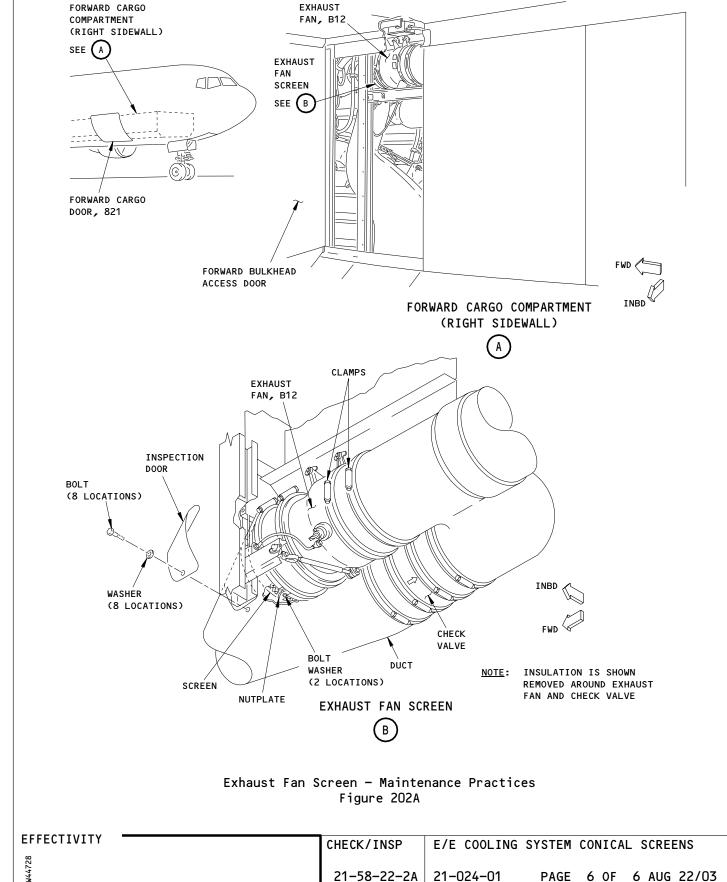
EFFECTIVITY

21-024-01

AIRLINE CARD NO.

SAS





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WORK AREA

SKILL



BOEING CARD NO. 21-025-C1

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

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ELECT	FUSELAG	iΕ	W-21-025-01	4C		14848	017	AUG 22/08
TASI	<		TITLE		STRUCTURAL ILLUSTRATION RE	FERENCE	AF	PPLICABILITY
							AIRPLAN	IE ENGINE

INTERVAL

FUNCTIONAL ZONE DUCT OVERHEAT SWITCH RIPLANE ENGINE NOTE ALL

ZONES ACCESS PANELS

121 211 212 223 224 2231 2331 2431 2531 233 234 243 244 253

RELATED TASK

254

MECH INSP

MPD ITEM NUMBER

FUNCTIONALLY CHECK THE SWITCH SETTING OF THE ZONE DUCT OVERHEAT SWITCH (OFF AIRCRAFT) AND THE CIRCUIT VERIFICATION.

21-61-01-4A

AIRPLANE NOTE: TASK APPLICABLE TO ALL AIRPLANES EXCEPT THE 767-400 ER.

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

ACCESS NOTE: SPECIAL ACCESS 2231, 2331, 2431, 2531 REQUIRE REMOVAL OF SCULPTURED CEILING PANELS STA -, 367 TO 455, 434 TO 785, 785 TO 1065 AND 1065 TO 1569 RESPECTIVELY.

- 1. Zone Duct Overheat Switch Removal (Fig. 401, 402)
 - A. References
 - (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
 - (2) AMM 06-46-00/201, Entry, Service and Cargo Doors Access Doors and Panels
 - (3) AMM 24-22-00/201, Electric Power Control
 - (4) AMM 25-52-01/401, Containerized Cargo Compartment Sidewall Lining
 - B. Access
 - (1) Location Zones 121

121	Forward Cargo Compartment (Left)
211/212	Control Cabin
223/224	Area Above Passenger Cabin Ceiling - Section 41
233/234	Area Above Passenger Cabin Ceiling - Section 43
243/244	Area Above Passenger Cabin Ceiling - Section 45
253/254	Area Above Passenger Cabin Ceiling - Section 46

EFFECTIVITY

FUNCTIONAL ZONE DUCT OVERHEAT SWITCH

21-61-01-4A

21-025-C1

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21-025-C1

AIRLINE CARD NO.

SAS BOEING 767 TASK CARD

MECH	INSP
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- C. Prepare for the Removal
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Push the L and R RECIRC FAN switch-lights, on the pilot's overhead panel P5, to the off position.
 - (a) Attach a DO-NOT-OPERATE tag to the switch-light.
 - (3) Turn the L and R PACK selectors, on the P5 panel, to the OFF position.
 - (a) Attach a DO-NOT-OPERATE tag to each PACK selector.
 - (4) Open these circuit breakers on the overhead circuit breaker panel, P11 and attach DO-NOT-CLOSE tags:
 - (a) 11C33, TRIM AIR
 - (b) The flight compartment switch:
 - 1) 11P24, ZONE TEMP CONT MAN FLT DK
 - 2) 11R24, ZONE DUCT OVHT FLT DK
 - (c) The forward zone switch:
 - 11P25, ZONE TEMP CONT VLV CLOSE FWD
 - 2) 11R25, ZONE DUCT OVHT FWD
 - 3) 11H5, ZONE DUCT OVHT AUX FWD
 - (d) The aux-forward zone switch:
 - 1) 11H2, ZONE TEMP CONT AUX FWD
 - 2) 11H5, ZONE DUCT OVHT AUX FWD
 - 3) 11R25, ZONE DUCT OVHT FWD
 - (e) The mid zone switch:
 - 1) 11P26, ZONE TEMP CONT VLV CLOSE MID
 - 2) 11R26, ZONE DUCT OVHT MID

EFFECTIVITY

FUNCTIONAL ZONE DUCT

ZONE DUCT OVERHEAT SWITCH

21-61-01-4A

21-025-c1

PAGE 2 OF 10 AUG 22/08

21-025-C1

AIRLINE CARD NO.

			TASK CARD
MECH	INSP		
			3) 11H6, ZONE DUCT OVHT AUX MID
			(f) The aux-mid zone switch:
			1) 11H3, ZONE TEMP CONT AUX MID
			2) 11H6, ZONE DUCT OVHT AUX MID
			3) 11R26, ZONE DUCT OVHT MID
			(g) The aft zone switch:
			1) 11P27, ZONE TEMP CONT VLV CLOSE AFT
			2) 11R27, ZONE DUCT OVHT AFT
			(h) The switch in the forward cargo zone:
			1) 11N22, FWD CARGO DUCT OVHT/INOP
			2) 11N21, FWD CARGO TEMP CONT VLV CLOSE
		(5)	Get access to the zone duct overheat switch for the flight compartment as follows:
			(a) Open the access door for the main equipment center 119AL (AMM $06-41-00/201$).
			(b) Find the duct overheat switch on the left sidewall near the after end of the nose wheel well.
		(6)	Get acccess to the zone duct overheat switch for the applicable passenger cabin zone as follows:
			(a) Open the sculptured ceiling panels on the left or right side of the passenger cabin in the area where the air conditioning riser ducts connect to the overhead distribution ducts.
		(7)	Find the duct overheat switch for the forward cargo zone as follows
			(a) Open the forward cargo door 821 (AMM 06-46-00/201).
			(b) Remove the side lining for the forward cargo compartment (AMM 25-52-01/401) from the left side.
			 The lining can be found approximately one foot forward of the aft end.

EFFECTIVITY

AIRLINE CARD NO.

21-025-C1

() BOEING TASK CARD

- D. Duct Overheat Switch Removal
 - (1) Disconnect the electrical connector from the duct overheat switch.
 - (2) Turn the duct overheat switch counterclockwise to remove it from the anchor-nut on the duct.
 - (3) Remove and discard the 0-ring from the duct overheat switch.

767

- Zone Duct Overheat Switch Installation (Fig. 401, 402)
 - Α. References
 - (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
 - (2) AMM 06-46-00/201, Entry, Service and Cargo Doors Access Doors and **Panels**
 - (3) AMM 20-10-23/401, Standard Practices Lockwires.
 - (4) AMM 24-22-00/201, Electric Power Control
 - (5) AMM 25-52-01/401, Containerized Cargo Compartment Sidewall Lining
 - B. Access
 - (1) Location Zones 121

211/212	Control Cabin
223/224	Area Above Passenger Cabin Ceiling - Section 41
233/234	Area Above Passenger Cabin Ceiling - Section 43
243/244	Area Above Passenger Cabin Ceiling - Section 45
253/254	Area Above Passenger Cabin Ceiling - Section 46

Forward Cargo Compartment (Left)

- C. Duct Overheat Switch Installation
 - (1) Install a new O-ring onto the duct overheat switch.
 - (2) Install the duct overheat switch into the anchor-nut on the duct.
 - (3) Tighten the duct overheat switch 15+/-5 pound-inches (1.7+/-0.6 newton-meters).
 - (4) Install a new lockwire to the duct overheat switch (AMM 20-10-23/401).

EFFECTIVITY

FUNCTIONAL ZONE DUCT OVERHEAT SWITCH

21-61-01-4A 21-025-C1

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21-025-C1

AIRLINE CARD NO.

BOEING 767 TASK CARD

MECH	INSP
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- (5) Connect the electrical connector to the duct overheat switch.
- Put the Airplane Back to Its Usual Condition
 - Remove the DO-NOT-CLOSE tags and close these circuit breakers on the P11 panel:
 - (a) 11C33, TRIM AIR
 - (b) The flight compartment switch:
 - 1) 11P24, ZONE TEMP CONT MAN FLT DK
 - 11R24, ZONE DUCT OVHT FLT DK
 - The forward zone switch: (c)
 - 1) 11P25, ZONE TEMP CONT VLV CLOSE FWD
 - 2) 11R25, ZONE DUCT OVHT FWD
 - 3) 11H5, ZONE DUCT OVHT AUX FWD
 - (d) The aux-forward zone switch:
 - 1) 11H2, ZONE TEMP CONT AUX FWD
 - 11H5, ZONE DUCT OVHT AUX FWD
 - 3) 11R25, ZONE DUCT OVHT FWD
 - (e) The mid zone switch:
 - 1) 11P26, ZONE TEMP CONT VLV CLOSE MID
 - 2) 11R26, ZONE DUCT OVHT MID
 - 11H6, ZONE DUCT OVHT AUX MID 3)
 - The aux-mid zone switch: (f)
 - 1) 11H3, ZONE TEMP CONT AUX MID
 - 2) 11H6, ZONE DUCT OVHT AUX MID
 - 3) 11R26, ZONE DUCT OVHT MID

EFFECTIVITY

FUNCTIONAL

ZONE DUCT OVERHEAT SWITCH

21-61-01-4A 21-025-C1

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21-025-C1

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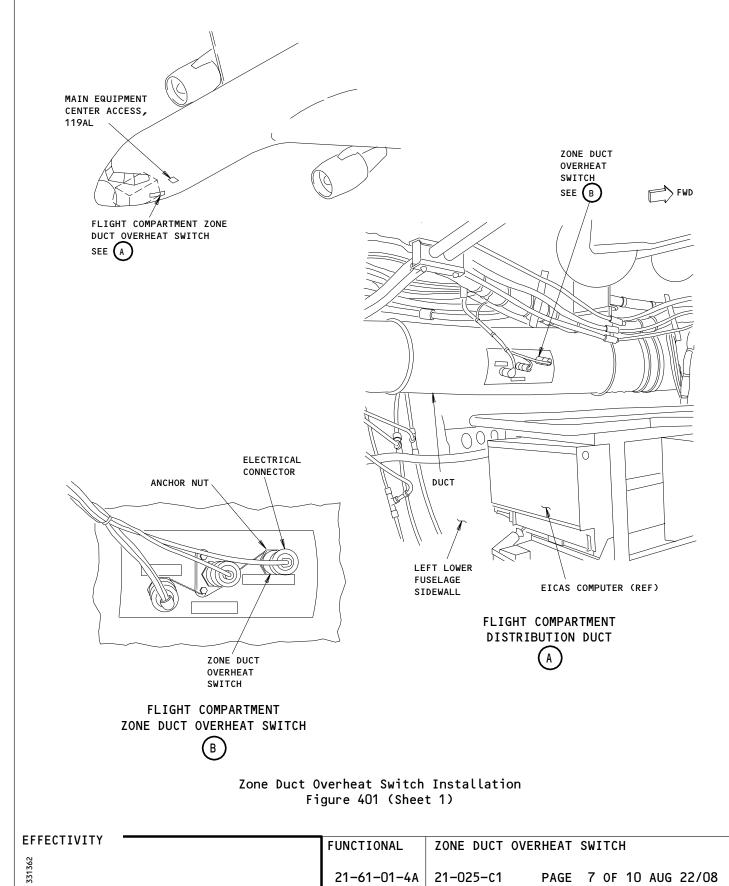
			TASK CARD
MECH	INSP		
			(g) The aft zone switch:
			1) 11P27, ZONE TEMP CONT VLV CLOSE AFT
			2) 11R27, ZONE DUCT OVHT AFT
			(h) The duct overheat switch in the forward cargo zone:
			1) 11N22, FWD CARGO DUCT OVHT/INOP
			2) 11N21, FWD CARGO TEMP CONT VLV CLOSE
		(2)	Remove the DO-NOT-OPERATE tags from the control selector switches for the air conditioning packs, on the P5 panel.
		(3)	Remove the DO-NOT-OPERATE tags from the RECIRC FAN switch-lights on the P5 panel.
		(4)	Close the access door to the main equipment center 119AL (AMM 06-41-00/201).
		(5)	Close the applicable sculptured ceiling panel.
		(6)	Install the left side lining in the forward cargo compartment (AMM 25-52-01/401).
		(7)	Close the forward cargo door 821 (AMM 06-46-00/201).
		(8)	Remove electrical power if it is not necessary (AMM 24-22-00/201).

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AIRLINE CARD NO.



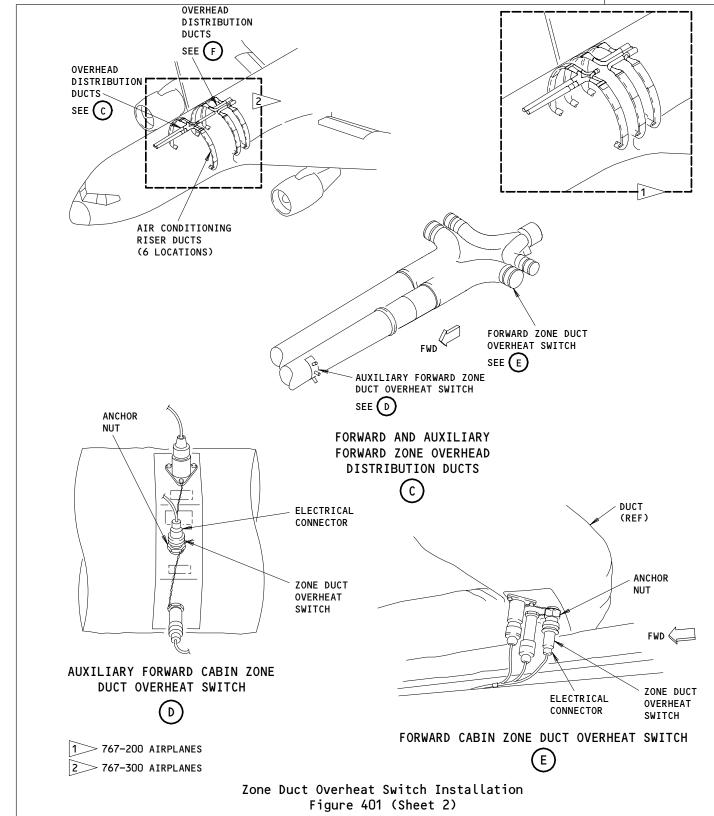
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AIRLINE CARD NO.

SAS





EFFECTIVITY

FUNCTIONAL

21-61-01-4A

ZONE DUCT OVERHEAT SWITCH

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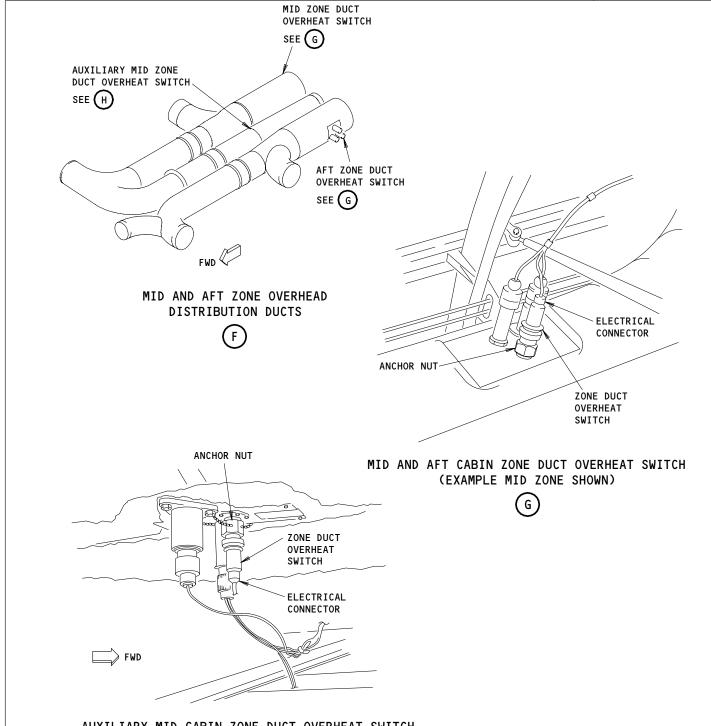
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AIRLINE CARD NO.







AUXILIARY MID CABIN ZONE DUCT OVERHEAT SWITCH



Zone Duct Overheat Switch Installation Figure 401 (Sheet 3)

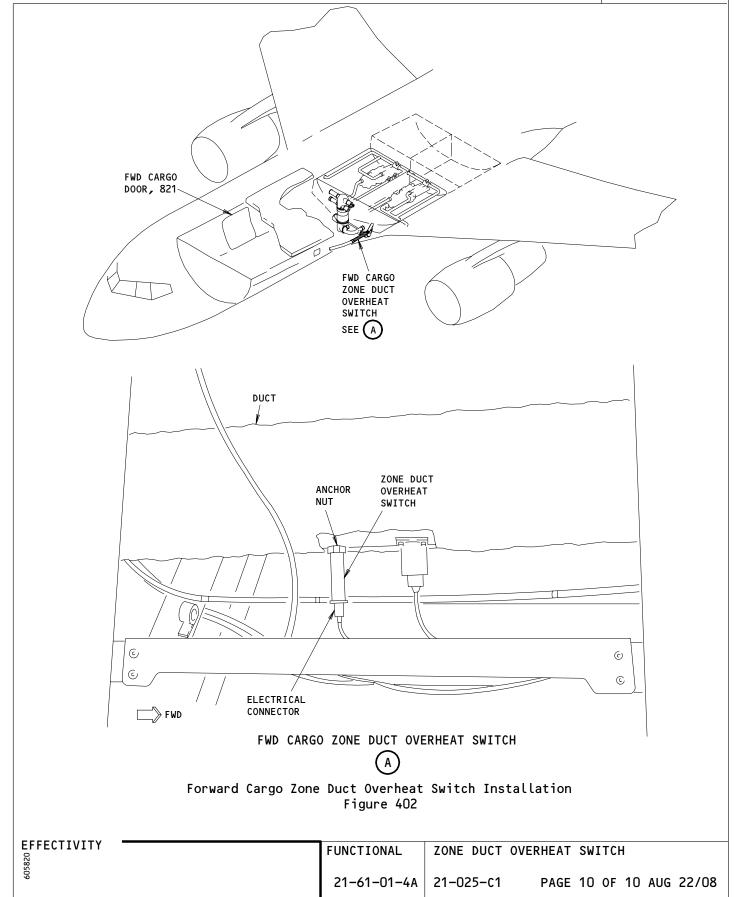
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	530		1 0110 1 1011/12	20112 2001	O V E I (I I E / ()	01121011	
	605530						
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AIRLINE CARD NO.

SAS

767 TASK CARD



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TAIL NO.	
DATE	\neg



BOEING CARD NO. 21-025-01

AIRLINE CARD NO.

MPD

WORK AREA INTERVAL SKILL RELATED TASK PHASE REV REVISION W-21-025-C1 4C 017 APR 22/09 ELECT | FUSELAGE 14848 APPLICABILITY
ANF ENGINE STRUCTURAL ILLUSTRATION REFERENCE AIRPLANE

FUNCTIONAL ZONE DUCT OVERHEAT SWITCH NOTE

TASK CARD

ALL

ZONES ACCESS PANELS

117 119 233 234

119AL 2331

MPD ITEM NUMBER MECH INSP

FUNCTIONALLY CHECK THE SWITCH SETTING OF THE ZONE DUCT OVERHEAT SWITCH (OFF AIRCRAFT) AND THE CIRCUIT VERIFICATION.

21-61-00-5A

AIRPLANE NOTE: TASK APPLICABLE TO ALL AIRPLANES EXCEPT THE 767-400ER.

THE FOLLOWING PROCEDURE APPLIES TO THE ON-AIRCRAFT PORTION OF THIS TASK (CIRCUIT VERIFICATION). THIS PROCEDURE SHOULD BE PERFORMED AFTER SWITCH REMOVAL/INSTALLATION.

ACCESS NOTE: SPECIAL ACCESS 2331 REQUIRES REMOVAL OF SCULPTURED CEILING PANEL - STA 434 TO 785.

Operational Test - Flight Deck/Cabin Zone Duct Overheat Switches (Functional Check of Overheat Indication Circuit)

Α. General

- (1) This procedure is for a scheduled maintenance task.
- (2) This task will perform a functional check of the overheat indication circuit for the flight deck and main cabin zone duct overheat switches.
- (3) This task simulates an overheat condition of zone duct overheat switch. The overheat simulation is accomplished by installing a jumper wire to the overheat switch's electrical connector to simulate closing of the switch contacts. The test then verifies that the appropriate overheat indications (INOP light and EICAS message) occur in the flight deck during the overheat simulation.

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(4) This task does not functionally check the switch setting for the actuation temperature and reset temperature of the overheat switch Refer to the supplier CMM for an off-aircraft check of the overheat switch temperature settings. Alternatively, an on-aircraft check of the overheat switch temperature settings can also be performed with special test equipment (TASK 21-61-00-705-403).

B. References

- (1) AMM 24-22-00/201, Electric Power Control
- (2) AMM 25-22-01/401, Sculptured Ceiling Panel
- (3) AMM 31-41-00/201, Engine Indicating and Crew Alerting System (EICAS)

C. Access

(1) Location Zones

117	Area Outboard and Above NLG Wheel Well (Left)
119/120	Main Equipment Center
135	Environmental Control System Bay (Left)
211/212	Control Cabin
223/224	Area Above Passenger Cabin Ceiling - Section 41
233/234	Area Above Passenger Cabin Ceiling - Section 43
243/244	Area Above Passenger Cabin Ceiling - Section 45
253/254	Area Above Passenger Cabin Ceiling - Section 46

(2) Access Panels

119AL Main Equipment Center Access Door 193FL ECS Components Access Panel

- D. Prepare for the Test
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Make sure these circuit breakers on the P11 overhead circuit breaker panel are closed:
 - (a) 11C33, TRIM AIR
 - (b) 11P24, ZONE TEMP CONT MAN FLT DK
 - (c) 11P25, ZONE TEMP CONT VLV CLOSE FWD
 - (d) 11P26, ZONE TEMP CONT VLV CLOSE MID

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				(e) 11P27, ZONE TEMP CONT VLV CLOSE AFT
				(f) 11R15, ZONE CNTLR
				(g) 11R16, ZONE TEMP IND
				(h) 11R24, ZONE DUCT OVHT FLT DK
				(i) 11R25, ZONE DUCT OVHT FWD
				(j) 11R26, ZONE DUCT OVHT MID
				(k) 11R27, ZONE DUCT OVHT AFT
			(3)	Make sure these additional circuit breakers on the P11 overhead circuit breaker panel are closed:
				(a) 11H2, ZONE TEMP CONT VLV CLOSE AUX FWD
				(b) 11H3, ZONE TEMP CONT VLV CLOSE AUX MID
				(c) 11H5, ZONE DUCT OVHT AUX FWD
				(d) 11H6, ZONE DUCT OVHT AUX MID
				(e) 11R11, AUX ZONE CNTLR
			(4)	Open the left ECS pack components access panel, 193FL, to get access to the zone trim air modulating valves.
			(5)	Make sure the temperature indications that show on the compartment temperature indicator, on the P5 panel, are less than 30-degrees C (85-degrees F).
				(a) If a zone temperature is more than 30-degrees C (85-degrees F), apply a cooling source temporarily to the zone temperature sensor to lower its temperature.
			(6)	Set each PACK selector to the AUTO position on the P5 panel.
			(7)	Set each zone temperature selector to the mid AUTO position on the P5 panel.
			(8)	Get access to the EICAS ECS/MSG maintenance page (AMM 31-41-00/201).
		E.	Fligh	nt Deck Zone - Duct Overheat Switch Circuit Verification Test
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		(1)	Get access to the flight deck zone duct overheat switch (S21) in the air distribution duct on the left side of the main equipment center:
			(a) Open the access door for the main equipment center, 119AL.
		(2)	Open this circuit breaker on the P11 circuit breaker panel:
			(a) 11R24, ZONE DUCT OVHT FLT DK
		(3)	Disconnect the electrical connector (D3838) from the duct overheat switch (S21).
		(4)	Install a jumper wire between pins 1 and 2 of the electrical connector (D3838) to simulate closing of the duct overheat switch (WDM 21-61-11).
		(5)	Close this circuit breaker on the P11 panel:
			(a) 11R24, ZONE DUCT OVHT FLT DK
		(6)	Set the FLT DK zone temperature selector to the full AUTO-W position on the P5 panel.
		(7)	Push the TRIM AIR switch-light on the P5 panel to the ON position.
		(8)	Make sure these zone overheat indications occur in the flight deck:
			(a) FLT DK INOP light illuminates on the P5 panel.
			(b) EICAS message FLT DK TEMP shows on the top display.
			(c) On the P5 panel, the FLT DK visual position indicator for the flight deck zone trim air modulating valve is at the full cool 'C' position.
			(d) TRIM VALVE-FLT DK indication is 0.00 to 0.05, on EICAS ECS/MSG maintenance page.
			(e) Visual position indicator for the flight deck zone trim air modulating valve (V1, in left ECS pack bay) at CLOSE position.
		(9)	Open this circuit breaker on the P11 panel:
			(a) 11R24, ZONE DUCT OVHT FLT DK
		(10)	Remove the jumper wire from the electrical connector (D3838).

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- (11) Reconnect the electrical connector (D3838) to the duct overheat switch (S21).
- (12) Close this circuit breaker on the P11 panel:
 - (a) 11R24, ZONE DUCT OVHT FLT DK
- Make sure these flight deck indications occur:
 - (a) FLT DK INOP light goes off on the P5 panel.
 - (b) EICAS message FLT DECK TEMP does not show on the top display.
 - On the P5 panel, the FLT DK visual position indicator for the flight deck zone trim air modulating valve is at the full warm 'W' position.
 - (d) TRIM VALVE-FLT DK indication is 0.95 to 1.00, on EICAS ECS/MSG maintenance page.
 - (e) Visual position indicator for the flight deck zone trim air modulating valve (V1, in left ECS pack bay) at OPEN position.
- (14) Push the TRIM AIR switch-light on the P5 panel to the off position.
- (15) Set the FLT DK zone temperature selector to the MAN (off) position on the P5 panel.
- (16) Close the access door to the main equipment center, 119AL.
- F. Forward Zone Duct Overheat Switch Circuit Verification Test
 - (1) Get access to the forward zone duct overheat (S22) in the air distribution duct above the main cabin ceiling:
 - Open/remove the sculptured ceiling panel(s) on the left side of the main cabin near STA 650 (AMM 25-22-01/401).
 - Open this circuit breaker on the P11 circuit breaker panel:
 - (a) 11R25, ZONE DUCT OVHT FWD
 - (3) Disconnect the electrical connector (D3824) from the duct overheat switch (S22).

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		(4)	Install a jumper wire between pins 1 and 2 of the electrical connector (D3824) to simulate closing of the duct overheat switch (WDM 21-61-21).
		(5)	Close this circuit breaker on the P11 panel:
			(a) 11R25, ZONE DUCT OVHT FWD
		(6)	Set the FWD CAB zone temperature selector to the full AUTO-W position on the P5 panel.
		(7)	Push the TRIM AIR switch-light on the P5 panel to the ON position.
		(8)	Make sure these zone overheat indications occur in the flight deck:
			(a) FWD CAB INOP light illuminates on the P5 panel.
			(b) EICAS message FWD CABIN TEMP shows on the top display.
			(c) TRIM VALVE-FWD indication is 0.00 to 0.05, on the EICAS ECS/MSG maintenance page.
			(d) Visual position indicator for the forward zone trim air modulating valve (V2, in left ECS pack bay) at CLOSE position.
		(9)	Open this circuit breaker on the P11 panel:
			(a) 11R25, ZONE DUCT OVHT FWD
		(10)	Remove the jumper wire from the electrical connector (D3824).
		(11)	Reconnect the electrical connector (D3824) to the duct overheat switch (S22).
		(12)	Close this circuit breaker on the P11 panel:
			(a) 11R25, ZONE DUCT OVHT FWD
		(13)	Make sure these flight deck indications occur:
			(a) FWD CAB INOP light goes off on the P5 panel.
			(b) EICAS message FWD CABIN TEMP does not show on the top display.
			(c) TRIM VALVE-FWD indication is 0.95 to 1.00, on EICAS ECS/MSG

maintenance page.

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- (d) Visual position indicator for the forward zone trim air modulating valve (V2, in left ECS pack bay) at OPEN position.
- (14) Push the TRIM AIR switch-light on the P5 panel to the off position.
- (15) Set the FWD CAB zone temperature selector to the OFF position on the P5 panel.
- (16) Install/close the sculptured ceiling panels (AMM 25-22-01/401).
- G. Aft Zone Duct Overheat Switch Circuit Verification Test
 - (1) Get access to the aft zone duct overheat switch (S23) in the air distribution duct above the main cabin ceiling:
 - (a) Open/remove the sculptured ceiling panel(s) on the left side of the main cabin near STA 770 (AMM 25-22-01/401).
 - (2) Open this circuit breaker on the P11 circuit breaker panel:
 - (a) 11R27, ZONE DUCT OVHT AFT
 - (3) Disconnect the electrical connector (D3826) from the duct overheat switch (S23).
 - (4) Install a jumper wire between pins 1 and 2 of the electrical connector (D3826) to simulate closing of the duct overheat switch (WDM 21-61-31).
 - (5) Close this circuit breaker on the P11 panel:
 - (a) 11R27, ZONE DUCT OVHT AFT
 - (6) Set the AFT CAB zone temperature selector to the full AUTO-W position on the P5 panel.
 - (7) Push the TRIM AIR switch-light on the P5 panel to the ON position.
 - (8) Make sure these zone overheat indications occur in the flight deck:
 - (a) AFT CAB INOP light illuminates on the P5 panel.
 - (b) EICAS message AFT CABIN TEMP shows on the top display.
 - (c) TRIM VALVE-AFT indication is 0.00 to 0.05, on EICAS ECS/MSG maintenance page.

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				(d) Visual position indicator for the aft zone trim air modulating valve (V3, in left ECS pack bay) at CLOSE position.
			(9)	Open this circuit breaker on the P11 panel:
				(a) 11R27, ZONE DUCT OVHT AFT
			(10)	Remove the jumper wire from the duct overheat switch (\$23).
			(11)	Reconnect the electrical connector (D3826) to the duct overheat switch (S23).
			(12)	Close this circuit breaker on the P11 panel:
				(a) 11R27, ZONE DUCT OVHT AFT
			(13)	Make sure these flight deck indications occur:
				(a) AFT CAB INOP light goes off on the P5 panel.
				(b) EICAS message AFT CABIN TEMP does not show on the top display.
				(c) TRIM VALVE-AFT indication is 0.95 to 1.00, on EICAS ECS/MSG maintenance page.
				(d) Visual position indicator for the aft zone trim air modulating valve (V3, in left ECS pack bay) at OPEN position.
			(14)	Push the TRIM AIR switch-light on the P5 panel to the off position.
			(15)	Set the AFT CAB zone temperature selector to the OFF position on the P5 panel.
			(16)	Install/close the sculptured ceiling panels (AMM 25-22-01/401).
		н.	Mid	Zone - Duct Overheat Switch Circuit Verification Test
			(1)	Get access to the mid zone duct overheat switch (\$635) in the air distribution duct above the main cabin ceiling:
				(a) Open/remove the sculptured ceiling panel(s) on the right side of the main cabin near STA 770 (AMM 25-22-01/401).
			(2)	Open this circuit breaker on the P11 circuit breaker panel:
				(a) 11R26, ZONE DUCT OVHT MID
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- (3) Disconnect the electrical connector (D10712) from the duct overheat switch (S635).
- (4) Install a jumper wire between pins 1 and 2 of the electrical connector (D10712) to simulate closing of the duct overheat switch (WDM 21-61-41).
- (5) Close this circuit breaker on the P11 panel:
 - (a) 11R26, ZONE DUCT OVHT MID
- (6) Set the MID CAB zone temperature selector to the full AUTO-W position on the P5 panel.
- (7) Push the TRIM AIR switch-light on the P5 panel to the ON position.
- (8) Make sure these zone overheat indications occur in the flight deck:
 - (a) MID CAB INOP light illuminates on the P5 panel.
 - (b) EICAS message MID CABIN TEMP shows on the top display.
 - (c) TRIM VALVE-MID indication is 0.00 to 0.05, on EICAS ECS/MSG maintenance page.
 - (d) Visual position indicator for the mid zone trim air modulating valve (V145, in left ECS pack bay) at CLOSE position.
- (9) Open this circuit breaker on the P11 panel:
 - (a) 11R26, ZONE DUCT OVHT MID
- (10) Remove the jumper wire from the duct overheat switch (S635).
- (11) Reconnect the electrical connector (D10712) to the duct overheat switch (S635).
- (12) Close this circuit breaker on the P11 panel:
 - (a) 11R26, ZONE DUCT OVHT MID
- (13) Make sure these flight deck indications occur:
 - (a) MID CAB INOP light goes off on the P5 panel.
 - (b) EICAS message MID CABIN TEMP does not show on the top display.

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- (c) TRIM VALVE-MID indication is 0.95 to 1.00, on EICAS ECS/MSG maintenance page.
- Visual position indicator for the mid zone trim air modulating valve (V145, in left ECS pack bay) at OPEN position.
- (14) Push the TRIM AIR switch-light on the P5 panel to the off position.
- (15) Set the MID CAB zone temperature selector to the OFF position on the P5 panel.
- (16) Install/close the sculptured ceiling panels (AMM 25-22-01/401).
- Aux-Forward Zone Duct Overheat Switch Circuit Verification Test
 - (1) Get access to the aux-forward zone duct overheat switch (\$791) in the air distribution duct above the main cabin ceiling:
 - (a) Open/remove the sculptured ceiling panel(s) on the left side of the main cabin near STA 560 (AMM 25-22-01/401).
 - (2) Open this circuit breaker on the P11 circuit breaker panel:
 - (a) 11H5, ZONE DUCT OVHT AUX FWD
 - (3) Disconnect the electrical connector (D13470) from the duct overheat switch (S791).
 - (4) Install a jumper wire between pins 1 and 2 of the electrical connector (D13470) to simulate closing of the duct overheat switch (WDM 21-61-61).
 - (5) Close these circuit breakers on the P11 panel:
 - (a) 11H5, ZONE DUCT OVHT AUX FWD
 - (6) Set the FWD CAB zone temperature selector to the full AUTO-W position on the P5 panel.
 - (7) Push the TRIM AIR switch-light on the P5 panel to the ON position.
 - Make sure these zone overheat indications occur in the flight deck:
 - (a) FWD CAB INOP light illuminates on the P5 panel.
 - (b) EICAS message FWD CABIN TEMP shows on the top display.

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- (c) TRIM VALVE-AUX FWD indication is 0.00 to 0.05, on EICAS ECS/MSG maintenance page.
- (d) Visual position indicator for the aux-forward zone trim air modulating valve (V152, in left ECS pack bay) at CLOSE position
- (9) Open this circuit breaker on the P11 panel:
 - (a) 11H5, ZONE DUCT OVHT AUX FWD
- (10) Remove the jumper wire from the electrical connector (D13470).
- (11) Reconnect the electrical connector (D13470) to the duct overheat switch (S791).
- (12) Close this circuit breaker on the P11 panel:
 - (a) 11H5, ZONE DUCT OVHT AUX FWD
- (13) Make sure these flight deck indications occur:
 - (a) FWD CAB INOP light goes off on the P5 panel.
 - (b) EICAS message FWD CABIN TEMP does not show on the top display.
 - (c) TRIM VALVE-AUX FWD indication is 0.95 to 1.00, on EICAS ECS/MSG maintenance page.
 - (d) Visual position indicator for the aux-forward zone trim air modulating valve (V152, in left ECS pack bay) at OPEN position.
- (14) Push the TRIM AIR switch-light on the P5 panel to the off position.
- (15) Set the FWD CAB zone temperature selector to the OFF position on the P5 panel.
- (16) Install/close the sculptured ceiling panels (AMM 25-22-01/401).
- J. Aux-Mid Zone Duct Overheat Switch Circuit Verification Test
 - (1) Get access to the aux-mid zone duct overheat switch (\$792) in the air distribution duct above the main cabin ceiling:
 - (a) Open/remove the sculptured ceiling panel(s) on the left side of the main cabin near STA 760 (AMM 25-22-01/401).
 - (2) Open this circuit breaker on the P11 circuit breaker panel:

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			(a) 11H6, ZONE DUCT OVHT AUX MID
		(3)	Disconnect the electrical connector (D13472) from the duct overheat switch (S792).
		(4)	Install a jumper wire between pins 1 and 2 of the electrical connector (D13472) to simulate closing of the duct overheat switch (WDM 21-61-71).
		(5)	Close this circuit breaker on the P11 panel:
			(a) 11H6, ZONE DUCT OVHT AUX MID
		(6)	Set the MID CAB zone temperature selector to the full AUTO-W position on the P5 panel.
		(7)	Push the TRIM AIR switch-light on the P5 panel to the ON position.
		(8)	Make sure these zone overheat indications occur in the flight deck:
			(a) MID CAB INOP light illuminates on the P5 panel.
			(b) EICAS message MID CABIN TEMP shows on the top display.
			(c) TRIM VALVE-AUX MID indication is 0.00 to 0.05, on EICAS ECS/MSG maintenance page.
			(d) Visual position indicator for the aux-mid zone trim air modulating valve (V153, in left ECS pack bay) at CLOSE position
		(9)	Open this circuit breaker on the P11 panel:
			(a) 11H6, ZONE DUCT OVHT AUX MID
		(10)	Remove the jumper wire from the duct overheat switch (\$792).
		(11)	Reconnect the electrical connector (D13472) to the duct overheat switch (S792).
		(12)	Close this circuit breaker on the P11 panel:
			(a) 11H6, ZONE DUCT OVHT AUX MID
		(13)	Make sure these flight deck indications occur:
			(a) MID CAB INOP light goes off on the P5 panel.

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- (b) EICAS message MID CABIN TEMP does not show on the top display.
- (c) TRIM VALVE-AUX MID indication is 0.95 to 1.00, on EICAS ECS/MSG maintenance page.
- (d) Visual position indicator for the aux-mid zone trim air modulating valve (V153, in left ECS pack bay) at OPEN position.
- (14) Push the TRIM AIR switch-light on the P5 panel to the off position.
- (15) Set the MID CAB zone temperature selector to the OFF position on the P5 panel.
- (16) Install/close the sculptured ceiling panels (AMM 25-22-01/401).
- K. Put the Airplane Back to Its Usual Condition
 - (1) Set each PACK selector to the OFF position on the P5 panel.
 - (2) Close the left ECS pack components access panel, 193FL.
 - (3) Remove electircal power if it is not necessary (AMM 24-22-00/201).
- Operational Test (Alternate) Flight Deck/Cabin Zone Duct Overheat Switches
 (Functional Check of Overheat Switch Setting and Overheat Indication Circuit)

A. General

- (1) This procedure is for a scheduled maintenance task.
- (2) This task does an on-wing operational test of the zone duct overheat switches for the flight deck and main cabin zones. This task will confirm that the overheat switches actuate (open/close) at prescribed temperatures when heat is applied to the overheat switch to simulate an overheat condition, and verifying that the associated flight deck overheat indications (INOP lights and EICAS messages) occur.
- (3) With increasing temperature, the overheat switch closes at a temperature of 190±10°F (88±5°C). With decreasing temperature, the overheat switch opens at minimum 150°F (66°C).

B. Equipment

(1) Tester, TEMPCAL - Howell Instruments (either of the following):

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- (a) H394R Tester Thermo Switch, K-Type Thermocouple Switches (recommended) Howell Instruments, Inc. (Vendor Code 98869) 3479 West Vickery Blvd., Fort Worth, TX 76107-5722
- (b) H394 Tester Thermo Switch, K-Type Thermocouple and Thermo Switches (alternative) Howell Instruments, Inc. (Vendor Code 98869) 3479 West Vickery Blvd., Fort Worth, TX 76107-5722
- (c) H294 Tester Thermo Switch, Thermocouple and Thermo Switches (alternative) Howell Instruments, Inc. (Vendor Code 98869) 3479 West Vickery Blvd., Fort Worth, TX 761070-5722
- (2) BH27956 TEMPCAL Heater Probe (for overheat switch p/n 641121-1) Howell Instruments, Inc. (Vendor Code 98869) 3479 West Vickery Blvd., Fort Worth, TX 761070-5722
- C. References
 - (1) AMM 21-61-01/401, Zone Duct Overheat Switch
 - (2) AMM 24-22-00/201, Electric Power Control
 - (3) AMM 25-22-01/401, Sculptured Ceiling Panels
 - (4) AMM 31-41-00/201, Engine Indicating and Crew Alerting System (EICAS)
- D. Access
 - (1) Location Zones

111	Alea outboard and Above NEG wheet wett (Lert)
119/120	Main Equipment Center
135	Environmental Control System Bay (Left)
211/212	Control Cabin
223/224	Area Above Passenger Cabin Ceiling - Section 41
233/234	Area Above Passenger Cabin Ceiling - Section 43
243/244	Area Above Passenger Cabin Ceiling - Section 45
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Area Outhoard and Above NLG Wheel Well (Left)

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		(2) Access Panels 119AL Main Equipment Center Access Door 193FL ECS Components Access Panel
		E. Prepare for Test
		(1) Supply electrical power (AMM 24-22-00/201).
		(2) Make sure these circuit breakers on the P11 overhead circuit breaker panel are closed:
		(a) 11C33, TRIM AIR
		(b) 11P24, ZONE TEMP CONT MAN FLT DK
		(c) 11P25, ZONE TEMP CONT VLV CLOSE FWD
		(d) 11P26, ZONE TEMP CONT VLV CLOSE MID
		(e) 11P27, ZONE TEMP CONT VLV CLOSE AFT
		(f) 11R15, ZONE CNTLR
		(g) 11R16, ZONE TEMP IND
		(h) 11R24, ZONE DUCT OVHT FLT DK
		(i) 11R25, ZONE DUCT OVHT FWD
		(j) 11R26, ZONE DUCT OVHT MID
		(k) 11R27, ZONE DUCT OVHT AFT
		(3) Make sure these additional circuit breakers on the P11 overhead circuit breaker panel are closed:
		(a) 11H2, ZONE TEMP CONT VLV CLOSE AUX FWD
		(b) 11H3, ZONE TEMP CONT VLV CLOSE AUX MID
		(c) 11H5, ZONE DUCT OVHT AUX FWD
		(d) 11H6, ZONE DUCT OVHT AUX MID
		(e) 11R11, AUX ZONE CNTLR
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to the zone trim air modulating valves.

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		(4)	0pen	the	left	ECS	pack	components	access	panel,	193FL,	to	qet	access

- (5) Get access to the EICAS ECS/MSG maintenance page (AMM 31-41-00/201).
- Flight Deck Zone Duct Overheat Switch Test
 - (1) Get access to the flight deck zone duct overheat switch (S21) in the air distribution duct on the left side of the main equipment center:
 - (a) Open the access door for the main equipment center, 119AL.
 - Remove the flight deck zone duct overheat switch (S21) but keep the airplane electrical connector still attached to the switch (AMM 21-61-01/401).
 - (3) Connect the TEMPCAL tester H394R (or alternative) and associated TEMPCAL heater probe BH27956 to the overheat switch.
 - Make sure this circuit breaker is closed on the P11 circuit breaker (4) panel:
 - (a) 11R24, ZONE DUCT OVHT FLT DK
 - (5) Set the FLT DK zone temperature selector on the P5 panel to the full AUTO-W position.
 - (6) Set the L/R PACK selectors to AUTO position on the P5 panel.
 - (7) Push the TRIM AIR switch-light on the P5 panel to the ON position.
 - Do these steps to check the overheat switch's actuation "closed" (8) temperature:
 - (a) Use the TEMPCAL tester H394R (or alternative) to apply heat to the overheat switch.
 - Increase the temperature of the overheat switch to 170°F (77°C) (b) and maintain this temperature for 5 minutes.
 - Slowly increase the temperature of the overheat switch at a rate of 2°F (1°C) per minute until the FLT DK INOP light comes on at the P5 panel.
 - 1) Make sure the FLT DK INOP light came on at an overheat switch temperature of 190±10°F (88±5°C).

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- 2) Make sure the EICAS message, FLT DECK TEMP, shows on the EICAS top display.
- Make sure the FLT DK position indicator on the P5 panel for the flight deck zone trim air modulating valve goes to full cool 'C' mark.
- 4) Make sure on the EICAS ECS/MSG Maintenance page that the TRIM VALVE-FLT DK indication reads 0.00 to 0.05
- 5) Make sure the visual position indicator for the flight deck zone trim air modulating valve (V1, in left ECS pack bay) is at CLOSE position.
- (9) Do these steps to check the overheat switch's actuation "open" temperature:
 - (a) Slowly decrease the temperature of the overheat switch at a rate of 2°F (1°C) per minute until the FLT DK INOP light goes out at the P5 panel.
 - 1) Make sure the FLT DK INOP light went out at an overheat switch temperature of no less than 150°F (66°C) and at least 10°F (5°C) less than the temperature at which the switch closed at.
 - Make sure the EICAS message, FLT DECK TEMP, does not show on the EICAS top display.
 - Make sure the FLT DK position indicator on the P5 panel for the flight deck zone trim air modulating valve goes to full warm 'W' mark.
 - Make sure on the EICAS ECS/MSG Maintenance page that the TRIM VALVE-FLT DK indication reads 0.95 to 1.00
 - Make sure the visual position indicator for the flight deck zone trim air modulating valve (V1, in left ECS pack bay) is at OPEN position.
- (10) Push the TRIM AIR switch-light on the P5 panel to the OFF position.
- (11) Set the L/R PACK selectors to OFF position on the P5 panel.
- (12) Set the FLT DK zone temperature selector on the P5 panel to the MAN (off) position.

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- (13) Let the overheat switch become cool then remove the TEMPCAL tester H394R (or alternative) and heater probe BH27956 from the overheat switch.
- (14) Reinstall the overheat switch if it tested okay or replace the overheat switch if found unsatisfactory (AMM 21-61-01/401).
- (15) Close the access door to the main equipment center, 119AL.
- G. Forward Zone Duct Overheat Switch Test
 - (1) Get access to the forward zone duct overheat (S22) in the air distribution duct above the main cabin ceiling:
 - (a) Open/remove the sculptured ceiling panel(s) on the left side of the main cabin near STA 650 (AMM 25-22-01/401).
 - (2) Remove the forward zone duct overheat switch (\$22) but keep the airplane electrical connector still attached to the switch (AMM 21-61-01/401).
 - (3) Connect the TEMPCAL tester H394R (or alternative) and associated TEMPCAL heater probe BH27956 to the overheat switch.
 - (4) Make sure this circuit breaker is closed on the P11 circuit breaker panel:
 - (a) 11R25, ZONE DUCT OVHT FWD
 - (5) Set the FWD CAB zone temperature selector on the P5 panel to the full AUTO-W position.
 - (6) Set the L/R PACK selectors to AUTO position on the P5 panel.
 - (7) Push the TRIM AIR switch-light on the P5 panel to the ON position.
 - (8) Do these steps to check the overheat switch's actuation "closed" temperature:
 - (a) Use the TEMPCAL tester H394R (or alternative) to apply heat to the overheat switch.
 - (b) Increase the temperature of the overheat switch to $170^{\circ}F$ (77°C) and maintain this temperature for 5 minutes.

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- (c) Slowly increase the temperature of the overheat switch at a rate of 2°F (1°C) per minute until the FWD CAB INOP light comes on at the P5 panel.
 - 1) Make sure the FWD CAB INOP light came on at an overheat switch temperature of 190±10°F (88±5°C).
 - 2) Make sure the EICAS message, FWD CABIN TEMP, shows on the EICAS top display.
 - Make sure on the EICAS ECS/MSG Maintenance page that the TRIM VALVE-FWD indication reads 0.00 to 0.05
 - Make sure the visual position indicator for the forward zone trim air modulating valve (V2, in left ECS pack bay) is at CLOSE position.
- (9) Do these steps to check the overheat switch's actuation "open" temperature:
 - Slowly decrease the temperature of the overheat switch at a rate of 2°F (1°C) per minute until the FWD CAB INOP light goes out at the P5 panel.
 - Make sure the FWD CAB INOP light went out at an overheat switch temperature of no less than 150°F (66°C) and at least 10°F (5°C) less than the temperature at which the switch closed at.
 - 2) Make sure the EICAS message, FWD CABIN TEMP, does not show on the EICAS top display.
 - Make sure on the EICAS ECS/MSG Maintenance page that the TRIM VALVE-FWD indication reads 0.95 to 1.00
 - 4) Make sure the visual position indicator for the forward zone trim air modulating valve (V2, in left ECS pack bay) is at OPEN position.
- (10) Push the TRIM AIR switch-light on the P5 panel to the OFF position.
- (11) Set the L/R PACK selectors to OFF position on the P5 panel.
- (12) Set the FWD CAB zone temperature selector on the P5 panel to the OFF position.

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- (13) Let the overheat switch become cool then remove the TEMPCAL tester H394R (or alternative) and heater probe BH27956 from the overheat switch.
- (14) Reinstall the overheat switch if it tested okay or replace the overheat switch if found unsatisfactory (AMM 21-61-01/401).
- (15) Install/close the sculptured ceiling panels (AMM 25-22-01/401).
- H. Aft Zone Duct Overheat Switch Test
 - (1) Get access to the aft zone duct overheat switch (\$23) in the air distribution duct above the main cabin ceiling:
 - (a) Open/remove the sculptured ceiling panel(s) on the left side of the main cabin near STA 770 (AMM 25-22-01/401).
 - (2) Remove the aft zone duct overheat switch (S23) but keep the airplane electrical connector still attached to the switch (AMM 21-61-01/401).
 - (3) Connect the TEMPCAL tester H394R (or alternative) and associated TEMPCAL heater probe BH27956 to the overheat switch.
 - (4) Make sure this circuit breaker is closed on the P11 circuit breaker panel:
 - (a) 11R27, ZONE DUCT OVHT AFT
 - (5) Set the AFT CAB zone temperature selector on the P5 panel to the full AUTO-W position.
 - (6) Set the L/R PACK selectors to the AUTO position on the P5 panel.
 - (7) Push the TRIM AIR switch-light on the P5 panel to the ON position.
 - (8) Do these steps to check the overheat switch's actuation "closed" temperature:
 - (a) Use the TEMPCAL tester H394R (or alternative) to apply heat to the overheat switch.
 - (b) Increase the temperature of the overheat switch to 170°F (77°C) and maintain this temperature for 5 minutes.

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- (c) Slowly increase the temperature of the overheat switch at a rate of 2°F (1°C) per minute until the AFT CAB INOP light comes on at the P5 panel.
 - 1) Make sure the AFT CAB INOP light came on at an overheat switch temperature of 190±10°F (88±5°C).
 - 2) Make sure the EICAS message, AFT CABIN TEMP, shows on the EICAS top display.
 - Make sure on the EICAS ECS/MSG Maintenance page that the TRIM VALVE-AFT indication reads 0.00 to 0.05
 - Make sure the visual position indicator for the aft zone trim air modulating valve (V3, in left ECS pack bay) is at CLOSE position.
- (9) Do these steps to check the overheat switch's actuation "open" temperature:
 - Slowly decrease the temperature of the overheat switch at a rate of 2°F (1°C) per minute until the AFT CAB INOP light goes out at the P5 panel.
 - Make sure the AFT CAB INOP light went out at an overheat switch temperature of no less than 150°F (66°C) and at least 10°F (5°C) less than the temperature at which the switch closed at.
 - 2) Make sure the EICAS message, AFT CABIN TEMP, does not show on the EICAS top display.
 - Make sure on the EICAS ECS/MSG Maintenance page that the TRIM VALVE-AFT indication reads 0.95 to 1.00
 - Make sure the visual position indicator for the aft zone trim air modulating valve (V3, in left ECS pack bay) is at OPEN position.
- (10) Push the TRIM AIR switch-light on the P5 panel to the OFF position.
- (11) Set the L/R PACK selectors to the OFF position on the P5 panel.
- (12) Set the AFT CAB zone temperature selector on the P5 panel to the OFF position.

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- (13) Let the overheat switch become cool then remove the TEMPCAL tester H394R (or alternative) and heater probe BH27956 from the overheat switch.
- (14) Reinstall the overheat switch if it tested okay or replace the overheat switch if found unsatisfactory (AMM 21-61-01/401).
- (15) Install/close the sculptured ceiling panels (AMM 25-22-01/401).
- I. Mid Zone Duct Overheat Switch Test
 - (1) Get access to the mid zone duct overheat switch (S635) in the air distribution duct above the main cabin ceiling:
 - (a) Open/remove the sculptured ceiling panel(s) on the right side of the main cabin near STA 770 (AMM 25-22-01/401).
 - Remove the mid zone duct overheat switch (S635) but keep the airplane electrical connector still attached to the switch (AMM 21-61-01/401).
 - (3) Connect the TEMPCAL tester H394R (or alternative) and associated TEMPCAL heater probe BH27956 to the overheat switch.
 - (4) Make sure this circuit breaker is closed on the P11 circuit breaker panel:
 - (a) 11R26, ZONE DUCT OVHT MID
 - (5) Set the MID CAB zone temperature selector on the P5 panel to the full AUTO-W position.
 - (6) Set the L/R PACK selectors to the AUTO position on the P5 panel.
 - Push the TRIM AIR switch-light on the P5 panel to the ON position.
 - Do these steps to check the switch's actuation "closed" temperature:
 - Use the TEMPCAL tester H394R (or alternative) to apply heat to the overheat switch.
 - Increase the temperature of the overheat switch to 170°F (77°C) (b) and maintain this temperature for 5 minutes.
 - Slowly increase the temperature of the overheat switch at a rate of 2°F (1°C) per minute until the MID CAB INOP light comes on at the P5 panel.

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			1)	Make sure the MID CAB INOP light came on at an overheat switch temperature of 190±10°F (88±5°C).
			2)	Make sure the EICAS message, MID CABIN TEMP, shows on the EICAS top display.
			3)	Make sure on the EICAS ECS/MSG Maintenance page that the TRIM VALVE-MID indication reads 0.00 to 0.05
			4)	Make sure the visual position indicator for the mid zone trim air modulating valve (V145, in left ECS pack bay) is at CLOSE position.
		(9)	Do these temperati	steps to check the overheat switch's actuation "open" ure:
			rate	wly decrease the temperature of the overheat switch at a e of 2°F (1°C) per minute until the MID CAB INOP light goes at the P5 panel.
			1)	Make sure the MID CAB INOP light went out at an overheat switch temperature of no less than 150°F (66°C) and at least 10°F (5°C) less than the temperature at which the switch closed at.
			2)	Make sure the EICAS message, MID CABIN TEMP, does not show on the EICAS top display.
			3)	Make sure on the EICAS ECS/MSG Maintenance page that the TRIM VALVE-MID indication reads 0.95 to 1.00
			4)	Make sure the visual position indicator for the mid zone trim air modulating valve (V145, in left ECS pack bay) is at OPEN position.
		(10)	Push the	TRIM AIR switch-light on the P5 panel to the OFF position.
		(11)	Set the I	L/R PACK selectors to OFF position on the P5 panel.
		(12)	Set the I	MID CAB zone temperature selector on the P5 panel to the OFF -

switch.

(13) Let the overheat switch become cool then remove the TEMPCAL tester H394R (or alternative) and heater probe BH27956 from the overheat

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- (14) Reinstall the overheat switch if it tested okay or replace the overheat switch if found unsatisfactory (AMM 21-61-01/401).
- (15) Install/close the sculptured ceiling panels (AMM 25-22-01/401).
- J. Aux-Forward Zone Duct Overheat Switch Test
 - (1) Get access to the aux-forward zone duct overheat switch (\$791) in the air distribution duct above the main cabin ceiling:
 - (a) Open/remove the sculptured ceiling panel(s) on the left side of the main cabin near STA 560 (AMM 25-22-01/401).
 - (2) Remove the aux-forward zone duct overheat switch (\$791) but keep the airplane electrical connector still attached to the switch (AMM 21-61-01/401).
 - (3) Connect the TEMPCAL tester H394R (or alternative) and associated TEMPCAL heater probe BH27956 to the overheat switch.
 - (4) Make sure this circuit breaker is closed on the P11 circuit breaker panel:
 - (a) 11H5, ZONE DUCT OVHT AUX FWD
 - (5) Set the FWD CAB zone temperature selector on the P5 panel to the full AUTO-W position.
 - (6) Set the L/R PACK selectors to AUTO position on the P5 panel.
 - (7) Push the TRIM AIR switch-light on the P5 panel to the ON position.
 - (8) Do these steps to check the overheat switch's actuation "closed" temperature:
 - (a) Use the TEMPCAL tester H394R (or alternative) to apply heat to the overheat switch.
 - (b) Increase the temperature of the overheat switch to 170°F (77°C) and maintain this temperature for 5 minutes.
 - (c) Slowly increase the temperature of the overheat switch at a rate of 2°F (1°C) per minute until the FWD CAB INOP light comes on at the P5 panel.
 - 1) Make sure the FWD CAB INOP light came on at an overheat switch temperature of 190±10°F (88±5°C).

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- 2) Make sure the EICAS message, FWD CABIN TEMP, shows on the EICAS top display.
- 3) Make sure on the EICAS ECS/MSG Maintenance page that the TRIM VALVE-AUX FWD indication reads 0.00 to 0.05
- 4) Make sure the visual position indicator for the aux-forward zone trim air modulating valve (V152, in left ECS pack bay) is at CLOSE position.
- (9) Do these steps to check the overheat switch's actuation "open" temperature:
 - (a) Slowly decrease the temperature of the overheat switch at a rate of 2°F (1°C) per minute until the FWD CAB INOP light goes out at the P5 panel.
 - Make sure the FWD CAB INOP light went out at an overheat switch temperature of no less than 150°F (66°C) and at least 10°F (5°C) less than the temperature at which the switch closed at.
 - 2) Make sure the EICAS message, FWD CABIN TEMP, does not show on the EICAS top display.
 - 3) Make sure on the EICAS ECS/MSG Maintenance page that the TRIM VALVE-AUX FWD indication reads 0.95 to 1.00
 - 4) Make sure the visual position indicator for the aux-forward zone trim air modulating valve (V152, in left ECS pack bay) is at OPEN position.
- (10) Push the TRIM AIR switch-light on the P5 panel to the OFF position.
- (11) Set the L/R PACK selectors to OFF position on the P5 panel.
- (12) Set the FWD CAB zone temperature selector on the P5 panel to the OFF position.
- (13) Let the overheat switch become cool then remove the TEMPCAL tester H394R (or alternative) and heater probe BH27956 from the overheat switch.
- (14) Reinstall the overheat switch if it tested okay or replace the overheat switch if found unsatisfactory (AMM 21-61-01/401).
- (15) Install/close the sculptured ceiling panels (AMM 25-22-01/401).

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- K. Aux-Mid Zone Duct Overheat Switch Test
 - (1) Get access to the aux-mid zone duct overheat switch (\$792) in the air distribution duct above the main cabin ceiling:
 - Open/remove the sculptured ceiling panel(s) on the left side of the main cabin near STA 760 (AMM 25-22-01/401).
 - (2) Remove the aux-mid zone duct overheat switch (\$792) but keep the airplane electrical connector still attached to the switch (AMM 21-61-01/401).
 - Connect the TEMPCAL tester H394R (or alternative) and associated TEMPCAL heater probe BH27956 to the overheat switch.
 - Make sure this circuit breaker is closed on the P11 circuit breaker (4) panel:
 - (a) 11H6, ZONE DUCT OVHT AUX MID
 - (5) Set the MID CAB zone temperature selector on the P5 panel to the full AUTO-W position.
 - (6) Set the L/R PACK selectors to the AUTO position on the P5 panel.
 - (7) Push the TRIM AIR switch-light on the P5 panel to the ON position.
 - Do these steps to check the overheat switch's actuation "closed" temperature:
 - Use the TEMPCAL tester H394R (or alternative) to apply heat to (a) the overheat switch.
 - Increase the temperature of the overheat switch to 170°F (77°C) and maintain this temperature for 5 minutes.
 - Slowly increase the temperature of the overheat switch at a rate of 2°F (1°C) per minute until the MID CAB INOP light comes on at the P5 panel.
 - 1) Make sure the MID CAB INOP light came on at an overheat switch temperature of 190±10°F (88±5°C):
 - 2) Make sure the EICAS message, MID CABIN TEMP, shows on the EICAS top display.

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3)	Make sure on the EICAS ECS/MSG Maintenance page that the
	TRIM VALVE-AUX MID indication reads 0.00 to 0.05

- 4) Make sure the visual position indicator for the aux-mid zone trim air modulating valve (V153, in left ECS pack bay) is at CLOSE position.
- (9) Do these steps to check the overheat switch's actuation "open" temperature:
 - (a) Slowly decrease the temperature of the overheat switch at a rate of 2°F (1°C) per minute until the MID CAB INOP light goes out at the P5 panel.
 - 1) Make sure the MID CAB INOP light went out at an overheat switch temperature of no less than 150°F (66°C) and at least 10°F (5°C) less than the temperature at which the switch closed at.
 - 2) Make sure the EICAS message, MID CABIN TEMP, does not show on the EICAS top display.
 - 3) Make sure on the EICAS ECS/MSG Maintenance page that the TRIM VALVE-AUX MID indication reads 0.95 to 1.00
 - 4) Make sure the visual position indicator for the aux-mid zone trim air modulating valve (V153, in left ECS pack bay) is at OPEN position.
- (10) Push the TRIM AIR switch-light on the P5 panel to the OFF position.
- (11) Set the L/R PACK selectors to OFF position on the P5 panel.
- (12) Set the MID CAB zone temperature selector on the P5 panel to the OFF position.
- (13) Let the overheat switch become cool then remove the TEMPCAL tester H394R (or alternative) and heater probe BH27956 from the overheat switch.
- (14) Reinstall the overheat switch if it tested okay or replace the overheat switch if found unsatisfactory (AMM 21-61-01/401).
- (15) Install/close the sculptured ceiling panels (AMM 25-22-01/401).
- L. Put the Airplane back to Its Usual Condition

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- (1) Close the left ECS pack components access panel, 193FL.
- (2) Remove electical power if it is not necessary (AMM 24-22-00/201).
- 3. Operational Test Forward Cargo Zone Duct Overheat Switches (Functional Check of Overheat Indication Circuit)

Α. General

- (1) This procedure is for a scheduled maintenance task.
- (2) This task will perform a functional check of the overheat indication circuit for the forward cargo zone duct overheat switches.
- (3) This task simulates an overheat condition of zone duct overheat switch. The overheat simulation is accomplished by installing a jumper wire to the overheat switch's electrical connector to simulate closing of the switch contacts. The test then verifies that the appropriate overheat indications (FAULT light and EICAS messages) occur in the flight deck during the overheat simulation.
- (4) This task does not functionally check the switch setting for the actuation temperature and reset temperature of the overheat switch Refer to the supplier CMM for an off-aircraft check of the overheat switch temperature settings. Alternatively, an on-aircraft check of the overheat switch temperature settings can also be performed with special test equipment (TASK 21-61-00-705-505).

References

- (1) AMM 24-22-00/201, Electric Power Control
- (2) AMM 25-52-01/401, Containerized Cargo Compartment Sidewall
- (3) AMM 27-51-00/201, Trailing Edge Flap System
- (4) AMM 27-61-00/201, Spoiler/Speedbrake Control System
- (5) AMM 32-09-02/201, Air/Ground Relays
- (6) AMM 36-00-00/201, Pneumatic General
- (7) AMM 52-33-00/201, Large Forward Cargo Door
- C. Access

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			(1)	Location Zones 119 Main Equipment Center (Left) 121/122 Forward Cargo Compartment 125 Area Aft of Forward Cargo Compartment (Left) 135/136 Environmental Control Systems (ECS) Bay 211/212 Control Cabin
			(2)	Access Panels 119AL Main Equipment Center Access Door 193NL Environmental Control System Access Door 194LR Environmental Control Systems (ECS) Bay Access Door 194NR Flow Control and Shutoff Valve (Right)
		D.	Prep	pare for Test
			(1)	Supply electrical power (AMM 24-22-00/201).
			(2)	Make sure these circuit breakers on the overhead circuit breaker panel, P11, are closed:
				(a) 11A13, L PACK FLOW CONT
				(b) 11A26, R PACK FLOW CONT
				(c) 11N1O, L PACK AUTO POWER
				(d) 11N11, L PACK AUTO CONT
				(e) 11N15, R PACK PWR STBY
				(f) 11N16, R PACK CONT STBY
				(g) 11N18, CARGO EXH VALVE
				(h) 11N19, R PACK AUTO POWER
				(i) 11N2O, R PACK AUTO CONT
				(j) 11N21, FWD CARGO CONT VLV CLOSE
				(k) 11N22, FWD CARGO DUCT OVHT
				(l) 11N24, L PACK PWR STBY
				(m) 11N25, L PACK CONT STBY

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			(n) 11P21, FWD CARGO A/C & VENT CONT
			(o) 11R11, AUX ZONE CONTROLLER
			(p) 11R14, CABIN RECIRC FAN L
			(q) 11R15, ZONE CONTROLLER
			(r) 11R19, FWD CARGO HEAT CONT
			(s) 11R21, CARGO HEAT OVERRIDE
			(t) 11R23, CABIN RECIRC FAN R
			(u) 11R24, F/D ZONE DUCT OVHT
		(3)	Make sure these circuit breakers on the miscellaneous electrical equipment panel, P36, are closed:
			(a) 36E4 or 36K3, CGO GND EXH B/U VAL
			(b) 36F2 or 36F4, RECIRC FAN L
			(c) 36L2 or 36K5, FWD CARGO HT CONT VLV
		(4)	Make sure these circuit breakers on the miscellaneous electrical equipment panel, P37, are closed:
			(a) 37E3 or 37K7, CARGO GND EXH VALVE
			(b) 37E4 or 37K6, CARGO A/C SOV
			(c) 37G4 or 37C4, RECIRC FAN 2
			(d) 37J3 or 37G1, FWD CARGO VENT FAN
			(e) 37J6 or 37F1, CGO GND EXH FAN
		(5)	Make sure that the flaps are in the retracted position (AMM 27-51-00/201).

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		(6)	To simulate right and left engines "ON", hold the Channel 2 switches on the N2 engine speed card assemblies (M1092 and M1093, P50 panel) to the TEST position, then set the L and R FUEL control switches to the RUN position.
			<u>NOTE</u> : There is a 3-5 minute time delay after setting fuel switches.
		(7)	Make sure that the system No.1 and No. 2 air/ground relays are set to ground mode (AMM 32-09-02/201).
		(8)	To simulate that the left and right engine bleed air PRSOV's are in the open position, open these circuit breakers and attach DO-NOT-CLOSE tags:
			(a) Pilot's Overhead Circuit Breaker Panel, P11
			1) 11S10, L AIR SUP ENG IND
			2) 11S11, L AIR SUP ENG BLEED CONT
			3) 11S19, R AIR SUP ENG IND
			4) 11S2O, R AIR SUP ENG BLEED CONT
		(9)	To simulate that the left and right pack flow control valves (FCV) are in the open position, do these steps:
			(a) Disconnect the electrical connector D2770 from the left pack FCV (V16).
			(b) Disconnect the electrical connector D1276 from the right pack FCV (V17).
		(10)	Set the position of the air conditioning flight deck control panel switches as follows, on the P5 pilot's overhead panel:
			(a) FWD CARGO AIR COND zone temperature selector at AUTO position.
			(b) FLT DK zone temperature selector at AUTO position.
			(c) FWD CAB, MID CAB, and AFT CAB zone temperature selectors at OFF position.
			(d) L PACK and R PACK selectors at AUTO position.
			(e) L-RECIRC FAN and R-RECIRC FAN switch-lights at ON position.

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- (f) FWD CARGO AIR COND switch-light set to ON position.
- EQUIP COOLING mode selector at AUTO position.
- Functional Check of Overheat Indication Circuit
 - (1) Do a test of the forward cargo duct overheat switch (\$793) and the forward cargo compartment overheat switch (S794):
 - Set the FWD CARGO AIR COND switch-light to the OFF position.
 - Get access to the forward cargo overheat switches (S793 and \$794) in the forward cargo compartment:
 - Open the forward cargo door 821 (AMM 52-33-00/201).
 - Remove the left sidewall linings near STA580 and STA740 in the forward cargo compartment (AMM 25-52-01/401).

NOTE: The forward cargo duct overheat switch (S793) is at STA734. The forward cargo compartment overheat switch (\$794) is at STA660.

- Make sure that these ciruit breakers are open on the P11 overhead circuit breaker panel to simulate that the left/right engine bleed air PRSOVs are open:
 - 11S10, LEFT ENG BLEED IND
 - 11S11, LEFT ENG BLEED CONT 2)
 - 11S19, RIGHT ENGINE BLEED IND 3)
 - 11S20, RIGHT ENG BLEED CONT
- Make sure that these electrical connectors are disconnected to simulate that both the left/right pack flow control valves are open.
 - Connector D2770 (left pack flow control valve, V16).
 - Connector D1276 (right pack flow control valve, V17).
- (e) Make sure that the FWD/AFT CARGO FIRE switches on the P8 panel are not armed.

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FUNCTIONAL ZONE DUCT OVERHEAT SWITCH

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		(f) Set the FWD CARGO AIR COND switch-light to the ON position, and make a record of the current time of day.
		(g) Make sure that the FWD CARGO AIR COND temperature selector is set to the AUTO position.
		WARNING: DO THE DEACTIVATION PROCEDURE FOR THE SPOILERS OR MOVE ALL PERSONS AND EQUIPMENT AWAY FROM THE SPOILERS. THE SPOILERS CAN RETRACT QUICKLY AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.
		(h) Do the deactivation procedure for the spoilers (AMM 27-61-00/201) or move all persons and equipment away from the spoilers.
		WARNING: MAKE SURE YOU DO THE FLIGHT MODE SIMULATION CORRECTLY. IF THE PROCEDURE IS NOT DONE CORRECTLY, INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.
		(i) Do the Flight Mode Simulation procedure for the No. 1 and No. 2 air/ground system (AMM 32-09-02/201).
		(j) Disconnect the electrical connector D13596 from the forward cargo duct overheat switch (S793), and install a jumper wire between pins 1 and 2 of the connector D13596 to simulate an overheat condition.
		 Make sure that the EICAS status and maintenance messages CARGO A/C TEMP show.
		Make sure that the EICAS advisory message FWD CGO BACKUP shows.
		3) Make sure that the FAULT light on the FWD CARGO AIR COND temperature control module (M1619, P5 panel) is on.
		(k) Remove the jumper wire from pins 1 and 2 of the connector D13596, and reconnect the electrical connector D13596 to the

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1) Make sure that the EICAS advisory message FWD CGO BACKUP

forward cargo duct overheat switch (S793).

does not show.

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AIRLINE CARD NO.

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			 Make sure that the FAULT light on the FWD CARGO AIR COND temperature control module (M1619, P5 panel) is off.
			3) Do the Maintenance Message Erase Procedure to clear the EICAS display (AMM 31-41-00/201).
			a) Make sure that the EICAS status and maintenance messages CARGO A/C TEMP do not show.
		(1)	Disconnect the electrical connector D14594 from the forward cargo compartment overheat switch (S794) and install a jumper wire between pins 1 and 2 of the connector D13594 to simulate an overheat condition.
			 Make sure that the FAULT light on the FWD CARGO AIR COND temperature control module (M1619, P5 panel) is on.
			2) Make sure that the EICAS adivsory message FWD CARGO BACKUP shows.
			Wait for 30 minutes to pass after the time which you set the FWD CARGO AIR COND switch-light to the ON position in the prior step above.
			4) Make sure that the EICAS maintenance message CARGO ZONE OVHT shows.
		(m)	Remove the jumper wire from pins 1 and 2 of the connector D13594, and reconnect the electrical connector D13594 to the forward cargo compartment overheat switch (S794).
			 Make sure that the EICAS advisory message FWD CARGO BACKUP does not show.
			2) Make sure that the FAULT light on the FWD CARGO AIR COND temperature control module (M1619, P5 panel) is off.
			3) Do the Maintenance Message Erase Procedure to clear the EICAS display (AMM 31-41-00/201).
			a) Make sure that the EICAS maintenance message

(AMM 32-09-02/201).

CARGO ZONE OVHT does not show.

(n) Put the No. 1 and 2 air/ground relay systems to the ground mode

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- (o) Do the activation procedure for the spoilers if you did the deactivation procedure (AMM 27-61-00/201).
- (p) To stop the open simulation of the left/right engine bleed air PRSOV's, close these circuit breakers on the P11 pilot's overhead circuit breaker panel and remove the DO-NOT-CLOSE tags:
 - 1) 11S10, L ENG BLEED IND
 - 2) 11S11, L ENG BLEED CONT
 - 3) 11S19, R ENG BLEED IND
 - 4) 11S2O, R ENG BLEED CONT
- (q) To stop the open simulation of the left/right pack flow control valves (FCVs), reconnect these electrical connectors:
 - 1) Connector D2770 (left pack flow control valve, V16).
 - 2) Connector D1276 (right pack flow control valve, V17).
- (r) To stop the simulation of the left/right engines "ON", release the Channel 2 switches on the N2 engine speed card assemblies (M1092 and M1093, P50 panel) from the the TEST position, and set the L and R FUEL control switches to the OFF position.
- F. Put the Airplane Back to Its Usual Condition
 - (1) Install the side lining for the forward cargo compartment (AMM 25-52-01/401).
 - (2) Close the access door for the main equipment center, 119AL (AMM 06-41-00/201).
 - (3) Remove pneumatic power if it is not necessary (AMM 36-00-00/201).
 - (4) Remove electrical power if it is not necessary (AMM 24-22-00/201).
- 4. <u>Operational Test (Alternate) Forward Cargo Zone Duct Overheat Switches</u>
 <u>(Functional Check of Overheat Switch Setting and Overheat Indication Circuit)</u>
 - A. General
 - (1) This procedure is for a scheduled maintenance task.

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TASK CARD

AIRLINE CARD NO.

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- (2) This task does an on-wing operational test of the zone duct overheat switch for the forward cargo compartment zone. This task will confirm that the overheat switch actuates (open/close) at prescribed temperatures when heat is applied to the overheat switch to simulate an overheat condition, and verifying that the associated flight crew overheat indications (FAULT light and EICAS messages) operate.
- (3) With increasing temperature, the overheat switch closes at a temperature of 190±10°F (88±5°C). With decreasing temperature, the overheat switch opens at minimum 150°F (66°C).

B. Equipment

- (1) Tester, TEMPCAL Howell Instruments (either of the following):
 - (a) H394R Tester Thermo Switch, K-Type Thermocouple Switches (recommended) Howell Instruments, Inc. (Vendor Code 98869) 3479 West Vickery Blvd., Fort Worth, TX 76107-5722
 - (b) H394 Tester Thermo Switch, K-Type Thermocouple and Thermo Switches (alternative) Howell Instruments, Inc. (Vendor Code 98869) 3479 West Vickery Blvd., Fort Worth, TX 76107-5722
 - (c) H294 Tester Thermo Switch, Thermocouple and Thermo Switches (alternative) Howell Instruments, Inc. (Vendor Code 98869) 3479 West Vickery Blvd., Fort Worth, TX 761070-5722
- (2) BH27956 TEMPCAL Heater Probe (for overheat switch p/n 641121-1) Howell Instruments, Inc. (Vendor Code 98869) 3479 West Vickery Blvd., Fort Worth, TX 761070-5722

C. References

- (1) AMM 21-61-01/401, Zone Duct Overheat Switch
- (2) AMM 24-22-00/201, Electric Power Control
- (3) AMM 27-61-00/201, Spoiler Speed Brake Control System
- (4) AMM 31-41-00/201, EICAS
- (5) AMM 32-09-02/201, Air Ground Relays
- D. Access

EFFECTIVITY	FUNCTIONAL	ZONE DUCT OVERHEAT	SWITCH
	21-61-00-5A	21-025-01 PAGE	36 OF 45 APR 22/09

TASK CARD

AIRLINE CARD NO.

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		(1) Location Zones 119 Main Equipment Center (Left) 121/122 Forward Cargo Compartment 125 Area Aft of Forward Cargo Compartment (Left) 135/136 Environmental Control Systems (ECS) Bay 211/212 Control Cabin
		(2) Access Panels 119AL Main Equipment Center Access Door 193NL Environmental Control System Access Door 194LR Environmental Control Systems (ECS) Bay Access Door 194NR Flow Control and Shutoff Valve (Right)
		E. Prepare For The System Test
		(1) Supply electrical power (AMM 24-22-00/201).
		(2) Make sure these circuit breakers on the overhead circuit breaker panel, P11, are closed:
		(a) 11A13, L PACK FLOW CONT
		(b) 11A26, R PACK FLOW CONT
		(c) 11N1O, L PACK AUTO POWER
		(d) 11N11, L PACK AUTO CONT
		(e) 11N15, R PACK PWR STBY
		(f) 11N16, R PACK CONT STBY
		(g) 11N18, CARGO EXH VALVE
		(h) 11N19, R PACK AUTO POWER
		(i) 11N2O, R PACK AUTO CONT
		(j) 11N24, L PACK PWR STBY
		(k) 11N25, L PACK CONT STBY
		(L) 11P21, FWD CARGO A/C & VENT CONT
		(m) 11R11, AUX ZONE CONTROLLER
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EFFECTIVITY

AIRLINE CARD NO.

			TASK CARD
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			(n) 11R14, CABIN RECIRC FAN L
			(o) 11R15, ZONE CONTROLLER
			(p) 11R19, FWD CARGO HEAT CONT
			(q) 11R21, CARGO HEAT OVERRIDE
			(r) 11R23, CABIN RECIRC FAN R
			(s) 11R24, F/D ZONE DUCT OVHT
		(3)	Make sure these circuit breakers on the miscellaneous electrical equipment panel, P36, are closed:
			(a) 36E4 or 36K3, CGO GND EXH B/U VAL
			(b) 36F2 or 36F4, RECIRC FAN L
			(c) 36L2 or 36K5, FWD CARGO HT CONT VLV
		(4)	Make sure these circuit breakers on the miscellaneous electrical equipment panel, P37, are closed:
			(a) 37E3 or 37K7, CARGO GND EXH VALVE
			(b) 37E4 or 37K6, CARGO A/C SOV
			(c) 37G4 or 37C4, RECIRC FAN 2
			(d) 37J3 or 37G1, FWD CARGO VENT FAN
			(e) 37J6 or 37F1, CGO GND EXH FAN
		(5)	Turn temperature selector switch for the F/D zone to the AUTO position.
		(6)	Turn the temperature selector switches for the forward, mid, and aft zones to the OFF position.
		(7)	Turn the selector switch for the left pack on the P5 panel to the AUTO position.
		(8)	Push the L and R RECIRC FAN switch-lights, on the P5 panel, to the ON position.

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WARNING: DO THE DEACTIVATION PROCEDURE FOR THE SPOILERS OR MOVE ALL PERSONS AND EQUIPMENT AWAY FROM THE SPOILERS. THE SPOILERS CAN RETRACT QUICKLY AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

- (9) Do the deactivation procedure for the spoilers (AMM 27-61-00/201) or move all persons and equipment away from the spoilers.
- (10) Open these ciruit breakers on the overhead circuit breaker panel, P11 and attach D0-NOT-CLOSE tags:
 - (a) 11S10, LEFT ENG BLEED IND
 - (b) 11S11, LEFT ENG BLEED CONT
 - (c) 11S19, RIGHT ENGINE BLEED IND
 - (d) 11S2O, RIGHT ENG BLEED CONT
- (11) Open the left ECS bay access door, 193NL.
- (12) Remove the connector, D2770, from the left flow control valve to simulate left pack flow valve is open.
- (13) Open the right ECS bay door, 194LR.
- (14) Remove the connector, D1276, from the right flow control valve to simulate the right pack flow valve is open.
- (15) Make sure the Cargo Fire arming switches on the P8 panel are not armed.
- (16) Turn the temperature selector switch for the forward cargo zone on the P5 panel to the AUTO position.
- (17) Push the FWD CARGO A/C switch-light on the pilots' overhead panel, P5, to the ON position.

WARNING: MAKE SURE YOU DO THE FLIGHT MODE SIMULATION CORRECTLY. IF THE PROCEDURE IS NOT DONE CORRECTLY, INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.

EFFECTIVITY

FUNCTIONAL

ZONE DUCT OVERHEAT SWITCH

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(18) Do the Flight Mode Simulation procedure for the No. 1 and No. 2 air/ground system (AMM 32-09-02/201).

NOTE: Simulation of the Flight Mode is optional. If you don't simulate the flight mode, you will need to wait 30 minutes after the time that the FWD CARGO A/C switch-light was selected ON to permit the forward cargo air conditioning system to go into its backup control mode.

- (19) Remove the forward cargo compartment duct overheat switch (AMM 21-61-01/401).
- (20) Connect the electrical connector to the zone duct overheat switch.
- (21) Make sure these circuit breakers are closed on the P11 panel:
 - (a) 11N21, FWD CARGO CONT VLV CLOSE
 - (b) 11N22, FWD CARGO DUCT OVHT
- F. Forward Cargo Compartment Zone Duct Overheat Switch Test
 - (1) Do these steps to check the switch's actuation "closed" temperature:
 - (a) Connect the Howell TEMPCAL tester to the overheat switch.
 - (b) Increase the temperature of the overheat switch probe to 170°F (77°C) and maintain this temperature for 5 minutes.
 - (c) Slowly increase the temperature of the overheat switch probe at $2^{\circ}F$ (1°C) per minute.
 - (d) Make sure this EICAS status message, CARGO A/C TEMP, shows on the bottom display.
 - (e) Make sure this EICAS advisory message, FWD CGO BACKUP, shows on the top display.
 - (f) Make sure the FAULT light on the Forward Cargo A/C control panel comes on.
 - (2) Do these steps to check the overheat switch's actuation "open" temperature:
 - (a) Slowly decrease the temperature of the overheat switch probe at $2^{\circ}F$ (1°C) per minute.

FUNCTIONAL ZONE DUCT OVERHEAT SWITCH

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AIRLINE CARD NO.

tess than 150°F (66°C)		(b)	Make sure that the overheat switch opens at a temperature no less than 150°F (66°C)
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- (c) Make sure that the temperature at which the overheat switch opens at is at least 10°F (4.72°C) less than than the temperature at which the switch closed at.
- (d) Make sure the EICAS advisory message, FWD CGO BACKUP, does not show on the top display.
- Do the Maintenance Message Erase Procedure to clear the EICAS display (AMM 31-41-00/201).
- Make sure the EICAS status and maintenance message, CARGO A/C TEMP, does not show on the bottom display.
- Make sure the FAULT light on the FORWARD CARGO A/C control panel does not come on.
- (h) Remove the Howell tester from the overheat switch.
- Put the Airplane Back to Its Usual Condition
 - (1) Install the forward cargo compartment zone duct overheat switch (AMM 21-61-01/401).
 - (2) If you put the airplane in the flight mode, put it back to the ground mode (AMM 32-09-02/201).
 - (3) Push the FWD CARGO A/C switch-light on the pilots' overhead panel, P5, to the OFF position.
 - Turn the temperature selector switch for the forward cargo zone on the P5 panel to the OFF position.
 - (5) Connect the connector D2770(D1276) to the left(right) flow control valve.
 - (6) Close the left(right) ECS bay access door, 193NL(194LR).
 - Remove the DO-NOT-CLOSE tags and close these ciruit breakers on the overhead circuit breaker panel, P11:
 - (a) 11S10, LEFT ENG BLEED IND
 - (b) 11S11, LEFT ENG BLEED CONT

EFFECTIVITY		ZONE DUOT	OVERVIEW OUTTON
2201111.	FUNCTIONAL	ZONE DUCT	OVERHEAT SWITCH
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			(c) 11S19, RIGHT ENGINE BLEED IND
			(d) 11S2O, RIGHT ENG BLEED CONT
		(8)	If you did the deactivation procedure for the spoilers, do the activation procedure (AMM 27-61-00/201).
		(9)	Push the L and R RECIRC FAN switch-lights, on the P5 panel, to the OFF position.
		(10)	Turn the selector switch for the left pack on the P5 panel to the OFF position.
		(11)	Turn temperature selector switch for the F/D zone to the OFF position.
		(12)	Remove electircal power if it is not necessary (AMM 24-22-00/201).

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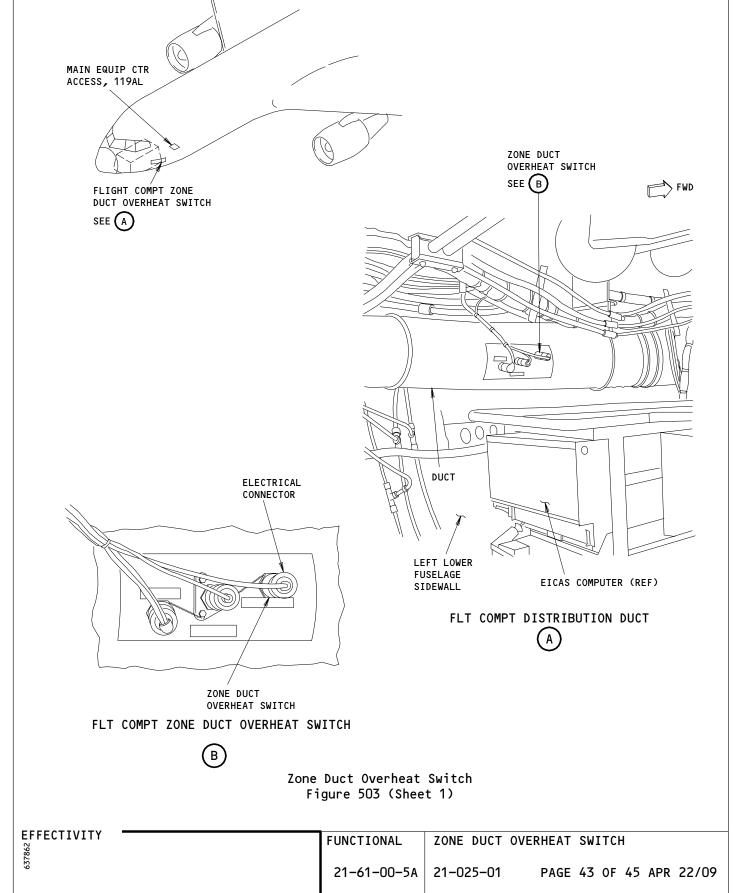
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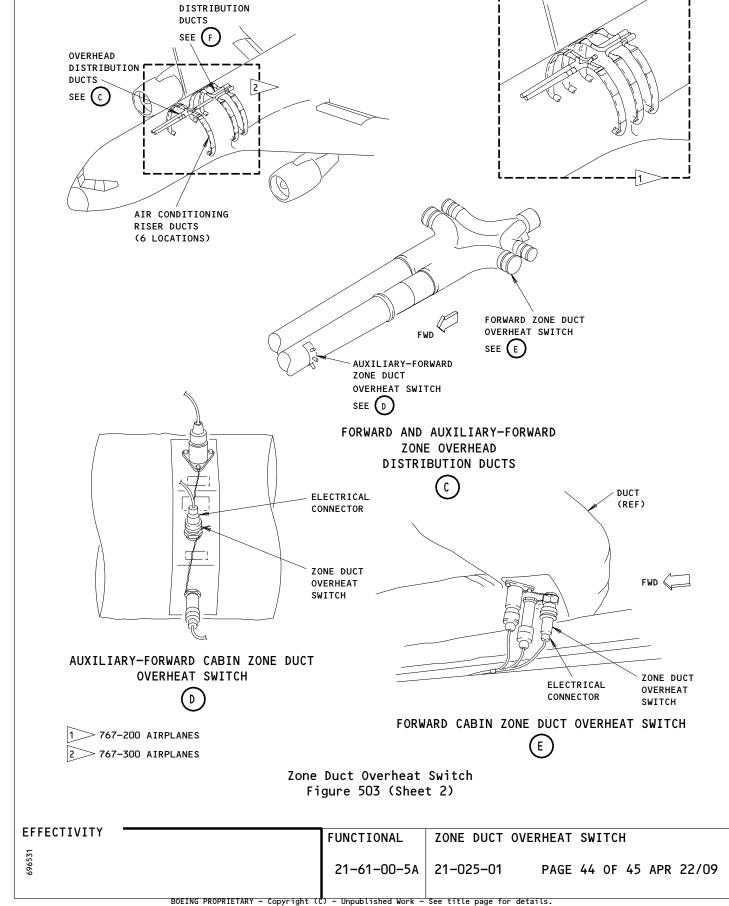
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OVERHEAD

767
TASK CARD

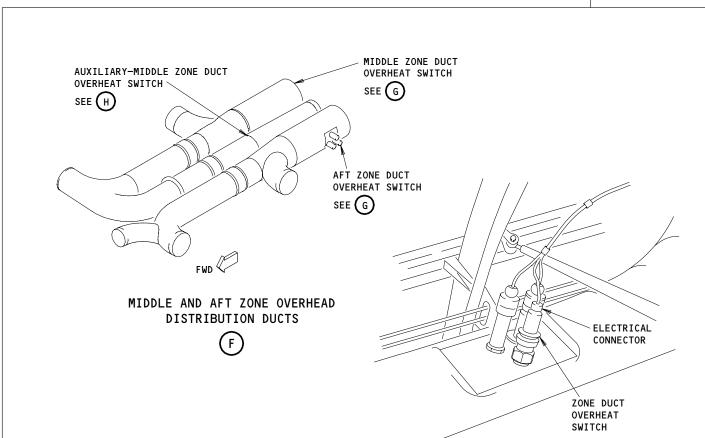


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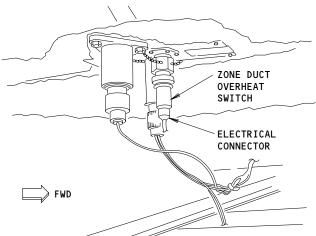
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767 TASK CARD



MIDDLE AND AFT CABIN ZONE DUCT OVERHEAT SWITCH (EXAMPLE-MIDDLE ZONE SHOWN)

G



AUXILIARY-MIDDLE CABIN ZONE DUCT OVERHEAT SWITCH

H

Zone Duct Overheat Switch Figure 503 (Sheet 3)

FUNCTIONAL ZONE DUCT OVERHEAT SWITCH
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TAIL NO.
DATE



BOEING CARD NO.
21-026-54

AIRLINE CARD NO.

SKILL	WORK AREA		REL	ATED TASK	INTERVAL			PHASE	MPD REV	TASK CARD REVISION		
ELECT	CREW CABIN					2A			10202	012	AUG	22/08
TASK		TITLE			STRUCTURAL ILLUSTRATION REFERENCE		APPLICABILITY		LITY			
		_								AIRPLAN	E	ENGINE
OPERATIONAL E/E COOL			COOLIN	IG SYSTEM E	EQUIP	COOL	TEST					
										PAS	S	ALL
	ZONES							ACCESS PANELS				

212

MECH INSP MPD ITEM NUMBER

OPERATIONALLY CHECK THE E/E COOLING SYSTEM WITH THE EQUIP COOL TEST SWITCH.

21-58-00-5D

- Operational Test EQUIP COOL Switch (Manual Test)
 - A. General
 - (1) This operational test is for a scheduled maintenance task.
 - B. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 31-41-00/201, Engine Indication and Crew Alerting System.
 - C. Access
 - D. Prepare for Test
 - (1) Make sure these circuit breakers on the main power distribution panel P6 are closed:
 - (a) 6D6, EQUIP COOL GND WARN
 - (b) 6H18, EQUIP COOL SUPPLY FAN 1
 - (c) 6H21, FWD EXH EQUIP COOL FAN
 - (2) Make sure these circuit breakers on the overhead circuit breaker panel P11 are closed:
 - (a) 11B8, STBY EQUIP COOL

OPERATIONAL E/E COOLING SYSTEM EQUIP COOL TEST

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AIRLINE CARD NO.

				TASK CARD
MECH	INSP			
				(b) 11C19, EQUIP COOL OVRD
				(c) 11D15, ENGINE SPEED SENSE L2
				(d) 11D16, ENGINE SPEED SENSE R2
				(e) 11D23, ENGINE SPEED SENSE L1
				(f) 11D24, ENGINE SPEED SENSE R1
				(g) 11P11, EQUIPMENT COOLING SUPPLY FAN 1
				(h) 11P13, EQUIPMENT COOLING OUTBD VALVES
				(i) 11P21, EQUIP COOL OVHT/SMOKE VALVE IND
				(j) 11P22, EQUIPMENT COOLING EXH FAN FWD
				(k) EICAS circuit breakers (6 places)
			(3)	Put the EQUIP COOLING mode selector on the pilots' overhead P5 panel to AUTO.
			(4)	Supply electrical power (AMM 24-22-00/201).
		Ε.	Test	the EQUIP COOL Switch (Manual Test)
			(1)	Push the EICAS MAINT ECS/MSG switch on the P61 panel.
			(2)	Move the EQUIP COOL test switch on the right side P61 panel to the EQUIP COOL position and hold.
				(a) Make sure these indications show:
				1) OVHT and SMOKE lights on P5 panel come on.
				2) EICAS advisory messages, FWD EQPT OVHT and FWD EQPT SMOKE show.
				3) EICAS maintenance messages, FWD EQ SUP FLOW and FLT DK SUP FLOW show after 30 seconds.
				4) After 30 seconds you hear the ground crew call horn.
			(3)	Release the EQUIP COOL test switch.
				(a) Make sure these conditions occur:
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21-026-54

AIRLINE CARD NO.



- 1) OVHT and SMOKE lights on the P5 panel go off.
- 2) EICAS advisory messages, FWD EQPT OVHT and FWD EQPT SMOKE do not show.
- 3) You do not hear the ground-crew-call horn.
- (4) Do the EICAS maintenance message erase procedure for these EICAS messages (AMM 31-41-00/201):
 - (a) EICAS maintenance messages, FWD EQ SUP FLOW and FLT DK SUP FLOW
- (5) AIRPLANES PRE-SB 21-105;
 Open and close the following circuit breaker on the P6 panel to restore fan operation, if the galley chiller exhaust fan, aft equip/lav/galley vent fans or bulk cargo vent fan have shutdown when airplane is in SMOKE mode.
 - (a) 6B7, CHILLER SHUTDOWN CONT
- F. Put the Airplane Back to Its Usual Condition
 - (1) Remove electrical power if it is not necessary (AMM 24-22-00/201).

EFFECTIVITY

OPERATIONAL | E/E COOLIN

E/E COOLING SYSTEM EQUIP COOL TEST

21-58-00-5D

21-026-54

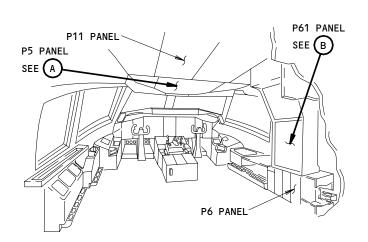
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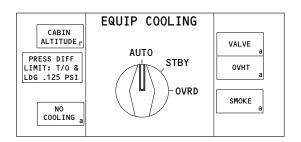
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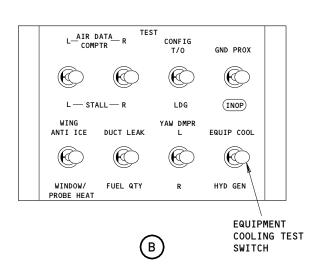
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EQUIPMENT COOLING CONTROL MODULE



Equipment Cooling System Flight Deck Test Components Figure 501

OPERATIONAL E/E COOLING SYSTEM EQUIP COOL TEST

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STATION	
TAIL NO.	
DATE	

WORK AREA



BOEING CARD NO. 21-027-51

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

ELECT FWD CARGO

TASK

TITLE

O1000 HRS

STRUCTURAL ILLUSTRATION REFERENCE
APPLICABILITY
AIRPLANE ENGINE

INTERVAL

OPERATIONAL | E/E COOLING LOW FLOW MONITOR SYSTEM | NOTE ALL

ZONES ACCESS PANELS

RELATED TASK

212

SKILL

MECH INSP MPD ITEM NUMBER

OPERATIONALLY CHECK THE E/E COOLING LOW FLOW (PNEUMATIC) MONITOR SYSTEM.

21-58-34-2A

AIRPLANE NOTE: AIRPLANES WITH PNEUMATIC MONITOR SYSTEM.

- 1. Do the Check of the Monitor System for the E/E Cooling
 - A. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - B. Access
 - C. Procedure
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Make sure the EQUIP COOLING switch on the P5 panel is in the AUTO position.
 - (3) Make sure these circuit breakers on the main power distribution panel P6 are closed:
 - (a) 6H18, EQUIP COOL SUPPLY FAN 1
 - (b) 6H21, FWD EXH EQUIP COOL FAN
 - (4) Make sure these circuit breakers on the overhead circuit breaker panel P11 are closed:
 - (a) 11B8, STBY EQUIP COOL

OPERATIONAL E/E COOLING LOW FLOW MONITOR SYSTEM

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21-027-51

AIRLINE CARD NO.

			TASK CARD
MECH	INSP		
			(b) 11P11, EQUIPMENT COOLING SUPPLY FAN 1
			(c) 11P13, EQUIPMENT COOLING OUTBD VALVES
			(d) 11P21, EQUIP COOL OVHT/SMOKE VALVE IND
			(e) 11P22, EQUIPMENT COOLING EXH FAN FWD
		(5)	Make sure that you cannot see all nine flow balls.
		(6)	Put the LIFT TO TEST lever on the indicator to the UP position.
		(7)	Make sure that you can see all nine (9) flow balls after 15 seconds.
		(8)	Put the LIFT TO TEST lever to the down position.
		(9)	Make sure that you cannot see all nine flow balls.
		(10)	Remove electrical power if it is not necessary (AMM 24-22-00/201).

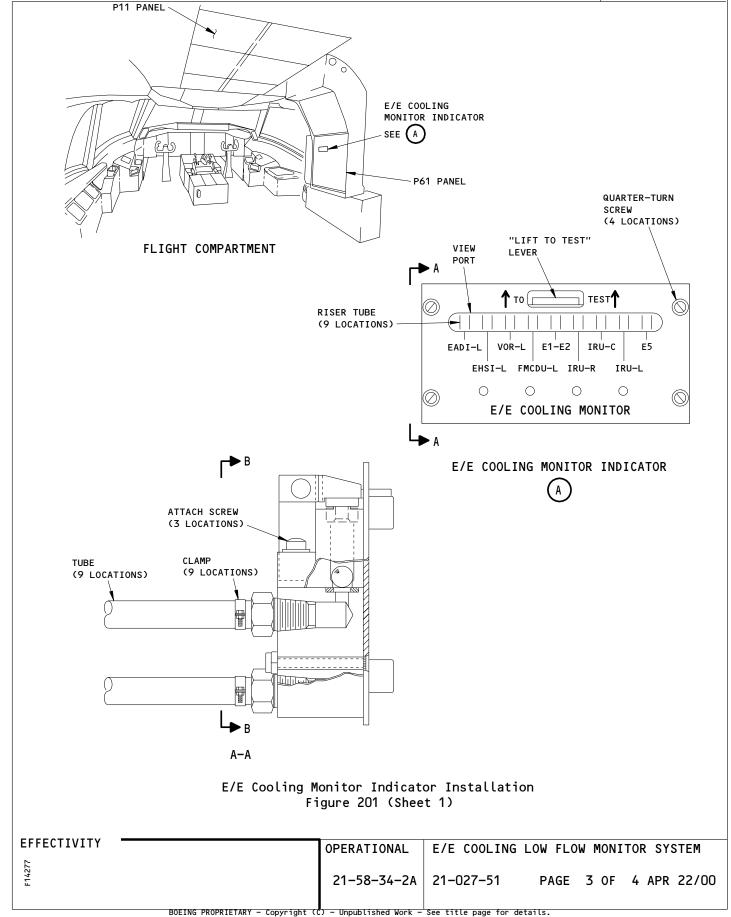
EFFECTIVITY

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AIRLINE CARD NO.

SAS

TASK CARD

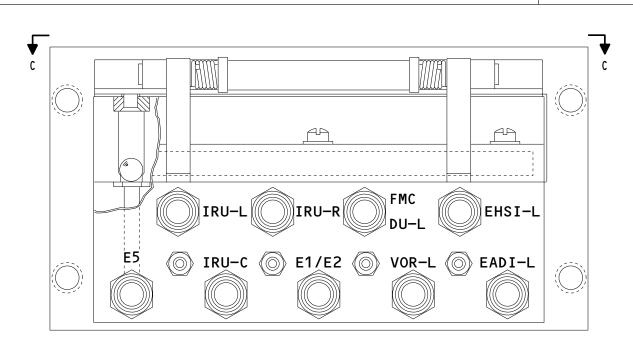


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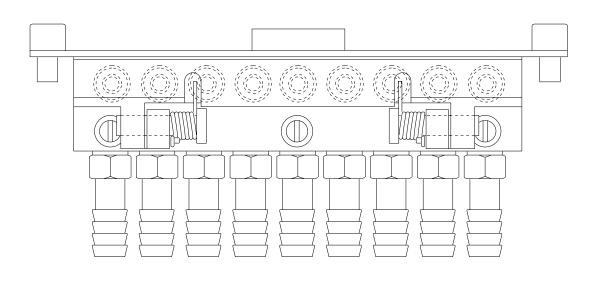
AIRLINE CARD NO.

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B-B



C-C

E/E Cooling Monitor Indicator Installation Figure 201 (Sheet 2)

EFFECTIVITY ₽

OPERATIONAL

E/E COOLING LOW FLOW MONITOR SYSTEM

21-58-34-2A

21-027-51

PAGE 4 OF 4 APR 22/00

STATION
TAIL NO.
DATE

SKILL

WORK AREA



BOEING CARD NO. 21-029-01

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

ELECT CREW CABIN

TASK

TITLE

STRUCTURAL ILLUSTRATION REFERENCE

APPLICABILITY
AIRPLANE
ENGINE

INTERVAL

OPERATIONAL PACK HIGH FLOW INHIBIT SYSTEM NOTE ALL

ZONES ACCESS PANELS

119 135 136 212 | 119AL 193NL 194LR

RELATED TASK

MECH INSP MPD ITEM NUMBER

OPERATIONALLY CHECK PACK HIGH FLOW INHIBIT SYSTEM.

21-51-00-5C

AIRPLANE NOTE: TASK APPLICABLE TO ALL AIRPLANES EXCEPT THE 767-400ER.

- Operational Test Pack High Flow Inhibit (Fig. 501, 502)
 - A. References
 - (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
 - (2) AMM 24-22-00/201, Electric Power Control
 - (3) AMM 27-51-00/201, Flaps
 - (4) AMM 27-61-00/201, Spoiler/Speedbrake Control System
 - (5) AMM 29-11-00/201, Main (Left, Right and Center) Hydraulic Systems
 - (6) AMM 32-09-02/201, Air/Ground Relay
 - (7) AMM 36-00-00/201, Pneumatic General
 - B. Access
 - (1) Location Zones

119/120 Main equipment center 135/136 Environmental control system bay

(2) Access Panels

119AL Main Equipment Center

193NL/194LR Environmental Control Systems (ECS) Bay

C. Prepare for the test

OPERATIONAL PACK HIGH FLOW INHIBIT SYSTEM

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1

2 6

AIRLINE CARD NO.



21-029-01

		TASK CARD
MECH	INSP	
		(1) Make sure these circuit breakers, on the overhead circuit breaker panel, P11, are closed:
		(a) 11A13, PACK FLOW CONT L
		(b) 11A26, PACK FLOW CONT R
		(c) 11A31, WING ANTI-ICE
		(d) 11N10, LEFT PACK AUTO PWR
		(e) 11N11, LEFT PACK AUTO CONT
		(f) 11N15, RIGHT PACK STANDBY PWR
		(g) 11N16, RIGHT PACK STANDBY CONT
		(h) 11N19, RIGHT PACK AUTO PWR
		(i) 11N2O, RIGHT PACK AUTO CONT
		(j) 11N24, LEFT PACK STANDBY PWR
		(k) 11N25, LEFT PACK STANDBY CONT
		(l) EICAS circuit breakers (6 locations)
		(m) 11C14, FLAP/STAB POS SENSING - C
		(n) 11D15, ENG SPEED SENSE L2
		(o) 11D16, ENG SPEED SENSE R2
		(p) 11D23, ENG SPEED SENSE L1
		(q) 11D24, ENG SPEED SENSE R1
		(r) 11J26, FLAP/STAB POS SENSING - R
		(s) 11S10, LEFT ENG BLEED IND
		(t) 11S11, LEFT ENG BLEED CONT
		(u) 11S19, RIGHT ENG BLEED IND
		(v) 11S2O, RIGHT ENG BLEED CONT

EFFECTIVITY

AIRLINE CARD NO.

21-029-01

SAS BOEING TASK CARD

MECH	INSP
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(2) Use an external power source or use two or more internal power sources (L IDG, R IDG, and APU) to supply the electrical power (AMM 24-22-00/201).

<u>NOTE</u>: If only one internal power source is used, the utility busses will shed when flight mode is simulated. Thus, the recirculation fans will shutdown.

- (3) Supply hydraulic power (AMM 29-11-00/201).
- (4) Make sure the flaps are in the retracted position (AMM 27-51-00/201).
- (5) Make sure the WING ANTI-ICE selector/switch (M10397 panel), on the P5 panel, is in the OFF position.
- (6) Push the L and R RECIRC FAN switch-lights, on the overhead control panel, P5, to ON. Make sure the ON light comes on.
- (7) Supply pneumatic power (AMM 36-00-00/201).
- (8) Turn all of the zone temperature selectors, on the pilot's overhead panel, P5, to the AUTO (12 o'clock) position.
- Turn the L and R PACK selectors, on the P5 panel, to the AUTO position.
- (10) Push the ECS/MSG button on the EICAS maintenance panel which is on the P61 panel, to view the ECS maintenance page.

NOTE: The ECS maintenance page will be used during this procedure to view the occurrence of EICAS status messages.

DO THE DEACTIVATION PROCEDURE FOR THE SPOILERS OR MOVE ALL <u>WARNING</u>: PERSONS AND EQUIPMENT AWAY FROM THE SPOILER PANELS. THE SPOILERS CAN RETRACT QUICKLY AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(11) Do the deactivation procedure for the spoilers (AMM 27-61-00/201) or move all persons and equipment away from the spoiler panels.

EFFECTIVITY

OPERATIONAL PACK HIGH FLOW INHIBIT SYSTEM

21-51-00-5c | 21-029-01

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SAS BOEING
767
TASK CARD

AIRLINE CARD NO.

			TASK CARD	
MECH	INSP			
			these steps on the Flight Management Computer (FMC) play Unit (CDU) to bring up the ANALOG DISCR page 1/	
		<u>NOT</u>	E: The FMC CDU will be used during this procedure t ECS PACK H/L indication which shows the pack flo (High flow/Low flow). The pack flow control and valve will be checked at the beginning and at th procedure to verify that the CDU display agrees valve position indicator.	w mode I shutoff e end of the
		(a)	Push the function mode key INIT REF on the FMC CDL	ı .
		(b)	Push the line select key adjacent to the INDEX prothe FMC CDU.	ompt shown on
		(c)	Push the line select key adjacent to the MAINT prothe FMC CDU.	mpt shown on
		(d)	Push the line select key adjacent to the DISCRETES on the FMC CDU to show the ANALOG DISCR page.	prompt shown
		<u>WARNING</u> :	MAKE SURE THAT THE FLIGHT MODE SIMULATION PROCEDUR CORRECTLY. INJURY TO PERSONS OR DAMAGE TO EQUIPME IF THE PROCEDURE IS NOT DONE CORRECTLY.	
		sys	the Flight Mode Simulation procedure for the No. 2 a tems and verify that the airplane is in the air mode M 32-09-02/201).	_
		Eng	e and hold the channel 2 test switches on the left a ine Speed Cards, in the electrical systems cardfile the TEST positions.	
			e sure the LEFT and RIGHT ECS PACK H/L entries on th CR page of the FMC CDU show LO (Low flow).	e ANALOG
		(16) Ope	n the ECS bay panels 193NL and 194LR to get access t	o the visual

(a)	Make a temporary mark on the visual position indicator to show
	the current position of the flow control and shutoff valve
	(Low flow).

position indicator on the flow control and shutoff valve for each

OPERATIONAL PACK HIGH FLOW INHIBIT SYSTEM

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pack (AMM 06-41-00/201).

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

D. Do the Left (Right) Pack High Flow Inhibit Test.

<u>NOTE</u>: This test can be done on only one pack at a time. Do the test for the left pack, then do it again for the right pack. Use the instructions in parentheses when you do the test for the right pack.

- (1) Turn the R (L) PACK selector, on the P5 panel, to the OFF position.
 - (a) Make sure the R (L) PACK OFF light comes on.
 - (b) Make sure the LEFT (RIGHT) ECS PACK H/L entry on the ANALOG DISCR page shows HI (High flow).
 - (c) Make sure the visual position indicator on the left (right) pack flow control and shutoff valve moves counterclockwise away from the temporary mark towards OPEN (High flow).
 - 1) Do the steps that follow if movement of the visual position indicator could not be seen:

NOTE: The voltage check that follows may be used anywhere in the procedure that calls for visual observation of counterclockwise movement of the position indicator.

- a) Open circuit breaker L(R) PACK FLOW CONT on the overhead circuit breaker panel P11.
- b) Disconnect electrical connector D746 (D1272) from the high flow solenoid A on the left (right) flow control and shutoff valve.
- c) Connect a voltmeter to connector D746 (D1272) pins 3 (negative lead) and 1 (positive lead).
- d) Close circuit breaker L(R) PACK FLOW CONT on the overhead circuit breaker panel P11.
- e) Make sure the indication on the voltmeter is 26 to 30 vdc.
- f) Open circuit breaker L(R) PACK FLOW CONT on the overhead circuit breaker panel P11.

EFFECTIVITY

OPERATIONAL PACK HIGH FLOW INHIBIT SYSTEM

21-51-00-5C

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AIRLINE CARD NO.

		TASK CARD
MECH INS		
		g) Remove the voltmeter from the connector D746 (D1272).
		h) Connect the connector D746 (D1272) to the high flow solenoid A on the left (right) pack flow control and shutoff valve.
		 i) Close the L(R) PACK FLOW CONT circuit breaker on the overhead circuit breaker panel P11.
	<u>CAUTION</u> :	DO NOT USE THE WING ANTI-ICE SYSTEM FOR LONGER THAN 10 SECONDS ON THE GROUND. USING WING ANTI-ICE ON THE GROUND CAN RESULT INDAMAGE TO THE WING LEADING EDGE.
		t the WING ANTI-ICE selector/switch (M10397 panel), on the P5 nel, to ON.
	(a)	Make sure the LEFT (RIGHT) ECS PACK H/L entry on the ANALOG DISCR page shows LO (Low flow).
	(b)	Make sure the visual position indicator on the left (right) pack flow control and shutoff valve moves clockwise to a position near the temporary mark (Low flow).
		 Do the steps that follow if movement of the visual position indicator could not be seen:
		NOTE: The voltage check that follows may be used anywhere in the procedure that calls for visual observation of clockwise movement of the position indicator.
		 a) Open circuit breaker L(R) PACK FLOW CONT on the overhead circuit breaker panel P11.
		b) Disconnect electrical connector D746 (D1272) from the high flow solenoid A on the left (right) flow control and shutoff valve.

F	F	F	F	c.	ГΤ	V	Т	ΤY	,
_			_	·		v	-		

c) Connect a voltmeter to connector D746 (D1272) pins 3

d) Close circuit breaker L(R) PACK FLOW CONT on the

(negative lead) and 1 (positive lead).

overhead circuit breaker panel P11.

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- e) Make sure the indication on the voltmeter is 0 to 5 vdc.
- f) Open circuit breaker L(R) PACK FLOW CONT on the overhead circuit breaker panel P11.
- g) Remove the voltmeter from the connector D746 (D1272).
- h) Connect the connector D746 (D1272) to the high flow solenoid A on the left (right) pack flow control and shutoff valve.
- i) Close the L(R) PACK FLOW CONT circuit breaker on the overhead circuit breaker panel P11.
- (3) Set the WING ANTI-ICE selector/switch (M10397 panel), on the P5 panel, to OFF.
 - (a) Make sure the LEFT (RIGHT) ECS PACK H/L entry on the ANALOG DISCR page shows HI (High flow).
- (4) Release the channel 2 test switch on the right (left) Engine Speed Card, in the P50 panel, from the TEST position.
 - (a) Make sure the LEFT (RIGHT) ECS PACK H/L entry on the ANALOG DISCR page shows LO (Low flow).
- (5) Move and hold the channel 2 test switch on the right (left) Engine Speed Card, in the P50 panel, to the TEST position.
 - (a) Make sure the LEFT (RIGHT) ECS PACK H/L entry on the ANALOG DISCR page shows HI (High flow).

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES
WHEN YOU OPERATE THE FLAP/STAB SYSTEM. ALSO, MAKE SURE THE
ENGINE STRUT ACCESS DOORS AND THE THRUST REVERSER COWLING WILL
NOT BE IN THE PATH OF THE SLATS. IN THE STEP THAT FOLLOWS, THE
TRAILING EDGE FLAPS AND THE LEADING EDGE SLATS WILL MOVE.
ALSO, POWER WILL BE SUPPLIED TO THE AILERON, SPOILER RUDDER,
ELEVATOR, AND STABILIZER CONTROL SURFACES.

- (6) Extend the flaps at least 5 degrees (AMM 27-51-00/201).
 - (a) Make sure the LEFT (RIGHT) ECS PACK H/L entry on the ANALOG DISCR page shows LO (Low flow).

EFFECTIVITY

OPERATIONAL PACK HIGH FLOW INHIBIT SYSTEM

21-51-00-5C

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SAS BOEING 767 TASK CARD

AIRLINE CARD NO.

MECH	INSP		
		(7)	Retract the flaps (AMM 27-51-00/201).
			(a) Make sure the LEFT (RIGHT) ECS PACK H/L entry on the ANALOG DISCR page shows HI (High flow).
		(8)	Turn the R (L) PACK selector, on the P5 panel, to the AUTO position.
			(a) Make sure the R (L) PACK OFF light goes out.
			(b) Make sure the LEFT and RIGHT ECS PACK H/L entry on the ANALOG DISCR page shows LO (Low flow).
		(9)	Push the L (R) RECIRC FAN switch-light to OFF.
			(a) Make sure the L (R) RECIRC FAN INOP light comes on.
			(b) Make sure the visual position indicator on the left (right) pack flow control and shutoff valve moves counterclockwise away from the temporary mark towards OPEN (High flow).
		(10)	Push the L (R) RECIRC FAN switch-light to ON.
			(a) Make sure the L (R) RECIRC FAN INOP light goes out.
			(b) Make sure the LEFT (RIGHT) ECS PACK H/L entry on the ANALOG DISCR page shows LO (Low flow).
		(11)	767-200 AIRPLANES; Do a test of the PACK HIFLOW INHIBIT function when the AFT CARGO FIRE switch is ARMED:
			CAUTION: IF THE CIRCUIT BREAKERS IN THE SUBSEQUENT STEP ARE NOT OPENED, THE CARGO FIRE EXTINGUISHER BOTTLES MAY DISCHARGE WHEN YOU DO THE STEPS THAT FOLLOW.
			(a) Open these circuit breakers, on the main power distribution panel P6, and attach a D0-N0T-CLOSE tags:

2) 6H6, FIRE EXTINGUISHING CARGO BTL 2

1) 6H5, FIRE EXTINGUISHING CARGO BTL 1

(b) Push the CARGO FIRE AFT switch-light, on the pilot's control stand panel P8, to ARMED (ARMED light comes on).

OPERATIONAL PACK HIGH FLOW INHIBIT SYSTEM

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BOEING 767 TASK CARD

AIRLINE CARD NO.

MEAN	T.1100
MECH	INSP

- 1) Make sure the L and R RECIRC FAN INOP lights come on.
- 2) Make sure the LEFT and RIGHT ECS PACK H/L entries on the ANALOG DISCR page show HI (High flow).
- (c) Push the CARGO FIRE AFT switch-light, on the P8 panel, to off (ARMED light not on).
 - 1) Make sure the L and R RECIRC FAN INOP lights go out.
 - 2) Make sure the LEFT and RIGHT ECS PACK H/L entries on the ANALOG DISCR page show LO (Low flow).
- Remove the DO-NOT-CLOSE tags and close these circuit breakers on the P6 panel:
 - 1) 6H5, FIRE EXTINGUISHING CARGO BTL 1
 - 2) 6H6, FIRE EXTINGUISHING CARGO BTL 2
- Turn the R (L) PACK selector, on the P5 panel, to the OFF position.
 - 1) Make sure the R (L) PACK OFF light comes on.
 - 2) Make sure the LEFT (RIGHT) ECS PACK H/L entry on the ANALOG DISCR page shows HI (High flow).
- (12) 767-300 AIRPLANES;

Do a test of the PACK HIFLOW INHIBIT function when the AFT CARGO FIRE switch is ARMED:

- Turn the R (L) PACK selector, on the P5 panel, to the OFF position.
 - 1) Make sure the R (L) PACK OFF light comes on.
 - 2) Make sure the LEFT (RIGHT) ECS PACK H/L entry on the ANALOG DISCR page shows HI (High flow).

IF THE CIRCUIT BREAKERS IN THE SUBSEQUENT STEP ARE NOT CAUTION: OPENED, THE CARGO FIRE EXTINGUISHER BOTTLES MAY DISCHARGE WHEN YOU DO THE STEPS THAT FOLLOW.

EFFECTIVITY

OPERATIONAL PACK HIGH FLOW INHIBIT SYSTEM

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21-029-01

AIRLINE CARD NO.

		TASK CARD	
MECH	INSP		
		(b) Open these circuit breakers, on the main power distr panel P6, and attach a D0-NOT-CLOSE tags:	ribution
		1) 6H5, FIRE EXTINGUISHING CARGO BTL 1	
		2) 6H6, FIRE EXTINGUISHING CARGO BTL 2	
		(c) Push the CARGO FIRE AFT switch-light, on the pilot's stand panel P8, to ARMED (ARMED light comes on).	s control
		1) Make sure the L and R RECIRC FAN INOP lights cor	me on.
		Make sure the EICAS message HI FLOW INHIBIT shown display.	ws on the
		NOTE: AIRPLANES WITH -1001 EICAS S/W OPS VERSION AND WITH FCAC SYSTEM (PRE-SB 31-0126); When the left cooling pack is tested, the message HI FLOW INHIBIT will show. However, the right cooling pack is tested, the EICH HI FLOW INHIBIT will not show. A message change was implemented in the -1001 EICAS message based upon a digital input format left cooling pack, the pack flow control controller (PFCAC) provides this digital However, for the right cooling pack, the flow control card provides only an analog which prevents the HI FLOW INHIBIT message showing.	e EICAS ver, when CAS message e logic S to set the t. For the cargo a/c input. right pack g input
		NOTE: AIRPLANES WITH -1001 EICAS S/W OPS VERSION	ON 3
		AND WITH FCAC SYSTEM (POST-SB 31-0126); When the left and right cooling pack is EICAS message HI FLOW INHIBIT will show.	tested, the
		3) Make sure the LEFT and RIGHT ECS PACK H/L entrie ANALOG DISCR page show LO (Low flow).	es on the
		(d) Push the CARGO FIRE AFT switch-light, on the P8 pane (ARMED light not on).	el, to off
		(e) Remove the DO-NOT-CLOSE tags and close these circuit on the P6 panel:	t breakers
		1) 6H5, FIRE EXTINGUISHING CARGO BTL 1	

1

SAS BOEING TASK CARD

AIRLINE CARD NO.

MECH	INSP

- 2) 6H6, FIRE EXTINGUISHING CARGO BTL 2
- Turn the L (R) PACK selector, on the P5 panel, to the OFF position and then to the AUTO position.
 - Make sure the L and R RECIRC FAN INOP lights go out.
 - 2) Make sure the EICAS message HI FLOW INHIBIT does not show on the display.
 - 3) Make sure the LEFT (RIGHT) ECS PACK H/L entry on the ANALOG DISCR page shows HI (High flow).
- (13) Open this circuit breaker on the P11 panel, 11C14, FLAP/STAB POS SENSING - C (11J26, FLAP/STAB POS SENSING - R)
 - Make sure the EICAS message HI FLOW INHIBIT shows on the display.

NOTE: AIRPLANES WITH -1001 EICAS S/W OPS VERSION 1 OR 2 AND WITH FCAC SYSTEM (PRE-SB 31-0126); When the left cooling pack is tested, the EICAS message HI FLOW INHIBIT will show. However, when the right cooling pack is tested, the EICAS message HI FLOW INHIBIT will not show. A message logic change was implemented in the -1001 EICAS to set the message based upon a digital input format. For the left cooling pack, the pack flow control cargo a/c controller (PFCAC) provides this digital input. However, for the right cooling pack, the right pack flow control card provides only an analog input which prevents the HI FLOW INHIBIT message from showing.

AIRPLANES WITH -1001 EICAS S/W OPS VERSION 3 NOTE:

> AND WITH FCAC SYSTEM (POST-SB 31-0126); When the left and right cooling pack is tested, the EICAS message HI FLOW INHIBIT will show.

- Make sure the LEFT (RIGHT) ECS PACK H/L entry on the ANALOG DISCR page shows LO (Low flow).
- (14) Close this circuit breaker on the P11 panel, 11C14, FLAP/STAB POS SENSING - C (11J26, FLAP/STAB POS SENSING - R)

EFFECTIVITY

OPERATIONAL

PACK HIGH FLOW INHIBIT SYSTEM

21-51-00-5C

21-029-01

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SAS BOEING

AIRLINE CARD NO.

			TASK CARD
MECH	INSP		
		(15)	(a) Make sure the EICAS message HI FLOW INHIBIT remains. Turn the L (R) PACK selector, on the P5 panel, to the OFF and then to the AUTO position.
			(a) Make sure the EICAS message HI FLOW INHIBIT does not show on

the display.

- (b) Make sure the LEFT (RIGHT) ECS PACK H/L entry on the ANALOG DISCR page shows HI (High flow).
- (c) Make sure the visual position indicator on the left (right) pack flow control and shutoff valve moves counterclockwise away from the temporary mark towards OPEN (High flow).
- (16) Turn the R (L) PACK selector, on the P5 panel, to the AUTO position.
 - (a) Make sure the R (L) PACK OFF light goes out.
 - (b) Make sure the LEFT and RIGHT ECS PACK H/L entry on the ANALOG DISCR page shows LO (Low flow).
 - Make sure the visual position indicator on the left and right pack flow control and shutoff valves move clockwise to the temporary mark (Low flow).
- (17) Do the steps in the Pack High Flow Inhibit Test for the right pack.
- E. Put the airplane back to its usual condition
 - (1) Release the channel 2 test switches on the left and right Engine Speed Cards, in the P50 panel, from the TEST positions.
 - (2) Put the No. 2 air/ground system to the ground mode (AMM 32-09-02/201).
 - (3) Turn the L and R PACK selectors, on the P5 panel, to the OFF position.
 - (4) Close the main equipment center access door, 119AL (AMM 06-41-00/201).
 - (5) Remove the hydraulic power if it is no longer necessary (AMM 29-11-00/201).

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EFFECTIVITY	OPERATIONAL	PACK HIGH FLOW INHIBIT SYSTEM
	21-51-00-5c	21-029-01 PAGE 12 OF 15 AUG 22/08

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21-029-01

AIRLINE CARD NO.

TASK CARD

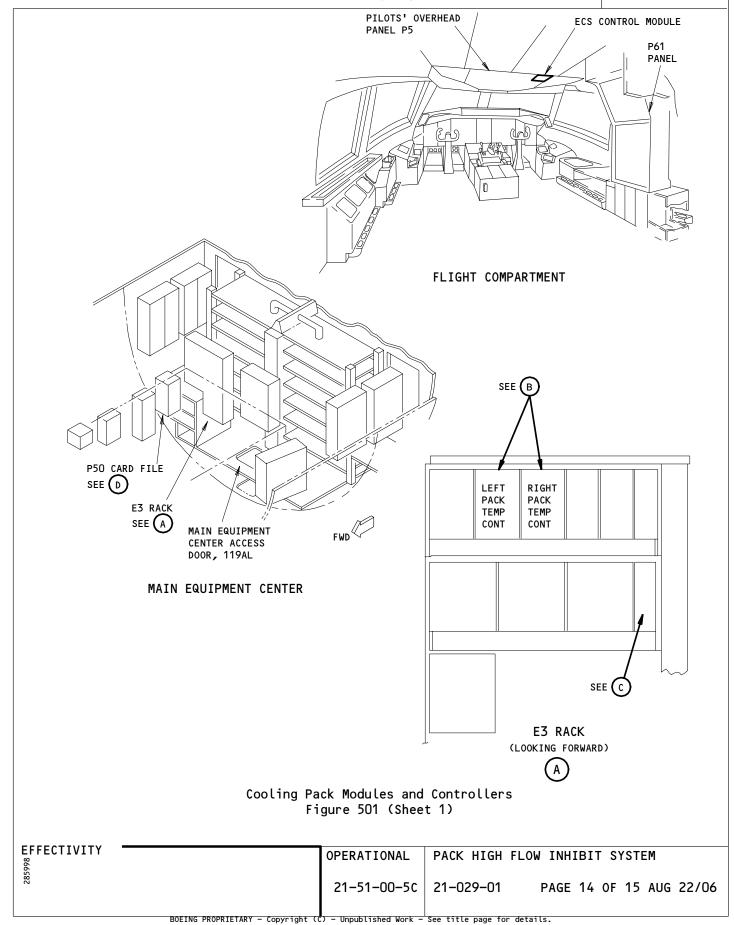
MECH	INSP							
		(6)	Remove the pneumati	c power if it	is no longe	r necessary		
		er necessary						
EFF	ECTI	VITY —		OPERATIONAL	PACK HIGH	FLOW INHIBIT S	YSTEM	
						PAGE 13 OF		2/06

AIRLINE CARD NO.

21-029-01

SAS

BOEING 767 TASK CARD

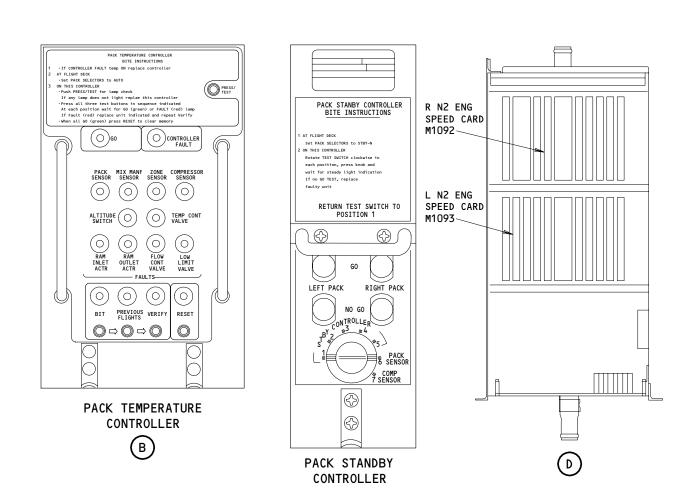


AIRLINE CARD NO.

21-029-01

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BOEING 767 TASK CARD



Cooling Pack Modules and Controllers Figure 501 (Sheet 2)

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	STA	TION		
	TAI	L NO.		CAC
	D	ATE		SAS
ŀ	SKILL	WORK ARI	ĒΑ	RELATED TASK



BOEING CARD NO.
21-029-51

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

AIRPL FWD CARGO
TASK
TITLE

REV REVISION
11212 011 APR 22/09
STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY

INTERVAL

CLEAN FWD E/E COOLING AIR CLEANER

AIRPLANE ENGINE

ALL ALL

ZONES ACCESS PANELS

121 1211 821

MECH INSP MPD ITEM NUMBER

CLEAN THE FWD E/E COOLING (CENTRIFUGAL) AIR CLEANER (REMOVAL FROM DUCT REQUIRED).

21-58-30-2A

ACCESS NOTE: SPECIAL ACCESS 1211 REQUIRES REMOVAL OF FORWARD CARGO COMPARTMENT LEFT SIDEWALL PANELS PER MM REF 25-52-01.

1. General

- A. This procedure contains four tasks:
 - (1) The first task has instructions to remove the equipment cooling air cleaner.
 - (2) The second task has instructions to install the equipment cooling air cleaner.
 - (3) The third task is to test the equipment cooling air cleaner.
 - (4) The fourth task has instructions to clean the equipment cooling air cleaner.
- B. The cooling air cleaner for the E/E equipment is found below and forward of the air supply fans for the E/E equipment, just outside of the forward left corner of the forward cargo compartment.
- 2. Remove the Equipment Cooling Air Cleaner (Fig. 201)
 - A. References
 - (1) AMM 52-33-00/201, Large Forward Cargo Door.
 - (2) AMM 24-22-00/201, Electrical Power Control
 - (3) AMM 25-52-01/401, Sidewall Panels

CLEAN FWD E/E COOLING AIR CLEANER

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SAS BOEING
767
TASK CARD

MECH INSP

- B. Access
- C. Prepare for Removal
 - (1) Open forward cargo compartment door 821 (AMM 52-33-00/201).
 - (2) Remove electrical power (AMM 24-22-00).
 - (3) Remove the sidewall panel that is found approximately 2 feet aft of the E/E bay on the left side of the cargo compartment (AMM 25-52-01).
- D. Remove the Air Cleaner (Fig. 201)
 - (1) Remove the air duct sleeve that secures the purge tube to the air cleaner.
 - (2) Remove the screws and the washers securing the air cleaner to the air supply ducts.
 - (3) Remove the air cleaner.
 - (4) Put a cover on all the tube and the duct openings.

NOTE: Electrical power can be supplied to the airplane while the air cleaner is removed if the ducts are taped together and the EQUIP COOLING selector on the P5 panel is selected to AUTO. However, continued operation of the equipment cooling system without the air cleaner installed could increase dirt and lint contamination of installed avionics equipment.

- Install the Equipment Cooling Air Cleaner
 - A. References
 - (1) 06-46-00/201, Entry, Service, Cargo Doors Access Doors and Panels
 - (2) AMM 24-22-00/201, Electrical Power Control
 - (3) AMM 25-52-01/401, Sidewall Panels
 - B. Access

EFFECTIVITY	CLEAN	FWD E/E COOLING AIR CLEANER			ER
	21-58-30-2A	21-029-51	PAGE	2 OF	8 DEC 22/04

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C. Procedure

- (1) Make sure the gasket(s) are not damaged or removed from the air cleaner flanges.
 - (a) If the gasket(s) are damaged or missing, replace the air cleaner or bond the gasket(s) to the air cleaner with adhesive per BAC 5010, Type 77.
- (2) Remove the covers from the tube and duct openings.
- (3) Put the air cleaner in the air supply ducts.
 - (a) As an option, you can replace the CE-00310-3 air cleaner with a CE-00310-4 air cleaner, or you can replace the -4 air cleaner with a -3 air cleaner.

NOTE: The -3 air cleaner uses a 13 hole pattern with 26 short screws (p/n NAS1801-3-13), while the -4 air cleaner uses a 6 hole pattern with 12 longer screws (p/n NAS6603-46).

To install a -3 air cleaner in the place where a -4 air cleaner was installed, you will need to get 12 short screws (p/n NAS1801-3-13) to replace the longer screws used with the -4 air cleaner. The longer screws from the -4 air cleaner cannot be used with a -3 air cleaner. Install the -3 air cleaner with 6 short screws in the upper flange of the air cleaner and the remaining 6 short screws in the lower flange (refer to Fig. 201).

To install a -4 air cleaner in the place where a -3 air cleaner was installed, you will need to get 6 long

screws (p/n NAS6603-46) to replace the shorter screws used with the -3 air cleaner. The shorter screws from the -3 air cleaner cannot be used a -4 air cleaner. Install the -4 air cleaner with the 6 long screws (refer to Fig. 201).

- (4) Attach the air cleaner to the ducts with the screws and the washers.
 - (a) Tighten the screws, in a diagonal pattern, 25 to 35 inch-pounds.

EFFECTIVITY

CLEAN

FWD E/E COOLING AIR CLEANER

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- (5) Attach the purge tube to the air cleaner with the air duct sleeve and the two clamp bands.
- D. Air Cleaner Post-Installation Test.
 - (1) Supply electrical power (AMM 24-22-00).
 - (2) Make sure these circuit breakers on the main power distribution panel, P6, are closed:
 - (a) 6H18, EQUIP COOL SUPPLY FAN 1
 - (b) 6H21, FWD EXH EQUIP COOL FAN
 - (3) Make sure these circuit breakers on the overhead panel P11 are closed:
 - (a) 11P11, EQUIPMENT COOLING SUPPLY FAN 1
 - (b) 11P22, EQUIPMENT COOLING EXH FAN FWD
 - (4) Put the EQUIP COOLING mode selector switch on the P5 panel to AUTO.
 - (5) Do a check for air leakage around the air cleaner flanges and at the sleeve on the purge tube:
 - (a) Hold your hand about 6-inches away from the air cleaner flanges and the sleeve on the purge tube to feel for air leakage.
 - (b) If you can feel air leakage, do these steps:
 - Make sure the gaskets on the air cleaner are not damaged or missing. If the gasket(s) are damaged or missing, replace the air cleaner or bond the gasket(s) to the air cleaner with adhesive per BAC 5010, Type 77.
 - 2) Make sure the fasteners on the air cleaner are tightened 25 to 35 inch-pounds.
 - 3) Make sure the air cleaner flanges are not bent.
 - Tighten the clamps on the sleeve.
- E. Put the Airplane Back to Its Usual Condition.
 - (1) Install the sidewall panel (AMM 25-52-01).

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MECH INSP

- (2) Close forward cargo compartment door 821 (AMM 52-33-00/201).
- (3) Remove electrical power if it is not necessary (AMM 24-22-00/201).
- Clean the Equipment Cooling Air Cleaner (Fig. 201)
 - A. General
 - (1) Two methods are given to clean the air cleaner:
 - (a) The first method removes most of the loose dirt and other unwanted materials.
 - (b) The second method cleans the air cleaner fully, but special equipment and material are necessary.
 - Equipment
 - (1) Vacuum cleaner commercially available
 - (2) Dryer Oven, capable of 140° F (60° C) (for method 2)
 - (3) Bath Parts, sufficient in size to soak the air cleaner, and capable of 130° F (54° C) (for method 2)
 - Consumable Materials
 - (1) Use one of these:
 - (a) B00615, Degreaser Solvent Emulsion, NEUGENIC 4177 (method 2)
 - (b) Dishwashing Soap, Commercially Available
 - D. Clean the air cleaner (method 1).
 - (1) Remove the air cleaner.
 - Use the vacuum cleaner or use compressed air to remove unwanted material from the swirl devices and plenum.
 - (3) Wash all of the surfaces of the air cleaner with the soap and water.
 - (4) Flush the air cleaner with water.

EFFECTIVITY CLEAN FWD E/E COOLING AIR CLEANER 21-58-30-2A 21-029-51 PAGE 5 OF 8 DEC 22/04

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MECH

- (5) Dry the air cleaner fully with compressed air until you can not see any water.
- (6) Install the Equipment Cooling Air Cleaner.
- E. Clean the air cleaner (method 2).
 - (1) Remove the air cleaner.
 - (2) Use the vacuum cleaner or use compressed air to remove unwanted material from the swirl devices and the plenum.
 - (3) Soak the air cleaner in the cleaning solution, at 130° F (54° C) for one hour.
 - (4) Shake and flush the air cleaner in the cleaning solution bath.
 - (a) Use a brush to loosen and remove remaining unwanted material.
 - (5) Use pressurized water to remove remaining unwanted material.
 - (6) Flush the air cleaner with clean water.
 - (7) Dry the air cleaner with compressed air.
 - (8) Dry the air cleaner in an oven for one hour at 140° F (60° C).
 - (9) Install the Equipment Cooling Air Cleaner.

EFFECTIVITY

CLEAN

FWD E/E COOLING AIR CLEANER

21-58-30-2A

21-029-51

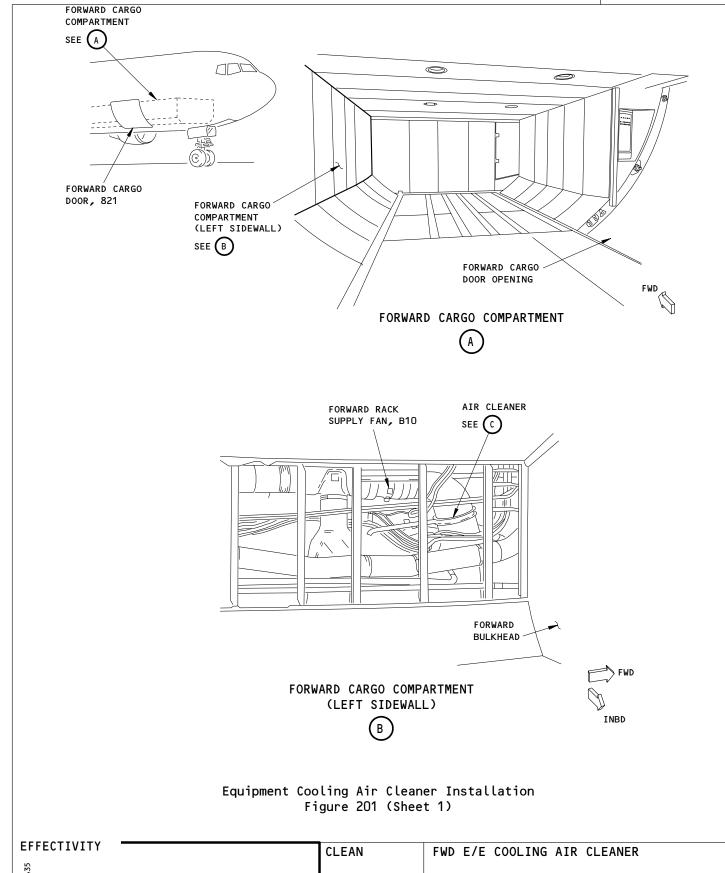
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BOEING 767 TASK CARD



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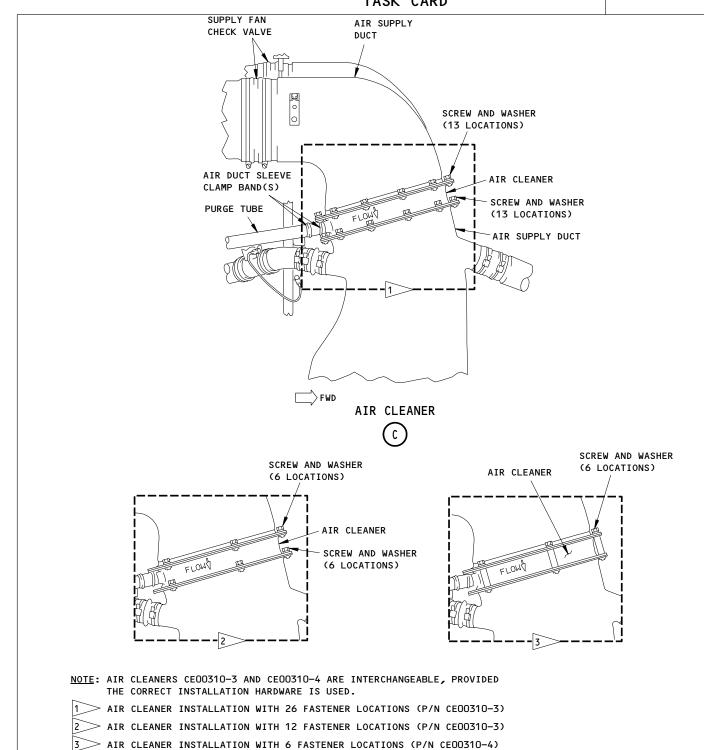
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Equipment Cooling Air Cleaner Installation Figure 201 (Sheet 2)

EFFECTIVITY FWD E/E COOLING AIR CLEANER CLEAN 21-58-30-2A 21-029-51 PAGE 8 OF 8 APR 22/09

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DATE	

SKILL



BOEING CARD NO. 21-030-07

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

REVISION REV 1C 013 AUG 22/07 AIRPL A/C MIX BAY 11212

INTERVAL

APPLICABILITY
AIRPLANE ENGINE STRUCTURAL ILLUSTRATION REFERENCE **REPLACE** RECIRCULATION AIR FILTERS 200 ALL

ACCESS PANELS ZONES 821

125 126 1251

WORK AREA

MPD ITEM NUMBER MECH INSP

DISCARD THE PALL LAND AND MARINE RECIRCULATION AIR FILTER.

21-25-02-4D

FOR P/N'S: CD-00756F-1 AND CD-00756F-2

RELATED TASK

ACCESS NOTE: SPECIAL ACCESS 1251 REQUIRES REMOVAL OF THE FORWARD CARGO COMPARTMENT AFT WALL

PANELS.

Recirculation Air Filter Replacement

Equipment Α.

- (1) Plastic disposal bags (38"x48", 1-2mil, 40-42 gal) (or equivalent)
- Personal protective equipment & clothing (PPE/PPC) (disposable) -(2) commercially available
 - Particulate Respirator (NIOSH 42 CFR 84 Class N95, N99, N100) -3M model 8210 (or eqiuvalent)
 - (b) Safety Goggles 3M model 1621 (or equivalent)
 - (c) Latex or Nitrile Gloves Kimberly-Clark KleenGuard, SafeSkin, or ShieldMaster models (or equivalent)
 - Coverall with hood Dupont 'Tyvek' style S1428 or 01414 (or equivalent)

B. Parts

EFFECTIVITY REPLACE RECIRCULATION AIR FILTERS 767-200 AIRPLANES 21-25-02-4D 21-030-07 PAGE 1 OF 5 AUG 22/07

21-030-07

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767
TASK CARD

AIRLINE CARD NO.

MECH INSP

АММ			AIPC		
FIG ITEM		NOMENCLATURE	SUBJECT	FIG	ITEM
401 401 401 401 401 401 401 401		Recirculation Air Filter Recirculation Air Filter Recirculation Air Filter Recirculation Air Filter Recirculation Air Filter Recirculation Air Filter Recirculation Air Filter Recirculation Air Filter	21-25-01 21-25-01 21-25-01 21-25-01 21-25-01 21-25-01 21-25-01 21-25-01	01 01 01 01 01 01 03 03	110 120 121 125 127 120 125 127

C. References

- (1) AMM 24-22-00/201, Electrical Power
- (2) AMM 25-52-01/401, Containerized Cargo Compartment Sidewall Panels
- D. Access
 - (1) Location Zones

125 Area Aft of Forward Cargo Compartment (Left)
126 Area Aft of Forward Cargo Compartment (Right)

(2) Access Panels

821 Forward Cargo Door

- E. Prepare for Removal
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Do this step if you will remove the left recirculation air filter:
 - (a) Push the L RECIRC FAN switch-light, on the P5 overhead panel, to the off position and attach a DO-NOT-OPERATE tag.
 - 1) Make sure the ON light goes off.
 - (3) Do this step if you will remove the right recirculation air filter:

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TASK CARD

MECH INSP

- (a) Push the R RECIRC FAN switch-light, on the P5 overhead panel, to the off position and attach a D0-N0T-OPERATE tag.
 - 1) Make sure the ON light goes off.
- (4) Open the forward cargo door, 821.
- (5) Remove the aft endwall (bulkhead) panels in the forward cargo compartment to get access to the recirculation air filters (AMM 25-52-01/401).

WARNING: PUT ON THE PERSONAL PROTECTIVE EQUIPMENT BEFORE YOU TOUCH THE FILTER. THE FILTER REMOVES SMALL PARTICLES (SMOKE, DUST, LINT, FIBERS, POLLEN) AND INFECTIOUS MATERIALS (BACTERIA, VIRUSES, MOLD SPORES, FUNGI) FROM THE AIR WHICH CAN CAUSE ILLNESSES.

- (6) Put on the personal protective equipment before you touch the filter.
- F. Single-piece HEPA Filter Replacement (Fig. 401)

NOTE: Donaldson and Pall Land & Marine 'single-piece' HEPA filters are interchangeable with the Donaldson 'two-piece' prefilter/particulate filter combination (767-SL-21-058).

(1) Remove the filter retainer channel from the filter tray.

WARNING: DO NOT LET THE FILTER TOUCH YOUR SKIN. DO NOT SHAKE OR HIT THE FILTER. DO NOT LET THE FILTER FALL. DO NOT USE COMPRESSED AIR TO CLEAN THE FILTER OR FILTER HOUSING. THIS CAN CAUSE THE INFECTIOUS MATERIAL TO BECOME AIRBORNE. DISCARD THE FILTER IN A PLASTIC DISPOSAL BAG. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN CAUSE INJURIES TO PERSONS.

(2) Pull the 4-inch thick HEPA filter out from the filter tray.

WARNING: PUT ALL AIR FILTERS THAT ARE REMOVED FROM THE AIRPLANE INTO PLASTIC DISPOSAL BAGS. OBEY THE AIRLINE POLICY, LOCAL HEALTH DEPARTMENT AND LAW ENFORCEMENT REGULATIONS FOR DISPOSAL OF MATERIAL.

EFFECTIVITY

767-200 AIRPLANES

REPLACE

RECIRCULATION AIR FILTERS

21-25-02-4D

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MECH INSP

- (a) Put the filter in a plastic disposal bag and discard in accord with airline, local health, safety and regulatory procedures for disposal of material.
- (3) Examine the inside of the filter tray and remove any unwanted material that could prevent proper airflow through the check valve.
- (4) Push a new 4-inch thick HEPA filter into the filter tray.
 - Make sure the airflow arrow on the filter frame points down into the filter tray.
- (5) Reinstall the filter retainer channel to the filter tray.
- Restore the Airplane to Normal

DISCARD ALL PERSONAL PROTECTIVE EQUIPMENT AFTER YOU USE IT ONE WARNING: TIME. DO NO TRY TO CLEAN IT. DISCARD THE EQUIPMENT IN A PLASTIC DISPOSAL BAG.

(1) Remove the personal protective equipment and put them in a plastic disposal bag, and discard them in accord with airline, local health, safety and regulatory procedures for disposal of material.

WARNING: CLEAN YOUR HANDS WITH SOAP AND RUNNING HOT WATER. DIRTY HANDS WITH CONTAMINATION CAN CAUSE DISEASE AND ILLNESSES.

- (2) CLean your hands with soap and running hot water.
- (3) Reinstall the aft endwall (bulkhead) panels in the forward cargo compartment (AMM 25-52-01/401).
- (4) Close the forward cargo door, 821.
- Remove the DO-NOT-OPERATE tag(s) from the L/R RECIRC FAN switch-light(s) on the P5 overhead panel.
- (6) Remove electrical power (AMM 24-22-00/201).

EFFECTIVITY

767-200 AIRPLANES

REPLACE

RECIRCULATION AIR FILTERS

21-25-02-4D

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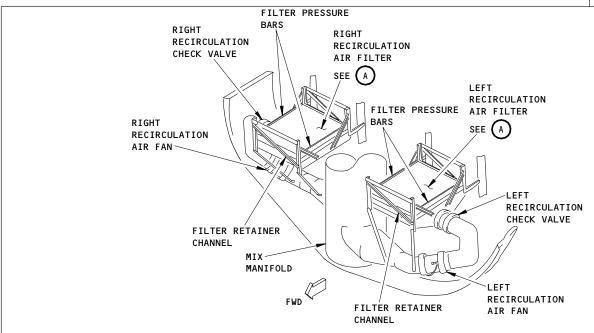
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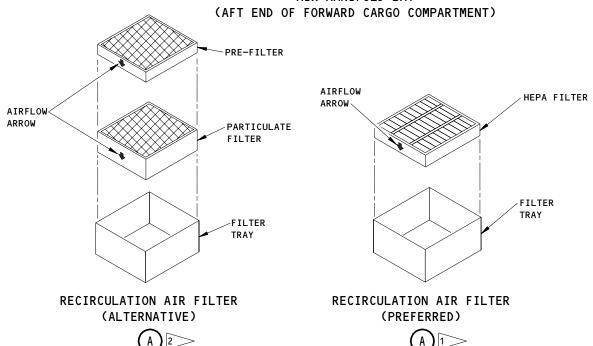


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AIRLINE CARD NO.



MIX MANIFOLD BAY (AFT END OF FORWARD CARGO COMPARTMENT)



> SINGLE-PIECE HEPA FILTER (DONALDSON OR PALL-LAND & MARINE).

> TWO-PIECE AIR FILTER COMBO (DONALDSON).

Recirculation Air Filter Installation Figure 401

EFFECTIVITY	REPLACE	RECIRCULATION	AIR F	ILTERS	
F67-200 AIRPLANES	21-25-02-4D	21-030-07	PAGE	5 OF	5 AUG 22/07

STATION	
TAIL NO.	
DATE	



BOEING CARD NO. 21-030-08

AIRLINE CARD NO.

	SKILL	ILL WORK AREA		RELATED TASK	INTERVAL		PHASE	MPD	TASK CARD	
									REV	REVISION
	AIRPL	A/C MIX	BAY		1C			11212	013	AUG 22/07
	TASK			TITLE		STRUCTURAL ILLUSTRATION RE	REFERENCE A		PLICABILITY	

AIRPLANE ENGINE **REPLACE** RECIRCULATION AIR FILTERS 300 ALL

ZONES ACCESS PANELS

125 126 1251 821

MPD ITEM NUMBER MECH INSP

DISCARD THE PALL LAND AND MARINE RECIRCULATION AIR FILTER.

21-25-02-4D

FOR P/N'S: CD-00843F-1 AND CD-00843F-2

ACCESS NOTE: SPECIAL ACCESS 1251 REQUIRES REMOVAL OF FORWARD CARGO COMPARTMENT AFT WALL PANELS.

1. Recirculation Air Filter Replacement

- Equipment
 - (1) Plastic disposal bags (38"x48", 1-2mil, 40-42 gal) (or equivalent)
 - Personal protective equipment & clothing (PPE/PPC) (disposable) commercially available
 - Particulate Respirator (NIOSH 42 CFR 84 Class N95, N99, N100) -3M model 8210 (or eqiuvalent)
 - Safety Goggles 3M model 1621 (or equivalent)
 - (c) Latex or Nitrile Gloves Kimberly-Clark KleenGuard, SafeSkin, or ShieldMaster models (or equivalent)
 - Coverall with hood Dupont 'Tyvek' style S1428 or 01414 (or equivalent)
- B. Parts

EFFECTIVITY REPLACE RECIRCULATION AIR FILTERS 767-300 AIRPLANES 21-25-02-4D 21-030-08 PAGE 1 OF 6 AUG 22/07

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SAS BOEING
767
TASK CARD

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I	AMM		1	AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM	
401		Recirculation Air Filter	21-25-01	02	264	
401		Recirculation Air Filter	21-25-01	02	265	
401		Recirculation Air Filter	21-25-01	02	270	
401		Recirculation Air Filter	21-25-01	02	272	
401		Recirculation Air Filter	21-25-01	02	273	
401		Recirculation Air Filter	21-25-01	02	275	
401		Recirculation Air Filter	21-25-01	04	185	
401		Recirculation Air Filter	21-25-01	04	190	
401		Recirculation Air Filter	21-25-01	04	195	
401		Recirculation Air Filter	21-25-01	04	197	
401		Recirculation Air Filter	21-25-01	04	300	

C. References

- (1) AMM 24-22-00/201, Electrical Power
- (2) AMM 25-52-01/401, Containerized Cargo Compartment Sidewall Panels
- D. Access
 - (1) Location Zones

125 Area Aft of Forward Cargo Compartment (Left) 126 Area Aft of Forward Cargo Compartment (Right)

(2) Access Panels

821 Forward Cargo Door

- E. Prepare for Removal
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Do this step if you will remove the left recirculation air filter:
 - (a) Push the L RECIRC FAN switch-light, on the P5 overhead panel, to the off position and attach a DO-NOT-OPERATE tag.
 - 1) Make sure the ON light goes off.

EFFECTIVITY	REPLACE	RECIRCULATION	AIR I	FILTERS	
767-300 AIRPLANES					
	21-25-02-4D	21-030-08	PAGE	2 OF	6 AUG 22/07

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21-030-08

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MECH INSP

- (3) Do this step if you will remove the right recirculation air filter:
 - (a) Push the R RECIRC FAN switch-light, on the P5 overhead panel, to the off position and attach a DO-NOT-OPERATE tag.
 - Make sure the ON light goes off.
- (4) Open the forward cargo door, 821.
- (5) Remove the aft endwall (bulkhead) panels in the forward cargo compartment to get access to the recirculation air filters (AMM 25-52-01/401).

WARNING: PUT ON THE PERSONAL PROTECTIVE EQUIPMENT BEFORE YOU TOUCH THE FILTER. THE FILTER REMOVES SMALL PARTICLES (SMOKE, DUST, LINT, FIBERS, POLLEN) AND INFECTIOUS MATERIALS (BACTERIA, VIRUSES, MOLD SPORES, FUNGI) FROM THE AIR WHICH CAN CAUSE ILLNESSES.

- (6) Put on the personal protective equipment before you touch the filter.
- Single-piece HEPA Filter Replacement (Fig. 401)

Donaldson and Pall Land & Marine 'single-piece' HEPA filters are interchangeable with the Donaldson 'two-piece' prefilter/particulate filter combination (767-SL-21-058).

(1) Remove the two filter retainer brackets from the filter tray.

WARNING: DO NOT LET THE FILTER TOUCH YOUR SKIN. DO NOT SHAKE OR HIT THE FILTER. DO NOT LET THE FILTER FALL. DO NOT USE COMPRESSED AIR TO CLEAN THE FILTER OR FILTER HOUSING. THIS CAN CAUSE THE INFECTIOUS MATERIAL TO BECOME AIRBORNE. DISCARD THE FILTER IN A PLASTIC DISPOSAL BAG. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN CAUSE INJURIES TO PERSONS.

(2) Pull the 4-inch thick HEPA filter out from the filter tray.

EFFECTIVITY

767-300 AIRPLANES

REPLACE

RECIRCULATION AIR FILTERS

21-25-02-4D

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AIRLINE CARD NO.

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767
TASK CARD

MECH INSP

WARNING: PUT ALL AIR FILTERS THAT ARE REMOVED FROM THE AIRPLANE INTO PLASTIC DISPOSAL BAGS. OBEY THE AIRLINE POLICY, LOCAL HEALTH DEPARTMENT AND LAW ENFORCEMENT REGULATIONS FOR DISPOSAL OF MATERIAL.

- (a) Put the filter in a plastic disposal bag and discard in accord with airline, local health, safety and regulatory procedures for disposal of material.
- (3) Examine the inside of the filter tray and remove any unwanted material that could prevent proper airflow through the check valve.
- (4) Push a new 4-inch thick HEPA filter into the filter tray.
 - (a) Make sure the airflow arrow on the filter frame points down into the filter tray.
- (5) Reinstall the filter retainer brackets to the filter tray.
- G. Restore the Airplane to Normal

WARNING: DISCARD ALL PERSONAL PROTECTIVE EQUIPMENT AFTER YOU USE IT ONE TIME. DO NO TRY TO CLEAN IT. DISCARD THE EQUIPMENT IN A PLASTIC DISPOSAL BAG.

(1) Remove the personal protective equipment and put them in a plastic disposal bag, and discard them in accord with airline, local health, safety and regulatory procedures for disposal of material.

<u>WARNING</u>: CLEAN YOUR HANDS WITH SOAP AND RUNNING HOT WATER. DIRTY HANDS WITH CONTAMINATION CAN CAUSE DISEASE AND ILLNESSES.

- (2) Clean your hands with soap and running hot water.
- (3) Reinstall the aft endwall (bulkhead) panels in the forward cargo compartment (AMM 25-52-01/401).
- (4) Close the forward cargo door, 821.
- (5) Remove the DO-NOT-OPERATE tag(s) from the L/R RECIRC FAN switch-light(s) on the P5 overhead panel.

EFFECTIVITY

767-300 AIRPLANES

REPLACE

RECIRCULATION AIR FILTERS

21-25-02-4D

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AIRLINE CARD NO.

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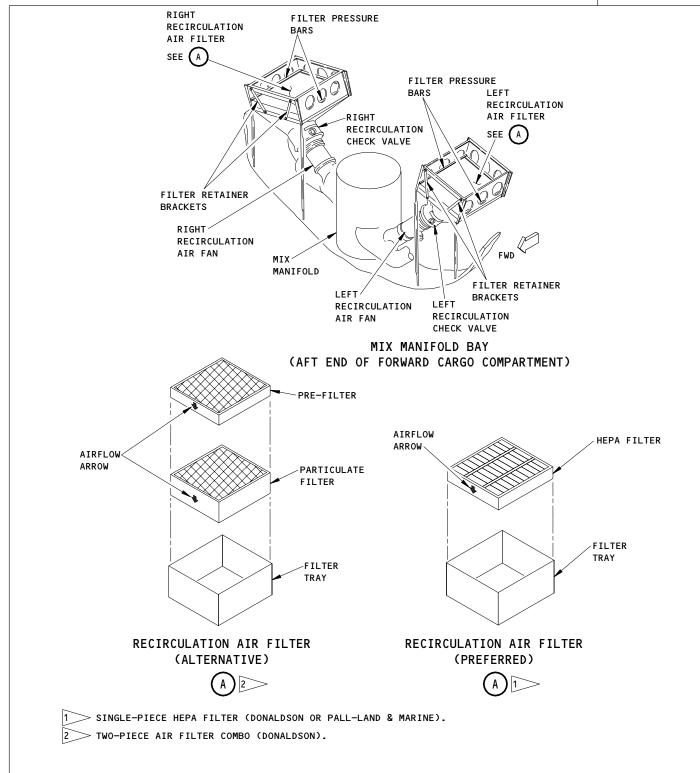
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			(6)	Remove	electr	rical p	ower	(AMM 2	24-22	2-00/201).					
FFF	ECTT	VITY -					1	105		DEATES:	II ATTAL:	475 -	T1 T-	D.C.		
		O AIRPL	ANFS				REPL	ACE		RECIRCU	JLATION	AIR F	TLTE	KS		
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Recirculation Air Filter Installation Figure 401

REPLACE RECIRCULATION AIR FILTERS

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STA	TION						BOE	ING CARD NO.
TAI	L NO.		(BOEIN	G		21-0	31-04
			SAS &	767			AIRI	INE CARD NO.
D	ATE			TASK CARD				
SKILL	WORK ARE	EA .	RELATED TASK	INTERVAL		PHASE	MPD REV	TASK CARD REVISION
ELECT	CREW CA	BIN		1 C		11212	017	AUG 22/08
TAS FUNCT		E/E CO(TITLE	IFF PRESS SWITCH	STRUCTURAL ILLUSTRATION RE	FERENCE	AF AIRPLAN	PLICABILITY E ENGINE
TONCT	TONAL	L/L CO	DEING SISIEN D	III FRESS SWITCH			PAS	S ALL
	ZONES				ACCESS PANELS			
119	121 212		119AL					

MECH INSP MPD ITEM NUMBER

FUNCTIONALLY CHECK THE E/E COOLING SYSTEM DIFFERENTIAL PRESSURE SWITCH.

21-58-00-5C

- 1. Operational Test Differential Pressure Switch
 - A. General
 - (1) This operational test is for a scheduled maintenance task.
 - B. Equipment
 - (1) Vacuum source with gauge, capacity: 0 to 2.0 inch water differential pressure minimum, commercially available.
 - C. References
 - (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
 - (2) AMM 24-22-00/201, Electrical Power Control
 - D. Access
 - (1) Location Zones
 - 119 Main Equipment Center, Left
 - 120 Main Equipment Center, Right
 - 212 Flight Compartment, Right
 - (2) Access Panels

119AL Main Equipment Center Access Door

- E. Prepare for Test
 - (1) Make sure these circuit breakers on the main power distribution panel P6 are closed:

EFFECTIVITY	FUNCTIONAL	E/E COOLING	SYSTEM	DIFF PRESS S	SWITCH
	21-58-00-5c	21-031-04	PAGE	1 OF 7 AUG	G 22/08

21-031-04

AIRLINE CARD NO.

SAS BOEING 767 TASK CARD

				TASK CARD
MECH	INSP			
				(a) 6D6, EQUIP COOL GND WARN
				(b) 6H18, EQUIP COOL SUPPLY FAN 1
				(c) 6H21, FWD EXH EQUIP COOL FAN
			(2)	Make sure these circuit breakers on the overhead circuit breaker panel P11 are closed:
				(a) 11B8, STBY EQUIP COOL
				(b) 11C19, EQUIP COOL OVRD
				(c) 11P11, EQUIPMENT COOLING SUPPLY FAN 1
				(d) 11P13, EQUIPMENT COOLING OUTBD VALVES
				(e) 11P21, EQUIP COOL OVHT/SMOKE VALVE IND
				(f) 11P22, EQUIPMENT COOLING EXH FAN FWD
				(g) EICAS circuit breakers (6 places)
			(3)	Put the EQUIP COOLING mode selector on the pilots' overhead P5 panel to AUTO.
			(4)	Supply electrical power (AMM 24-22-00/201).
			(5)	Get access to the differential pressure switch (S613) in the main equipment center.
				(a) Open the main equipment center door 119AL (AMM 06-41-00/201).
				(b) Find the differential pressure switch on the air plenum of E1/E2 rack.
				(c) Remove the cover from the differential pressure switch.
		F.	Test	the Differential Pressure Switch
			(1)	Disconnect the sense tube at the differential pressure switch.
			(0)	and the second s

EFFECTIVITY	FUNCTIONAL	E/E COOLING	SYSTEM	DIFF	PRESS SWITCH
	21-58-00-5c	21-031-04	PAGE	2 OF	7 AUG 22/08

(2) Connect the vacuum source to the differential pressure switch at the

sense tube connection.

AIRLINE CARD NO.

21-031-04



MECH INSP

DO NOT KEEP THE EQUIP COOLING MODE SELECTOR IN "OVRD" POSITION CAUTION: FOR MORE THAN FIVE (5) MINUTES. IN "OVRD" POSITION, THE EQUIPMENT COOLING FANS STOP OPERATING. EXTENDED OPERATION OF THE AVIONICS ELECTRICAL EQUIPMENT WITHOUT SUFFICIENT COOLING AIR FROM THE EQUIPMENT COOLING FANS CAN CAUSE DAMAGE TO THE AVIONICS ELECTRICAL EQUIPMENT.

- (3) Put the EQUIP COOLING mode selector on the P5 panel to OVRD.
 - (a) After one minute, make sure the following occurs:
 - Equip Cooling NO COOLING light on P5 panel comes on
 - Ground crew call horn operates 2)
 - 3) EICAS caution message FWD EQPT COOLING shows.

CAUTION: APPLY A VACUUM SLOWLY TO AVOID DAMAGE TO THE PRESSURE SWITCH.

- Slowly apply a vacuum of 2.0 inches water differential pressure to the differential pressure switch.
 - (a) Make sure that the NO COOLING light on the P5 panel goes off.
 - (b) Make sure that the ground crew call horn still operates.
- (5) Reduce the vacuum and make sure that the NO COOLING light comes on.
- (6) Put the EQUIP COOLING mode selector on the P5 panel to AUTO.
 - After one minute, make sure the following occurs:
 - 1) Equip Cooling NO COOLING light goes off
 - Ground crew call horn shuts off
 - 3) EICAS caution message FWD EQPT COOLING does not show.
- (7) Disconnect the vacuum source from the differential pressure switch.
- (8) Connect the sense tube to the differential pressure switch.
- (9) Install the cover for the differential pressure switch.

EFFECTIVITY

FUNCTIONAL E/E COOLING SYSTEM DIFF PRESS SWITCH

21-58-00-5C

21-031-04 PAGE 3 OF 7 AUG 22/08

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21-031-04

AIRLINE CARD NO.

TASK CARD

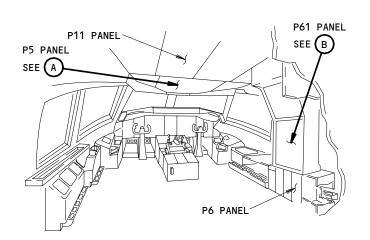
MECH	INSP								
		G.	Put	the Airplane Back to	Its Usual Con	dition			
			(1)	Close the main equi	pment center d	oor 119AL (AM	1M 06-41	-00/201).	
			(2)	Remove electrical p	ower if it is	not necessary	/ (AMM 2	4-22-00/2	01).
EFF	ECTI	VITY •			FUNCTIONAL	E/E COOLING	CVCTEM	NIEE DDEC	כ פשודרם
						21-031-04			
									,

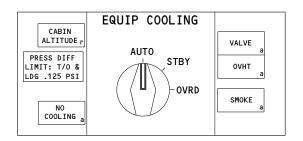
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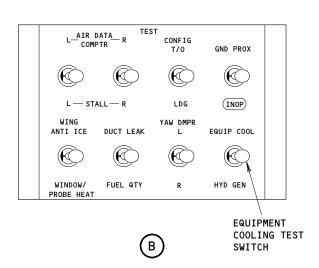
767 TASK CARD

SAS





EQUIPMENT COOLING CONTROL MODULE



Equipment Cooling System Flight Deck Test Components Figure 501

EFFECTIVITY To a series of the

FUNCTIONAL

E/E COOLING SYSTEM DIFF PRESS SWITCH

21-58-00-5c | 21-031-04

PAGE 5 OF 7 AUG 22/08

AIRLINE CARD NO.

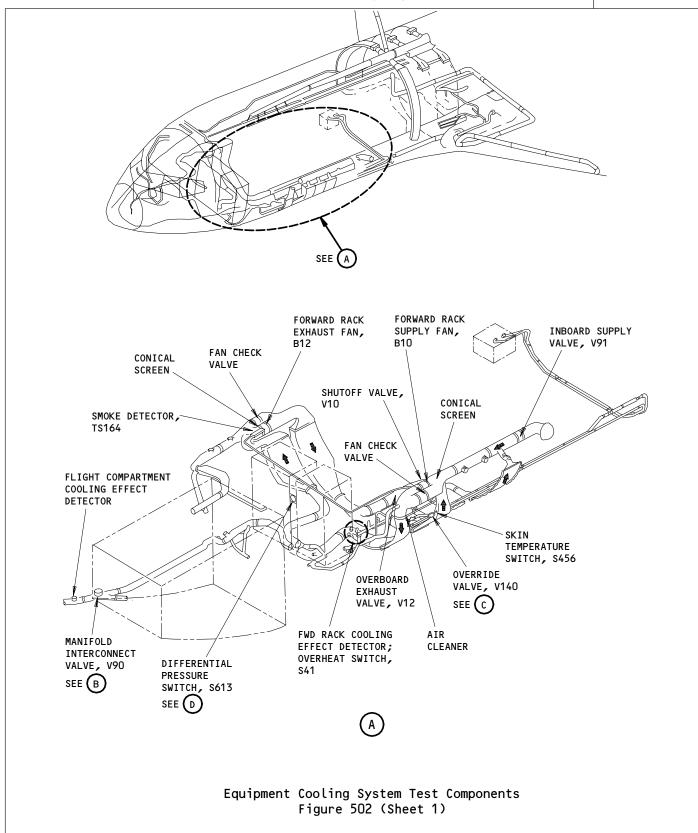
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E/E COOLING SYSTEM DIFF PRESS SWITCH

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FUNCTIONAL

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21-031-04

EFFECTIVITY

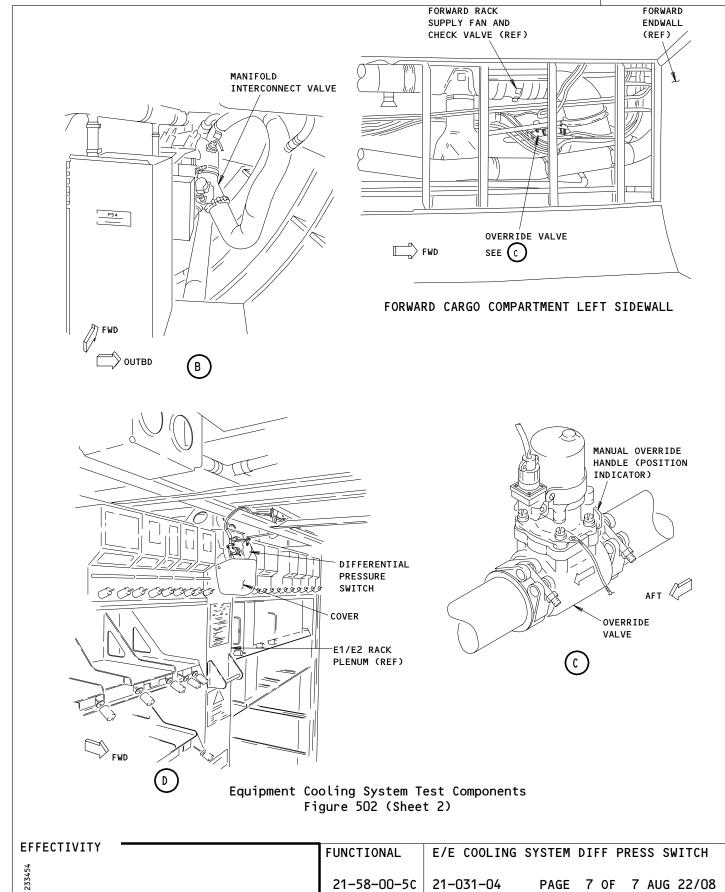
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AIRLINE CARD NO.



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STATION	
TAIL NO.	
DATE	┨



BOEING CARD NO. 21-031-27

AIRLINE CARD NO.

SKILL	WORK ARE	ĒΑ	RELATED TASK	INTERVAL		PHASE	MPD	TASK CARD
							REV	REVISION
AIRPL	A/C MIX	BAY		02000 HRS		10404	013	DEC 22/07
TAS	K	TITLE			STRUCTURAL ILLUSTRATION R	FERENCE	APPLICABILITY	
							AIRPLAN	E ENGINE
REPLA	CE	RECI	IRC AIR HIGH EFF:	ICIENCY FILTERS				
							200	ALL
	ZONES				ACCESS PANELS			-
125	126		1251 82	21				

MPD ITEM NUMBER MECH INSP

DISCARD THE DONALDSON RECIRCULATION AIR HEPA-LIKE FILTER. (P/N: P199762)

21-25-02-4E

ACCESS NOTE: SPECIAL ACCESS 1251 REQUIRES REMOVAL OF FORWARD CARGO COMPARTMENT AFT WALL PANELS.

1. Recirculation Air Filter Replacement

- A. Equipment
 - (1) Plastic disposal bags (38"x48", 1-2mil, 40-42 gal) (or equivalent)
 - (2) Personal protective equipment & clothing (PPE/PPC) (disposable) commercially available
 - Particulate Respirator (NIOSH 42 CFR 84 Class N95, N99, N100) -(a) 3M model 8210 (or eqiuvalent)
 - (b) Safety Goggles 3M model 1621 (or equivalent)
 - (c) Latex or Nitrile Gloves Kimberly-Clark KleenGuard, SafeSkin, or ShieldMaster models (or equivalent)
 - Coverall with hood Dupont 'Tyvek' style S1428 or 01414 (or equivalent)
- B. Parts

EFFECTIVITY RECIRC AIR HIGH EFFICIENCY FILTERS REPLACE 767-200 AIRPLANES 21-25-02-4E | 21-031-27 PAGE 1 OF 5 DEC 22/07

AIRLINE CARD NO.



MECH INSP

,	AMM.		AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
401 401 401 401 401 401 401 401		Recirculation Air Filter Recirculation Air Filter Recirculation Air Filter Recirculation Air Filter Recirculation Air Filter Recirculation Air Filter Recirculation Air Filter Recirculation Air Filter	21-25-01 21-25-01 21-25-01 21-25-01 21-25-01 21-25-01 21-25-01 21-25-01	01 01 01 01 01 01 03 03	110 120 121 125 127 120 125 127

C. References

- (1) AMM 24-22-00/201, Electrical Power
- (2) AMM 25-52-01/401, Containerized Cargo Compartment Sidewall Panels
- D. Access
 - (1) Location Zones

Area Aft of Forward Cargo Compartment (Left)
Area Aft of Forward Cargo Compartment (Right)

(2) Access Panels

821 Forward Cargo Door

- E. Prepare for Removal
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Do this step if you will remove the left recirculation air filter:
 - (a) Push the L RECIRC FAN switch-light, on the P5 overhead panel, to the off position and attach a DO-NOT-OPERATE tag.
 - 1) Make sure the ON light goes off.
 - (3) Do this step if you will remove the right recirculation air filter:

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (a) Push the R RECIRC FAN switch-light, on the P5 overhead panel, to the off position and attach a D0-N0T-OPERATE tag.
 - 1) Make sure the ON light goes off.
- (4) Open the forward cargo door, 821.
- (5) Remove the aft endwall (bulkhead) panels in the forward cargo compartment to get access to the recirculation air filters (AMM 25-52-01/401).

WARNING: PUT ON THE PERSONAL PROTECTIVE EQUIPMENT BEFORE YOU TOUCH THE FILTER. THE FILTER REMOVES SMALL PARTICLES (SMOKE, DUST, LINT, FIBERS, POLLEN) AND INFECTIOUS MATERIALS (BACTERIA, VIRUSES, MOLD SPORES, FUNGI) FROM THE AIR WHICH CAN CAUSE ILLNESSES.

- (6) Put on the personal protective equipment before you touch the filter.
- F. Single-piece HEPA Filter Replacement (Fig. 401)

NOTE: Donaldson and Pall Land & Marine 'single-piece' HEPA filters are interchangeable with the Donaldson 'two-piece' prefilter/particulate filter combination (767-SL-21-058).

(1) Remove the filter retainer channel from the filter tray.

WARNING: DO NOT LET THE FILTER TOUCH YOUR SKIN. DO NOT SHAKE OR HIT THE FILTER. DO NOT LET THE FILTER FALL. DO NOT USE COMPRESSED AIR TO CLEAN THE FILTER OR FILTER HOUSING. THIS CAN CAUSE THE INFECTIOUS MATERIAL TO BECOME AIRBORNE. DISCARD THE FILTER IN A PLASTIC DISPOSAL BAG. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN CAUSE INJURIES TO PERSONS.

(2) Pull the 4-inch thick HEPA filter out from the filter tray.

WARNING: PUT ALL AIR FILTERS THAT ARE REMOVED FROM THE AIRPLANE INTO PLASTIC DISPOSAL BAGS. OBEY THE AIRLINE POLICY, LOCAL HEALTH DEPARTMENT AND LAW ENFORCEMENT REGULATIONS FOR DISPOSAL OF MATERIAL.

EFFECTIVITY

767-200 AIRPLANES

REPLACE

RECIRC AIR HIGH EFFICIENCY FILTERS

21-25-02-4E

21-031-27

PAGE 3 OF 5 AUG 22/07

AIRLINE CARD NO.

SAS BOEING
767
TASK CARD

MECH INSP

- (a) Put the filter in a plastic disposal bag and discard in accord with airline, local health, safety and regulatory procedures for disposal of material.
- (3) Examine the inside of the filter tray and remove any unwanted material that could prevent proper airflow through the check valve.
- (4) Push a new 4-inch thick HEPA filter into the filter tray.
 - (a) Make sure the airflow arrow on the filter frame points down into the filter tray.
- (5) Reinstall the filter retainer channel to the filter tray.
- G. Restore the Airplane to Normal

WARNING: DISCARD ALL PERSONAL PROTECTIVE EQUIPMENT AFTER YOU USE IT ONE TIME. DO NO TRY TO CLEAN IT. DISCARD THE EQUIPMENT IN A PLASTIC DISPOSAL BAG.

(1) Remove the personal protective equipment and put them in a plastic disposal bag, and discard them in accord with airline, local health, safety and regulatory procedures for disposal of material.

<u>WARNING</u>: CLEAN YOUR HANDS WITH SOAP AND RUNNING HOT WATER. DIRTY HANDS WITH CONTAMINATION CAN CAUSE DISEASE AND ILLNESSES.

- (2) CLean your hands with soap and running hot water.
- (3) Reinstall the aft endwall (bulkhead) panels in the forward cargo compartment (AMM 25-52-01/401).
- (4) Close the forward cargo door, 821.
- (5) Remove the DO-NOT-OPERATE tag(s) from the L/R RECIRC FAN switch-light(s) on the P5 overhead panel.
- (6) Remove electrical power (AMM 24-22-00/201).

EFFECTIVITY

767-200 AIRPLANES

REPLACE

RECIRC AIR HIGH EFFICIENCY FILTERS

21-25-02-4E

21-031-27

PAGE 4 OF 5 AUG 22/07

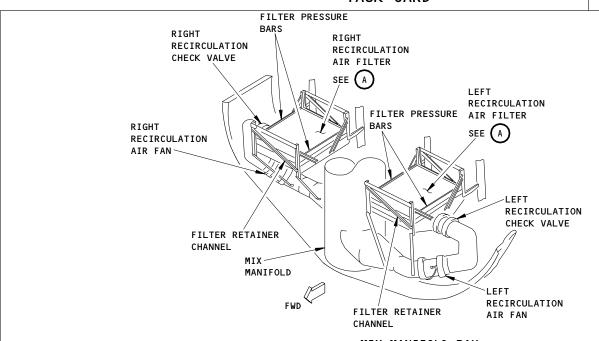
BOEING 767

SAS

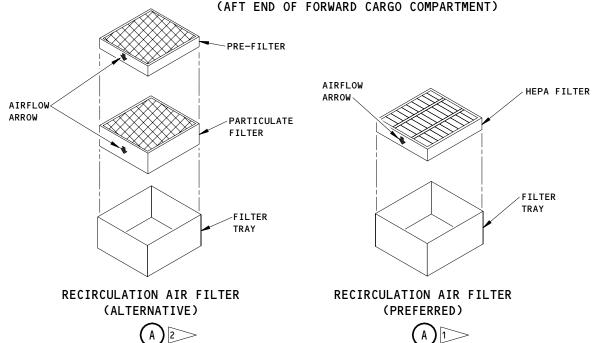
TASK CARD

21-031-27

AIRLINE CARD NO.



MIX MANIFOLD BAY (AFT END OF FORWARD CARGO COMPARTMENT)



> SINGLE-PIECE HEPA FILTER (DONALDSON OR PALL-LAND & MARINE).

TWO-PIECE AIR FILTER COMBO (DONALDSON).

Recirculation Air Filter Installation Figure 401

EFFECTIVITY RECIRC AIR HIGH EFFICIENCY FILTERS REPLACE ₹67-200 AIRPLANES 21-25-02-4E 21-031-27 PAGE 5 OF 5 AUG 22/07

STATION
TAIL NO.
DATE

SKILL

WORK AREA



BOEING CARD NO. 21-031-28

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

AIRPL A/C MIX BAY

O2000 HRS

TASK

TITLE

REV REVISION

10404 013 DEC 22/07

STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY

TASK
REPLACE
RECIRC AIR HIGH EFFICIENCY FILTERS
STRUCTURAL ILLUSTRATION REFERENCE
APPLICABILITY
AIRPLANE
ENGINE
300 ALL

INTERVAL

ZONES ACCESS PANELS

125 126 | 1251 821

MECH INSP MPD ITEM NUMBER

DISCARD THE DONALDSON RECIRCULATION AIR HEPA-LIKE FILTER.

21-25-02-4E

(P/N: P199763)

ACCESS NOTE: SPECIAL ACCESS 1251 REQUIRES REMOVAL OF FORWARD CARGO COMPARTMENT AFT WALL PANELS.

1. Recirculation Air Filter Replacement

RELATED TASK

A. Equipment

- (1) Plastic disposal bags (38"x48", 1-2mil, 40-42 gal) (or equivalent)
- (2) Personal protective equipment & clothing (PPE/PPC) (disposable) commercially available
 - (a) Particulate Respirator (NIOSH 42 CFR 84 Class N95, N99, N100) 3M model 8210 (or eqiuvalent)
 - (b) Safety Goggles 3M model 1621 (or equivalent)
 - (c) Latex or Nitrile Gloves Kimberly-Clark KleenGuard, SafeSkin, or ShieldMaster models (or equivalent)
 - (d) Coverall with hood Dupont 'Tyvek' style S1428 or 01414 (or equivalent)

B. Parts

REPLACE RECIRC AIR HIGH EFFICIENCY FILTERS
767-300 AIRPLANES
21-25-02-4E 21-031-28 PAGE 1 OF 6 DEC 22/07

AIRLINE CARD NO.

SAS BOEING
767
TASK CARD

MECH INSP

I	AMM		,	AIPC	
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
401		Recirculation Air Filter	21-25-01	02	264
401		Recirculation Air Filter	21-25-01	02	265
401		Recirculation Air Filter	21-25-01	02	270
401		Recirculation Air Filter	21-25-01	02	272
401		Recirculation Air Filter	21-25-01	02	273
401		Recirculation Air Filter	21-25-01	02	275
401		Recirculation Air Filter	21-25-01	04	185
401		Recirculation Air Filter	21-25-01	04	190
401		Recirculation Air Filter	21-25-01	04	195
401		Recirculation Air Filter	21-25-01	04	197
401		Recirculation Air Filter	21-25-01	04	300

C. References

- (1) AMM 24-22-00/201, Electrical Power
- (2) AMM 25-52-01/401, Containerized Cargo Compartment Sidewall Panels
- D. Access
 - (1) Location Zones

125 Area Aft of Forward Cargo Compartment (Left) 126 Area Aft of Forward Cargo Compartment (Right)

(2) Access Panels

821 Forward Cargo Door

- E. Prepare for Removal
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Do this step if you will remove the left recirculation air filter:
 - (a) Push the L RECIRC FAN switch-light, on the P5 overhead panel, to the off position and attach a DO-NOT-OPERATE tag.
 - 1) Make sure the ON light goes off.

REPLACE RECIRC AIR HIGH EFFICIENCY FILTERS
767-300 AIRPLANES
21-25-02-4E 21-031-28 PAGE 2 OF 6 AUG 22/07

AIRLINE CARD NO.

21-031-28

SAS BOEING TASK CARD

MECH INSP

- (3) Do this step if you will remove the right recirculation air filter:
 - (a) Push the R RECIRC FAN switch-light, on the P5 overhead panel, to the off position and attach a DO-NOT-OPERATE tag.
 - Make sure the ON light goes off.
- (4) Open the forward cargo door, 821.
- (5) Remove the aft endwall (bulkhead) panels in the forward cargo compartment to get access to the recirculation air filters (AMM 25-52-01/401).
- WARNING: PUT ON THE PERSONAL PROTECTIVE EQUIPMENT BEFORE YOU TOUCH THE FILTER. THE FILTER REMOVES SMALL PARTICLES (SMOKE, DUST, LINT, FIBERS, POLLEN) AND INFECTIOUS MATERIALS (BACTERIA, VIRUSES, MOLD SPORES, FUNGI) FROM THE AIR WHICH CAN CAUSE ILLNESSES.
- (6) Put on the personal protective equipment before you touch the filter.
- Single-piece HEPA Filter Replacement (Fig. 401)
 - Donaldson and Pall Land & Marine 'single-piece' HEPA filters are interchangeable with the Donaldson 'two-piece' prefilter/particulate filter combination (767-SL-21-058).
 - (1) Remove the two filter retainer brackets from the filter tray.
 - WARNING: DO NOT LET THE FILTER TOUCH YOUR SKIN. DO NOT SHAKE OR HIT THE FILTER. DO NOT LET THE FILTER FALL. DO NOT USE COMPRESSED AIR TO CLEAN THE FILTER OR FILTER HOUSING. THIS CAN CAUSE THE INFECTIOUS MATERIAL TO BECOME AIRBORNE. DISCARD THE FILTER IN A PLASTIC DISPOSAL BAG. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN CAUSE INJURIES TO PERSONS.
 - (2) Pull the 4-inch thick HEPA filter out from the filter tray.

EFFECTIVITY

767-300 AIRPLANES

REPLACE

RECIRC AIR HIGH EFFICIENCY FILTERS

21-25-02-4E

21-031-28

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SAS BOEING
767
TASK CARD

AIRLINE CARD NO.

MECH INSP

WARNING: PUT ALL AIR FILTERS THAT ARE REMOVED FROM THE AIRPLANE INTO PLASTIC DISPOSAL BAGS. OBEY THE AIRLINE POLICY, LOCAL HEALTH DEPARTMENT AND LAW ENFORCEMENT REGULATIONS FOR DISPOSAL OF MATERIAL.

- (a) Put the filter in a plastic disposal bag and discard in accord with airline, local health, safety and regulatory procedures for disposal of material.
- (3) Examine the inside of the filter tray and remove any unwanted material that could prevent proper airflow through the check valve.
- (4) Push a new 4-inch thick HEPA filter into the filter tray.
 - (a) Make sure the airflow arrow on the filter frame points down into the filter tray.
- (5) Reinstall the filter retainer brackets to the filter tray.
- G. Restore the Airplane to Normal

WARNING: DISCARD ALL PERSONAL PROTECTIVE EQUIPMENT AFTER YOU USE IT ONE TIME. DO NO TRY TO CLEAN IT. DISCARD THE EQUIPMENT IN A PLASTIC DISPOSAL BAG.

(1) Remove the personal protective equipment and put them in a plastic disposal bag, and discard them in accord with airline, local health, safety and regulatory procedures for disposal of material.

<u>WARNING</u>: CLEAN YOUR HANDS WITH SOAP AND RUNNING HOT WATER. DIRTY HANDS WITH CONTAMINATION CAN CAUSE DISEASE AND ILLNESSES.

- (2) Clean your hands with soap and running hot water.
- (3) Reinstall the aft endwall (bulkhead) panels in the forward cargo compartment (AMM 25-52-01/401).
- (4) Close the forward cargo door, 821.
- (5) Remove the DO-NOT-OPERATE tag(s) from the L/R RECIRC FAN switch-light(s) on the P5 overhead panel.

EFFECTIVITY

1

3

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3

767-300 AIRPLANES

REPLACE

RECIRC AIR HIGH EFFICIENCY FILTERS

21-25-02-4E

21-031-28

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21-031-28

SAS BOEING 767 TASK CARD

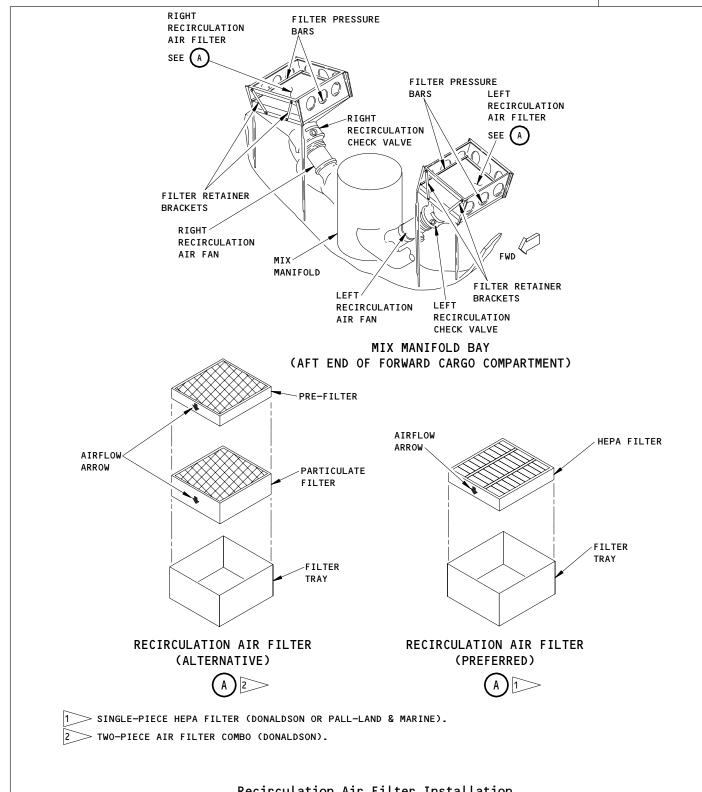
AIRLINE CARD NO.

MECH	INSP													
			(6)	Remove	electrical	power	(AMM 2	24-22	-00/20	1).				
EFF	ECTI	VITY -				REPI	LACE		RECTRO	ATR	HIGH EFF	TCTENC	Y FII TE	FRS
		O AIRPL	ANES			I KEPI	LACL		KECIKC	VTV.	IIIOII EIT	TOTEING		-11.0
						21-	-25-02-	-4E	21-031	-28	PAGE	5 OF	6 AUG	22/07

AIRLINE CARD NO.

SAS





Recirculation Air Filter Installation Figure 401

REPLACE RECIRC AIR HIGH EFFICIENCY FILTERS

21-25-02-4E 21-031-28 PAGE 6 OF 6 AUG 22/07

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STATION	7
STATION	
TATI NO.	\dashv
TAIL NO.	
	_
DATE	

SKILL

WORK AREA



BOEING CARD NO.
21-033-01

AIRLINE CARD NO.

21-51-22-4A

TASK CARD

MPD

PHASE

AIRPL ECS BAY

2C

NOTE

124XX

017

AUG 22/06

TASK

TITLE

STRUCTURAL ILLUSTRATION REFERENCE

APPLICABILITY

INTERVAL

TASK
TITLE
STRUCTURAL ILLUSTRATION REFERENCE
APPLICABILITY
AIRPLANE
ENGINE
NOTE ALL

ZONES ACCESS PANELS

135 136 193 194 193ML 194MR

RELATED TASK

MECH INSP MPD ITEM NUMBER

PERFORM EFFICIENCY CHECK (OFF-AIRCRAFT) OF CATALYTIC (OZONE)
CONVERTERS.

INTERVAL NOTE: AT 2C FREQUENCY, CHECK ONE CONVERTER ON 3

DIFFERENT AIRPLANES. RESULTS OF THIS EFFICIENCY CHECK SHOULD BE USED TO ESTABLISH SUBSEQUENT INTERVALS.

AIRPLANE NOTE: FOR 767-200/300 IF INSTALLED.

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

- Remove the Catalytic Converter (Fig. 401)
 - A. References
 - (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
 - (2) AMM 36-00-00/201, Pneumatic General
 - B. Prepare for the Removal

WARNING: REMOVE ALL THE PNEUMATIC POWER BEFORE YOU REMOVE OR INSTALL THE CATALYTIC CONVERTER. IF YOU DO NOT REMOVE ALL PNEUMATIC POWER, THEN IT COULD CAUSE INJURY TO PERSONS.

- (1) Remove the pneumatic power (AMM 36-00-00/201).
- (2) Make sure the L/R PACK selectors on the P5 overhead panel are OFF, and attach D0-NOT-OPERATE tags.
- (3) To get access to the catalytic converter for the left pack, open these access panels:

FUNCTIONAL CATALYTIC (OZONE) CONVERTERS

21-51-22-4A 21-033-01 PAGE 1 OF 4 APR 22/06

TASK CARD

AIRLINE CARD NO.

MECH	INSP	
		(a) 193ML Fuselage Structure (Left)
		(b) 193NL ECS Bay Access Door (Left)
		(4) To get access the catalytic converter for the right pack, open/remove these access panels:
		(a) 194HR ECS Components - Pressure Relief Panel
		NOTE: The catalytic converter is removed through this access panel opening.
		(b) 194LR ECS Bay Access Door (Right)
		(c) 194NR ECS Components - Flow Control Valve and Shutoff Valve
		C. Remove the Catalytic Converter
		(1) Disconnect the support clamp from the converter.
		(2) Remove the couplings from each end of the converter.
		(3) Remove the catalytic converter.
		(a) Move the right catalytic converter forward until it can be removed through the opening of the 194HR access panel.
		(4) Put a cover on the duct openings.
		2. <u>Install the Catalytic Converter</u> (Fig. 401)
		A. References

- (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
- (2) AMM 36-00-00/201, Pneumatic General
- B. Install the Catalytic Converter
 - (1) Remove the covers from the duct openings.
 - (a) Make sure there is no unwanted material in the ducts.
 - (2) Put the catalytic converter in its position, upstream of the flow control valve.

EFFECTIVITY	FUNCTIONAL	CATALYTIC	(OZONE)	CONVERT	ERS
	21-51-22-4A	21-033-01	PAGE	2 OF	4 APR 22/06

21-033-01

AIRLINE CARD NO.



MECH INSP

- (a) For the right catalytic converter, put it through the opening of the 194HR access panel and move it aft towards the flow control valve.
- (b) Make sure the flow arrow points to the flow control valve.
- (3) Connect the support clamp to the converter.
 - (a) Tighten the support clamp to 15-20 pound-inches.
- (4) Install the couplings on each end of the converter.
 - (a) Tighten the coupling nuts to 50 pound-inches.
- C. Do the installation test for the catalytic converter
 - (1) Supply pneumatic power (AMM 36-00-00/201).
 - (2) Feel for leaks around the catalytic converter.
 - (a) Small leaks are permitted.
 - (b) You must repair a large leak.
- D. Put the airplane back to its usual condition
 - (1) Close/install the applicable access panels:
 - (a) 193ML Fuselage Structure (Left)
 - (b) 193NL ECS Bay Access Door (Left)
 - (c) 194HR ECS Components Pressure Relief Panel (Right)
 - (d) 194LR ECS Bay Access Door (Right)
 - (e) 194NR ECS Components Flow Control and Shutoff Valve (Right)
 - (2) Remove pneumatic power if it is not necessary (AMM 36-00-00/201).
 - (3) Remove the DO-NOT-OPERATE tags from the L/R PACK selectors on the P5 overhead panel.

EFFECTIVITY

FUNCTIONAL

CATALYTIC (OZONE) CONVERTERS

21-51-22-4A

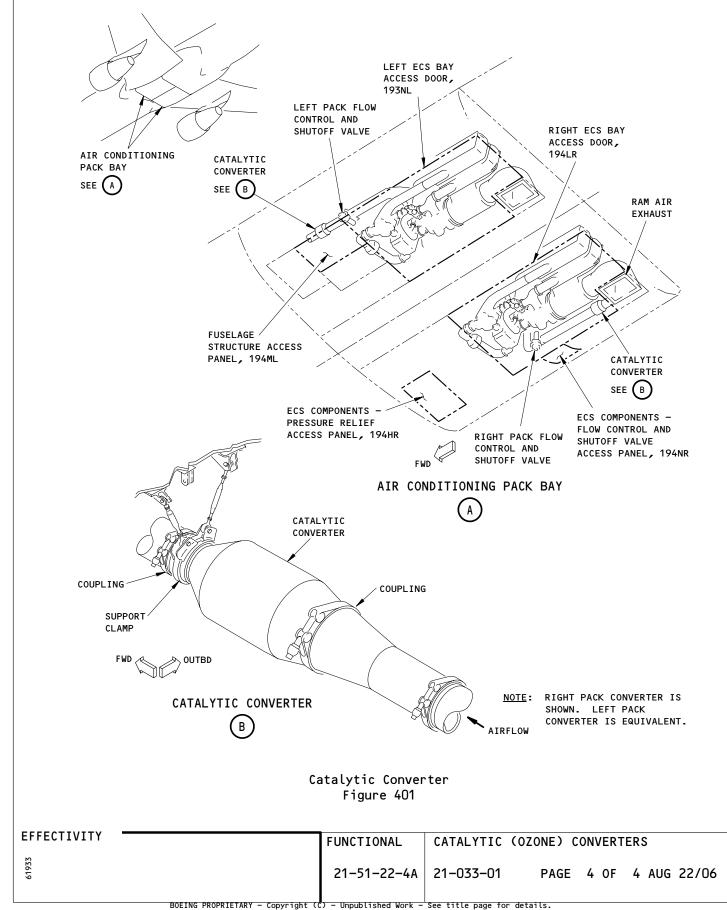
21-033-01

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767 TASK CARD 21-033-01

AIRLINE CARD NO.



	STAT	ION									BOE	ING CAR	D NO.
	TAIL	NO.				()	BO	EIN	i G		21-0	36 – 0′	1
	DAT			S	AS			'67			AIRL	INE CAR	D NO.
	DA	IE					TASK	CARD					
SKIL	.L	ECS BAY IONAL PACK LOW ZONES		RELATED TASK			INTERVAL		PHASE	MPD REV		SK CARD VISION	
AIR	PL	ECS BAY					2C			12424	017	APR	22/08
0PI	TASK ERAT	IONAL	PACK	LOW L	TIT IMIT VAL		NEUMATIC	CHECK	STRUCTURAL ILLUSTRATION RE	FERENCE	AP AIRPLAN	PLICABI E	LITY ENGINE
											NOT	E	ALL
13!	5 1	zones 36 211			193NL	194LF	8		ACCESS PANELS				
MECH	INSP										М	IPD ITEM	1 NUMBER
					CK THE F			TIONS O	F THE AIR		21-5	1–11-	-2A
		AIRPLA	NE NO	TE: 1	ASK APPL	_I CABL	E TO ALL	AIRPLA	NES EXCEPT THE				

767-400ER.

- 1. Low Limit Valve (LLV) Operational Test/Pneumatic Check (Fig. 201, 202)
 - A. Equipment
 - (1) Portable source of air commercially available.
 - (2) A21011-7, -8, Low Limit Valve Test Equipment (recommended)

NOTE: The following pressure gages are optional equipment to the gages included in the A21011 test equipment.

- (a) Pressure gage, 0 to 27.5 In-Hg (13.5 PSI) range and minimum accuracy of 0.5% - commercially available (optional)
- (b) Pressure gage, 0 to 95 In-H20 (3.43 PSI) range and minimum accuracy of 0.5% - commercially available (optional)
- (c) Pressure gages, 0 to 100 kPa (14.5 PSI) range and minimum accuracy of +/- 0.25% of full scale displacement - commercially available (optional)
- B. Parts

AIRLINE CARD NO.

TASK CARD

MECH INSP

AM	M		A	IPC	
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
201	5	Packing	21-51-01	10	58
201	5	Packing	21-51-01	10A	150
201	9	Packing	21-51-01	10	58
201	9	Packing	21-51-01	10A	150
201	12	Packing (left pack)	21-51-52	01	210
201	12	Packing (left pack)	21-51-52	01A	210
201	12	Packing (right pack)	21-51-52	01	550
201	12	Packing (right pack)	21-51-52	01A	550
201	23	Packing	21-51-01	10	58
201	23	Packing	21-51-01	10A	150

C. References

- (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
- (2) AMM 21-00-00/201, Air Conditioning General
- (3) AMM 24-22-00/201, Electrical Power Control
- (4) AMM 36-00-00/201, Pneumatic General
- D. Consumables
 - (1) D00130, Lubricant-Dry film MIL-L-23398
- E. Access
 - (1) Location Zones 135/136 Environmental Control Systems (ECS) Bay
 - (2) Access Panels 193NL/194LR ECS access doors
- F. Prepare for the Test
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Supply pneumatic power (AMM 36-00-00/201).

EFFECTIVITY

OPERATIONAL

PACK LOW LIMIT VALVE PNEUMATIC CHECK

21-51-11-2A 21-036-01

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1

AIRLINE CARD NO.

SAS BOEING 767 TASK CARD

MECH INSP

- (3) Turn the applicable (L or R) PACK selector, on the pilot's overhead panel, P5, to the OFF position.
 - (a) Make sure the PACK OFF light comes on.
- (4) Open the applicable (left or right) ECS access door, 193NL or 194LR (AMM 06-41-00/201).
- G. Low Limit Valve (LLV) Torque Motor Test
 - (1) Operate the air conditioning pack with the applicable PACK selector in the AUTO position (AMM 21-00-00/201).
 - (2) Look at the visual position indicator on the LLV (1).

<u>NOTE</u>: The visual position indicator must show the LLV in the closed position.

- (3) Disconnect the electrical connector from the L/R pack standby temperature sensor (pack temperature 2 sensor) TS5132/TS5134 (WDM 21-51-13, WDM 21-51-23).
 - (a) The pack standby temperature sensor is found in the water extractor outlet duct of each cooling pack (AMM 21-51-08/401).
- (4) Move the applicable PACK selector to the STBY-N position.
- (5) Make sure the visual position indicator for the LLV (1) starts to move to the open position.

NOTE: It can take 5 minutes before the LLV starts to open.
When the system is in the standby normal mode, the LLV is
used to keep the pack outlet temperature at 40 deg. F until
the compressor discharge temperature reaches 450 deg. F.
When the compressor discharge temperature reaches 450 deg. F,
the LLV will modulate to keep the compressor discharge
temperature at 450 deg. F.

- (a) If the LLV (1) valve does not start to open after 5 minutes, then there is a problem with the torque motor circuit.
- (6) Connect the electrical connector to the L/R pack standby temperature sensor (pack temperature 2 sensor) TS5132/TS5134.

EFFECTIVITY

OPERATIONAL PACK LOW LIMIT VALVE PNEUMATIC CHECK

21-51-11-2A

21-036-01

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AIRLINE CARD NO.



MECH INSP

- (7) Move the applicable PACK selector back to the AUTO position, and shut down the air conditioning pack (AMM 21-00-00/201).
- H. Low Limit Valve (LLV) Pneumatic Check
 - (1) Do the low pressure servo test.

WARNING: DO NOT TOUCH THE HOT AIR DUCT. WHILE THE PACKS ARE ON, THE TEMPERATURE OF THIS DUCT CAN CAUSE INJURIES TO PERSONS.

- (a) Disconnect the turbine muff sense-line (21) from the union (22).
 - 1) Remove the union (22) and the packing (23) from the LLV (1).
- (b) Disconnect the pack outlet sense-line (10) (COND AIR IN) from the union (11).
 - Remove the union (11) and the packing (12) from the LLV (1).
- (c) Use the A21011-7 Low Limit Valve Test Equipment, or equivalent to connect the source of air and the pressure gage to the turbine muff sense line connection (Fig. 202).
- (d) Turn the applicable (L or R) PACK selector, on the P5 panel, to the AUTO position.
 - 1) Make sure the PACK OFF light goes off.

CAUTION: DO NOT APPLY A PRESSURE OF MORE THAN 7.00 IN-Hg (95 IN-H2O; 23.6 KPa). A PRESSURE LARGER THAN THIS CAN CAUSE DAMAGE TO THE VALVE.

(e) Slowly increase the pressure at the turbine muff connection.

EFFECTIVITY

OPERATIONAL

PACK LOW LIMIT VALVE PNEUMATIC CHECK

21-51-11-2A

21-036-01

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AIRLINE CARD NO.

		TASK CARD
МЕСН	INSP	
		(f) Look at or feel the visual position indicator on the LLV (1).
		NOTE: To see the visual position indicator, use a flashlight or some other source of light. The valve position is shown by the direction of a small, red groove on the position indicator.
		(g) Make sure the LLV (1) starts to open when the pressure is at 1.69-1.84 In-Hg (23-25 In-H20; 5.7-6.2 kPa).
		(h) Make sure the LLV (1) is fully open when the pressure is at 6.12-6.56 In-Hg (83-89 In-H20; 20.7-22.1 kPa).
		NOTE: The LLV is fully open when the butterfly is a minimum of 70 degrees from full closed.
		(i) If the LLV (1) does not open correctly, do the steps that follow:
		 Feel for a leak at the mating surface of the cover assembly of the LLV (1).
		2) Turn the low pressure servo adjustment on the LLV (1).
		NOTE: If you turn the low pressure servo adjustment in a clockwise direction, it will increase the pressure to the LLV (1).
		(j) Slowly decrease the pressure at the turbine muff connection to 0.00 In-Hg (0.0 In-H20; 0.0 kPa).
		(k) Make sure the LLV (1) is fully closed.
		(l) Disconnect the A21011-7 Low Limit Valve-Test Equipment, and source of air from the turbine muff sense line connection.
		(m) If the LLV (1) did not operate correctly, replace the LLV (1).
	1	(n) If the LLV (1) did operate correctly, do the steps that follow:

EFFECTIVITY

TASK CARD

AIRLINE CARD NO.

MECH	INSP	
		1) Apply a light layer of dry lubricant to the unions (22,11).
		<u>NOTE</u> : You can use acetone to dilute the dry lube if necessary.
		2) To connect the turbine muff sense-line (21) to the LLV (1), do these steps:
		 a) Install the union (22) and new packing (23) on the LLV (1).
		b) Connect the turbine muff sense-line (21) to the union (22).
		To connect the pack outlet sense-line (10) (COND AIR IN) to the LLCV (1), do these steps:
		 a) Install the union (11) and new packing (12) on the LLV (1).
		b) Connect the pack outlet sense-line (10) to the union (11).
		(o) Turn the applicable (L or R) PACK selector, on the P5 panel, to the OFF position.
		1) Make sure the PACK OFF light comes on.
		(2) Do the high pressure servo test.
		WARNING: DO NOT TOUCH THE HOT AIR DUCT. WHILE THE PACKS ARE ON, THE TEMPERATURE OF THIS DUCT CAN CAUSE INJURIES TO PERSONS.
		(a) Disconnect the condensor inlet sense-line (3) from the union (4).
		 Remove the union (4) and the packing (5) from the LLV (1).
		2) Discard the packing (5).
		(b) Disconnect the condensor outlet sense-line (6) from the elbow (7).
EFF	ECTI	OPERATIONAL PACK LOW LIMIT VALVE PNEUMATIC CHECK

AIRLINE CARD NO.

		TASK CARD
MECH	INSP	
		 Loosen the nut (8) and remove the elbow (7), nut (8) and packing (9) from the LLV (1).
		2) Discard the packing (9).
		(c) Use the A21011-8 Low Limit Valve - Test Equipment, or equivalent to connect the source of air and the pressure gage to the condensor inlet sense line connection (Fig. 202).
		(d) Turn the applicable (L or R) PACK selector, on the P5 panel, to the AUTO position.
		1) Make sure the PACK OFF light goes off.
		CAUTION: DO NOT APPLY A PRESSURE MORE THAN 27.5 IN-Hg (373.2 IN-H2O; 93.1 KPa). A PRESSURE LARGER THAN THIS CAN CAUSE DAMAGE TO THE VALVE.
		(e) Slowly increase the pressure at the condensor inlet connection.
		(f) Look at or feel the position indicator on the LLV (1)
		NOTE: To see the valve position indicator, use a flashlight or some other source of light. The valve position is shown by the direction of a small, red groove on the position indicator.
		(g) Make sure the LLV (1) starts to open when the pressure is at 6.1-8.1 In-Hg (82.8-109.9 In-H20; 20.6-27.4 kPa).
		(h) Make sure the LLV (1) is fully open when the pressure is at 21.4-25.4 In-Hg (290.4-344.7 In-H20; 72.3-85.8 kPa).
		(i) If the LLV (1) does not operate correctly, do the steps that follow:
		 Feel for a leak at the mating surface of the cover assembly of the LLV (1).
		2) Turn the high pressure servo adjustment on the LLV (1).
		(j) Slowly decrease the pressure at the condensor inlet connection to 0.0 In-Hg (0.0 In-H20; 0.0 kPa).

EFFECTIVITY

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21-036-01

BOEING TASK CARD

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- (k) Make sure the LLV (1) is fully closed.
- (L) Disconnect the A21011-8 Low Limit Valve-Test Equipment, and source of air from the condensor inlet sense line connection.
- If the LLV (1) did not operate correctly, replace the LLV (1).

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- If the LLV (1) did operate correctly, do the steps that follow: (n)
 - Apply a light coat of dry lubricant to the union (4) and the elbow (7).

NOTE: You can use acetone to dilute the dry lube if necessary.

- To connect the condensor inlet sense-line (3) to the LLV (1), do these steps:
 - Install the union (4) and new packing (5) on the LLV (1).
 - b) Connect the condenser inlet sense-line (3) to the union (4).
- To connect the condensor outlet sense-line (6) (HEAT EX OUT) to the LLV (1), do these steps:
 - Install the elbow (7), nut (8) and new packing (9) on the LLCV (1).
 - b) Connect the condenser outlet sense-line (6) to the elbow (7).
- Put the airplane back to its usual condition
 - (1) Close the applicable (left or right) ECS access door, 193NL or 194LR (AMM 06-41-00/201).
 - (2) Turn the applicable (L or R) PACK selector, on the P5 panel, to the OFF position.
 - (a) Make sure the PACK OFF light comes on.
 - (3) Remove the pneumatic power, if it is not necessary (AMM 36-00-00/201).

EFFECTIVITY

OPERATIONAL

PACK LOW LIMIT VALVE PNEUMATIC CHECK

21-51-11-2A

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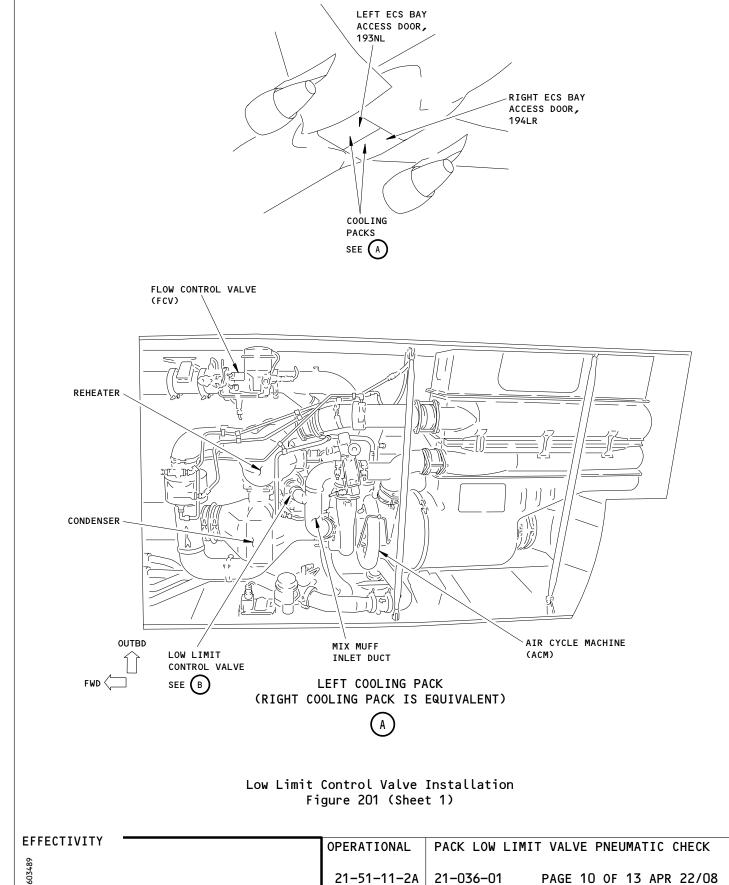
AIRLINE CARD NO. MECH INSP (4) Remove the electrical power, if it is not necessary (AMM 24-22-00/201). **EFFECTIVITY**

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AIRLINE CARD NO.

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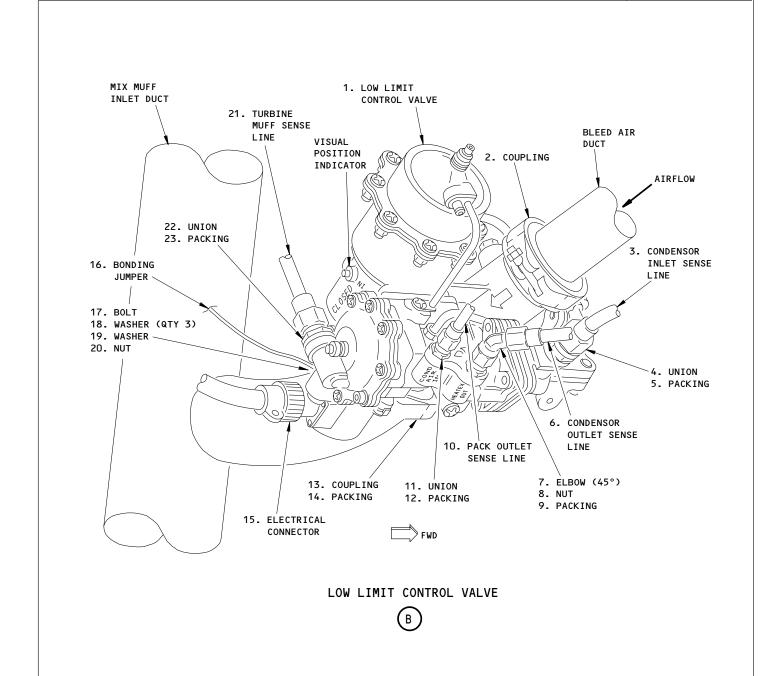


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BOEING 767 TASK CARD



Low Limit Control Valve Installation Figure 201 (Sheet 2)

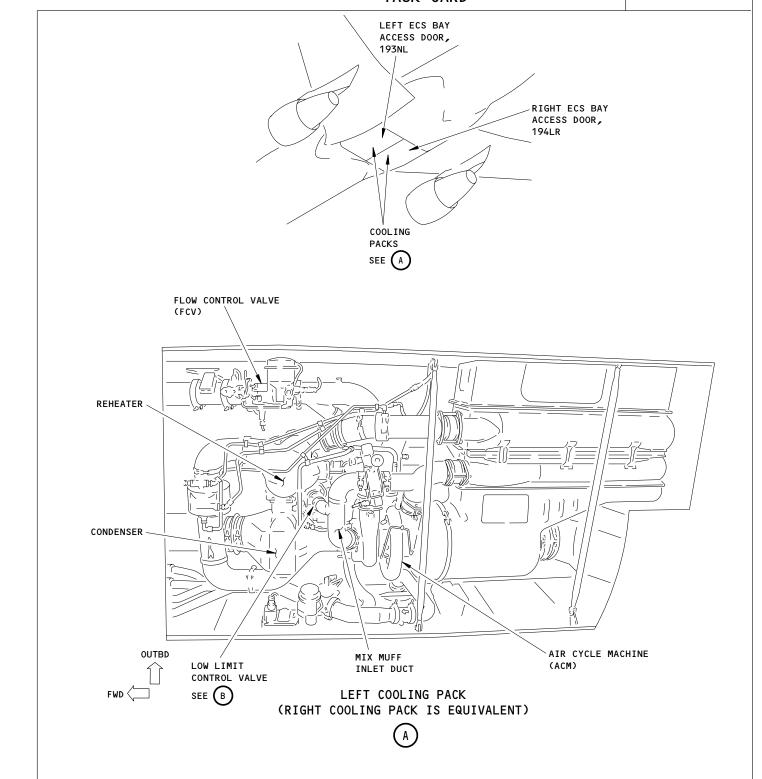
EFFECTIVITY OPERATIONAL PACK LOW LIMIT VALVE PNEUMATIC CHECK 21-51-11-2A 21-036-01 PAGE 11 OF 13 APR 22/08

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Low Limit Control Valve - Low and High Pressure Servo Test Figure 202 (Sheet 1)

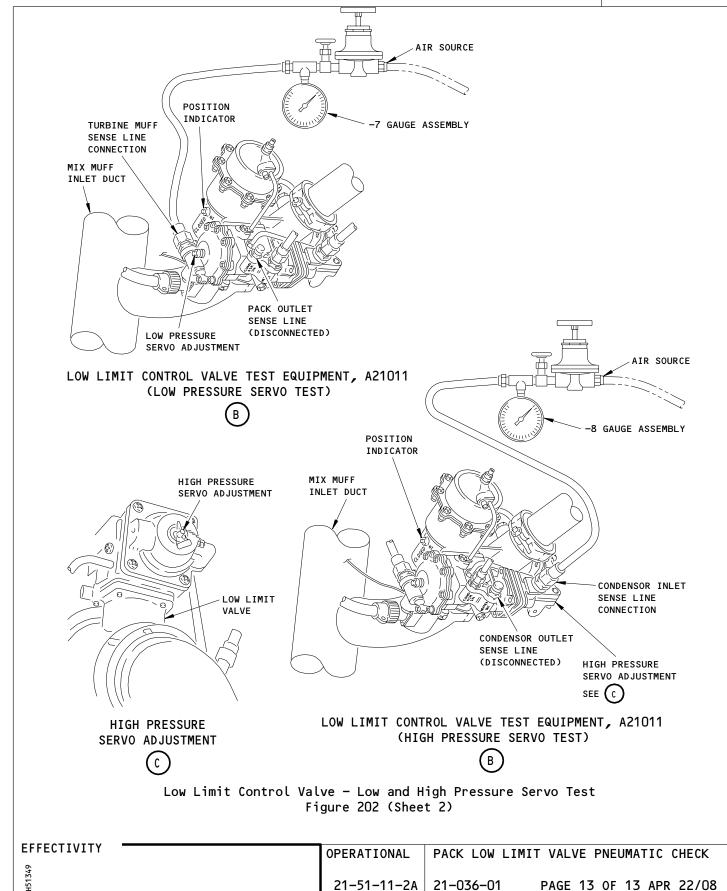
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AIRLINE CARD NO.

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BOEING 767 TASK CARD



STATION	
TAIL NO.	
DATE	1



BOEING CARD NO. 21-037-01

AIRLINE CARD NO.

SKILL	WORK AREA		REL	LATED TASK INTERVAL		PHASE		REV	REVISION
AIRPL	FWD CAR	GO			10		11212	011	APR 22/06
TASK				TITLE		STRUCTURAL ILLUSTRATION REFERENCE		APPLICABILITY	
CLEAN		E/E	COOLIN	NG LOW FLOW	DETECTORS			AIRPLAN	E ENGINE
								ALL	ALL
	ZONES					ACCESS PANELS			

ZONES

113AL 1231 821

MECH INSP

118 123

CLEAN E/E EQUIPMENT COOLING LOW FLOW DETECTORS.

21-58-17-2A

MPD ITEM NUMBER

ACCESS NOTE: SPECIAL ACCESS 1231 REQUIRES REMOVAL CARGO COMPARTMENT FLOOR PANELS PER MM 25-53-03.

- 1. Remove the Equipment Cooling Low Flow Detector (Fig. 201 or 202)
 - A. References
 - (1) AMM 06-41-00/201, Fuselage Access Doors and Panels.
 - (2) AMM 24-22-00/201, Electric Power Control
 - (3) AMM 52-33-00/201, Large Forward Cargo Door.
 - B. Access
 - (1) Location Zones
 - 118 Area outboard and above NLG wheel well (Right) Area below forward cargo compartment (Left) 123
 - (2) Access Panels 113AL Fwd equip. bay door
 - Procedure to remove the low flow detector
 - (1) Remove the electrical power (AMM 24-22-00/201).
 - (2) Get access to the low flow detector.
 - (a) For removal of the forward rack detector open the large forward cargo door 821 (AMM 52-33-00/201).

EFFECTIVITY

CLEAN

E/E COOLING LOW FLOW DETECTORS

21-58-17-2A

21-037-01

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21-037-01

AIRLINE CARD NO.

SAS BOEING 767 TASK CARD

MECH INSP

- 1) Find the detector below the cargo floor approximately two feet aft of the forward endliner panel.
- (b) For the removal of flight compartment detector, open the forward door 113AL and find the detector (AMM 06-41-00/201).
- (3) Remove the electrical connector from the low flow detector.
- (4) Remove the low flow detector from the boss.
- (5) Remove and discard the 0-ring from the low flow detector.
- (6) Put a cover on the hole in the duct to prevent the entry of unwanted objects.
- (7) Do the steps that follow to clean the Low Flow Detector.

CAUTION: BE CAREFUL WITH THE SENSOR. IF YOU ARE NOT CAREFUL WITH THE SENSOR YOU CAN DAMAGE IT.

- (a) Remove the dirt from the low flow detector.
- (b) Use a wet cloth over the probe end of the low flow detector.
- 2. Install Equipment Cooling Low Flow Detector
 - A. References
 - (1) AMM 06-41-00/201, Fuselage Access Doors and Panels.
 - (2) AMM 24-22-00/201, Electric Power Control
 - (3) AMM 52-33-00/201, Large Forward Cargo Door.
 - B. Procedure to install the low flow detector
 - (1) Remove the cover from the low flow detector boss.
 - (2) Use a new 0-ring and install the detector into the boss. Tighten and install the lockwire (AMM 20-10-23/401).
 - (3) Attach the electrical connector to the low flow detector.
 - (4) Supply the electrical power (AMM 24-22-00/201).

EFFECTIVITY

CLEAN

E/E COOLING LOW FLOW DETECTORS

21-58-17-2A

21-037-01

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			TASK CARD	
MECH	INSP			
		(5)	Put the EQUIP COOLING mode selector on the pilot's overhead P5 panel to AUTO.	
		(6)	Push and hold the EQUIP COOL test switch on the P61 panel to EQUIP COOL position. Make sure the EQUIP COOLING OVHT light on the P5 panel comes on.	
		(7)	Release EQUIP COOL test switch on the P61 panel.	
		(8)	Close the forward access door 113AL (AMM 06-41-00/201) or the forward cargo door 821 (AMM 52-33-00/201).	
			(a) Remove the electrical power if it is not necessary (AMM 24-22-00/201).	

EFFECTIVITY

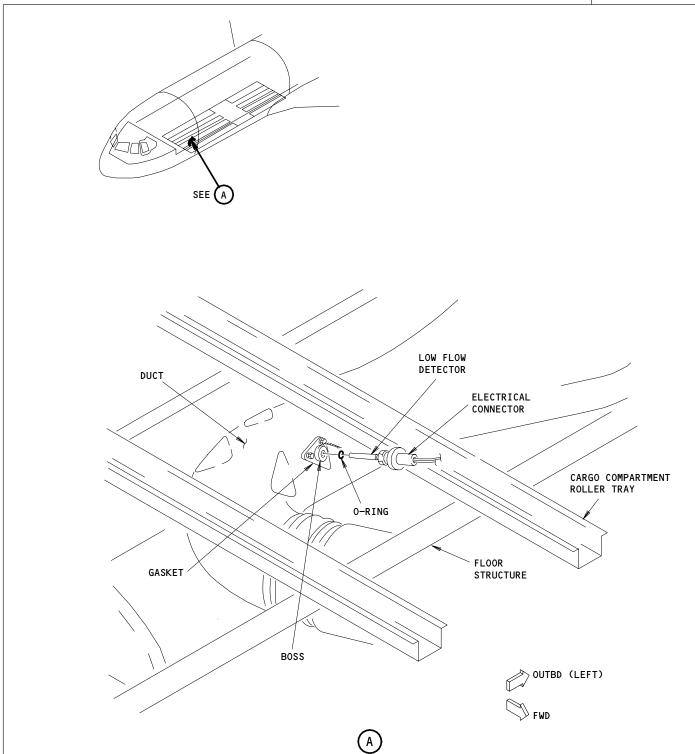
CLEAN

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AIRLINE CARD NO.

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Equipment Cooling Forward Rack Low Flow Detector Installation Figure 201

CLEAN E/E COOLING LOW FLOW DETECTORS

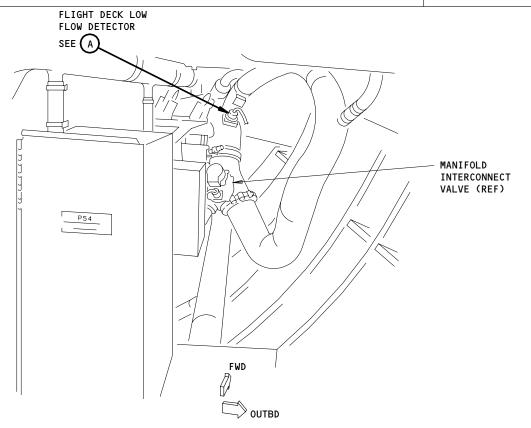
21-58-17-2A 21-037-01 PAGE 4 0F 5 NOV 10/88

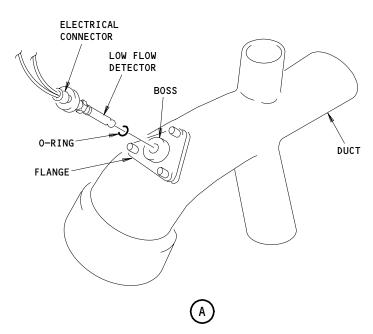
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AIRLINE CARD NO.





Equipment Cooling Flight Deck Low Flow Detector Installation Figure 202

EFFECTIVITY

CLEAN

E/E COOLING LOW FLOW DETECTORS

21-58-17-2A | 21-037-01

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STATION	
TAIL NO.	
DATE	

SKILL

WORK AREA



BOEING CARD NO. 21-038-01

AIRLINE CARD NO.

TASK CARD

PHASE

							REV	REVISION	
AIRPL	FWD CAR	G0		10		11212	012	DEC 22/04	+
TASK			TITLE		STRUCTURAL ILLUSTRATION RE	EFERENCE	AF	PLICABILITY	

INTERVAL

CLEAN E/E COOLING OVERHEAT SWITCH

AIRPLANE ENGINE

ALL ALL

ZONES ACCESS PANELS

RELATED TASK

123 211 212 1231 821

MECH INSP MPD ITEM NUMBER

CLEAN E/E EQUIPMENT COOLING OVERHEAT SWITCH.

21-58-26-2A

ACCESS NOTE: SPECIAL ACCESS 1231 REQUIRES REMOVAL OF FORWARD CARGO COMPARTMENT FLOOR PANELS PER MM REF 25-53-03.

Remove/Install The Overheat Switch (Fig. 201)

- A. References
 - (1) AMM 06-46-00/201, Entry, Service and Cargo Doors Access Doors and Panels
 - (2) AMM 20-10-23/401, Standard Practices Lockwires
 - (3) AMM 24-22-00/201, Electric Power Control
 - (4) AMM 27-61-00/201, Spoiler/Speedbrake Control System
- B. Access
 - (1) Location Zone 123 Area Below Forward Cargo Compartment (left)
- C. Prepare for Removal
 - (1) Open forward cargo compartment door 821 (AMM 52-33-00/201).
 - (2) Find the switch below the cargo floor.
 - (3) Remove electrical power (AMM 24-22-00/201).
 - (4) Remove the electrical connector from the switch.
 - (5) Remove the switch from the boss.

CLEAN E/E COOLING OVERHEAT SWITCH

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AIRLINE CARD NO.

SAS



21-038-01

- (6) Discard the O-ring.
- (7) Put a cover in the hole in the duct to prevent the entry of unwanted objects.
- D. Install the Overheat Switch
 - (1) Remove the cover from the switch hole.
 - (2) Put a new 0-ring on the switch.
 - (3) Install the switch into the boss on the duct and tighten the switch.
 - (4) Install lockwire (AMM 20-10-23/401).
 - (5) Install the electrical connector to the switch.
 - (6) Close forward cargo compartment door 821 (AMM 52-33-00/201).
- Clean the Overheat Switch
 - A. Access
 - (1) Location Zone 123 Area Below Forward Cargo Compartment (left)
 - B. Procedure to Clean the Switch
 - (1) Do the procedure to remove the overheat switch.

CAUTION: BE CAREFUL WHEN YOU REMOVE THE SWITCH. DAMAGE TO THE SWITCH CAN OCCUR, IF YOU ARE NOT CAREFUL.

- (2) Remove the dirt from the switch.
- (3) Clean the probe end of the switch with a wet cloth.
- (4) Do the procedure to install the switch.

EFFECTIVITY

CLEAN

E/E COOLING OVERHEAT SWITCH

21-58-26-2A

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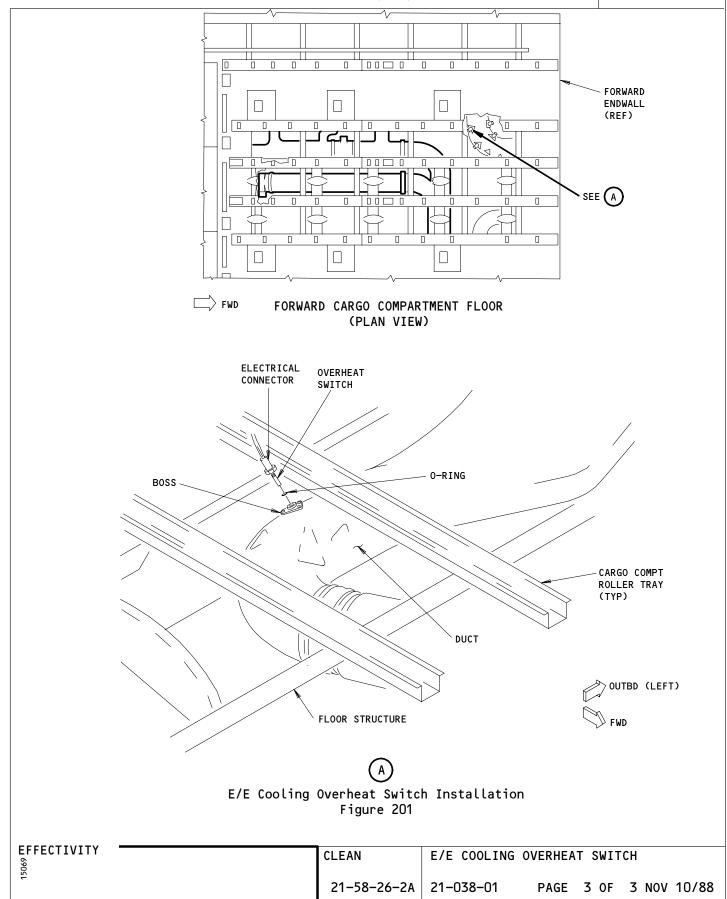
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AIRLINE CARD NO.

SAS





STATION	
TAIL NO.	
DATE	\exists

WORK AREA



BOEING CARD NO. 21-041-01

AIRLINE CARD NO.

TASK CARD

ALL

REVISION REV 20 011 APR 22/08 AIRPL FWD CARGO 12424 STRUCTURAL ILLUSTRATION REFERENCE

INTERVAL

APPLICABILITY
ANE ENGINE AIRPLANE

ALL

MPD

PHASE

ZONES ACCESS PANELS

E/E COOLING SUPPLY AND EXHAUST FANS

121 122

CLEAN/INSP

1211 1221 821

MPD ITEM NUMBER

MECH INSP

SKILL

CLEAN E/E COOLING SUPPLY AND EXHAUST FANS.

RELATED TASK

21-58-06-7A

ACCESS NOTE: SPECIAL ACCESS 1211 REQUIRES REMOVAL OF

FORWARD CARGO COMPARTMENT LEFT SIDEWALL

PANELS PER MM REF 25-52-01.

SPECIAL ACCESS 1221 REQUIRES REMOVAL OF FORWARD CARGO COMPARTMENT RIGHT SIDEWALL

PANELS PER MM REF 25-52-01.

Forward Equipment Cooling Supply/Exhaust Fans Cleaning

Α. General

(1) This task is only applicable to the forward equipment cooling supply and exhaust fans with p/n 732591 series (CMM 21-58-02). The following instructions are based on the supplier component maintenance manual CMM 21-58-02.

Equipment B.

- (1) Clean, Lint-free Absorbent Cloths, commercially available
- (2) Stiff-bristled, Non-metallic Brush, commercially available
- Wooden dowel, 0.5 inch (12.7 millimeters) in diameter by 6 inches (142 millimeters) in length

C. Consumable Materials

- (1) Isopropyl Alcohol (Federal Specification TT-I-735), commercially available
- (2) Cleaning Compound Alkaline Cleaner (pH 8-9.5), commercially available

EFFECTIVITY CLEAN/INSP

E/E COOLING SUPPLY AND EXHAUST FANS

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SAS FOR TASK CARD

MECH INSP

(3) Mobil Grease 28 (Military Specification MIL-G-81322A), Mobil Oil Corp.

D. Parts

- (1) Self-locking nut, p/n MS21043-6 (quantity 1), commercially available
- (2) Screw-Cap-Socket Head, p/n NAS1351-3-10P (quantity 8), commercially available
- E. References
 - (1) AMM 21-58-06/401, Forward Rack Supply and Exhaust Fans
- F. Prepare for Cleaning
 - (1) Remove the supply/exhaust fan (AMM 21-58-06/401).
- G. Fan Disassembly
 - (1) Disassemble the fan rotor housing from the fan stator housing as follows:
 - (a) Remove the eight (8) screws and washers at the split-line between the fan rotor housing and the fan stator housing.
 - 1) Discard the eight (8) screws.
 - (b) Carefully separate the fan rotor housing from the fan stator housing and be careful as you remove the fan rotor housing over the impeller, because the clearances between the impeller blades and the fan rotor housing are within just a few thousandths of an inch.
 - (2) Disassemble the fairing and impeller from the shaft of the fan rotor assembly:
 - (a) To prevent rotation of the impeller and the fan, insert (wedge) a wooden dowel, approximately 0.5 inch (12.7 millimeters) in diameter by 6 inches (142 millimeters) in length, between any two blades of the impeller and the vanes in the stator housing.
 - Make sure the wooden dowel contacts the blades of the impeller and the vanes of the stator housing assembly in such a position that the dowel will minimize the stresses transferred to the blades and vanes in order to prevent potential fan damage.

EFFECTIVITY

CLEAN/INSP | E/E COOLING SUPPLY AND EXHAUST FANS

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S FOEING 767 TASK CARD

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MECH	INSP				TASK CARD
				(b)	Remove the self-locking nut and washer from the shaft of the rotor assembly.
					1) Discard the self-locking nut.
				(c)	Remove the fairing, impeller, rectangular key, and shims (if installed) from the shaft of the rotor assembly.
				(d)	Remove the wooden dowel.
		н.	Fan	Clean	ning
			(1)	Clea	n the metal non-electrical parts as follows:
				(a)	Wash all metal non-electrical parts with cleaning solution of alkaline cleaner or isopropyl alcohol and water.
				(b)	Use a stiff-bristled, non-metallic brush to loosen caked dirt from exterior surfaces.
				(c)	Rinse the parts with clean cold water.
				(d)	Dry all parts using clean, lint-free cloths and/or compressed, clean, dry air.
			(2)	Clea	n the electrical parts as follows:
				(a)	Wipe all electrical parts with clean, lint-free cloth moistened with isopropyl alcohol.
				(b)	Dry all parts using clean, lint-free cloths and/or compressed, clean, dry air.
		I.	Fan	Assem	ıbly
			(1)		emble the impeller and fairing to the shaft of the fan rotor embly as follows:
				(a)	Install the shims (if removed), rectangular key, and impeller onto the shaft of the fan rotor assembly.
				(b)	Install the fairing onto the hub of the impeller, and align the timing marks on the fairing and impeller to within 0.030 inch

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(0.76 millimeter).

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			TASK CARD
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(c) To prevent rotation of the impeller and the fan, insert (wedge) a wooden dowel, approximately 0.5 inch (12.7 millimeters) in diameter by 6 inches (142 millimeters) in length, between any two blades of the impeller and the vanes in the stator housing.

- To prevent potential fan damage, make sure the wooden dowel contacts the blades of the impeller and the vanes of stator housing assembly in such a position that the dowel will minimize the stresses transferred to the blades and vanes.
- (d) Lubricate the threads of a new self-locking nut (p/n MS21043-6) with Mobil Grease 28.
- Install the new self-locking nut (p/n MS21043-6) and washer to secure the fairing and impeller to the shaft of the rotor assembly.
 - Tighten the new self-locking nut 80-100 pound-inches (9.04-11.30 newton-meters).
 - Remove the wooden dowel.
- (2) Assemble the fan rotor housing to the fan stator housing as follows:
 - Be careful as you install the fan rotor housing over the impeller, because the clearances between the impeller blades and the fan rotor housing are within just a few thousandths of an inch.
 - Carefully push the fan rotor housing towards the fan stator housing, then align and press the mounting flanges of each housing together in a simulated torque condition.
 - Install eight (8) new screws (p/n NAS1351-3-10P) and washers to secure the fan rotor housing to the fan stator housing, but do not tighten the screws.
 - (d) Use a feeler gauge to measure the clearances between the inside of the fan rotor housing at the leading edge, mid-point, and trailing edge of each impeller blade.
 - For fan p/n 732591/E/F/G, make sure the clearance at the leading edge of the impeller blade is 0.020+/-0.005 inch (0.508+/-0.127 millimeter)

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E/E COOLING SUPPLY AND EXHAUST FANS

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2) For fan p/n 732591/A/B/C/D, make sure the clearance at the leading edge of the impeller blade is 0.015+/-0.005 inch (0.381+/-0.127 millimeter). (e) Make sure the timing marks on the fairing and the impeller at still within 0.030 inch (0.76 millimeter). (f) Tighten the eight (8) new screws 51-56 pound-inches		TASK CARD
leading edge of the impeller blade is 0.015+/-0.005 inch (0.381+/-0.127 millimeter). (e) Make sure the timing marks on the fairing and the impeller a still within 0.030 inch (0.76 millimeter). (f) Tighten the eight (8) new screws 51-56 pound-inches (5.8-6.3 newton-meters) to secure the fan rotor housing to the fan stator housing. J. Return the Airplane to Normal Configuration	ECH INSP	TAGE CARD
still within 0.030 inch (0.76 millimeter). (f) Tighten the eight (8) new screws 51-56 pound-inches (5.8-6.3 newton-meters) to secure the fan rotor housing to the fan stator housing. J. Return the Airplane to Normal Configuration		leading edge of the impeller blade is 0.015+/-0.005 inch
(5.8-6.3 newton-meters) to secure the fan rotor housing to the fan stator housing. J. Return the Airplane to Normal Configuration		(e) Make sure the timing marks on the fairing and the impeller are still within 0.030 inch (0.76 millimeter).
		(5.8-6.3 newton-meters) to secure the fan rotor housing to the
(1) Install the supply/exhaust fan (AMM 21-58-06/401).		J. Return the Airplane to Normal Configuration
		(1) Install the supply/exhaust fan (AMM 21-58-06/401).

EFFECTIVITY

ST	ATION							B0E	ING CAR	D NO.
TAIL NO.					OEIN	G		21-0	43-0′	1
		S	SAS		767			AIRI	INE CAR	D NO.
I	DATE	•	,,,,	•	TASK CARD					
					IASK CAKD					
SKILL	WORK ARE	AREA RELATED TASK		SK INTERVAL		PHASE	MPD REV	l	SK CARD VISION	
AIRPL	ECS BAY			· ·	1 C		11212	011	APR	22/01
TASK		<u>.</u>	TITLE			STRUCTURAL ILLUSTRATION RE	FERENCE		PLICABI	
CHECK/INSP TR:		TRIM AIR	SUPPLY C	HECK VALVE	ES			AIRPLAN	E	ENGINE
								NOT	E	ALL
	ZONES					ACCESS PANELS				
135	136		193NL	194LR						

MECH INSP MPD ITEM NUMBER

VISUALLY CHECK CONDITION OF TRIM AIR SUPPLY CHECK VALVES (REMOVAL FROM DUCT REQUIRED).

21-61-05-6A

AIRPLANE NOTE: TASK APPLICABLE TO ALL AIRPLANES EXCEPT THE 767-400ER.

TRIM AIR SUPPLY CHECK VALVES - INSPECTION/CHECK

- 1. Trim Air Supply Check Valve Inspection (Fig. 601)
 - A. References
 - (1) AMM 21-61-05/401, Trim Air Supply Check Valves
 - B. Access
 - (1) Location Zone 135 Environmental control system (ECS) bay, Left
 - (2) Access Panel 193NL ECS bay access door, Left
 - C. Prepare for Inspection
 - (1) Remove the trim air supply check valve (AMM 21-61-05/401).
 - D. Do a check of the Trim Air Supply Check Valve
 - (1) Make sure the valve body does not have a crack.
 - (2) Make sure the valve body does not have corrosion.
 - (3) Manually open and close the flappers.

EFFECTIVITY	CHECK/INSP	TRIM AIR SUPPLY CHECK VALVES	
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	(a) Make sure the flappers are free to move.
	(b) Make sure the flappers touch equally with the valve body in the closed position.
(4)	Open the flappers.
	(a) Make sure the surfaces of the valve body, and the flappers that touch those surfaces, do not have damage.
	(b) Make sure there is no sign of leakage.
(5)	Make sure the flappers are not bent.
(6)	Make sure the flappers do not have cracks.
(7)	Install the trim air supply check valve (AMM 21-61-05/401).

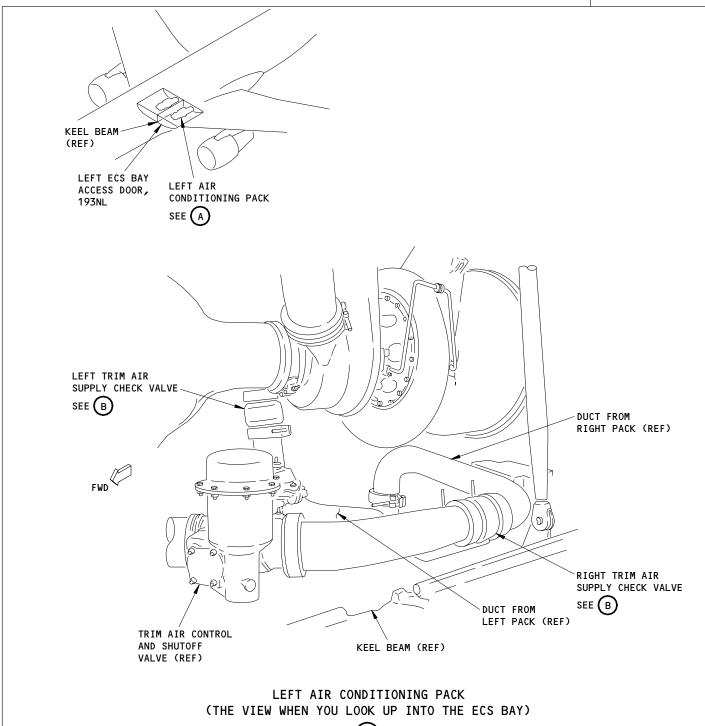
EFFECTIVITY

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Trim Air Supply Check Valve Figure 601 (Sheet 1)

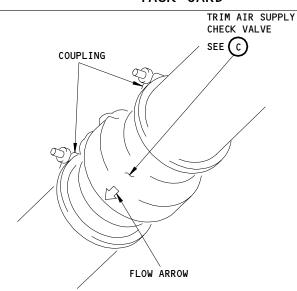
EFFECTIVITY	CHECK/INSP	TRIM AIR SUF	PPLY CHE	CK VA	VES
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<u>.</u>	21-61-05-6A	21-043-01	PAGE	3 OF	4 APR 22/01
BOEING PROPRIETARY - Copyright	(C) - Unpublished Work -	See title page for de	etails.		

AIRLINE CARD NO.

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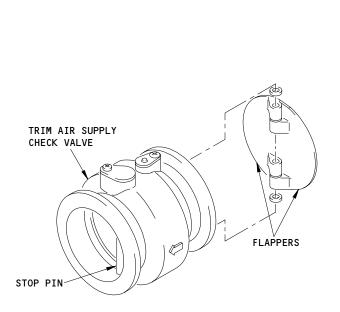
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BOEING 767 TASK CARD



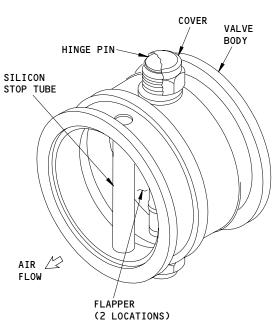
TRIM AIR SUPPLY CHECK VALVE





TRIM AIR SUPPLY CHECK VALVE (P/N S210T130-71)

(c)



TRIM AIR SUPPLY CHECK VALVE (P/N S210T130-76)



Trim Air Supply Check Valve Figure 601 (Sheet 2)

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CHECK/INSP

TRIM AIR SUPPLY CHECK VALVES

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ST	ATION							BOE	ING CARD NO.
TA	IL NO.				BOEIN	G		21-0	46-01
		5	SAS		767			AIR	LINE CARD NO.
1	DATE				TASK CARD				
SKILL	WORK ARI	EA RI	ELATED TASK		INTERVAL		PHASE	MPD REV	TASK CARD REVISION
AIRPL	ECS BAY	,			1C		11212	011	DEC 22/05
TA	SK	·	TIT	LE		STRUCTURAL ILLUSTRATION RE	FERENCE	AIRPLAN	PLICABILITY E ENGINE
OPER/	ATIONAL	WATER SPR	AY NOZZL	ES				AIRI LAN	ENGINE
								ALL	ALL
	ZONES					ACCESS PANELS			
135	136 212		193NL	194LR					

MECH INSP MPD ITEM NUMBER

OPERATIONALLY CHECK THE WATER SPRAY NOZZLES FOR THE AIR CONDITIONING PACKS.

21-53-05-6A

- 1. Water Spray Nozzle Check (Fig. 601)
 - A. References
 - (1) AMM 06-41-00/201, Fuselage Access Doors and Panels
 - (2) AMM 24-22-00/201, Electrical Power Control
 - (3) AMM 36-00-00/201, Pneumatic General
 - B. Access
 - (1) Location Zones 135/136 Environmental control systems (ECS) bay
 - (2) Access Panels
 193NL/194LR ECS bay access doors
 - C. Spray Nozzle System Inspection
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Supply pneumatic power to the air conditioning packs using the APU or an equivalent pneumatic source (AMM 36-00-00/201).
 - (3) Turn the L and R PACK selectors to the AUTO position.
 - (a) Make sure that the PACK OFF light goes off.
 - (4) Put the TRIM AIR switch to the ON position.
 - (5) Turn all the zone temperature selectors to the AUTO-C (fully cold) position.

OPERATIONAL WATER SPRAY NOZZLES
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BOEING

spray system (AMM 06-41-00/201).

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		(6)	0pen	the	ECS	bay	doors	193NL	and	194LR	to	get	access	to	the	water

- (7) Remove the access panel on the bottom of each ram air inlet duct adjacent to each secondary heat exchanger.
- (8) Use a flashlight and look at the water spray pattern from the water spray nozzle in each ram air inlet duct.

The quantity of the water is a function of the air humidity and the pack air flow.

- (a) Make sure the water spray pattern from each water spray nozzle is approximately the same.
- Make sure the water spray patterns are approximately circular and not a jet blast.
- If the water spray patterns are not satisfactory, examine these parts for leakage or blockage:
 - 1) The water spray nozzle
 - The air and water supply lines from the water extractor to the water spray nozzle
 - The water extractor
- (9) Turn the L and R PACK selectors to the OFF position.
- Remove the water drain line at the bottom of each water extractor that comes from the secondary water separator.
- (11) Turn the L and R PACK selectors to the AUTO position.
- (12) Feel for air or water to come out of the water drain line that you disconnected.
- Feel for air or water to come out of the hole in the water extractor (13) where you disconnected the water drain line.
- (14) If you did not feel air or water, examine these parts for leakage or blockage:
 - (a) The water extractor

EFFECTIVITY	OPERATIONAL	WATER SPRAY	${\tt NOZZLES}$			
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		(b) The water drain line from the water extractor to the secondary water extractor
		(c) The secondary water extractor
		D. Put the airplane back to its usual condition
		(1) Turn the L and R PACK selectors to the OFF position.
		(2) Put the TRIM AIR switch to the OFF position.
		(3) Install the access panels on the bottom of the ram air inlet ducts.
		(4) Close the ECS bay doors 193NL and 194LR (AMM 06-41-00/201).
		(5) Remove pneumatic power if it is not necessary (AMM 36-00-00/201).
		(6) Remove electrical power if it is not necessary (AMM 24-22-00/201).

SAS



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AIRLINE CARD NO.

