STA	TION									BOE	ING CAR	D NO.
TAI	L NO.		•	۸.		BO)E/A	G		24-R		
D	ATE		5	AS			767			AIR	LINE CAF	RD NO.
٠	2					TAS	SK CARD					
SKILL	WORK ARE	EA .	REL	ATED TASK			INTERVAL		PHASE	MPD REV	1	ASK CARD EVISION
ENGIN	ENGIN/S	TRUT								004	APR	22/07
TAS REPLA		INTE	GRATED	DRIVE	GENER	RATOR		STRUCTURAL ILLUSTRATION RE	FERENCE	AIRPLAN	PPLICABI IE	ILITY ENGINE
										NOT	<u>E</u>	ALL
411	zones 421							ACCESS PANELS				
			1									

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REPLACE THE INTEGRATED DRIVE GENERATOR.

24-11-01-4A

MPD ITEM NUMBER

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

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

- Remove the Integrated Drive Generator (Fig. 401)
 - A. Equipment
 - (1) Hoist Adapter, IDG
 - (a) Option 1: Hoist Adapter, IDG A71013-55
 - (b) Option 2: Hoist Adapter, IDG A71013-32
 - (c) Option 3: Hoist Adapter, IDG A71013-82
 - (2) Hoist Assembly
 - (a) Option 1 or 3: Lifting Fixture, engine accessory A71015-107
 - (b) Option 2: Hein Werner Model 62 Jack with,
 - 1) Spacer Assembly, A71013-19 and
 - 2) Spacer Assembly, A71013-40 and
 - 3) Spacer Assembly, A71013-45

REPLACE INTEGRATED DRIVE GENERATOR

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- (3) 1.5 gallon container to collect oil drainage.
- (4) IDG oil overflow drain hose with outlet adapter Ozone OMP2505-3
- References B.
 - (1) AMM 24-11-02/201, Scavenge Filter
 - (2) AMM 71-11-04/201, Fan Cowl Panels
 - (3) AMM 71-11-06/201, Core Cowl Panels
 - (4) AMM 78-31-00/201, Thrust Reverser System
- C. Prepare for Removal
 - (1) Open these circuit breakers on the main power distribution panel, P6, and attach D0-N0T-CLOSE tags:
 - (a) 6B5, L GEN DRIVE DISC
 - (b) 6B6, R GEN DRIVE DISC

DO THE DEACTIVATION PROCEDURE TO PREVENT THE OPERATION OF THE <u>WARNING</u>: THRUST REVERSER. THE ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (2) Do the deactivation procedure for the thrust reverser for ground maintenance (AMM 78-31-00/201).
- (3) Open the fan cowl panels (AMM 71-11-04/201).
- (4) Open the core cowl panels (AMM 71-11-06/201).

OBEY THE INSTRUCTIONS IN THE PROCEDURE TO OPEN THE THRUST WARNING: REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (5) Open the thrust reversers (AMM 78-31-00/201).
- (6) Remove the pressure from the IDG oil cooling system:

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INTEGRATED DRIVE GENERATOR

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- (a) Remove the dust cover from the overflow drain coupling on the IDG.
- (b) Put the container below the IDG to catch the oil.
- (c) Put the end of the overflow drain hose in the container.
- Connect the overflow drain hose to the overflow drain coupling on the IDG, and allow the surplus oil to flow into the container.
- (e) Remove the overflow drain hose.

Procedure D.

- (1) Drain the IDG cooling oil as follows:
 - (a) Put the container below the IDG to catch the oil.

WARNING: USE EXTREME CARE WHEN YOU DRAIN THE IDG OIL. WEAR SPLASH GOGGLES, INSULATED GLOVES, AND PROTECTION GEAR. CONTACT WITH HOT OIL CAN CAUSE SERIOUS INJURY.

- (b) Remove the case drain plug (1) and 0-ring (2).
- (c) Allow the oil to flow from the IDG into the container.
- (d) Discard the O-ring.
- Remove and inspect the scavenge filter (AMM 24-11-02/201).
 - (a) Lubricate and install a new 0-ring (2) on the case drain plug (1).
 - (b) Install case drain plug (1). Tighten to 55-75 pound-inches.
- Remove the thermal relief valve drain line as follows:
 - (a) Disconnect the thermal relief line union. Discard O-ring.
 - (b) Remove the thermal relief drain line.
- (4) Disconnect the oil-in and oil-out lines from the IDG as follows:

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HOT OIL MAY FLOW OUT OF THE DISCONNECTED OIL LINES. WEAR WARNING: SPLASH GOGGLES, INSULATED GLOVES, AND PROTECTION GEAR. HOT OIL CAN CAUSE INJURY.

- Disconnect the oil-in and oil-out lines from the IDG. Allow the oil from the lines to drain into the container.
- Cap the oil-in line and remove the oil-out flex tube from the engine.
- Remove the oil-in unions (16) and oil-out unions (18). Keep the unions (16, 18) for subsequent installation. Discard the 0-rings.
- Remove the pressure fill/drain tubing as follows:
 - Disconnect the pressure fill tube assy coupling nuts at the IDG and the IDG fill/drain panel.
 - (b) Remove the tube assy (34). Keep for subsequent installation.
 - Remove the elbow (35), union (36) and 0-ring (37) from the IDG. Keep the elbow (35) and union (36) for subsequent installation. Discard 0-ring (37).
 - Install a plug in the IDG pressure fill opening.
 - Disconnect the overflow drain tube assy (28). Keep for subsequent installation.
 - Remove the elbow (27), union (30) and 0-ring (29) from the IDG. Keep the elbow (27) and union (30) for subsequent installation. Discard the 0-ring (27).
 - (g) Install a plug in the IDG overflow drain opening.
- Remove the fill/drain panel as follows:
 - (a) Remove the nut and washer holding the IDG oil fill/drain panel to the oil-in fitting.
 - Remove the nuts and washers holding the IDG oil fill/drain panel to the IDG. Remove the fill/drain panel and keep for subsequent installation.

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			(c)	Remove the oil-in fitting (16) and 0-ring (17). Keep the fitting for subsequent installation. Discard the 0-ring.
		(7)	Remo	ve the electrical connectors:
			(a)	Remove the wiring harness electrical connectors D10964 and D10966 from the IDG.
			(b)	Install protective caps on the IDG and ship side electrical connectors.
		(8)	Remo	ve the power leads from the IDG:
			(a)	Remove the two screws (3) and the two washers (4) which attach the terminal block cover (7) to the IDG.
			(b)	Remove the spiralock nuts (5), the self-locking nuts, or the terminal nuts and washers which are installed on the terminal studs.
			(c)	Make sure the fanning strip is not damaged or loose over the power feeder cables.
			(d)	Make sure the phase color sleeves on the power feeder cables are not damaged or missing.
			(e)	If the fanning strip or phase color sleeves are damaged or missing, identify the generator power wires for the subsequent installation.
			(f)	Remove the four power leads and identify the leads for subsequent installation.
			(g)	Install the spiralock nuts (5), the self-locking nuts, or the washers and terminal nuts on the terminal studs (tighten by hand).
			(h)	Install the terminal block cover (7) with the washers (4) and the screws (3).
	(9)		Remo	ve the IDG.
			(a)	Move the lift fixture under the IDG. Lift the hoist adapter to touch the IDG.

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<u>CAUTION</u>: DO NOT SUPPLY MORE LIFT THAN NECESSARY TO HOLD THE IDG. EXCESSIVE LIFT OR FAILURE TO HOLD THE IDG PROPERLY CAN

DAMAGE THE INPUT SEAL.

(b) Attach the hoist to the IDG.

- (c) Lift the adapter to take some of the weight of the IDG.
- (d) Remove the lockwire from the QAD tension bolt.
- (e) Loosen the tension bolt to allow movement of the IDG.
- (f) Adjust the hoist adapter to fully hold the weight of IDG and remove any weight on the QAD and the IDG input shaft.
- (g) Loosen the QAD tension bolt until the stripe marks on the QAD ring and IDG housing align. The QAD kit is in the open position and clamping lugs will be disengaged when the stripe marks align.

CAUTION: DO NOT USE THE IDG INPUT SHAFT TO LIFT THE IDG. THIS WILL DAMAGE THE SHAFT. GUIDE THE IDG OUT IN A STRAIGHT LINE. IF YOU BIND THE INPUT SHAFT YOU CAN DAMAGE THE IDG INPUT SEAL.

(h) Pull the hoist adapter straight back to remove the IDG from QAD clamping lugs, and spline the shaft from engine gearbox.

NOTE: If the QAD ring rotates off the alignment marks on the adapter plate, the IDG cannot be removed. Turn the QAD tension bolt to maintain alignment during removal if necessary.

- (i) Plug the oil-in and oil-out openings on IDG.
- (j) Remove and discard the 0-ring (13) from the IDG input spline.
- Install Integrated Drive Generator (Fig. 401)

<u>NOTE</u>: To prevent foreign material from entering the IDG, leave the plugs in the ports until the fittings are to be installed.

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INTEGRATED DRIVE GENERATOR

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		TASK CARD
H INSP		,
	Α.	Equipment
		(1) Hoist Adapter, IDG
		(a) Option 1: Hoist Adapter, IDG - A71013-55
		(b) Option 2: Hoist Adapter, IDG A71013-32
		(c) Option 3: Hoist Adapter, IDG A71013-82
		(2) Hoist Assembly
		(a) Option 1 or 3: Lifting Fixture, engine accessory A71015-107
		(b) Option 2: Hein Werner Model 62 Jack with,
		1) Spacer Assembly, A71013-19 and
		2) Spacer Assembly, A71013-40 and
		3) Spacer Assembly, A71013-45
	В.	References
		(1) AMM 12-13-03/301, Integrated Drive Generator (IDG)
		(2) AMM 20-10-23/401, Lockwires
		(3) AMM 24-11-00/501, Integrated Drive Generator.
		(4) AMM 24-11-03/401, Quick Attach Detach (QAD) Coupling
		(5) AMM 24-11-03/601, Quick Attach/Detach (QAD) Coupling
		(6) AMM 71-00-00/201, Power Plant - Maintenance Practices
		(7) AMM 71-11-04/201, Fan Cowl Panels
		(8) AMM 71-11-06/201, Core Cowl Panels
		(9) AMM 71-71-00/601, Engine Vents and Drains - Inspection/Check
		(10) AMM 78-31-00/201, Thrust Reverser System
	С.	Parts

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(1) Refer to the AIPC for part numbers and effectivities of items in the table that follows.

АММ			ļ	AIPC	
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
401	2 13 17 19 29 37	O-ring O-ring O-ring O-ring O-ring O-ring O-ring	24-11-01	11 11 02 02 02 02	25 235 60 165 70 65

- D. Consumable Materials
 - (1) Oil Aircraft turbine engines, synthetic base, MIL-L-23699 or MIL-L-7808 (AMM 20-30-04/201).
- E. Access
- F. Prepare for Installation
 - (1) Drain the IDG of the preservation oil.

<u>NOTE</u>: The IDG will have preservation oil in the case when it is delivered. This oil should be replaced with new oil before operation of the IDG.

- (a) Remove the IDG case drain plug and allow the oil to drain into a suitable container.
- (b) Install the IDG case drain plug.
- (2) Visually examine the QAD ring for damage.
- (3) Lubricate and install the new 0-ring (13) on the IDG input spline.
- G. Procedure
 - (1) Install the IDG as follows:

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		TASK CARD
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		CAUTION: DO NOT ALLOW THE IDG TO HANG ON THE INPUT SHAFT DURING INSTALLATION. FAILURE TO SUPPORT THE IDG PROPERLY CAN DAMAGE THE INPUT SEAL.
		(a) Use the hoist adapter and lift fixture, to put the IDG toward the mounting pad and hold it so that no weight is put on the input shaft.
		(b) Turn the QAD tension bolt to open the QAD ring. Align the mark on the QAD ring with the mark on the QAD engine adapter plate.
		CAUTION: THE IDG MUST BE MOUNTED CORRECTLY. IF THE IDG IS NOT MOUNTED CORRECTLY DAMAGE TO MATING PARTS CAN OCCUR.
		(c) Put the IDG input spline into the gearbox mating spline.
		(d) Make sure the locating dowl pin on the IDG is aligned with a hole in QAD ring.
		(e) Position the IDG to allow the lugs on the IDG input flange to mate with QAD ring openings.
		NOTE: If the QAD ring moves off the alignment marks on the adapter plate, the IDG cannot be installed. Turn the QAD tension bolt to maintain alignment during installation if necessary.
		(f) Lubricate the threads on the tension bolt.
		CAUTION: MAKE SURE THE QAD RING DOES NOT BIND OR SNAG WHEN YOU TIGHTEN IT, TO PREVENT QAD DAMAGE.
		(g) Tighten the QAD tension bolt as follows:

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1) Torque the QAD tension bolt to 240-264 pound-inches.

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TAP THE QAD RING ONLY IN THE AREA SHOWN IN FIG. 401. CAUTION: DAMAGE TO THE QAD RING COULD RESULT IF YOU TAP IT

WITH EXCESSIVE FORCE.

2) Tap the QAD with a soft mallet (rubber, fiber, or equivalent) to center the ring. Tap along the area in D.

Make a check of the torque value of the tension bolt. If the torque is less than 180 pound-inches, tighten the tension bolt to 240-264 pound-inches. Continue to alternately tap and torque the bolt to 240-264 pound-inches until a minimun of 180 pound-inches is measured at the beginning of the torque step.

If the tension bolt does not drop below 180 NOTE: pound-inches after first tapping, repeat tapping on ring. If the tension bolt does not drop below 180 pound-inches after second tapping, tighten bolt to 240-264 pound-inches.

- 4) Torque the QAD tension bolt to 240-264 pound-inches.
- (h) Remove the hoist adapter from the IDG.
- Make sure the distance between the ring lug and the bracket on the QAD ring is equal to or greater than 0.562 inch. Replace the QAD coupling if the dimension is less than 0.562 inch (AMM 24-11-03/401).
- (2) Lock the QAD tension bolt with a wire (AMM 20-10-23/401).
- Install the power leads:
 - If the phase color sleeves on the power feeder cables are damaged or missing, replace the sleeves (SWPM 20-10-14).
 - (b) If the fanning strip is damaged or loose, replace the fanning strip.
 - Do these steps if you install the spiralock nuts:
 - 1) Make sure nuts do not have rundown resistance. If nuts have rundown resistance, inspect the studs for any sharp threads or any rounded threads.

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2) If the studs have any sharp threads or any rounded threads, replace the terminal block assembly (AMM 24-11-20/401).

CAUTION: MAKE SURE THAT YOU CONNECT THE GENERATOR WIRES TO THE CORRECT TERMINAL STUDS ON THE IDG. AN INCORRECT INSTALLATION CAN CAUSE DAMAGE TO ELECTRICAL EQUIPMENTS.

- (d) Put the four power leads on the terminal studs.
- (e) Install the spiralock nuts (5), the self-locking nuts, or the washers and terminal nuts on the terminal studs.

MAKE SURE THAT YOU TIGHTEN THE NUTS TO THE SPECIFIED CAUTION: TORQUE VALUE. A LOW TERMINAL NUT TORQUE WILL CAUSE LOW CONDUCTIVITY OF THE PHASE LEAD. LOW PHASE LEAD CONDUCTIVITY WILL RESULT IN RESISTANCE HEATING AND BURNING OF THE PHASE LEAD AND THE TERMINAL BLOCK.

(f) Tighten the terminal nuts to 144-168 pound-inches. Make sure the terminal studs do not rotate when the terminal nuts are tightened. If the terminal studs rotate when the nuts are tightened, replace the terminal block.

NOTE: The torque is the same for the regular nut or the lock nut. A torque wrench adapter might be useful to tighten the nuts to the specified torque value.

- (g) Install the terminal block cover (7) with the two screws (3) and the two 2 washers (4).
- (h) Tighten the screws to 20-22 pound-inches.
- (4) Install the electrical connectors:
 - Remove the caps from the two IDG electrical connectors on the (a) IDG.
- (5) Connect the wiring harness electrical connectors D10964 and D10966 to the IDG.
- (6) Install the oil-in and oil-out tubing as follows:

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SAS BOEING TASK CARD

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MAKE SURE THERE IS SUFFICENT CLEARANCE BETWEEN THE OIL-IN CAUTION: TUBE AND THE OIL-OUT TUBE. IF THE TUBES RUB TOGETHER DAMAGE CAN OCCUR TO THE TUBES.

- (a) Remove the plugs from oil-in and oil-out openings on the IDG.
- (b) Lubricate and install the O-rings to oil-in and oil-out unions.
- (c) Install the oil-in union. The O-ring should be on the IDG side of the union.
- (d) Tighten the oil-in union to 150-200 to 150-200 pound-inches.
- (e) Install the oil-out union. The O-ring should be on the IDG side of the union.
- (f) Tighten the oil-out union to 130-175 pound inches.
- (g) Put the IDG oil fill/drain panel on IDG and attach with nuts and washers.
- (h) Install nut and washer on the oil-in fitting.

USE TWO WRENCHES TO HOLD FITTINGS WHEN YOU TORQUE THE CAUTION: OIL-IN AND OIL-OUT LINES. IF THE DOUBLE-WRENCH METHOD IS NOT FOLLOWED, EXCESS TORQUE MAY BE TRANSFERRED TO THE IDG FITTINGS, THIS COULD CAUSE DAMAGE TO THE IDG BOSSES.

- (i) Connect the oil-in and oil-out lines to the IDG.
- Install a new or shop pressure tested oil-in coupling and tighten to 150-200 pound-inches.

NOTE: It is recommended that a new oil-in coupling be installed in the IDG to prevent oil leakage.

- (7) Install the case drain plug as follows:
 - (a) Lubricate and install the 0-ring (2) on the case drain plug (1).

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INTEGRATED DRIVE GENERATOR

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BOEING SAS 767 TASK CARD

MECH	INSP
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- (b) Install the case drain plug (1). Tighten to 55-75 pound-inches.
- (c) Lockwire the case drain plug (1).
- Install pressure fill/drain tubing as follows:
 - (a) Remove the pressure fill plug from the pressure fill opening on the IDG.
 - Lubricate a new 0-ring (37) with engine oil.
 - (c) Install the new 0-ring (37) and the union (36) to the IDG. Tighten the union (36) from 257 to 273 pound-inches.
 - (d) Connect and tighten the elbow (35) that holds the pressure fill tube (34) to the union (36).
 - Connect the elbow (33) that holds the pressure fill tube (34) to the pressure fill coupling (23) and tighten the pressure fill coupling (23) from 257 to 273 pound-inches.
 - (f) Remove the plug in the IDG overflow drain opening.
 - (g) Lubricate a new 0-ring (29) with engine oil.
 - (h) Install the new 0-ring (29) and the union (30) to the IDG. Tighten the overflow drain union from 475 to 525 pound-inches.
 - Connect and tighten the elbow (27) that holds the overflow drain tube (28) to the union (30).
 - Connect the elbow (27) that hold the overflow drain tube (28) (j) to the overflow drain coupling (24).
 - (k) Tighten the overflow drain coupling from 475 to 525 pound-inches.
 - (l) Lubricate and install the 0-ring on the thermal relief line.
 - Install the thermal relief line.
- (9) Do this task to fill the IDG oil: "IDG Oil Servicing" (AMM 12-13-03/301).

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TASK CARD

AIRLINE CARD NO.

MECH INSP

WARNING: OBEY THE INSTRUCTIONS IN THE PROCEDURE AMM 78-31-00/201 TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (10) Close the thrust reverser panel (AMM 78-31-00/201).
- (11) Close the core cowl panel (AMM 71-11-06/201).
- (12) Close the fan cowl panels (AMM 71-11-04/201).
- (13) Do the activation procedure for the thrust reverser (AMM 78-31-00/201).
- (14) Remove the DO-NOT-CLOSE tags and close these circuit breakers on the P6 panel:
 - (a) 6B5, L GEN DRIVE DISC
 - (b) 6B6, R GEN DRIVE DISC
- (15) Do this task: "Dry Motor the Engine" (AMM 71-00-00/201).
- (16) Stop the engine and wait for five minutes for the oil level to become stable.
- (17) Do a check for oil leaks at the IDG and external oil cooling system. Repair any leaks you find or refer to Permitted Leakage table (AMM 71-71-00/601).
- (18) Do this task: "IDG Oil Level Check" (AMM 12-13-03/301).
- (19) If the oil level is incorrect, do this task: "IDG Oil Servicing" (AMM 12-13-03/301).
- (20) Do the IDG Adjustment/Test (AMM 24-11-00/501).
- (21) Do a check for oil leaks at the IDG and external oil cooling system. Repair any leaks you find or refer to Permitted Leakage table (AMM 71-71-00/601).

EFFECTIVITY

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INTEGRATED DRIVE GENERATOR

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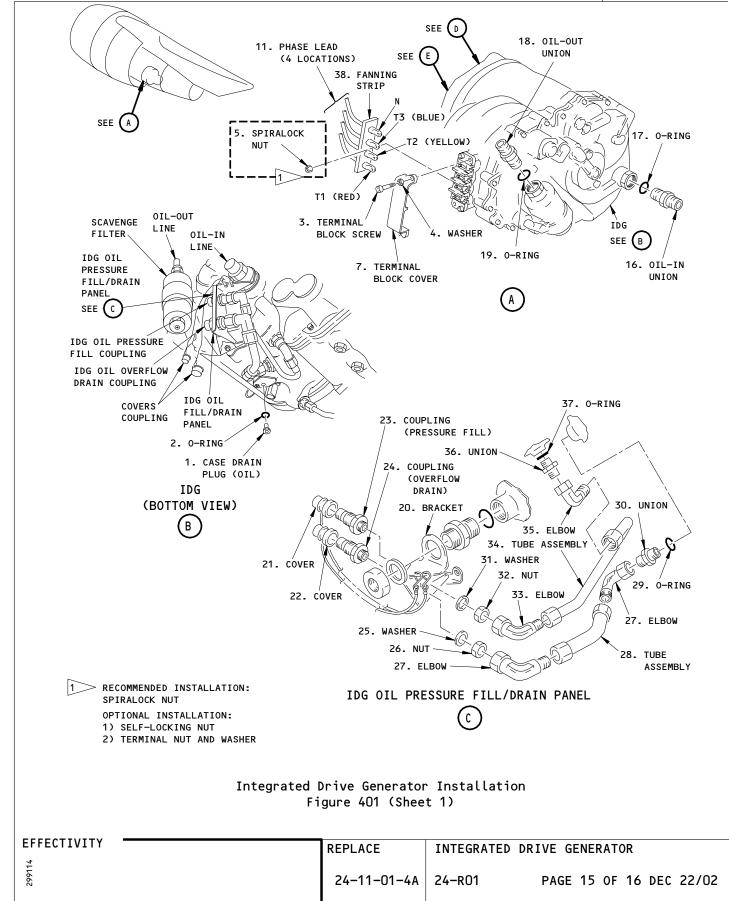
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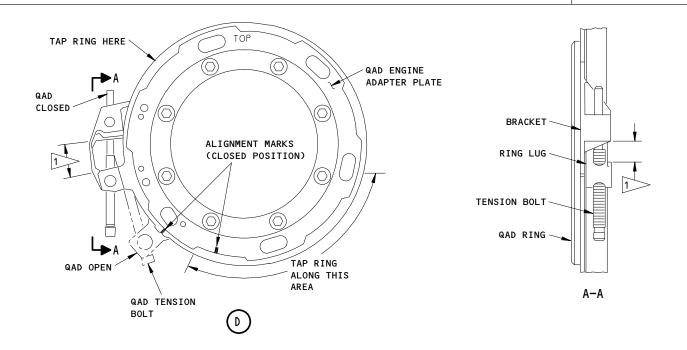
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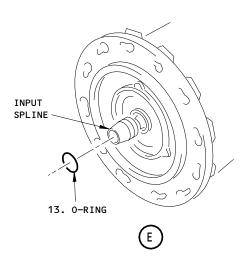


BOEING CARD NO.

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AIRLINE CARD NO.





1 DISTANCE MUST BE EQUAL TO OR GREATER THAN 0.562 INCH

Integrated Drive Generator Installation Figure 401 (Sheet 2)

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STA	TION	
TAT	L NO.	
IAI	L NO.	
D	ATE	-
SKILL	WORK A	REA



BOEING CARD NO. 24-001-01-1

AIRLINE CARD NO.

SKILL	World 7th		RELATED TASK	INTERVAL		FRASE	REV	REVIS	
ENGIN	ENGINE	1		00500 HRS		10101	009	APR 22	2/08
TAS	SK .		TITLE		STRUCTURAL ILLUSTRATION RE	FERENCE	AF	PLICABILITY	Y
SERVI	CE	ENG:	INE 1 IDG OIL LEVE	EL			AIRPLAN		ENGINE

ACCESS PANELS

ZONES

NOTE N

INC.

DUVCE

NOTE

TASK CARD

MECH INSP

410

417CL

CHECK L IDG OIL LEVEL AND SERVICE AS NECESSARY.

12-13-03-3A

MPD ITEM NUMBER

AIRPLANE NOTE: THIS TASK IS APPLICABLE TO ALL AIRPLANE

MODELS EXCEPT THE 767-400ER.

ENGINE NOTE: THIS TASK IS APPLICABLE TO THE 4000, 7R4, 80A

AND 80C ENGINES.

IDG OIL Level Check (Fig. 303)

A. General

- (1) When the engine cowl panels are not open, the IDG oil level can be examined through the IDG access panel.
- B. Reference
 - (1) FIM 24-20-00/101, BPCU BITE
- C. Prepare to check the IDG Oil Level.
 - (1) Open the IDG access panel.
- D. IDG Oil Level Check.

CAUTION: A DISCONNECTED IDG MUST BE REMOVED FROM AN AIRPLANE IN LESS

THAN 50 FLIGHT HOURS. AFTER 50 FLIGHT HOURS, DAMAGE TO THE IDG

CAN OCCUR.

(1) If the DISCONNECT TRIP message show on the bus power control unit (M116), correct the DISCONNECT TRIP message (FIM 24-20-00/101).

EFFECTIVITY

SERVICE

ENGINE 1 IDG OIL LEVEL

12-13-03-3A

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24-001-01-1

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SAS BOEING

	TASK CARD
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	(2) Do these steps to examine the IDG oil level:
	NOTE: Do not do an oil level check on a disconnected IDG because the indication will be incorrect.
	(a) Make sure the engine has been shut down for a minimum of 5 minutes before checking oil level.
	(b) Clean the face of the oil level indicator if it is necessary.
	(c) Look into the view port of the oil level indicator
	(d) Align the white marks, found in the view port, in a straight line.
	NOTE: A flashlight can be necessary to see the white marks. Do not point the light directly into the view port. Reflections can cause incorrect indications.
	 If you see an OK in the view port, the oil level in the IDG is correct.
	If you see a silver mark in the view port, the oil level in the IDG is low.
	a) Do the IDG Servicing procedure (AMM 12-13-03/301).
	(3) Close the IDG access panel.

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24-001-01-1

AIRLINE CARD NO.

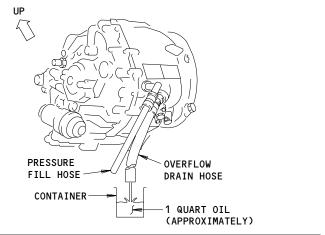
NOTE: DO NOT SERVICE IDG IF IDG IS DISCONNECTED. REFER TO 24-20-00 FAULT ISOLATION AND CORRECT "DISCONNECT TRIP" BITE MESSAGE.

STEP ONE

ATTACH OVERFLOW DRAIN AND PRESSURE FILL HOSES.

SOME OIL MAY COME OUT OVERFLOW DRAIN HOSE WHEN HOSE IS CONNECTED.

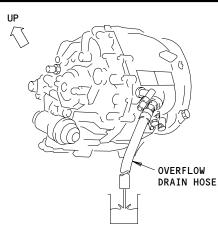
PUMP OIL INTO IDG UNTIL APPROXIMATELY ONE QUART OF OIL COMES OUT OVERFLOW DRAIN HOSE.



STEP TWO

REMOVE PRESSURE FILL HOSE ONLY.

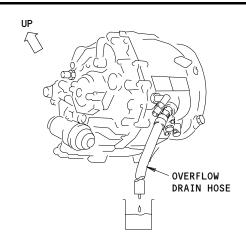
INSTALL COVER.



STEP THREE

REMOVE OVERFLOW DRAIN HOSE WHEN DRAINAGE SLOWS TO DROPS.

INSTALL COVER.



Summarized Servicing Procedure Figure 301

EFFECTIVITY

SERVICE

ENGINE 1 IDG OIL LEVEL

12-13-03-3A

24-001-01-1 PAGE 3 OF 6 APR 22/99

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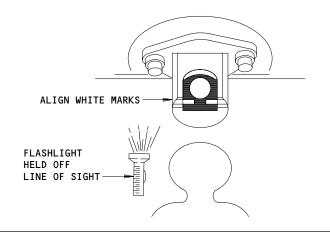


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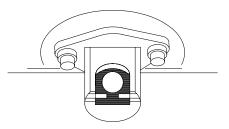
AIRLINE CARD NO.

NOTE: DO NOT CHECK OIL LEVEL IF IDG IS DISCONNECTED. REFER TO 24-20-00 FAULT ISLOATION AND CORRECT "DISCONNECT TRIP" BITE MESSAGE.

- LOOK AT VIEWING FACE OF LOW OIL LEVEL INDICATOR.
 - WIPE CLEAN IF DIRTY
 - USE FLASHLIGHT IF IDG HAS "OK"
 LOW OIL INDICATOR OR IF TOO DARK
 TO SEE WHITE ALIGNMENT MARKS.
 DO NOT SHINE FLASHLIGHT DIRECTLY
 ON VIEWING FACE BECAUSE REFLECTION
 WILL MAKE READING DIFFICULT.
- CHANGE YOUR LINE OF SIGHT UNTIL. WHITE MARKS ARE ALIGNED.



- LOOK FOR SILVER SPOT IN VIEWING FACE.
 - SILVER SPOT SEEN SERVICING REQUIRED.
 - "OK" SEEN SERVICING NOT REQUIRED.



ANY SILVER SPOT LARGE OR SMALL SERVICING REQUIRED



"OK"
NO SERVICING REQUIRED

Summarized Low Oil Level Check Procedure Figure 302

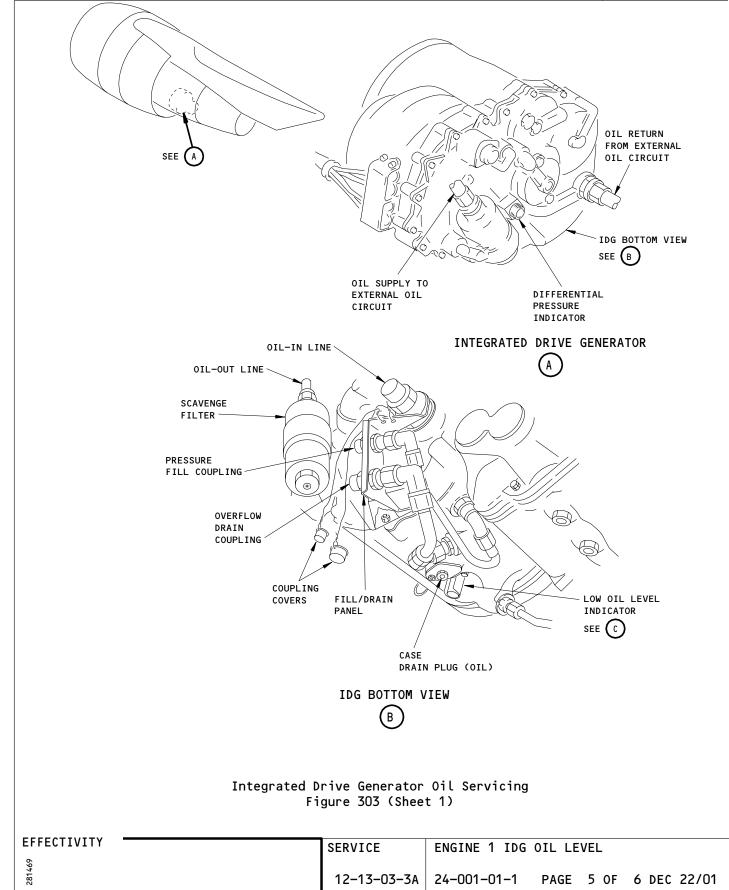
BOEING CARD NO.

767 TASK CARD

SAS

24-001-01-1

AIRLINE CARD NO.



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BOEING 767 TASK CARD

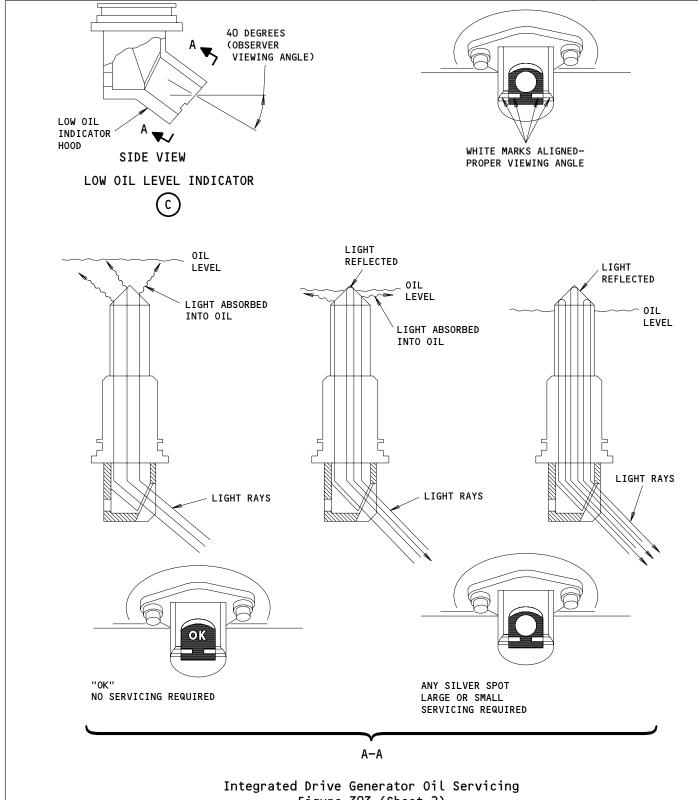


Figure 303 (Sheet 2)

EFFECTIVITY SERVICE ENGINE 1 IDG OIL LEVEL 12-13-03-3A

STATIO	N
STATIO	N
TAIL N	0.
DATE	
DATE	



BOEING CARD NO. 24-001-01-2

AIRLINE CARD NO.

WORK AREA RELATED TASK INTERVAL TASK CARD SKILL PHASE REV REVISION 009 ENGIN | ENGINE 2 00500 HRS APR 22/08 10101 APPLICABILITY
AIRPLANE ENGINE STRUCTURAL ILLUSTRATION REFERENCE SERVICE ENGINE 2 IDG OIL LEVEL NOTE NOTE ZONES ACCESS PANELS 420 427CL

MECH INSP

MPD ITEM NUMBER

12-13-03-3A

CHECK R IDG OIL LEVEL AND SERVICE AS NECESSARY.

AIRPLANE NOTE: THIS TASK IS APPLICABLE TO ALL AIRPLANE

MODELS EXCEPT THE 767-400ER.

ENGINE NOTE: THIS TASK IS APPLICABLE TO THE 4000, 7R4, 80A

AND 80C ENGINES.

IDG OIL Level Check (Fig. 303)

A. General

- (1) When the engine cowl panels are not open, the IDG oil level can be examined through the IDG access panel.
- B. Reference
 - (1) FIM 24-20-00/101, BPCU BITE
- C. Prepare to check the IDG Oil Level.
 - (1) Open the IDG access panel.
- D. IDG Oil Level Check.

<u>CAUTION</u>: A DISCONNECTED IDG MUST BE REMOVED FROM AN AIRPLANE IN LESS

THAN 50 FLIGHT HOURS. AFTER 50 FLIGHT HOURS, DAMAGE TO THE IDG

CAN OCCUR.

(1) If the DISCONNECT TRIP message show on the bus power control unit (M116), correct the DISCONNECT TRIP message (FIM 24-20-00/101).

EFFECTIVITY

SERVICE

ENGINE 2 IDG OIL LEVEL

12-13-03-3A

24-001-01-2 PAGE 1 OF 6 DEC 22/07

24-001-01-2

AIRLINE CARD NO.

BOEING 767 TASK CARD

MECH INSP (2) Do these steps to examine the IDG oil level: Do not do an oil level check on a disconnected IDG because NOTE: the indication will be incorrect. (a) Make sure the engine has been shut down for a minimum of 5 minutes before checking oil level. (b) Clean the face of the oil level indicator if it is necessary. (c) Look into the view port of the oil level indicator Align the white marks, found in the view port, in a straight line. NOTE: A flashlight can be necessary to see the white marks. Do not point the light directly into the view port. Reflections can cause incorrect indications. 1) If you see an OK in the view port, the oil level in the IDG is correct. If you see a silver mark in the view port, the oil level in the IDG is low. a) Do the IDG Servicing procedure (AMM 12-13-03/301). (3) Close the IDG access panel.

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2

24-001-01-2

SAS

BOEING 767 TASK CARD

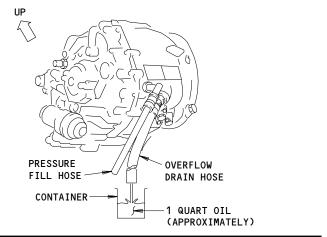
NOTE: DO NOT SERVICE IDG IF IDG IS DISCONNECTED. REFER TO 24-20-00 FAULT ISOLATION AND CORRECT "DISCONNECT TRIP" BITE MESSAGE.

STEP ONE

ATTACH OVERFLOW DRAIN AND PRESSURE FILL HOSES.

SOME OIL MAY COME OUT OVERFLOW DRAIN HOSE WHEN HOSE IS CONNECTED.

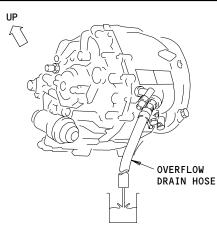
PUMP OIL INTO IDG UNTIL APPROXIMATELY ONE QUART OF OIL COMES OUT OVERFLOW DRAIN HOSE.



STEP TWO

REMOVE PRESSURE FILL HOSE ONLY.

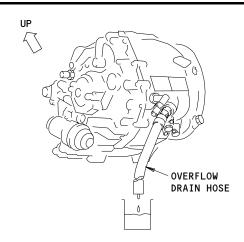
INSTALL COVER.



STEP THREE

REMOVE OVERFLOW DRAIN HOSE WHEN DRAINAGE SLOWS TO DROPS.

INSTALL COVER.



Summarized Servicing Procedure Figure 301

EFFECTIVITY 2389

SERVICE

ENGINE 2 IDG OIL LEVEL

12-13-03-3A

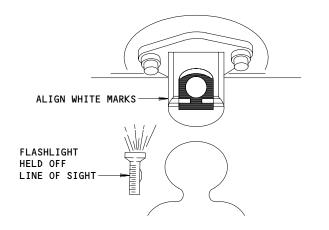
24-001-01-2 PAGE 3 OF 6 APR 22/99 SAS



AIRLINE CARD NO.

NOTE: DO NOT CHECK OIL LEVEL IF IDG IS DISCONNECTED. REFER TO 24-20-00 FAULT ISLOATION AND CORRECT "DISCONNECT TRIP" BITE MESSAGE.

- LOOK AT VIEWING FACE OF LOW OIL LEVEL INDICATOR.
 - WIPE CLEAN IF DIRTY
 - USE FLASHLIGHT IF IDG HAS "OK" LOW OIL INDICATOR OR IF TOO DARK TO SEE WHITE ALIGNMENT MARKS.
 DO NOT SHINE FLASHLIGHT DIRECTLY ON VIEWING FACE BECAUSE REFLECTION WILL MAKE READING DIFFICULT.
- CHANGE YOUR LINE OF SIGHT UNTIL. WHITE MARKS ARE ALIGNED.



- LOOK FOR SILVER SPOT IN VIEWING FACE.
 - SILVER SPOT SEEN SERVICING REQUIRED.
 - "OK" SEEN SERVICING NOT REQUIRED.



ANY SILVER SPOT LARGE OR SMALL SERVICING REQUIRED



"OK"
NO SERVICING REQUIRED

Summarized Low Oil Level Check Procedure Figure 302

EFFECTIVITY

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4

SERVICE

ENGINE 2 IDG OIL LEVEL

12-13-03-3A

24-001-01-2 PAGE 4 OF 6 APR 22/99

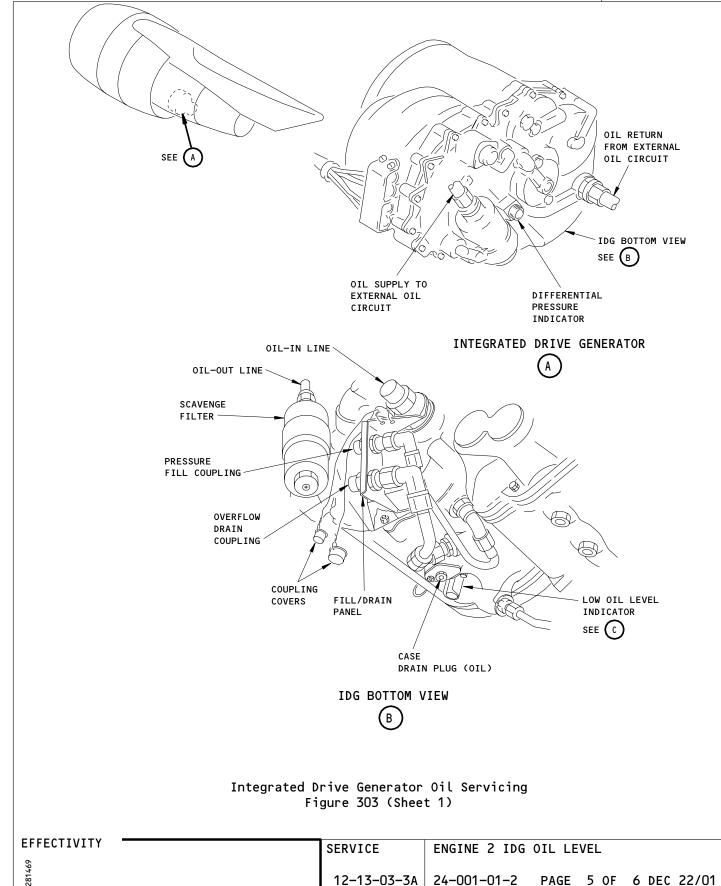
BOEING CARD NO.

24-001-01-2

AIRLINE CARD NO.

SAS

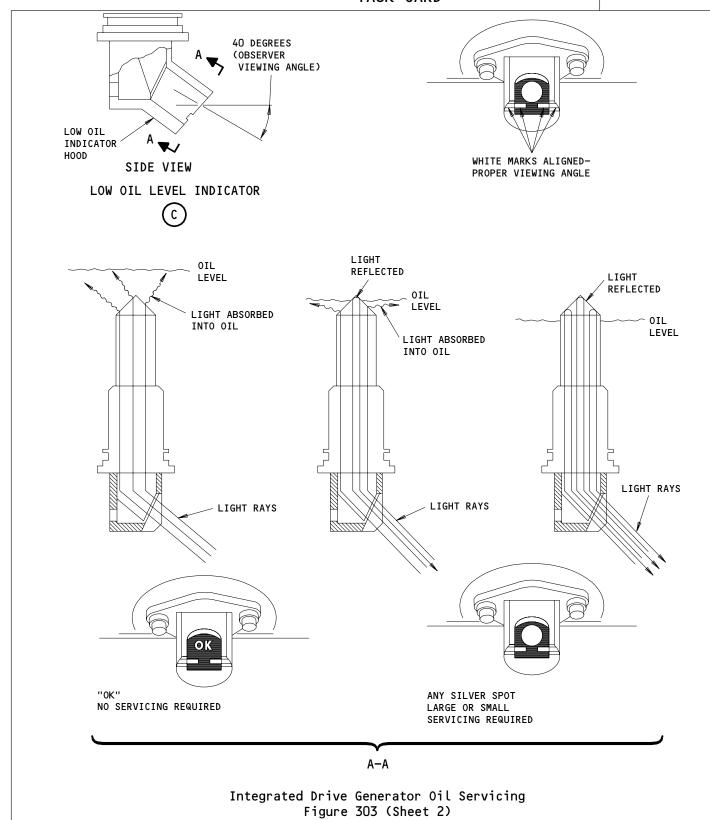




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SAS

BOEING 767 TASK CARD



EFFECTIVITY

4

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SERVICE

ENGINE 2 IDG OIL LEVEL

12-13-03-3A

24-001-01-2 PAGE 6 OF 6 APR 22/99

STATION
TAIL NO.
DATE



BOEING CARD NO. 24-001-02-1

AIRLINE CARD NO.

NOTE

NOTE

SKILL	WORK AREA RELATED TASK		INTERVAL		PHASE	MPD	TASK CARD	
							REV	REVISION
ENGIN	ENGINE	1		00500 HRS		10101	010	DEC 22/07
TASI	K		TITLE		STRUCTURAL ILLUSTRATION RE	FERENCE	AF	PLICABILITY
CHECK	/INSP	IDG	SCAVENGE FILTER	DIFF PRESS INDIC			AIRPLAN	E ENGINE

ACCESS PANELS

ZONES

411

417CL

MPD ITEM NUMBER MECH INSP

CHECK L IDG SCAVENGE FILTER PRESSURE DIFFERENTIAL INDICATOR.

12-13-03-3C

AIRPLANE NOTE: THIS TASK IS APPLICABLE TO ALL AIRPLANE

MODELS EXCEPT THE 767-400ER.

ENGINE NOTE: THIS TASK IS APPLICABLE TO THE 4000, 7R4, 80A

AND 80C ENGINES.

<u>Differential Pressure Indicator Check</u> (Fig. 303)

General Α.

- (1) When the engine cowl panels are not open, the differential pressure indicator (DPI) can be examined through the IDG access panel.
- References В.
 - (1) AMM 24-11-02/201, Scavenge Filter
- Prepare to examine the Differential Pressure Indicator (DPI)
 - (1) Open the IDG access panel.
- Differential Pressure Indicator Check
 - (1) Visually examine the red button on the DPI.
 - (a) Make sure that the red button does not extend from the DPI case.
 - If the red button extends from the DPI case, do the Scavenge Filter Inspection/Check (AMM 24-11-02/201).
 - (2) Close the IDG access panel.

EFFECTIVITY CHECK/INSP IDG SCAVENGE FILTER DIFF PRESS INDIC 12-13-03-3C 24-001-02-1 PAGE 1 OF 2 DEC 22/07

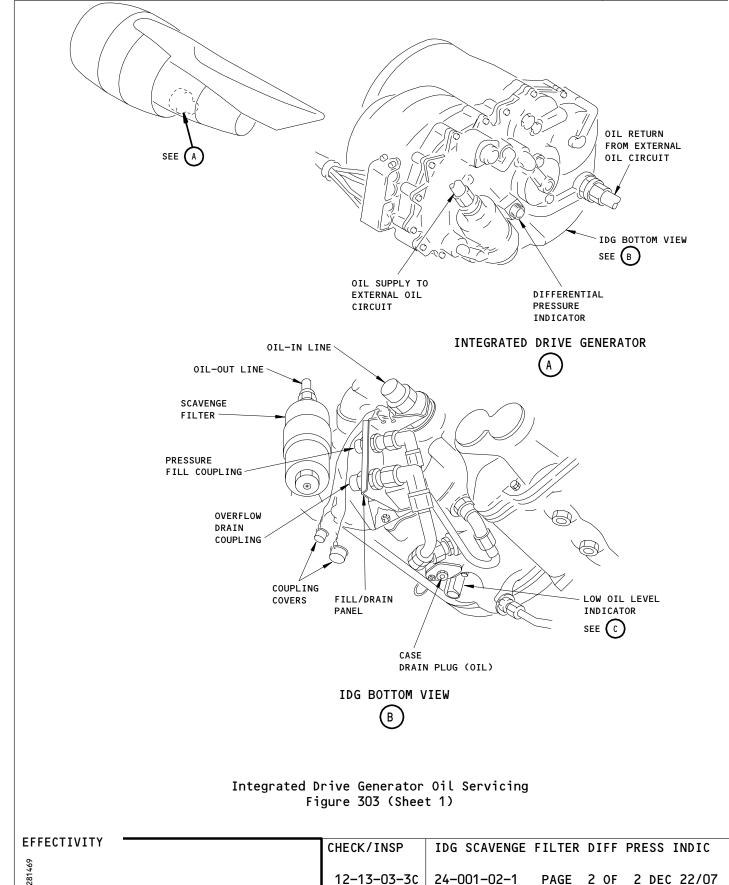
BOEING CARD NO.

24-001-02-1

AIRLINE CARD NO.

SAS





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STATION
TAIL NO.
DATE

SKILL



BOEING CARD NO. 24-001-02-2

AIRLINE CARD NO.

MPD

NOTE

PHASE

ENGIN ENGINE 2 00500 HRS 10101 010 DEC 22/07
TASK TITLE STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY

INTERVAL

CHECK/INSP | IDG SCAVENGE FILTER DIFF PRESS INDIC | AIRPLANE

APPLICABILITY
AIRPLANE ENGINE

TASK CARD

NOTE

ZONES ACCESS PANELS

RELATED TASK

421 427CL

WORK AREA

MECH INSP MPD ITEM NUMBER

CHECK R IDG SCAVENGE FILTER PRESSURE DIFFERENTIAL INDICATOR.

12-13-03-3C

AIRPLANE NOTE: THIS TASK IS APPLICABLE TO ALL AIRPLANE

MODELS EXCEPT THE 767-400ER.

ENGINE NOTE: THIS TASK IS APPLICABLE TO THE 4000, 7R4, 80A

AND 80C ENGINES.

Differential Pressure Indicator Check (Fig. 303)

A. General

- (1) When the engine cowl panels are not open, the differential pressure indicator (DPI) can be examined through the IDG access panel.
- B. References
 - (1) AMM 24-11-02/201, Scavenge Filter
- C. Prepare to examine the Differential Pressure Indicator (DPI)
 - (1) Open the IDG access panel.
- D. Differential Pressure Indicator Check
 - (1) Visually examine the red button on the DPI.
 - (a) Make sure that the red button does not extend from the DPI case.
 - (b) If the red button extends from the DPI case, do the Scavenge Filter Inspection/Check (AMM 24-11-02/201).
 - (2) Close the IDG access panel.

CHECK/INSP IDG SCAVENGE FILTER DIFF PRESS INDIC

12-13-03-3C 24-001-02-2 PAGE 1 OF 2 DEC 22/07

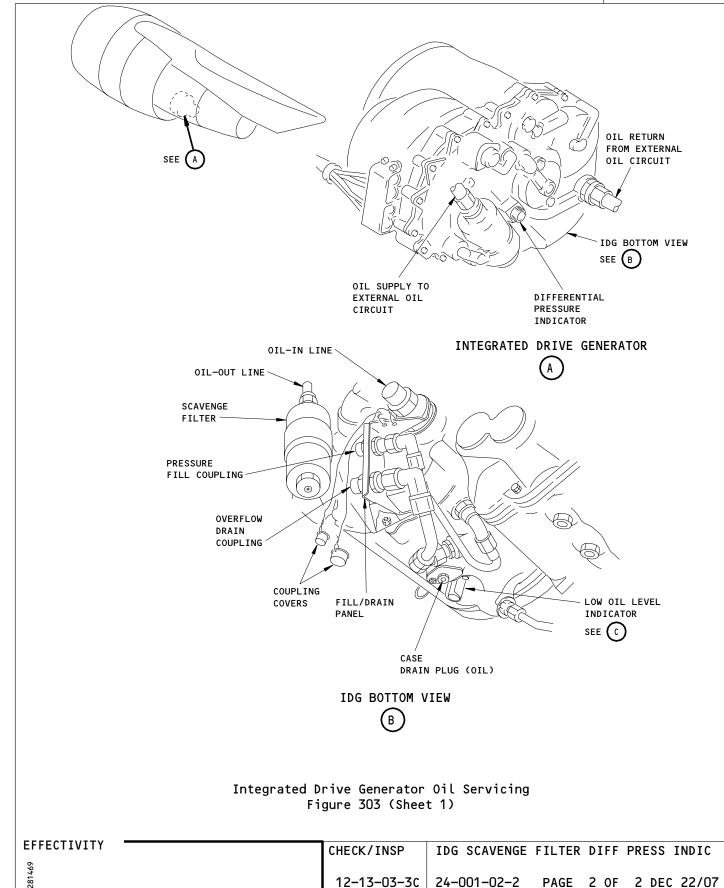
BOEING CARD NO.

FOEING 767 TASK CARD

SAS

24-001-02-2

AIRLINE CARD NO.



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TAI	TION L NO.		sas &	BOEIN 767 TASK CARD		
SKILL	WORK ARE	EA	RELATED TASK	INTERVAL		PHASE
ENGIN	ENGINE	1		3A		1030
TAS	K		TITLE		STRUCTURAL ILLUSTRATION RE	FERENCE

BOEING CARD NO. 24-002-01-1

AIRLINE CARD NO.

MPD

REV

PHASE

10303

007 DEC 22/07 APPLICABILITY
AIRPLANE ENGINE

TASK CARD

REVISION

ALL ALL

ACCESS PANELS

411

MECH INSP

CHECK/INSP

ZONES

417AL

ENGINE 1 IDG QAD COUPLING

MPD ITEM NUMBER

CHECK THE TORQUE AND CONDITION OF THE ENGINE 1 IDG QUICK ATTACH/DETACH (QAD) COUPLING.

24-11-03-6A

- 1. QAD Coupling Torque Check (Fig. 601)
 - A. References
 - (1) AMM 71-11-04/201, Fan Cowl Panels
 - (2) AMM 71-11-06/201, Core Cowl Panels
 - (3) AMM 78-31-00/201, Thrust Reverser System
 - B. Prepare to check QAD coupling torque

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

- (1) Do the deactivation procedure for the thrust reverser for ground maintenance (AMM 78-31-00/201).
- (2) Open the fan cowl panels (AMM 71-11-04/201).
- (3) Open the core cowl panels (AMM 71-11-06/201).

WARNING: OBEY THE INSTRUCTIONS IN THE PROCEDURE TO OPEN THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(4) Open the thrust reverser (AMM 78-31-00/201).

EFFECTIVITY

CHECK/INSP

ENGINE 1 IDG QAD COUPLING

24-11-03-6A

24-002-01-1 PAGE 1 OF 4 DEC 22/07

24-002-01-1

SAS BOEING TASK CARD

AIRLINE CARD NO.

C. Procedure

- (1) Make a check of the torque value as follows:
- Remove the locking wire from the QAD coupling tension bolt. (2)

CAUTION: MAKE SURE THAT THE QAD RING DOES NOT BIND OR CATCH WHILE YOU TIGHTEN THE TENSION BOLT. THIS CAN CAUSE DAMAGE TO THE QAD RING.

Tap the edge of the QAD ring with a brass drift to adjust the ring and to prevent incorrect torque values.

Tap the edge of the ring from the 4 O'clock to 7 O'clock NOTE: positions.

- (b) Measure the torque on the tension bolt.
 - If the torque is more than 180 pound-inches (20 N.m), do these steps:
 - Tighten the tension bolt to a torque of 240-264 pound-inches (27-30 N.m).
 - Secure the tension bolt with lockwire.
 - If the torque is less than 180 pound-inches (20 N.m), do these steps:
 - Tighten the tension bolt to a torque of 240-264 pound-inches (27-30 N.m).
 - b) Tap the QAD ring again and measure the torque on the tension bolt.
 - If the torque is less than 180 pound-inches again, tighten the bolt to the torque of 240-264 pound-inches and tap the ring. Do this step again until the torque does not drop below 180 pound-inches after you tap the QAD ring.
 - d) Tighten the tension bolt to a torque of 240-264 pound-inches (27-30 N.m).

EFFECTIVITY

CHECK/INSP

ENGINE 1 IDG QAD COUPLING

24-11-03-6A

24-002-01-1 PAGE 2 OF 4 AUG 22/99

24-002-01-1

AIRLINE CARD NO.

SAS BOEING 767 TASK CARD

MECH INSP

e) Secure the tension bolt with lockwire.

WARNING: OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (3) Close the thrust reversers (AMM 78-31-00/201).
- (4) Close the core cowl panels (AMM 71-11-06/201).
- (5) Close the fan cowl panels (AMM 71-11-04/201).
- (6) Do the activation procedure for the thrust reverser (AMM 78-31-00/201).

EFFECTIVITY

CHECK/INSP

ENGINE 1 IDG QAD COUPLING

24-11-03-6A

24-002-01-1 PAGE 3 OF 4 AUG 22/99

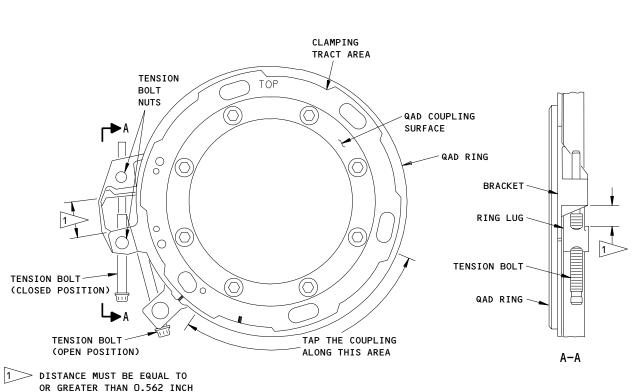
BOEING CARD NO.

24-002-01-1

AIRLINE CARD NO.

SAS

767 TASK CARD



OR GREATER THAN 0.562 INCH

Quick Attach/Detach (QAD) Coupling Figure 601

EFFECTIVITY CHECK/INSP ENGINE 1 IDG QAD COUPLING 24-11-03-6A 24-002-01-1 PAGE 4 OF 4 DEC 10/98

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STATION
TAIL NO.
DATE



BOEING CARD NO. 24-002-01-2

AIRLINE CARD NO.

SKILL WORK AREA RELA		ATED TASK		INTERVAL		PHASE	MPD		SK CARD		
									REV	RE	VISION
ENGIN	ENGINE	2			3A			10303	007	APR	22/08
TASK			TITLE		STRUCTURAL ILLUSTRATION REFERENCE		APPLICABILITY		LITY		
CHECK	/INSP	ENG:	NE 2 1	DG QAD COU	PLING				AIRPLAN	E	ENGINE
									ALL		ALL
	ZONES						ACCESS PANELS				

427AL

421

MECH INSP

CHECK THE TORQUE AND CONDITION OF THE ENGINE 2 IDG QUICK

24-11-03-6A

MPD ITEM NUMBER

1. QAD Coupling Torque Check (Fig. 601)

ATTACH/DETACH (QAD) COUPLING.

- A. References
 - (1) AMM 71-11-04/201, Fan Cowl Panels
 - (2) AMM 71-11-06/201, Core Cowl Panels
 - (3) AMM 78-31-00/201, Thrust Reverser System
- B. Prepare to check QAD coupling torque

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

- (1) Do the deactivation procedure for the thrust reverser for ground maintenance (AMM 78-31-00/201).
- (2) Open the fan cowl panels (AMM 71-11-04/201).
- (3) Open the core cowl panels (AMM 71-11-06/201).

WARNING: OBEY THE INSTRUCTIONS IN THE PROCEDURE TO OPEN THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(4) Open the thrust reverser (AMM 78-31-00/201).

EFFECTIVITY ENGINE 2 IDG QAD COUPLING CHECK/INSP 24-11-03-6A 24-002-01-2 PAGE 1 OF 4 APR 22/08

24-002-01-2

AIRLINE CARD NO.

SAS BOEING
767
TASK CARD

MECH INSP

C. Procedure

- (1) Make a check of the torque value as follows:
- (2) Remove the locking wire from the QAD coupling tension bolt.

CAUTION: MAKE SURE THAT THE QAD RING DOES NOT BIND OR CATCH WHILE YOU TIGHTEN THE TENSION BOLT. THIS CAN CAUSE DAMAGE TO THE QAD RING.

(a) Tap the edge of the QAD ring with a brass drift to adjust the ring and to prevent incorrect torque values.

NOTE: Tap the edge of the ring from the 4 O'clock to 7 O'clock positions.

- (b) Measure the torque on the tension bolt.
 - 1) If the torque is more than 180 pound-inches (20 N.m), do these steps:
 - a) Tighten the tension bolt to a torque of 240-264 pound-inches (27-30 N.m).
 - b) Secure the tension bolt with lockwire.
 - 2) If the torque is less than 180 pound-inches (20 N.m), do these steps:
 - a) Tighten the tension bolt to a torque of 240-264 pound-inches (27-30 N.m).
 - b) Tap the QAD ring again and measure the torque on the tension bolt.
 - c) If the torque is less than 180 pound-inches again, tighten the bolt to the torque of 240-264 pound-inches and tap the ring. Do this step again until the torque does not drop below 180 pound-inches after you tap the QAD ring.
 - d) Tighten the tension bolt to a torque of 240-264 pound-inches (27-30 N.m).

EFFECTIVITY

CHECK/INSP

ENGINE 2 IDG QAD COUPLING

24-11-03-6A

24-002-01-2 PAGE 2 OF 4 AUG 22/99

24-002-01-2

AIRLINE CARD NO.



MECH INSP e) Secure the tension bolt with lockwire. OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE WARNING: THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR. (3) Close the thrust reversers (AMM 78-31-00/201). (4) Close the core cowl panels (AMM 71-11-06/201). (5) Close the fan cowl panels (AMM 71-11-04/201). (6) Do the activation procedure for the thrust reverser (AMM 78-31-00/201).

EFFECTIVITY

CHECK/INSP

ENGINE 2 IDG QAD COUPLING

24-11-03-6A

24-002-01-2 PAGE 3 OF 4 AUG 22/99

BOEING CARD NO.

AIRLINE CARD NO.

24-002-01-2

SAS

767 TASK CARD

CLAMPING TRACT AREA TENSION TOP BOLT NUTS QAD COUPLING SURFACE QAD RING BRACKET RING LUG TENSION BOLT TENSION BOLT (CLOSED POSITION) QAD RING TENSION BOLT TAP THE COUPLING (OPEN POSITION) ALONG THIS AREA A-A1 DISTANCE MUST BE EQUAL TO OR GREATER THAN 0.562 INCH Quick Attach/Detach (QAD) Coupling Figure 601 **EFFECTIVITY** CHECK/INSP ENGINE 2 IDG QAD COUPLING 24-11-03-6A 24-002-01-2 PAGE 4 OF 4 DEC 10/98

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DATE	1
DAIL	

SKILL

WORK AREA



BOEING CARD NO. 24-003-01

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

ELECT CREW CABIN IDG CNG NOTE 99XXX 013 APR 22/09
TASK TITLE STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY

INTERVAL

TASK
OPERATIONAL
IDG DISCONNECT
STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY
AIRPLANE ENGINE
NOTE ALL

ZONES ACCESS PANELS

212 411 421 417AL 427AL

MECH INSP MPD ITEM NUMBER

OPERATIONALLY CHECK THE IDG DISCONNECT FUNCTION.

24-11-01-6A

INTERVAL NOTE: AT IDG OR ENGINE CHANGE.

RELATED TASK

AIRPLANE NOTE: THIS TASK IS APPLICABLE TO ALL AIRPLANE

MODELS EXCEPT THE 767-400ER.

THE PROCEDURE INCLUDED IN THIS TASK CARD IS FOR CHECKING THE DISCONNECT FUNCTION OF THE IDG WITH ENGINE NOT RUNNING. THIS FUNCTION CAN ALSO BE CHECKED WITH ENGINE RUNNING USING THE PROCEDURE INCLUDED IN THE IDG OR ENGINE CHANGE.

- 1. Check IDG Disconnect Function (Fig. 601)
 - A. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 78-31-00/201, Thrust Reverser System
 - B. Prepare for Check
 - (1) Make sure the engines are not running.
 - (2) Supply External Power to the main AC buses (AMM 24-22-00/201).
 - (3) Make sure these circuit breakers on the main power distribution panel, P6, are closed.
 - (a) 6B1, L GEN CONT UNIT
 - (b) 6B2, R GEN CONT UNIT
 - (c) 6B5, L GEN DRIVE DISC
 - (d) 6B6, R GEN DRIVE DISC

OPERATIONAL IDG DISCONNECT

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AIRLINE CARD NO.

24-003-01

L+ 005 01

SAS BOEING
767
TASK CARD

MECH INSP

WARNING: OBEY THE INSTRUCTIONS IN THE PROCEDURE TO OPEN THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (4) Open the thrust reverser (AMM 78-31-00/201).
- C. SAS 050-154, 275, 276 WITH SB 24-59 AND SAS 155-274, 277-999;

IDG Disconnect Inhibit Function Check

(1) Do these steps:

CAUTION: DO NOT ACTUATE DISCONNECT SWITCH FOR LONGER THAN 3
SECONDS. ALLOW A MINIMUM OF 60 SECONDS BETWEEN ACTUATION
PERIODS. FAILURE TO FOLLOW THESE RULES COULD DAMAGE IDG
DISCONNECT FUNCTION.

- (a) Momentarily push the DRIVE DISC switch on the P5 panel for the applicable IDG.
- (b) Slowly pull the disconnect reset ring to the outer travel limit.
 - Make sure there is no "click" sound when you pull the disconnect reset ring.
- (c) Permit the ring to slowly go back to the maximum inner position.
- (2) Close the thrust reverser (AMM 78-31-00/201).
- D. IDG Disconnect Check
 - (1) Do this check of the IDG:
 - (a) Start the applicable engine (AMM 71-00-00/201).
 - (b) Make sure the DRIVE light in the applicable GEN DRIVE DISC switch is off.

EFFECTIVITY

OPERATIONAL | IDG DISCONNECT

24-11-01-6A

24-003-01

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AIRLINE CARD NO.

SAS BOEING
767
TASK CARD

MECH INSP

CAUTION: DO NOT OPERATE THE DISCONNECT SWITCH UNLESS THE ENGINE IS

AT OR ABOVE IDLE SPEED. IF YOU DISCONNECT THE IDG BELOW THE ENGINE IDLE SPEED, DAMAGE TO THE IDG CAN OCCUR.

DO NOT PUSH AND HOLD THE DRIVE DISC SWITCH FOR MORE THAN THREE SECONDS. DAMAGE TO THE DISCONNECT SOLENOID CAN

OCCUR.

IF THE IDG DOES NOT DISCONNECT, DO NOT PUSH PUSH THE DRIVE DISC SWITCH AGAIN FOR 60 SECONDS. YOU WILL CAUSE DAMAGE $\ensuremath{\mathsf{A}}$

TO THE DISCONNECT SOLENOID.

(c) Momentarily push the DRIVE DISC switch on the P5 panel for the applicable IDG.

- (d) Make sure the yellow DRIVE light in the applicable DRIVE DISC switch comes on.
- (e) Stop the engine (AMM 71-00-00/201).
- (f) Remove electrical power if it is not necessary (AMM 24-22-00/201).
- Connect the IDG Input Shaft (Fig. 601)
 - A. References
 - (1) AMM 24-11-01/401, Integrated Drive Generator
 - (2) AMM 78-31-00/201, Thrust Reverser System
 - B. Procedure
 - (1) Connect IDG as follows:
 - (a) Open the thrust reverser (AMM 78-31-00/201).

CAUTION: DO NOT RECONNECT THE IDG UNTIL ENGINE ROTATION STOPS (WIND

MILLING SPEEDS THAT ARE LESS THAN 100 RPM ARE ACCEPTABLE FOR RECONNECTION). IF YOU RECONNECT THE IDG DURING ENGINE ROTATION IT COULD DAMAGE THE DOG TEETH AND SEAL ON THE IDG

INPUT SHAFT.

EFFECTIVITY

OPERATIONAL | IDG DISCONNECT

24-11-01-6A

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AIRLINE CARD NO.

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SAS BOEING TASK CARD

MECH INSP

(b) Slowly pull the disconnect reset ring on the IDG to the outer limit.

NOTE: The operation of the ring must be smooth and must move freely.

(c) Make sure you feel the "click" in the disconnect reset ring as it gets near the outer limit.

NOTE: The "click" may not be heard or felt if there is too much noise in the area.

- (d) Allow the disconnect reset ring to slowly return to the inner position.
- Slowly pull the disconnect reset ring to the outer limit again. Note the amount of force required.
 - 1) Make sure that the force required is less than the force required the first time you pulled the disconnect reset ring.
 - If the force is not less than the force the first time you pulled the disconnect reset ring, replace the IDG (AMM 24-11-01/401).
 - 3) Make sure there is no "click" when you pull the disconnect reset ring.
 - 4) If there is a "click" when you pull the disconnect reset ring, replace the IDG (AMM 24-11-01/401).
- (f) Allow the disconnect reset ring to slowly return to the inner position.

WARNING: OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Close the thrust reversers (AMM 78-31-00/201).
- 3. Examine the Pressure Differential Indicator and the Scavenge Filter

EFFECTIVITY

OPERATIONAL IDG DISCONNECT

24-11-01-6A

24-003-01

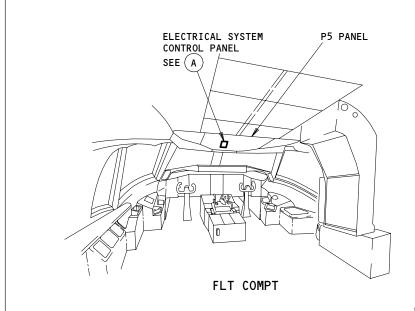
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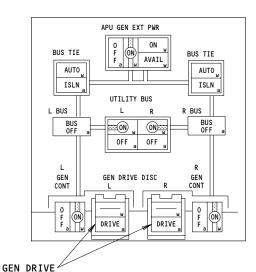
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AIRLINE CARD NO.

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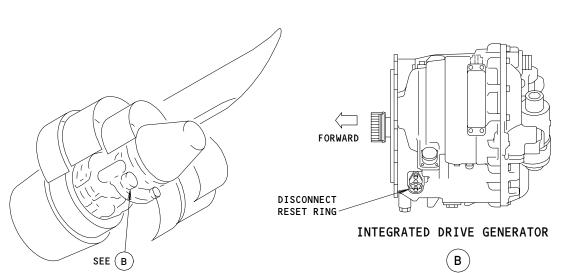




M10063 - ELECTRICAL SYSTEM CONTROL PANEL

DISC SWITCHES





IDG Disconnect Drive System Figure 601

EFFECTIVITY

OPERATIONAL

IDG DISCONNECT

24-11-01-6A

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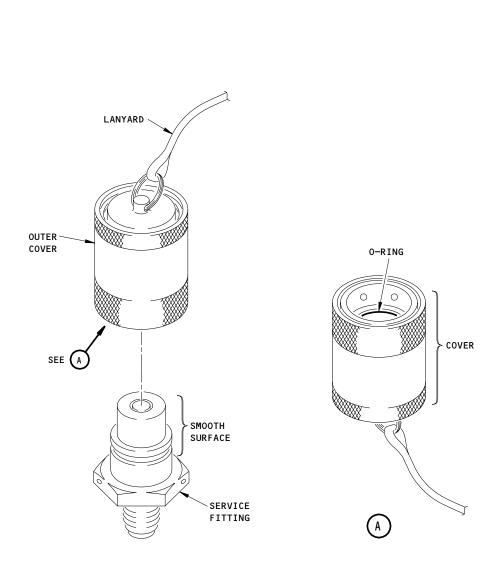
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BOEING CARD NO.

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AIRLINE CARD NO.



IDG Service Fitting and Pressure Cap Inspection Figure 602

OPERATIONAL IDG DISCONNECT

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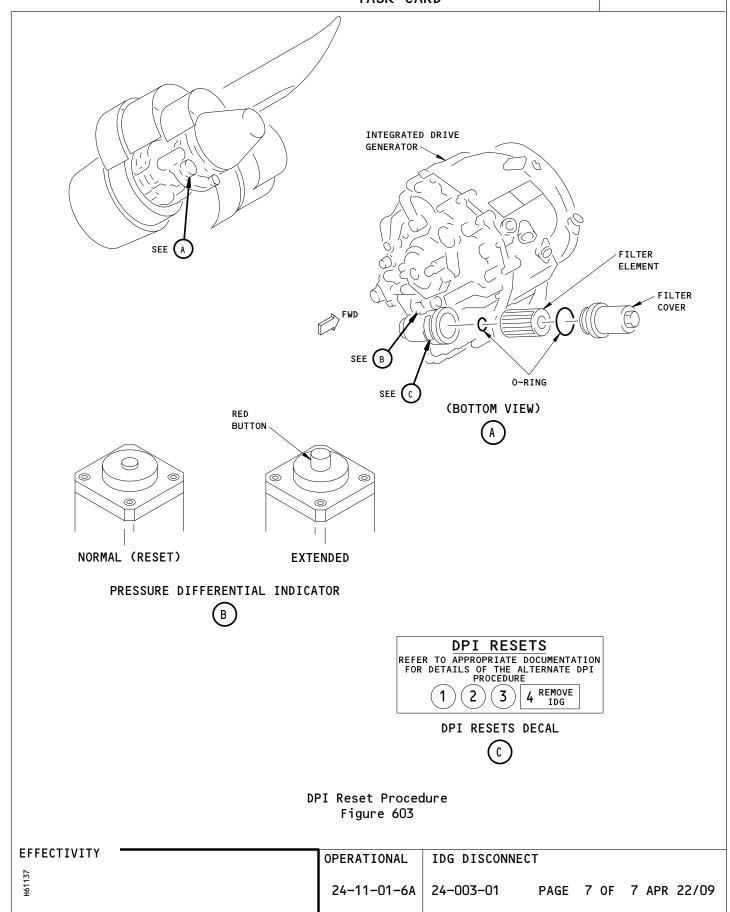
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24-003-01

AIRLINE CARD NO.

SAS DE

767
TASK CARD



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STATION
TAIL NO.
DATE



BOEING CARD NO.

24-004-01

AIRLINE CARD NO.

SKILL WORK AREA RELAT		RELATED TASK	INTE	ERVAL	PHASE	MPD REV	TASK CARD REVISION		
	ELECT	MAIN EE	CTR		1 C		11212	002	APR 22/02
	TASI	<		TITLE		STRUCTURAL ILLUSTRATION	REFERENCE	AF	PPLICABILITY
						AIRPLAN	IE ENGINE		
	OPERA	TIONAL	BUS	POWER CONTROL UN	IT (BPCU)				
								NOT	E ALL
		ZONES				ACCESS PANELS			
	119			119AL					

MECH INSP

MPD ITEM NUMBER

PERFORM BPCU BITE/PERIODIC TEST.

24-22-00-5A

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

1. BPCU BITE/Periodic Test

- A. Reference
 - (1) FIM 24-20-00/101, AC Generation
 - (2) AMM 24-22-00/201, Electrical Power Control
- B. Procedure
 - (1) Set the BAT switch on the P5 panel to the ON position.
 - (2) Make sure the EXT PWR, APU GEN, LEFT GEN CONT, and RIGHT GEN CONT switches are OFF.
 - (3) Do the PERIODIC TEST:

NOTE: Use battery power to supply the BPCU. Do not use the IDGs, External Power or the APU generator to supply power.

- (a) Momentarily push the PERIODIC TEST switch on the BPCU (E2-4).
- (b) Make sure the indication sequence shows on the BPCU:
 - 1) EXTERNAL POWER SYSTEM
 - 2) 0K
 - 3) LEFT GEN POWER SYSTEM

OPERATIONAL BUS POWER CONTROL UNIT (BPCU)

24-22-00-5A 24-004-01 PAGE 1 OF 2 APR 22/02

BOEING CARD NO.

24-004-01

AIRLINE CARD NO.

SAS BOEING
767
TASK CARD

MECH INSP 4) 0K 5) RIGHT GEN POWER SYSTEM 6) 0K 7) APU GEN POWER SYSTEM 8) 0K 9) LAST FLT OO END OF DATA 10) FOR PREVIOUS FLT PUSH NOW The above sequence is for a power system with no faults found. If a fault is found in a control unit or in the airplane equipment it governs, the applicable messages will be displayed in place of the OK message. (c) Repair any message which is displayed on the BPCU (FIM 24-20-00/101).(d) If it is necessary to view this display again, stop until the FOR PREVIOUS FLT PUSH NOW indication has extinguished. Then, momentarily push the PERIODIC TEST switch. (e) Push the RESET switch on the front of the BPCU. (f) Make sure the indication sequence shows on the BPCU: 1) EXTERNAL POWER SYSEM 2) LEFT GEN POWER SYSTEM 3) RIGHT GEN POWER SYSTEM 4) APU GEN POWER SYSTEM (4) Set the BAT switch on the P5 panel to the OFF position.

EFFECTIVITY

OPERATIONAL | BUS POWER CONTROL UNIT (BPCU)

24-22-00-5A

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STATION	
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DATE	\neg



BOEING CARD NO.

24-006-01

AIRLINE CARD NO.

		TASK CARD								
SKILL	WORK ARI	EA	RELATED TASK		INTERVAL		PHASE	MPD		SK CARD
								REV		VISION
ELECT	MAIN EE	CTR			02000 HRS		10404	013	APR	22/09
TAS	K			TITLE		STRUCTURAL ILLUSTRATION RE	FERENCE		PLICABI	
RESTORE MAIN BATTI		RY				AIRPLAN	E	ENGINE		
							NOT	Е	ALL	
	ZONES					ACCESS PANELS				
119				119AL						

MECH INSP

RESTORE THE MAIN BATTERY (OFF-AIRCRAFT).

24-31-01-4A

MPD ITEM NUMBER

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

BATTERY TEST AND RESTORATION PROCEDURES ARE FOUND IN THE VENDOR COMPONENT MAINTENANCE MANUAL. THE FOLLOWING PROCEDURE APPLIES TO THE ON-AIRCRAFT PORTION OF THIS TASK (REMOVAL/INSTALLATION):

- 1. Remove the Main Battery
 - A. Equipment
 - (1) Fishpole hoist, to lift 96-pound battery, commercially available
 - (2) A24001-1, Hoist Equipment LRU's Main EE Bay
 - B. Prepare for Removal (Fig. 401)
 - (1) Push the BAT switch to the OFF position at the standby power control panel on the pilots' overhead panel (referred to as the P5 panel).
 - (2) Open this circuit breaker on the forward miscellaneous electrical equipment panel (referred to as the P33 panel) and attach a DO-NOT-CLOSE tag:
 - (a) 33E2, BATTERY CHARGER MAIN
 - C. Remove the Main Battery
 - (1) Do these steps to remove the main battery:

RESTORE MAIN BATTERY

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AIRLINE CARD NO.

SAS FOEING
767
TASK CARD

MECH INSP

CAUTION: THE MAIN BATTERY MAY BE REMOVED WHILE THE AIRPLANE IS SUPPLIED WITH EXTERNAL POWER. DO NOT REMOVE THE MAIN BATTERY IF THE AIRPLANE IS SUPPLIED WITH APU OR IDG POWER. THE APU OR IDG WILL SHUTDOWN WHEN THE BATTERY IS REMOVED.

- (a) Remove the battery connector from the main battery.
- (b) Remove the lockwire from the battery connector and the electrical connector (AMM 20-10-23/401).
- (c) Remove the electrical connector from the main battery.
- (d) Remove the six screws that hold the main battery.

WARNING: STAY AWAY FROM THE AREA BELOW THE MAIN BATTERY WHEN THE BATTERY IS HUNG FROM THE HOIST. DO NOT MOVE THE MAIN BATTERY ABOVE PERSONS DURING REMOVAL. THE BATTERY WEIGHS 96 POUNDS AND FAILURE OF THE HOIST COULD INJURE PERSONS.

- (e) Use the fishpole hoist and spreader bar to remove the main battery.
- Install Main Battery (Fig. 401)
 - A. Equipment
 - (1) Fishpole hoist to lift 96-pound battery, commercially available
 - (2) Bonding meter Model T-477W, Avtron Manufacturing, Inc., Cleveland, Ohio
 - (3) A24001-1, Hoist Equipment LRU's Main EE Bay
 - B. References
 - (1) SWPM 20-20-00, Standard Wiring Practice Manual D6-544446
 - (2) AMM 24-22-00/201, Electrical Power Control
 - C. Install the Main Battery
 - (1) Do these steps to install the main battery:

EFFECTIVITY	RESTORE	MAIN BATTERY			
	24-31-01-4A	24-006-01	PAGE	2 OF	5 AUG 22/08

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SAS BOEING
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TASK CARD

AIRLINE CARD NO.

MECH	INSP

WARNING: STAY AWAY FROM THE AREA BELOW THE MAIN BATTERY WHEN THE BATTERY IS HUNG FROM THE HOIST. DO NOT MOVE THE MAIN BATTERY ABOVE PERSONS DURING INSTALLATION. THE BATTERY WEIGHS 96 POUNDS AND FAILURE OF THE HOIST COULD INJURE

PERSONS.

- (a) Use the fishpole hoist and spreader bar to set the main battery in the main equipment center.
- (b) Install the six screws that hold the main battery.
- (c) Connect the electrical connector to the main battery.
- (d) Install the lockwire to the electrical connector (AMM 20-10-23/401).

CAUTION: DO NOT PULL ON THE BATTERY GROUND WIRE. LOOSE FASTENERS ON THE SHUNT STUDS CAN CREATE AN OPEN CIRCUIT OR HIGH RESISTANCE IN THE MAIN BATTERY GROUND STUD CONNECTION WHICH CAN CAUSE AIRPLANE SYSTEMS MALFUNCTION.

- (e) Connect the battery connector to the main battery.
- (f) Install the lockwire from the connector knob to one of the connector bolts (AMM 20-10-23/401).

NOTE: NASM20995CY20 or MS20995CY20 lockwire can be used.

- (2) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P33 panel:
 - (a) 33E2, BATTERY CHARGER MAIN
- (3) Set the airplane clocks to the correct time and date (AMM 31-25-00/501).
- D. Do these steps to check the main battery shunt:
 - (1) If there is a crack in the battery shunt body, a thread damage to the terminal posts, or a corrosion on the terminal posts, do these steps to replace the battery shunt:

EFFECTIVITY

RESTORE

MAIN BATTERY

24-31-01-4A

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AIRLINE CARD NO.

				TASK CARD
MECH	INSP			
				(a) Replace the battery shunt.
				(b) Make sure each jamnut is torqued to 35 ±5 pound-inch (SWPM 20-30-00).
				(c) Make sure the main battery ground stud nut is torqued between 65-70 pound-inch (SWPM 20-20-00).
				(d) Make sure the bonding resistance between the main battery ground stud and airplane structure is not more than 0.001 ohm (SWPM 20-20-00), D6-54446.
			(2)	Clean the area next to the battery shunt and the ground stud nut. Make sure the area is free of dust and dirt.
		Ε.	Do a	test of the main battery installation.
			(1)	Supply electrical power (AMM 24-22-00/201).
			(2)	Make sure the six EICAS circuit breakers on the overhead circuit breaker panel, P11, are closed.
			(3)	Do a test of the main battery, as follows:
				(a) Push the ELEC HYD switch on the EICAS MAINT panel on the right side panel, P61.
				(b) Make sure this value shows below STBY/BAT on the lower EICAS display:
				DC-V 28 ±4
				
			(4)	Remove electrical power if it is not necessary (AMM 24-22-00/201).

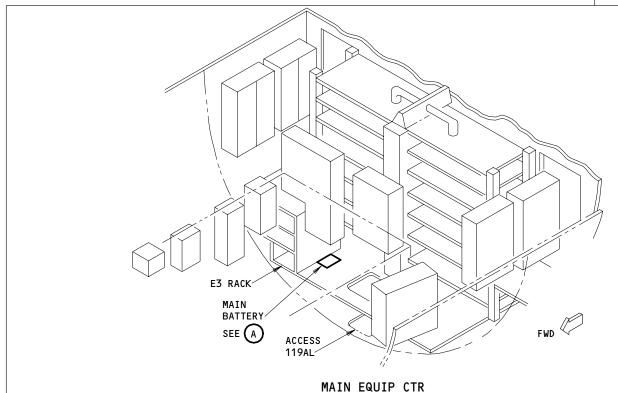
BOEING CARD NO.

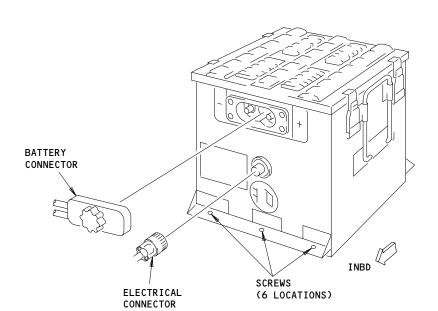
24-006-01

AIRLINE CARD NO.

SAS

767 TASK CARD





MAIN BATTERY



Main Battery Installation Figure 401

RESTORE MAIN BATTERY

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STATION	
TAIL NO.	
DATE	┪

WORK AREA



BOEING CARD NO. 24-007-c1

AIRLINE CARD NO.

TASK CARD

MPD

AIRPLANE

PHASE

REV REVISION 012 APR 22/09 ELECT | CREW CABIN 2A 10202 APPLICABILITY
ANE ENGINE STRUCTURAL ILLUSTRATION REFERENCE

INTERVAL

OPERATIONAL BATTERY CHARGER & CURRENT MONITOR NOTE ALL

ZONES ACCESS PANELS

RELATED TASK

212

SKILL

MPD ITEM NUMBER MECH INSP

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

24-30-00-5A 24-30-00-5C

OPERATIONALLY CHECK THE MAIN AND APU BATTERY CHARGERS. 24-30-00-5A OPERATIONALLY CHECK THE BATTERY CURRENT MONITORING 24-30-00-5C CAPABILITY.

The Battery Charger Test and the Current Monitor Test

References Α.

- (1) AMM 24-22-00/201, Electrical Power Control
- (2) AMM 27-61-00/201, Spoiler/Speedbrake Control System
- (3) AMM 31-41-00/201, EICAS
- B. Prepare for the Battery Charger Test and the Current Monitor Test.
 - (1) Supply electrical power (AMM 24-22-00/201).

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

- (2) Do the deactivation procedure for the spoilers (AMM 27-61-00/201) or move all persons and equipment away from the spoilers.
- (3) Make sure the six EICAS circuit breakers on the overhead circuit breaker panel, P11, are closed.

EFFECTIVITY OPERATIONAL BATTERY CHARGER & CURRENT MONITOR 24-30-00-5A 24-007-c1 PAGE 1 OF 6 DEC 22/07

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AIRLINE CARD NO.

		TASK CARD
MECH	INSP	
		(4) Make sure these circuit breakers on the main power distribution panel, P6, are closed:
		(a) 6A1, BAT BUS DISTR
		(b) 6A2, DC STBY
		(c) 6A4, BAT CUR MON PWR
		(d) 6A5, STBY PWR CONT
		(e) 6A6, DC BUS TIE CONT
		(f) 6C11, BAT BUS CONT
		(g) 6C12, L DC VOLT SENSE
		(h) 6C18, L TRU
		(i) 6C24, R TRU
		(j) 6D1, BAT OVHT PROT
		(k) 6D2, BAT XFER CONT
		(l) 6D8, SEC 2
		(m) 6D9, SEC 1
		(n) 6D10, TIE L
		(o) 6D11, INV PWR TRU
		(p) 6D12, BAT BUS PWR TRU
		(q) 6G6, STBY BUS OFF LT/BAT VM
		(r) 6G8, SEC 2
		(s) 6G9, SEC 1
		(t) 6G10, TIE R
		(u) 6G11, R DC VOLT SENSE
		(v) 6J9, MAIN BAT CHGR

AIRLINE CARD NO.

24-007-c1

BOEING 767 TASK CARD

MECH INSP (w) 6J10, HOT BAT BUS (x) 6J11, BAT BUS PWR (y) 6J12, INV PWR BAT (z) 6J17, AC STBY BUS PWR (aa) 6L16, INVERTER VOLT SENSE (5) Make sure these circuit breakers on the overhead circuit breaker panel, P11, are closed: (a) 11D1, STANDBY BUS AC (b) 11D2, STANDBY BUS DC (6) Make sure this circuit breaker on the right generator power panel, P32, is closed: (a) R GEN GND SVCE BUS (7) Make sure this circuit breaker on the forward miscellaneous electrical equipment panel, P33, is closed: (a) 33E2, BATTERY CHARGER MAIN (b) 33E5, BATTERY CHARGER APU (8) Make sure this circuit breaker on the APU/external power panel, P34, is closed: (a) 34M6, EXT PWR BPCU Make sure these circuit breakers on the aft equipment center rack, E6, are closed: (a) APU BAT OVHT PROT (b) APU BAT DC VOLTS (c) APU BAT CHGR (d) APU BAT BUS (10) The Main Battery Charger Test and the Battery Current Monitor Test

EFFECTIVITY

OPERATIONAL BATTERY CHARGER & CURRENT MONITOR

24-30-00-5A

24-007-c1

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AIRLINE CARD NO.

24-007-c1



MECH	INSP

- (a) Make sure the bottom EICAS display is in the ELEC/HYD mode. Push the ELEC HYD switch on the EICAS MAINT panel if necessary.
- (b) Make sure the BAT switch on the P5 panel is set to the ON position.
- (c) Turn the STBY POWER switch on the P5 panel to the BAT position.
- (d) Make sure the DISCH light on the P5 panel comes on.
- (e) Make sure the EICAS message, MAIN BAT DISCH, shows on the top EICAS display.

NOTE: This message does not show for ten seconds.

(f) Make sure these values show below STBY/BAT on the bottom EICAS display:

DC-V	25±2
DC-A	greater than 4 amps discharge

NOTE: There is a minus sign in front of the number to show that it is a dischage current. Discharge current value can vary from 4 to 75 amps, depending on the configuration of the airplane and the condition of the battery.##

- (g) After one minute, turn STBY POWER switch on the P5 panel to the AUTO position.
- Make sure the DC-A value below STBY/BAT is 38 ±5 (BAO6) or 45 ±10 (BA35) on the bottom EICAS display.
- (i) Make sure the DC-V value below STBY/BAT increases to 33 ±4 and then decreases to 28 ±2 on the bottom EICAS display.

NOTE: It will usually take from one to five minutes for the voltage value to increase and then decrease. But a fully discharged battery will extend this time to 75 minutes.

EFFECTIVITY

OPERATIONAL BATTERY CHARGER & CURRENT MONITOR

24-30-00-5A

24-007-c1

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AIRLINE CARD NO.

				TASK CARD		
MECH	INSP			<u>'</u>		
			(j)	After the DC-V value below STBY/BAT decreases to 28 ± 2 , make sure the DC-A value below STBY/BAT is 0 ± 5 on the bottom EICAS display.		
			(k)	Make sure the DISCH light on the P5 panel is off.		
			(1)	Make sure the EICAS message, MAIN BAT DISCH, does not show on the top display.		
			(m)	Push the ECS MSG switch on the EICAS MAINT panel on the right side panel, P61.		
			(n)	Make sure the EICAS message, MAIN BAT CHGR, does not show on the bottom display.		
		(11)	The	APU Battery Charger Test		
			(a)	Make sure the bottom EICAS display is in the ELEC/HYD mode. Push the ELEC HYD switch on the EICAS MAINT panel, if necessary.		
			(b)	Make sure the STBY POWER switch on the P5 panel is set to the AUTO position.		
			(c)) Make sure the BAT switch on the P5 panel is set to the ON position.		
			(d)	Turn the STBY POWER switch on the P5 panel to the BAT position for one minute.		
			(e)	Make sure these values show below APU/BAT on the bottom EICAS display:		
				DC-V 26 ±3		
				DC-A O		
			(f)	Turn the STBY POWER switch on the P5 panel to the AUTO position.		

- (g) Make sure these steps occur below APU/BAT on the bottom EICAS display:
 - 1) DC-A value increases quickly to 38 ± 5 (BA06) or 45 ± 10 (BA35).

EFFECTIVITY	OPERATIONAL	BATTERY C	HARGER & (URRENT	MONITOR
	24-30-00-5A				6 APR 22/09

BOEING CARD NO.

24-007-c1

AIRLINE CARD NO.

		TASK CARD	
MECH	INSP		<u>'</u>
		2) DC-V value increases to 33 ±4 and then decrease	ses to 28/±2.
		NOTE: It will usually take less than one mind voltage value to increase and then decifully discharged battery can extend the minutes.	ease. But, a
		3) After the DC-V value decreases to 28 ±2, make value is 0 ±5 below APU/BAT.	sure the DC-A
		(12) Do the activation procedure for the spoilers if you did deactivation procedure (AMM 27-61-00/201).	d the
		(13) Remove electrical power if it is not necessary (AMM 24-	-22-00/201).
	1 1		

EFFECTIVITY

STATION
TAIL NO.
DATE

WORK AREA

SKILL



BOEING CARD NO. 24-008-01

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

ELECT AFT CARGO

TASK

TITLE

D2000 HRS

STRUCTURAL ILLUSTRATION REFERENCE

APPLICABILITY
AIRPLANE
ENGINE

INTERVAL

RESTORE APU BATTERY NOTE ALL

ZONES ACCESS PANELS

154 822

MECH INSP MPD ITEM NUMBER

RESTORE THE APU BATTERY (OFF-AIRCRAFT).

RELATED TASK

24-31-04-4A

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

BATTERY TEST AND RESTORATION PROCEDURES ARE FOUND IN THE VENDOR COMPONENT MAINTENANCE MANUAL.
THE FOLLOWING PROCEDURE APPLIES TO THE ON-AIRCRAFT PORTION OF THIS TASK (REMOVAL/INSTALLATION):

Remove the APU Battery

A. Equipment

(1) PASSENGER AIRPLANES; A24006-1, APU Battery Hoist (preferred)

Fishpole Hoist used with the A24006-1 battery hoist to lift 96 lb. battery

PF-51 Hoist, Fishpole
P.F. Industries
9320 15th Ave. So. Seattle, WA 98108
(Alternative)

Minilift Hoist, Fishpole
Didsbury Engineering Co. Ltd.
Manchester M19 3 EJ
(Alternative)

Hoist, Fishpole - Commercially Available

Fishpole hoist not required for use with A49006-26.

EFFECTIVITY RESTORE APU BATTERY

24-31-04-4A 2

24-008-01

PAGE 1 OF 6 AUG 22/08

24-008-01

SAS BOEING
767
TASK CARD

AIRLINE CARD NO.

MECH I	NSP
--------	-----

- (2) PASSENGER AIRPLANES; A49006-26, APU Battery Hoist (alternate, no longer available)
- B. Prepare for Removal
 - (1) Open this circuit breaker on the forward miscellaneous electrical equipment panel (referred to as the P33 panel) and attach a D0-NOT-CLOSE tag:

NOTE: Make sure the APU is not operating when you open this circuit breaker. The APU will automatically shut down when you open this circuit breaker.

- (a) 33E5, BATTERY CHARGER APU
- (2) Open these circuit breakers on the aft equipment center rack (referred to as the E6 rack) and attach a DO-NOT-CLOSE tag:

<u>NOTE</u>: Make sure the APU is not operating when you open these circuit breakers. The APU will automatically shut down when you open these circuit breakers.

- (a) APU PRIME CONTROL
- (b) APU BAT CHGR
- (3) Do these steps to remove the APU battery:
 - (a) Open the access cover on the forward side of the E6 rack.
 - (b) Remove the lockwire from the electrical connector and the battery connector (AMM 20-10-23/401).
 - (c) Remove the electrical connector and battery connector from the APU battery.
 - (d) Remove the six screws that hold the APU battery.

WARNING: DO NOT REMOVE THE APU BATTERY WITHOUT AID. BATTERY WEIGHS 96 POUNDS AND INJURY CAN OCCUR IF BATTERY REMOVAL IS DONE WITHOUT AID.

EFFECTIVITY

RESTORE APU BATTERY

24-31-04-4A

24-008-01

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AIRLINE CARD NO.

24-008-01

SAS BOEING TASK CARD

MECH INSP

- (e) PASSENGER AIRPLANES; Use the hoist to remove the APU battery from the E6 rack.
- FREIGHTER AIRPLANES; Use special care to manually remove the APU battery from the E6 rack.
- 2. <u>Install the APU Battery</u> (Fig. 401)
 - (1) PASSENGER AIRPLANES; A24006-1, APU Battery Hoist (preferred) Fishpole Hoist used with the A24006-1 battery hoist to lift 96 lb. battery is commercially available. Fishpole hoist not required for use with A49006-26.
 - (2) PASSENGER AIRPLANES; A49006-26, APU Battery Hoist (alternate, no longer available)
 - Bonding meter Model T-477W, Microhm Bridge, Avtron Manufacturing, Inc., Cleveland, Ohio
 - Α. References
 - (1) SWPM 20-20-00, Standard Wiring Practices Manual D6-544446
 - (2) AMM 24-22-00/201, Electrical Power Control
 - Install the APU Battery В.
 - (1) Do these steps to install the APU battery:
 - (a) PASSENGER AIRPLANES; Use the hoist to install the APU battery in the E6 rack.
 - FREIGHTER AIRPLANES; Use special care to manually install the APU battery in the E6 rack.
 - (c) Install the six screws that hold the APU battery.
 - (d) Connect the electrical connector and battery connector to the APU battery.
 - (e) Install the lockwire to the electrical connector (AMM 20-10-23/401).

EFFECTIVITY

RESTORE APU BATTERY

24-31-04-4A

24-008-01

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24-008-01

TASK CARD

AIRLINE CARD NO.

			TASK CARD
MECH	INSP		
			(f) Install the lockwire from the connector knob to one of the connector bolts (AMM 20-10-23/401).
			NOTE: NASM20995CY20 or MS20995CY20 lockwire can be used.
			(g) Close the access cover on the forward side of the E6 rack.
		(2)	Remove the DO-NOT-CLOSE tag and close these circuit breakers on the E6 rack:
			(a) APU PRIME CONTROL
			(b) APU BAT CHGR
		(3)	Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P33 panel:
			(a) 33E5, BATTERY CHARGER APU
		C. Do t	these steps to check the APU battery ground stud:
		(1)	If the terminal lug, ground strap or stud is damaged, deformed, discolored or annealed, do these steps:
			(a) Repair or replace the terminal lug, ground strap or stud (SWPM 20-30-00).
			NOTE: The terminal lug can become annealed (soft) because it is heated and cooled again and again. If the terminal lug is annealed, replace it with a high temperature terminal lug (SWPM 20-30-11).
			CAUTION: DO NOT PULL ON THE GROUND WIRE AFTER THE GROUND STUD IS TIGHTENED. DAMAGE TO EQUIPMENT OR AIRPLANE STRUCTURE MAY OCCUR.
			(b) Make sure each APU ground stud nut is torqued from 180 to 200 pound-inch (SWPM 20-30-00).
			(c) Make sure the electrical bonding of the APU battery ground is 0.0001 ohms (SWPM 20-20-00).

24-008-01

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

(2) If the terminal lug, ground strap or stud is not damaged, deformed, discolored or annealed but the electrical bonding of the ground stud is in question, do the following steps:

CAUTION: DO NOT PULL ON THE GROUND WIRE AFTER THE GROUND STUD IS TIGHTENED. DAMAGE TO EQUIPMENT OR AIRPLANE STRUCTURE MAY OCCUR.

- (a) Make sure each APU ground stud nut is torqued from 180 to 200 pound-inch (SWPM 20-30-00).
- (b) Make sure the electrical bonding of the APU battery ground is 0.0001 ohm (SWPM 20-20-00).
- (3) Clean the fuselage next to the APU ground studs. Make sure the battery ground stud area is free of dust and dirt.
- D. Do a test of the APU battery installation.
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Make sure the six EICAS circuit breakers on the overhead circuit breaker panel, P11, are closed.
 - (3) Do a test of the APU battery, as follows:
 - (a) Push the ELEC HYD switch on the EICAS MAINT panel on the right side panel, P61.
 - (b) Make sure this value is below APU/BAT on the bottom EICAS display:

DC-V	28 ±4
------	-------

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

EFFECTIVITY

RESTORE

APU BATTERY

24-31-04-4A

24-008-01

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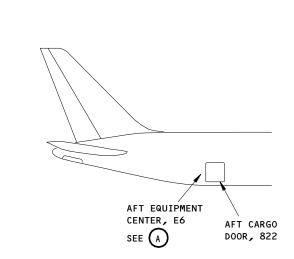
BOEING CARD NO.

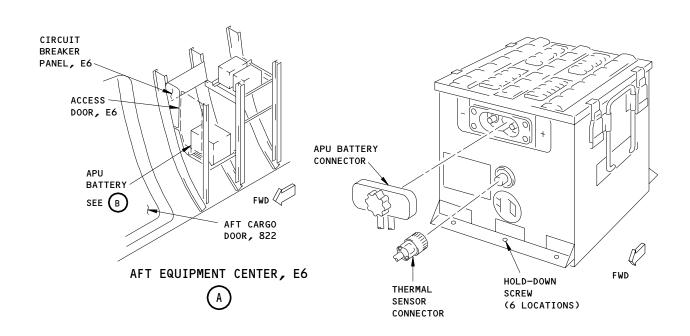
24-008-01

AIRLINE CARD NO.

SAS







APU Battery Installation Figure 401 APU BATTERY

RESTORE APU BATTERY

24-31-04-4A 24-008-01 PAGE 6 OF 6 AUG 22/02

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

STATION	
STATION	
TAIL NO.	
TAIL NO.	
DATE	
DATE	

SKILL

WORK AREA



BOEING CARD NO. 24-009-C1

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

ELECT CREW CABIN

TASK

TITLE

STRUCTURAL ILLUSTRATION REFERENCE

APPLICABILITY
AIRPLANE
ENGINE

INTERVAL

OPERATIONAL DC TIE CONTROL UNIT & DC TIE RELAY

NOTE ALL

ZONES ACCESS PANELS

212 119AL

RELATED TASK

MECH INSP MPD ITEM NUMBER

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

24-30-00-5D

24-30-00-5B

OPERATIONALLY CHECK THE DC TIE RELAY. 24-30-00-5B OPERATIONALLY CHECK THE DC TIE CONTROL UNIT (DTCU). 24-30-00-5D

The DC Tie Control Unit Test and the DC Tie Relay Test

A. References

- (1) AMM 24-22-00/201, Electrical Power Control
- (2) AMM 27-61-00/201, Spoiler/Speedbrake Control System
- (3) AMM 31-41-00/201, EICAS
- B. Prepare for the DC Tie Control Unit Test and the DC Tie Relay Test
 - (1) Supply electrical power (AMM 24-22-00/201).

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

- (2) Do the deactivation procedure for the spoilers (AMM 27-61-00/201) or move all persons and equipment away from the spoilers.
- (3) Make sure the six EICAS circuit breakers on the overhead circuit breaker panel, P11, are closed.
- (4) Make sure these circuit breakers on the main power distribution panel, P6, are closed:

OPERATIONAL DC TIE CONTROL UNIT & DC TIE RELAY

24-30-00-5B 24-009-C1 PAGE 1 OF 6 AUG 22/06

24-009-c1

TASK CARD

AIRLINE CARD NO.

		TASK CARD	
MECH	INSP		
		(a) 6A1, BAT BUS DISTR	
		(b) 6A2, DC STBY	
		(c) 6A4, BAT CUR MON PWR	
		(d) 6A5, STBY PWR CONT	
		(e) 6A6, DC BUS TIE CONT	
		(f) 6C11, BAT BUS CONT	
		(g) 6C12, L DC VOLT SENSE	
		(h) 6C18, L TRU	
		(i) 6C24, R TRU	
		(j) 6D1, BAT OVHT PROT	
		(k) 6D2, BAT XFER CONT	
		(l) 6D8, SEC 2	
		(m) 6D9, SEC 1	
		(n) 6D10, TIE L	
		(o) 6D11, INV PWR TRU	
		(p) 6D12, BAT BUS PWR TRU	
		(q) 6G6, STBY BUS OFF LT/BAT VM	
		(r) 6G8, SEC 2	
		(s) 6G9, SEC 1	
		(t) 6G10, TIE R	
		(u) 6G11, R DC VOLT SENSE	
		(v) 6J9, MAIN BAT CHGR	
		(w) 6J10, HOT BAT BUS	
		(x) 6J11, BAT BUS PWR	

EFFECTIVITY

24-009-c1

AIRLINE CARD NO.

SAS FOEING 767 TASK CARD

MECH INSP

- (y) 6J12, INV PWR BAT
- (z) 6J17, AC STBY BUS PWR
- (aa) 6L16, INVERTER VOLT SENSE
- (5) Make sure these circuit breakers on the overhead circuit breaker panel, P11, are closed:
 - (a) 11D1, STANDBY BUS AC
 - (b) 11D2, STANDBY BUS DC
- (6) Make sure this circuit breaker on the right generator power panel, P32, is closed:
 - (a) R GEN GND SVCE BUS
- (7) Make sure this circuit breaker on the forward miscellaneous electrical equipment panel, P33, is closed:
 - (a) 33E2, BATTERY CHARGER MAIN
 - (b) 33E5, BATTERY CHARGER APU
- (8) Make sure this circuit breaker on the APU/external power panel, P34, is closed:
 - (a) 34M6, EXT PWR BPCU
- (9) The DC Tie Control Unit Test and the DC Tie Relay Test
 - (a) Make sure the two BUS TIE switches on the P5 panel are set to the AUTO position. The ISLN light in each switch should be off.
 - (b) Make sure the bottom EICAS display is in the ELEC/HYD mode. Push the ELEC HYD switch on the EICAS MAINT panel if necessary.
 - (c) Make sure these values are below L and R on the bottom EICAS display:

DC-V	28 ±2
DC-A	greater than 5

EFFECTIVITY

OPERATIONAL DC TIE CONTROL UNIT & DC TIE RELAY

24-30-00-5B

24-009-c1

PAGE 3 OF 6 AUG 22/01

AIRLINE CARD NO.

24-009-c1

BOEING 767 TASK CARD

MECH INSP

- (d) Open this circuit breaker on the main power distribution panel, P6:
 - 1) 6C24, R TRU
- Make sure these values are below R for 11 +5 seconds on the bottom EICAS display:

DC-V	0 ±1
DC-A	0

(f) After 12 seconds, make sure these values are below R on the bottom EICAS display:

DC-V	28 ±2
DC-A	0

- (g) Push the ECS MSG switch on the EICAS MAINT panel on the right side panel, P61.
- Make sure the EICAS message, T-R UNIT, shows on the bottom (h) display.
- Close this circuit breaker on the main power distribution panel, P6:
 - 1) 6C24, R TRU
- Make sure the EICAS message, T-R UNIT, still shows on the bottom display.
- (k) Push the right BUS TIE switch on the P5 panel to the ISLN position. Make sure the yellow ISLN light in the switch comes on.
- After three seconds (minimum), push the right BUS TIE switch on (L) the P5 panel to the AUTO position. Make sure the yellow ISLN light in the switch goes off.
- Make sure the EICAS message, T-R UNIT, does not show on the bottom display.
- (n) Push the ELEC HYD switch on the EICAS MAINT panel.

EFFECTIVITY

DC TIE CONTROL UNIT & DC TIE RELAY OPERATIONAL

24-30-00-5B

24-009-c1

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AIRLINE CARD NO.

24-009-c1

				TASK CARD	
MECH	INSP				·
		(0)	Make sure these values are below L and R on the bottom EIC display:		bottom EICAS
			DC-V	28 ±2	
			DC-A	greater than O	
		(p)	Open this cire	cuit breaker on the main power dist	ribution panel,
			1) 6C18, L TI	RU	
		(p)	Make sure these values show below L on the bottom EICAS display for 11 +5 seconds:		
			DC-V	0 ±1	
			DC-A	0	
		(r)	After 12 seconds, make sure these values show below L on the bottom EICAS display:		low L on the
			DC-V	28 ±2	
			DC-A	0	
		(s)	Push the ECS MSG switch on the EICAS MAINT panel.		
		(t)	Make sure the EICAS display	EICAS message, T-R UNIT, shows on	the bottom
		(u)	Close this cipanel, P6:	rcuit breaker on the main power dis	tribution
			1) 6C18, L TRU		
		(v)	Make sure the bottom display	EICAS message, T-R UNIT, still sho	ows on the
			- 1 .1 1 6.	DUO 775 11 11 DE 11	

(w) Push the left BUS TIE switch on the P5 panel to the ISLN

position. Make sure the yellow ISLN light in the switch comes

on.

BOEING CARD NO.

24-009-C1

AIRLINE CARD NO.



MECH INSP

- (x) After 3 seconds (minimum), push the left BUS TIE switch on the P5 panel to the AUTO position. Make sure the yellow ISLN light in the switch goes off.
- (y) Make sure the EICAS message, T-R UNIT, does not show on the bottom display.
- (z) Push the ELEC HYD switch on the EICAS MAINT panel.
- (aa) Make sure these values show below L and R on the bottom EICAS display:

DC-V	28 ±2
DC-A	greater than O

- (10) Do the activation procedure for the spoilers if you did the deactivation procedure (AMM 27-61-00/201).
- (11) Remove electrical power if it is not necessary (AMM 24-22-00/201).
- (12) Push the BAT switch on the P5 panel to the OFF position.

EFFECTIVITY

OPERATIONAL DC T

DC TIE CONTROL UNIT & DC TIE RELAY

24-30-00-5B

24-009-c1

PAGE 6 OF 6 AUG 22/01

STATION	
TAIL NO.	
DATE	



BOEING CARD NO. 24-010-01

AIRLINE CARD NO.

SKILL	WORK AR	EA R	ELATED TASK	INTERVAL		PHASE	MPD REV	TASK CARD REVISION
ELECT	CREW CA	BIN		00048 HRS	(#)	002DY	012	AUG 22/06
TAS	K		TITLE		STRUCTURAL ILLUSTRATION RE	FERENCE	AF	PLICABILITY
OPERA	TIONAL	STANDBY F	OWER SYSTEM				AIRPLAN	E ENGINE
							NOT	E ALL
	ZONES				ACCESS PANELS			

212

MECH INSP MPD ITEM NUMBER

OPERATIONALLY CHECK THE STANDBY POWER SYSTEM.

24-33-00-6A

(#) CMR FREQUENCY IS 48 ELAPSED CLOCK HOURS.

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

- Daily Standby Power Operational Test (Short Test)
 - A. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - B. Access
 - (1) Location Zones
 211/212 Flight Compartment
 - C. Procedure
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Make sure the BAT switch on the electrical power control panel (P5) is in the ON position.
 - (3) Make sure the STANDBY PWR switch on the electrical power control panel (P5) is in the AUTO position.
 - (4) Turn the STBY POWER switch on the P5 panel to the BAT position.
 - (5) Make sure the yellow DISCH light on the standby power control panel (P5) comes on.
 - (6) Make sure the yellow STBY BUS OFF light next to the STBY POWER switch (P5) is off.

OPERATIONAL STANDBY POWER SYSTEM

24-33-00-6A 24-010-01 PAGE 1 OF 2 AUG 22/06

24-010-01

AIRLINE CARD NO.

			TASK CARD
MECH	INSP		
		(7)	Turn the STBY POWER switch (P5) to the AUTO position.
		(8)	Make sure the yellow DISCH light on the standby power control panel
			(P5) goes off.
		(9)	Make sure the yellow STBY BUS OFF light next to the STBY POWER switch (P5) is off.
EFF	ECTI	VITY	OPERATIONAL STANDBY POWER SYSTEM
1			

STA	TION						BOE	ING CAR	D NO.
TAII	L NO.			T BOEIN	VG		24-0	10-0	2
<u> </u>	ATE		SAS Y	767			AIRI	LINE CAF	RD NO.
D.	AIE			TASK CARD					
SKILL	WORK ARE	Ā	RELATED TASK	INTERVAL		PHASE	MPD REV		SK CARD VISION
ELECT	CREW CA	BIN		1C		11212	010	APR	22/09
TAS	K		TITLE		STRUCTURAL ILLUSTRATION RE	FERENCE	AIRPLAN	PLICABI	LITY ENGINE
FUNCT	IONAL	STAN	IDBY POWER SYSTE	M			AIKFLAN	· L	LINGTINE
							NOT	E	ALL

ZONES ACCESS PANELS

212

MPD ITEM NUMBER MECH INSP

FUNCTIONALLY CHECK THE STANDBY POWER SYSTEM.

24-33-00-6B

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

- 1. Functional Test 115 volt AC Standby Power Generation
 - References Α.
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 27-61-00/201, Spoiler/Speedbrake Control System
 - B. Access
 - (1) Location Zones 211/212 Flight compartment
 - C. Procedure
 - (1) Supply electrical power (AMM 24-22-00/201).

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

- (2) Do the deactivation procedure for the spoilers (AMM 27-61-00/201) or move all persons and equipment away from the spoilers.
- (3) Make sure these circuit breakers on the main power distribution panel, P6, are closed:

EFFECTIVITY FUNCTIONAL STANDBY POWER SYSTEM 24-33-00-6B 24-010-02 PAGE 1 OF 7 AUG 22/01

1

4 9

24-010-02

TASK CARD

AIRLINE CARD NO.

MECH	INSP		
			(a) 6A1, BAT BUS DISTR
			(b) 6A2, DC STBY
			(c) 6A4, BAT CUR MON PWR
			(d) 6A5, STBY PWR CONT
			(e) 6C11, BAT BUS CONT
			(f) 6C18, L TRU
			(g) 6C24, R TRU
			(h) 6D1, BAT OVHT PROT
			(i) 6D2, BAT XFER CONT
			(j) 6D11, INV PWR TRU
			(k) 6D12, BAT BUS PWR TRU
			(l) 6G6, STBY BUS OFF LT/BAT VM
			(m) 6J9, MAIN BAT CHGR
			(n) 6J10, HOT BAT BUS
			(o) 6J11, BAT BUS PWR
			(p) 6J12, INV PWR BAT
			(q) 6J17, AC STBY BUS PWR
			(r) 6L16, INVERTER VOLT SENSE
		(4)	Make sure the six EICAS circuit breakers on the overhead circuit breaker panel, P11, are closed.
		(5)	Make sure these circuit breakers on the overhead circuit breaker panel, P11, are closed:
			(a) 11D1, STANDBY BUS AC
			(b) 11D2, STANDBY BUS DC

EFFECTIVITY

24-010-02

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (6) Make sure these circuit breakers on the forward miscellaneous electrical equipment panel, P33, are closed:
 - (a) 33E2, BATTERY CHARGER MAIN
 - (b) 33E5, BATTERY CHARGER APU
- (7) Make sure this circuit breaker on the APU/external power panel, P34, is closed:
 - (a) 34M6, EXT PWR BPCU
- (8) Make sure these circuit breakers on the aft equipment center rack, E6, are closed:
 - (a) APU BAT OVHT PROT
 - (b) APU BAT DC VOLTS
 - (c) APU BAT CHGR
 - (d) APU BAT BUS
- (9) Do a check of the standby power system as follows:
 - (a) Make sure the BAT switch on the P5 panel is in the ON position.
 - (b) Make sure the STBY POWER switch on the P5 panel is in the AUTO position.
 - (c) Push the ELEC HYD switch on the EICAS MAINT panel on the right side panel, P61.
 - (d) Make sure these values show below the STBY/BAT on the bottom EICAS display:

AC-V	115 ±5
FREQ	400 ±5
DC-V	28 ±2

(e) Make sure the yellow STBY BUS OFF light, next to the STBY POWER switch, is off.

EFFECTIVITY

FUNCTIONAL STANDBY POWER SYSTEM

24-33-00-6B

24-010-02

PAGE 3 OF 7 DEC 22/00

AIRLINE CARD NO.

24-010-02

		TASK CARD
MECH	INSP	
		(f) Turn the STBY POWER switch to the OFF position on the electrical power control panel.
		(g) Make sure the yellow STANDBY BUS OFF light, next to the STBY POWER switch, comes on.
		(h) Make sure the EICAS message, STANDBY BUS OFF, shows on the top EICAS display.
		(i) Turn the STBY POWER switch to the AUTO position.
		(j) Make sure the yellow OFF light, next to the STBY POWER switch, goes off.
		(k) Make sure the EICAS message, STANDBY BUS OFF, does not show on the top EICAS display.
		(l) Open the AC STBY BUS PWR (J17) circuit breaker on the main power distribution panel, P6.
		(m) Make sure the yellow STBY BUS OFF light, next to the STBY POWE switch, is off.
		(n) Make sure the EICAS message, STANDBY BUS OFF, does not show on the top EICAS display.
		(o) Open the INV PWR TRU (D11) circuit breaker on the main power distribution panel, P6.
		(p) Make sure the yellow STBY BUS OFF light, next to the STBY POWE switch, comes on.
		(q) Make sure the EICAS message, STANDBY BUS OFF, shows on the top EICAS display.
		(r) Turn the STBY POWER switch to the BAT position.
		(s) Make sure the yellow STANDBY BUS OFF light, next to the STBY POWER switch, goes off.
		(t) Make sure the EICAS message, STANDBY BUS OFF, does not show on the top EICAS display.

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(u) Open the INV PWR BAT (J12) circuit breaker on the main power

distribution panel, P6.

AIRLINE CARD NO.

24-010-02

BOEING 767 TASK CARD

MECH INSP

- (v) Make sure the yellow STANDBY BUS OFF light, next to the STBY POWER switch, comes on.
- (w) Make sure the EICAS message, STANDBY BUS OFF, shows on the top EICAS display.
- (x) Turn the STBY POWER switch to the AUTO position.
- Close the AC STBY BUS PWR (J17) circuit breaker on the main (y) power distribution panel, P6.
- (z) Make sure the yellow STANDBY BUS OFF light, next to the STBY POWER switch, goes off.
- Make sure the EICAS message, STANDBY BUS OFF, does not show on the top EICAS display.
- Close the INV PWR TRU (D11) and INV PWR BAT (J12) circuit (ab) breakers on the main power distribution panel, P6.
- (ac) Push the ELEC HYD switch on the EICAS MAINT panel on the right side panel, P61.
- Make sure these values show below STBY/BAT on the bottom EICAS (ad) display:

AC-V	115 ±5
FREQ	400 ±5
DC-V	28 ±2

Make sure this value shows below APU/BAT on the bottom EICAS display:

DC-V 28 ±2

- (af) Turn the STBY POWER switch to the BAT position.
- (ag) Make sure the yellow DISCH light on the standby power control panel comes on.

EFFECTIVITY

FUNCTIONAL STANDBY POWER SYSTEM

24-33-00-6B

24-010-02

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24-010-02

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (ah) Make sure the EICAS message, MAIN BAT DISCH, shows on the top display.
- (ai) Make sure this value shows below STBY/BAT on the bottom EICAS display:

DC-V	25 ±2
------	-------

- (aj) Turn the STBY POWER switch to the AUTO position.
- (ak) Make sure the DISCH light goes off.
- (al) Make sure these values show below STBY/BAT on the bottom EICAS display:

NOTE: These values show that the main battery is in a charge cycle. A charge cycle of one to five minutes is usual however, a fully discharged battery requires 75 minutes to charge.

DC-A	38 ±5 (BAO6)
DC-A	45 ±10 (BA35)
DC-V	33 ±4

(am) When the battery charge cycle is complete, make sure the DC-A value below STBY/BAT decreases suddenly (1-2 seconds) from 38 ± 5 (BAO6) or 45 ± 10 (BA35) to 0 ± 5 .

NOTE: If the DC-A value decreases slowly, there is a failure in the main battery charger or its external circuit.

(an) Make sure this value shows below STBY/BAT on the bottom EICAS display:

DC-V 28 ±2

(ao) Push the STATUS switch on the EICAS display select panel on the forward electronics panel, P9.

EFFECTIVITY

FUNCTIONAL STANDBY POWER SYSTEM

24-33-00-6B

24-010-02

PAGE 6 OF 7 APR 22/09

24-010-02

AIRLINE CARD NO.



MECH INSP (ap) Make sure the EICAS message, MAIN BAT CHGR, does not show on the bottom display. (10) Do the EICAS Maintenance Message Erase Procedure to erase any latched messages (AMM 31-41-00/201). (11) Do the activation procedure for the spoilers (AMM 27-61-00/201) if you did the deactivation procedure. (12) Remove electrical power if it is not necessary (AMM 24-22-00/201). **EFFECTIVITY** FUNCTIONAL

		1			
STATION				_	/
TAI	L NO.		SAS		BOEII 767
D	ATE		JAJ		TASK CAR
SKILL	WORK ARI	ĒΑ	RELATED TASK		INTERVAL
ELECT	CREW CA	BIN			1A

STANDBY POWER SYSTEM

BOEING CARD NO. 24-010-06

AIRLINE CARD NO.

MPD TASK CARD PHASE REVISION REV 012 APR 22/09 10101

ACCESS PANELS

APPLICABILITY
AIRPLANE ENGINE STRUCTURAL ILLUSTRATION REFERENCE

NOTE

ALL

ZONES

OPERATIONAL

MECH INSP

212

OPERATIONALLY CHECK THE STANDBY POWER SYSTEM.

24-33-00-6C

MPD ITEM NUMBER

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

- 1. Operational Test 115 volt AC Standby Power Generation (Long Test)
 - References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 31-41-00/201, EICAS Maintenance Practices
 - B. Access
 - (1) Location Zones Flight Compartment 211/212
 - Procedure
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Make sure the BAT switch on the electrical power control panel is in the ON position.
 - (3) Make sure the STANDBY PWR switch on the electrical power control panel is in the AUTO position.
 - (4) Open INV PWR TRU (D11) circuit breaker on the main power distribution panel, P6.
 - (5) Make sure the yellow STBY BUS OFF light next to the STBY POWER switch is off.

EFFECTIVITY

OPERATIONAL

STANDBY POWER SYSTEM

24-33-00-6C

24-010-06

PAGE 1 OF 3 AUG 22/01

1

24-010-06

BOEING 767 TASK CARD

AIRLINE CARD NO.

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- (6) Make sure the EICAS message, STANDBY BUS OFF, does not show on the top EICAS display.
- (7) Make sure the EICAS message, STBY INVERTER, appears on the bottom EICAS display.
- (8) Close the INV PWR TRU (D11) circuit breaker on the main power distribution panel, P6.
- (9) Do the EICAS message erase procedure (AMM 31-41-00/201).
- (10) Open the AC STBY BUS PWR (J17) circuit breaker on the main power distribution panel, P6.
- (11) Make sure the yellow STBY BUS OFF light next to the STBY POWER switch is off.
- (12) Make sure the EICAS message, STANDBY BUS OFF, does not show on the top EICAS display.
- (13) Close the AC STBY BUS PWR (J17) circuit breaker on the main power distribution panel, P6.
- (14) Push the ELEC HYD switch on the EICAS MAINT panel on the right side panel, P61.
- (15) Make sure these values show below STBY/BAT on the bottom EICAS display:

AC-V	115 ±5
FREQ	400 ±5
DC-V	28 ±2

- (16) Turn the STBY POWER switch to the BAT position.
- Make sure the yellow DISCH light on the standby power control panel (17) comes on.
- Make sure this value shows below STBY/BAT on the bottom EICAS display:

DC-V	25 ±2
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EFFECTIVITY

OPERATIONAL STANDBY POWER SYSTEM

24-33-00-6C

24-010-06

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24-010-06

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (19) Turn the STBY POWER switch to the AUTO position.
- (20) Make sure these values show below STBY/BAT on the bottom EICAS display:

NOTE: These values show that the main battery is in a charge cycle. A charge cycle of one to five minutes is usual, however, a fully discharged battery requires 75 minutes to charge.

DC-A	38 ±5 (BAO6)
DC-A	45 ±10 (BA35)
DC-V	33 ±4

(21) When the battery charge cycle is completed, make sure the DC-A value below STBY/BAT decreases suddenly (1-2 seconds) from 38 \pm 5 (BAO6) or 45 \pm 10 (BA35) to 0 \pm 5.

<u>NOTE</u>: If the DC-A value decreases slowly, there is a failure in the main battery charger or its external circuit.

(22) Make sure this value shows below STBY/BAT on the bottom EICAS display:

DC-V 28 ±2	
------------	--

- (23) Push the STATUS switch on the EICAS display select panel on the forward electronics panel, P9.
- (24) Make sure the EICAS message, MAIN BAT CHRG, does not show on the bottom display.
- (25) Do the EICAS Maintenance Message Erase Procedure to erase any latched messages (AMM 31-41-00/201).
- (26) Remove electrical power if it is not necessary (AMM 24-22-00/201).

EFFECTIVITY

OPERATIONAL | STANDBY POWER SYSTEM

24-33-00-6C

24-010-06

PAGE 3 OF 3 APR 22/09

STATION
TAIL NO.
DATE



BOEING CARD NO. 24-013-51

AIRLINE CARD NO.

SKILL WORK AREA		RELATED TASK			INTERVAL		PHASE	SE MPD		TASK CARD			
											REV	RE	VISION
ELECT CREW CABIN							1A			10101	003	DEC	22/07
TAS	K				TITLE				STRUCTURAL ILLUSTRATION RE	FERENCE	AF	PPLICABI	LITY
											AIRPLAN	ΙE	ENGINE
OPERA	TIONAL	HYDR	RAULIC	MOTOR	GENE	RATOR	(HMG)						
										NOT	E	ALL	
ZONES								ACCESS PANELS					
212													

MECH INSP

MPD ITEM NUMBER

OPERATIONALLY CHECK THE HYDRAULIC MOTOR GENERATOR (HMG).

24-25-00-5A

AIRPLANE NOTE: 767-200/300 AIRPLANES WITH HMG.

- Operational Test Hydraulic Motor Generator System (Fig. 501)
 - A. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 29-11-00/201, Main Hydraulic Systems
 - (3) AMM 36-00-00/201, Pneumatic General
 - B. Equipment
 - (1) Hydraulic Service Cart, 0 to 3000 psi, with hydraulic fluid, fire resistant, BMS 3-11 commercially available (required for Instrument Bus Power Transfer Test)
 - C. Prepare for Test
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Make sure the six EICAS circuit breakers on the overhead circuit breaker panel P11 are closed.
 - (3) Make sure these circuit breakers on the overhead circuit breaker panel P11 are closed:
 - (a) 11R4, AC BUS SENSE L
 - (b) 11R31, AC BUS SENSE R

OPERATIONAL HYDRAULIC MOTOR GENERATOR (HMG)

24-25-00-5A 24-013-51 PAGE 1 OF 5 DEC 22/07

24-013-51

AIRLINE CARD NO.

SAS BOEING 767 TASK CARD

MECH I	NSP
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- (4) Make sure this circuit breaker on the main power distribution panel, P6, is closed:
 - (a) 6A7, HYD GEN CONTR POWER
- (5) Pressurize the center hydraulic system with one of these methods:

<u>NOTE</u>: When the ACMPs do not produce enough flow to pressurize the HMG, use the air driven pump.

- (a) Both ACMP C1 and C2 (AMM 29-11-00/201).
 - 1) Put both ACMP C1 and C2 switches on the hydraulic control panel (P5) to ON (AMM 29-11-00/201).
- (b) The air driven pump:
 - 1) Supply pneumatic power (AMM 36-00-00/201).
 - 2) Put the C DEMAND HYD PUMPS AIR switch on the hydraulic control panel (P5) to the AUTO position.

D. Procedure

- (1) Do this operational test of the HMG system:
 - (a) Push the STATUS switch on the EICAS display select panel P9.
 - (b) Hold the EQUIP COOL/HYD GEN switch on the miscellaneous test panel (P61) in the HYD GEN position.
 - (c) If the ADP is used, make sure the ADP starts to operate.
 - (d) Make sure the status messages HYD GEN ON and HYD GEN VAL appear on the EICAS lower display unit on P2.
 - (e) Push the ELEC/HYD switch on the EICAS MAINT panel (P61) and make sure these values are shown on the lower EICAS display:

1) HYD GEN DC-V 28 ± 3

2) HYD GEN AC-V 118 ±5

EFFECTIVITY

OPERATIONAL HYDRAULIC MOTOR GENERATOR (HMG)

24-25-00-5A

24-013-51

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24-013-51

AIRLINE CARD NO.

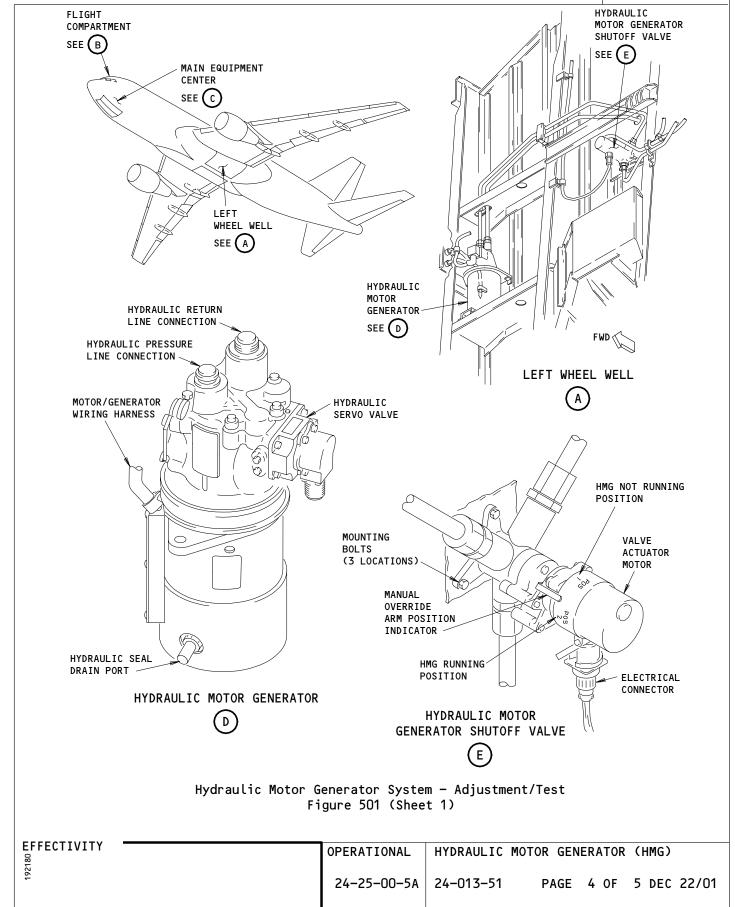
					TAS	SK CARD		
MECH	INSP							
			3)	HYD GE	N FREQ		400 ±5	
				NOTE:		bus volt	display is an indicatio age (HMG dc output in p	
							EN switch on the P61 pa ADP stops.	nel. If the
			(g) Mak	e sure	these val	ues are s	hown on the lower EICAS	display:
			1)	HYD GE	N DC-V		0 ±4	
			2)	HYD GE	N AC-V		0 ±5	
			3)	HYD GE	N FREQ		0 ±5	
			(h) Pus	h the E	CS/MSG sw	itch on t	he EICAS MAINT panel (P	61).
			(i) Pus	h and h	old the E	RASE swit	ch (P61) for 3 seconds.	
			_			_	s HYD GEN ON and HYD GE out of view.	N VAL on the
		(2)	Remove t			er if it	is not necessary	
		(3)	Remove p	neumati	c power i	f it is n	ot necessary (AMM 36-00	-00/201).
		(4)	Remove e	lectric	al power	if it is	not necessary (AMM 24-2	2-00/201).

24-013-51

AIRLINE CARD NO.

SAS

767 TASK CARD



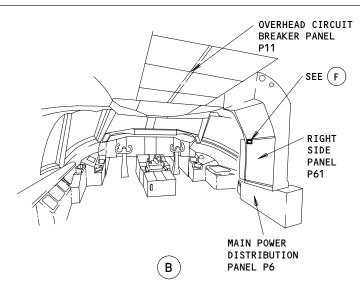
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24-013-51

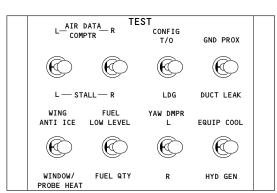
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SAS

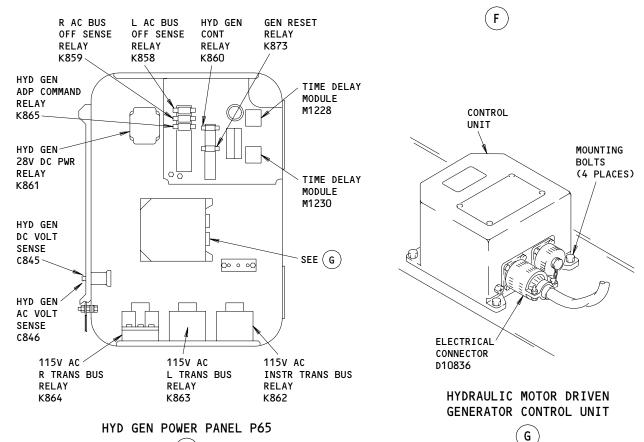
FOEING 767 TASK CARD



C



MISCELLANEOUS TEST PANEL



Hydraulic Motor Driven Generator System Component Location Figure 501 (Sheet 2)

OPERATIONAL HYDRAULIC MOTOR GENERATOR (HMG)

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STA	TION						
TAIL NO.							
2.77							
DATE							
SKILL	WORK AREA						



BOEING CARD NO.

24-014-01

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

							REV	REVISION
ELECT	CREW CA	BIN		1 C		11212	012	APR 22/00
TASK			TITLE		STRUCTURAL ILLUSTRATION RE	FERENCE	AF	PLICABILITY

OPERATIONAL INSTRUMENT BUS VOLTAGE SENSING UNIT

NOTE ALL

ZONES ACCESS PANELS

212

MECH INSP MPD ITEM NUMBER

OPERATIONALLY CHECK THE INSTRUMENT BUS VOLTAGE SENSING UNIT.

24-50-00-5A

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

- Instrument Bus Voltage Sensing Unit Test
 - A. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - B. Test.
 - (1) Do these steps to do a test of the instrument bus voltage sensing units:
 - (a) Supply electrical power (AMM 24-22-00/201).
 - (b) Push the STATUS switch on the EICAS DISPLAY select panel.
 - (c) Make sure the EICAS messages, CAPT INSTR XFER and F/O INSTR XFR, do not show on the bottom display.
 - (d) Open this circuit breaker on the main power distribution panel, P6:
 - 1) 6J14, CAPT PRIM INST BUS ΦΑ
 - (e) Make sure the EICAS message, CAPT INSTR XFER, shows on the bottom EICAS display unit.
 - (f) Close this circuit breaker on the main power distribution panel, P6:
 - 1) 6J14, CAPT PRIM INST BUS ϕA

OPERATIONAL INSTRUMENT BUS VOLTAGE SENSING UNIT

24-50-00-5A 24-014-01 PAGE 1 OF 2 APR 22/00

24-014-01

AIRLINE CARD NO.

TASK CARD		3/13
 (g) Make sure the EICAS message, CAPT INSTR XFER, does not show on the bottom display. (h) Open this circuit breaker on the main power distribution panel, P6: 1) 6L20, F/O PRIM INST BUS φA (i) Make sure the EICAS message, F/O INSTR XFER, shows on the bottom display. (j) Close this circuit breaker on the main power distribution panel, P6: 1) 6L20, F/O PRIM INST BUS φA (k) Make sure the EICAS message, F/O INSTR XFER, does not show on the bottom display. (l) Remove electrical power if it is not necessary 		TASK CARD
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(l) Remove electrical power if it is not necessary		
		the bottom display.
		(l) Remove electrical power if it is not necessary

EFFECTIVITY

STATION
TAIL NO.
DATE

SKILL

WORK AREA



BOEING CARD NO. 24-014-51

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

ELECT FUSELAGE

TASK

TITLE

REV REVISION

12424 003 AUG 22/08

STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY AIRPLANE ENGINE

INTERVAL

FUNCTIONAL HYDRAULIC MOTOR GENERATOR SYSTEM

NOTE ALL

ZONES ACCESS PANELS

RELATED TASK

119 212 119AL

MECH INSP MPD ITEM NUMBER

FUNCTIONALLY CHECK THE HYDRAULIC MOTOR GENERATOR SYSTEM.

24-25-00-5B

AIRPLANE NOTE: 767-200/300 AIRPLANES WITH HMG.

- Functional Test Hydraulic Motor Generator System (Fig. 501)
 - A. General
 - B. Equipment
 - (1) MULTIMETER 0-1000v dc $\pm 1\%$, 0-750 ac, 0-2 amps, 0-2 meg ohms Commercially available.
 - (2) Test Box A24008-37 (Preferred)
 Test Box A24008-27 (Optional)
 Test Box A24008-19 (Optional)
 - C. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 29-11-00/201, Main Hydraulic Systems
 - (3) AMM 32-09-02/201, Air Ground Relays
 - (4) AMM 32-00-15/201, Main Gear Door Locks
 - D. Prepare for Test
 - (1) Open the left wheel well doors and install the door locks (AMM 32-00-15/201).
 - (2) Remove the connector D466 from the ADP pressure switch (S29). The switch is located on the ADP pressure/case drain filter module in the left wheel well.

FUNCTIONAL HYDRAULIC MOTOR GENERATOR SYSTEM

24-25-00-5B 24-014-51 PAGE 1 OF 10 AUG 22/08

24-014-51

AIRLINE CARD NO.

SAS BOEING 767 TASK CARD

MECH	INSP
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- (3) Remove the left wheel well door lock and close wheel well door (AMM 32-00-15/201).
- (4) Supply electrical power (AMM 24-22-00/201).
- (5) Make sure the six EICAS circuit breakers on the overhead circuit breaker panel P11 are closed.

E. Procedure

- (1) Do the HMG ADP ON Command Check as follows:
 - (a) Remove the ground from test point as follows:
 - 1) Make sure the landing gear, landing gear doors, flaps and slats are in agreement with their selected positions.
 - 2) Make sure the spoiler handle on P10 is in the DOWN position.
 - 3) Make sure the AIR HYD PUMP select switch on the hydraulic system control panel P5 is in the OFF position.
 - 4) Open this circuit breaker on the overhead circuit breaker panel, P11, and attach a D0-N0T-CLOSE tag:
 - a) 11L15, HYD ELEC PUMP C1
 - 5) Push the C1 ELEC HYD PUMP switch on the hydraulic system control panel P5 to ON.
 - (b) Make sure that there is no continuity between the terminal FA21 of TB176 (E2-4) and ground (WDM 29-11-32).
 - (c) Make sure this circuit breaker on the main power distribution panel P6 is closed:
 - 1) 6A7, HYD GEN CONTR POWER
 - (d) Make sure these P11 panel circuit breakers are closed:
 - 1) 11R4, AC BUS SENSE L
 - 2) 11R31, AC BUS SENSE R
 - (e) Hold the EQUIP COOL/HYD GEN switch on the miscellaneous test panel (P61) in HYD GEN position.

EFFECTIVITY

FUNCTIONAL

HYDRAULIC MOTOR GENERATOR SYSTEM

24-25-00-5B

24-014-51

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AIRLINE CARD NO.

24-014-51

BOEING SAS 767 TASK CARD

MECH	INSP

- (f) Make sure that there is continuity between terminal FA21 of TB176 (E2-4) and ground (WDM 29-11-32).
- (g) Release the EQUIP COOL/HYD GEN switch.
- (h) Return the C1 ELECT HYD PUMP switch to OFF.
- (i) Remove DO-NOT-CLOSE identifier and close the following P11 panel circuit breaker:
 - 1) 11L15, HYD ELEC PUMP C1
- Open the left wheel well doors and install the door locks (AMM 32-00-15/201).
- (k) Connect connector D466 to ADP pressure switch.
- Do the HMG Reset Signal Check as follows:
 - (a) Open this circuit breaker on the main power distribution P6 panel and attach a DO-NOT-CLOSE tag:
 - 1) 6A7, HYD GEN CONT
 - Disconnect the electrical connector D10836 from the HMG control unit and then connect D10836 to the HMG tester A24008.
 - (c) Put the HMG tester RELAY POWER and POWER switches to OFF.
 - (d) Connect HMG tester to 115v ac, 400 Hz power source.
 - Put the tester POWER switch and the RELAY POWER switch to ON. Make sure the tester RESET light comes on.
 - Open these circuit breakers on the P11 panel and attach DO-NOT-CLOSE tags:
 - 1) 11R4, AC BUS SENSE L
 - 11R31, AC BUS SENSE R 2)
 - Remove the electrical connector D10834 from the HMG shutoff valve V147 in the left wheel well.
 - (h) Remove the DO-NOT-CLOSE tag and close the HYD GEN CONT (6A7) circuit breaker on the P6 panel.

EFFECTIVITY

FUNCTIONAL

HYDRAULIC MOTOR GENERATOR SYSTEM

24-25-00-5B

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SAS BOEING
767
TASK CARD

MECH INSP

- (i) Make sure 28 ±3 vdc is at pin 3 of connector D10834.
- (j) Make sure 0 ±3 vdc is at pin 2 of connector D10834.
- (k) Hold the EQUIP COOL/HYD GEN test switch on the miscellaneous test panel (P61) in the HYD GEN position.

NOTE: The test switch must be held for a minimum of 0.5 second for the hydraulic generator control relay K860 to latch in the commanded position.

- (l) Release the EQUIP COOL/HYD GEN test switch.
- (m) Make sure 28 ±3 vdc is at pin 2 of electrical connector D10834.
- (n) Make sure 0 ±3 vdc is at pin 3 of electrical connector D10834.
- (o) Put the tester RELAY POWER switch to OFF. Make sure the RESET light goes out for 1.5 seconds and then comes on.
- (p) Push the ECS/MSG switch on the EICAS MAINT panel (P61).
- (g) Push and hold the ERASE switch (P61) for 3 seconds.
- (r) Make sure the HYD GEN ON message is not displayed on the EICAS.
- (s) Put the tester RELAY POWER switch to ON. Make sure the RESET light remains on.
- (t) Make sure the HYD GEN ON message is displayed on the EICAS.
- (u) Open the HYD GEN CONT (6A7) circuit breaker on the P6 panel and attach a D0-NOT-CLOSE tag.
- (v) Connect the electrical connector D10834 to the HMG shutoff valve V147 in the left wheel well.
- (w) Put the POWER switch of the tester to the OFF position and remove the HMG tester. Connect the electrical connector D10836 to the HMG control unit.
- (x) Remove the DO-NOT-CLOSE tags and close these P11 panel circuit breakers:
 - 1) 11R4, AC BUS SENSE L

EFFECTIVITY

FUNCTIONAL

HYDRAULIC MOTOR GENERATOR SYSTEM

24-25-00-5B

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AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- 2) 11R31, AC BUS SENSE R
- (y) Remove the DO-NOT-CLOSE tag and close the HYD GEN CONT (6A7) circuit breaker on the P6 panel.
- (3) Do the Hydraulic Shutoff Valve and Valve Control Circuit Check as follows:

CAUTION: REFER TO AMM 32-09-02/201 FOR FLIGHT MODE SIMULATION. EQUIPMENT DAMAGE MAY OCCUR IF INSTRUCTIONS ARE NOT FOLLOWED.

- (a) Simulate System No. 1 air/ground relays in flight mode by placing actuators and deactuators on proximity sensors (AMM 32-09-02/201).
- (b) Open these P11 panel circuit breakers and attach D0-N0T-CLOSE tags:
 - 1) 11R4, AC BUS SENSE L
 - 2) 11R31, AC BUS SENSE R
- (c) Make sure the hydraulic shutoff valve moves to the open position (2).
- (d) Make sure the status message HYD GEN VAL is displayed on the lower EICAS display unit.
- (e) Remove the DO-NOT-CLOSE tags and close these P11 panel circuit breakers:
 - 1) 11R4, AC BUS SENSE L
 - 2) 11R31, AC BUS SENSE R
- (f) Make sure the hydraulic shutoff valve moves to the closed position (1).
- (g) Make sure the status message HYD GEN VAL is not displayed on the lower EICAS display unit.
- (4) Do the HMG Bus Power Transfer Check as follows:

EFFECTIVITY

FUNCTIONAL

HYDRAULIC MOTOR GENERATOR SYSTEM

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AIRLINE CARD NO.

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BOEING 767 TASK CARD

MECH INSP

- (a) Open these circuit breakers to de-energize all the hydraulic generator powered buses:
 - 1) 6D15, 115V AC L TRANSFER BUS
 - 2) 6F18, 115V AC R TRANSFER BUS
 - 3) 6J14, CAPT PRIMARY INSTR BUS PH A
 - 4) 6J15, CAPT PRIMARY INSTR BUS PH B
 - 5) 6J16, CAPT PRIMARY INSTR BUS PH C
 - 6) 11834, CAPT ALT INST BUS PH A
 - 7) 11S35, CAPT ALT INST BUS PH B
 - 8) 11836, CAPT ALT INST BUS PH C
- Make sure the transfer buses are not powered by doing a voltage check at these circuit breakers:

BUS	CIRCUIT BREAKER	TERMINAL	VOLTAGE
115v ac L Transfer	L IRS (11F1) C611	2	0 ±5 ac
115v ac R Transfer	R AIR SUPPLY VALVE PWR (11S21) C1331	2	0 ±5 ac
Captains Instr	L IAS (11E1) C580	1	0 ±5 ac
Hot Battery	HYD GEN 28V DC POWER relay, K861	A2	28 ±3 dc

- (c) Open this circuit breaker and attach the DO-NOT-CLOSE tag:
 - 1) Main Power Distribution Panel P6:
 - a) 6G12, HYD GEN 28V DC PWR
- Make sure 0 ±3 vdc at terminal A2 of the HYD GEN 28V DC POWER relay, K861 in the P65 panel.

EFFECTIVITY

FUNCTIONAL HYDRAULIC MOTOR GENERATOR SYSTEM

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MECH INSP

- (e) Pressurize the center hydraulic system using the hydraulic service cart or by operating both ACMP C1 and C2 (AMM 29-11-00/201).
- (f) Open these P11 panel circuit breakers and attach D0-N0T-CLOSE tags:
 - 1) 11R4, AC BUS SENSE L
 - 2) 11R31, AC BUS SENSE R
- (g) Make sure the hydraulic motor generator supplies power to the transfer buses by doing a voltage check at these circuit breakers:

BUS	CIRCUIT BREAKER	TERMINAL	VOLTAGE
115v ac L Transfer	L IRS (11F1) C611	2	118 ±5ac
115v ac R Transfer	R AIR SUPPLY VALVE PWR (11S21) C1331	2	118 ±5ac
Captains Instr	L IAS (11E1) C580	1	118 ±5ac
HMG DC Output	HYD GEN 28V DC POWER relay, K861	A2	>28 dc *(1)

- *(1) DC voltage is unregulated and when the HMG is unloaded, it will typically rise above 28 Vdc during this test.
 - (h) Remove the DO-NOT-CLOSE tags and close these P11 panel circuit breakers:
 - 1) 11R4, AC BUS SENSE L
 - 2) 11R31, AC BUS SENSE R
 - (i) Close these circuit breakers on the main power distribution panel P6:
 - 1) 6G12, HYD GEN 28V DC PWR
 - 2) 6D15, 115V AC L TRANSFER BUS

EFFECTIVITY

FUNCTIONAL HYDRAULIC MOTOR GENERATOR SYSTEM

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AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- 3) 6F18, 115V AC R TRANSFER BUS
- 4) 6J14, CAPT PRIMARY INSTR BUS PH A
- 5) 6J15, CAPT PRIMARY INSTR BUS PH B
- 6) 6J16, CAPT PRIMARY INSTR BUS PH C
- (j) Close these circuit breakers on the overhead circuit breaker panel P11:
 - 1) 11834, CAPT ALT INST BUS PH A
 - 2) 11S35, CAPT ALT INST BUS PH B
 - 3) 11836, CAPT ALT INST BUS PH C
- F. Put the Airplane Back to Its Usual Condition
 - (1) Return System No. 1 air/ground relays to ground mode by removing actuators and deactuators from proximity sensors (AMM 32-09-02/201).
 - (2) Remove the left wheel well door lock and close wheel well door if no longer required (AMM 32-00-15/201).
 - (3) Remove hydraulic power if it is not necessary (AMM 29-11-00/201).
 - (4) Remove electrical power if it is not necessary (AMM 24-22-00/201).

EFFECTIVITY

FUNCTIONAL

HYDRAULIC MOTOR GENERATOR SYSTEM

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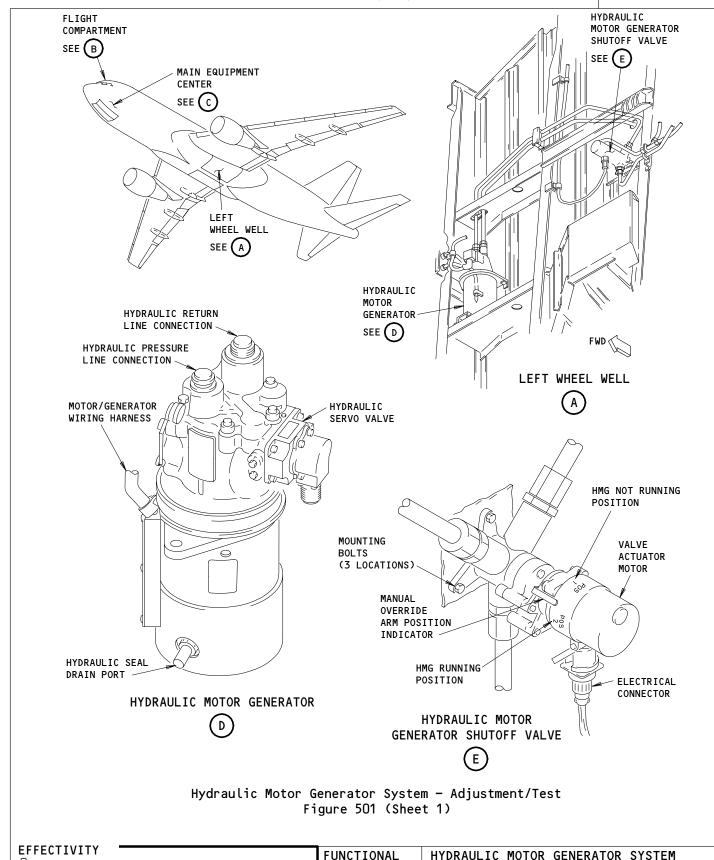
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SAS





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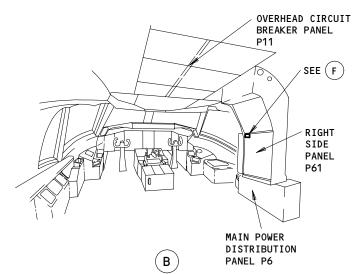
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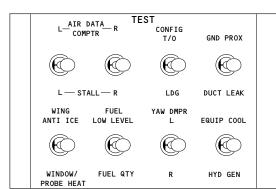
AIRLINE CARD NO.

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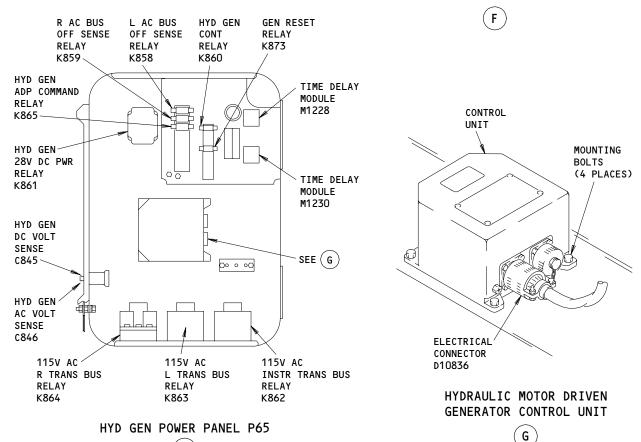




C



MISCELLANEOUS TEST PANEL



Hydraulic Motor Driven Generator System Component Location Figure 501 (Sheet 2)

FUNCTIONAL HYDRAULIC MOTOR GENERATOR SYSTEM

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STATION
TAIL NO.
DATE

WORK AREA



BOEING CARD NO. 24-015-01

AIRLINE CARD NO.

TASK CARD

ALL

MPD

NOTE

PHASE

SKILL			RELATED TASK		NIERVAL	TIMSE	REV	REVISION
AVION	CREW CA	BIN		1c		11212	001	APR 22/05
TAS	K		TITLE		STRUCTURAL ILLUSTRATION RE	FERENCE	AF	PLICABILITY
OPERA	TIONAL	AUTO	LAND DC TIE				AIRPLAN	E ENGINE

TNTFRVAL

ZONES ACCESS PANELS

119 212

119AL

RELATED TASK

MECH INSP

SKILL

OPERATIONALLY CHECK THE AUTOLAND DC TIE.

24-22-00-5C

MPD ITEM NUMBER

AIRPLANE NOTE: THIS TASK IS APPLICABLE TO ALL AIRPLANE

MODELS EXCEPT THE 767-400ER.

NOTE: ALTERNATE ACCESS CAN BE GAINED THROUGH THE FORWARD CARGO

COMPARTMENT SIDEWALL PANELS 121AW AND 121BW.

Autoland DC Tie Test

- A. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 31-41-00/501 EICAS
- B. Procedure
 - (1) Do a test on the autoland DC Tie:
 - (a) Remove the electrical power from the 115V ac buses if it is on (AMM 24-22-00/201).
 - (b) Make sure the BAT switch on the P5 panel is in the OFF position.
 - (c) Open the following circuit breakers on the P11 panel and attach D0-NOT-CLOSE tags:
 - 1) 11E17, L FLT CONT CMPTR PWR
 - 2) 11E2O, C FLT CONT CMPTR PWR
 - 3) 11E35, R FLT CONT CMPTR PWR

OPERATIONAL AUTOLAND DC TIE

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TASK CARD

AIRLINE CARD NO.

			TASK CARD
MECH	INSP	-	
		(d)	Install a jumper to ground at the terminal block TB127, terminal G45 (E1-4 shelf) to enable the K122 ISOLATION REQUEST relay (WDM 22-11-32).
		(e)	Install a jumper from terminal FC123 to terminal FC101 of the terminal block TB176 on the E2-4 shelf (WDM 24-51-31).
			NOTE: The jumper is installed to energize the Center Bus Isln relay K123.
		(f)	Make sure these P11 panel circuit breakers are closed:
			1) 11D6, CAT III BUS ISOL BAT
			2) 11S7, F/O INST TRANSFER ALTN BUS φA
			3) 11S8, F/O INST TRANSFER ALTN BUS φB
			4) 11S9, F/O INST TRANSFER ALTN BUS φC
			5) 11834, CAPT INST TRANSFER ALTN BUS ϕ A
			6) 11S35, CAPT INST TRANSFER ALTN BUS φB
			7) 11836, CAPT INST TRANSFER ALTN BUS ϕ C
			8) 11T3, CAT III BUS ISOL L
			9) 11T3O, CAT III BUS ISOL R
		(g)	Make sure these P6 panel circuit breakers are closed:
			1) 6A6, DC BUS TIE CONT
			2) 6A18, 115V AC BUS LEFT SEC 2
			3) 6A24, 115V AC BUS RIGHT SEC 2
			4) 6J14, CAPT PRIM INST BUS φA
			5) 6J15, CAPT PRIM INST BUS φB
			6) 6J16, CAPT PRIM INST BUS φC
			7) 6L15, INVERTER CTR BUS ISLN PWR

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		TASK CARD
MECH	INSP	
		8) 6L20, F/0 PRIM INST BUS ϕ A
		9) 6L21, F/O PRIM INST BUS φB
		10) 6L22, F/O PRIM INST BUS φC
		(h) Supply external power to the 115V ac buses (AMM 24-22-00/201).
		(i) Make sure the battery switch (P5) is in the ON position.
		(j) Make sure the two BUS TIE switches (P5) are set to the AUTO position.
		1) Make sure the ISLN light in each switch is off.
		(k) Make sure the EICAS operates (AMM 31-41-00/501).
		(l) Push the STATUS switch on the EICAS select panel (P9).
		(m) Make sure the TR UNIT, CAPT INSTR XFER, and F/O INSTR XFER indications are not shown on the lower EICAS display.
		(n) Open the CAPT PRIM INSTR BUS ϕ A (6J14) circuit breaker.
		 Make sure the CAPT INSTR XFER and the TR UNIT indications show on the lower EICAS display.

- (o) Close the CAPT PRIM INSTR BUS φA (6J14) circuit breaker.
 - 1) Make sure the CAPT INSTR XFER and the TR UNIT indications do not show on the lower EICAS display.
- (p) Open the F/O PRIM INSTR BUS ϕA (6L20) circuit breaker.
 - 1) Make sure the F/O INSTR XFER and the TR UNIT indications show on the lower EICAS display.
- (q) Close the F/O PRIM INSTR BUS φA (6L20) circuit breaker.
 - 1) Make sure the F/O INSTR XFER and the TR UNIT indications do not show on the lower EICAS display.
- (r) Remove the external power from the 115V ac buses (AMM 24-22-00/201).
- (s) Make sure the BAT switch (P5) is set to the OFF position.

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SAS	767
	TASK CARD

	TASK CARD		
ECH INSP		I .	
	(t) Remove the jumper from terminal FC123 to terminal F terminal block TB176 (E2-4 shelf).	C101 of the	
	(u) Remove the jumper to ground at the terminal block Terminal G45 (E1-4 shelf).	ГВ127 ,	
	(v) Remove D0-N0T-CLOSE tags and close the following circuit breakers on the P11 panel:		
	1) 11E17, L FLT CONT CMPTR PWR		
	2) 11E2O, C FLT CONT CMPTR PWR		
	3) 11E35, R FLT CONT CMPTR PWR		
FFECTIVITY -	OPERATIONAL AUTOLAND DC TIE		

STATION
TAIL NO.
DATE

SKILL



BOEING CARD NO.

24-015-51

AIRLINE CARD NO.

TASK CARD

MPD

PHASE

ELECT ENGINES

TASK

TITLE

TITLE

TITLE

TENGINES

TITLE

TITLE

TITLE

REV

REVISION

APPLICABILITY
AIRPLANE
ENGINE

INTERVAL

OPERATIONAL BUS TIE BREAKER

NOTE ALL

ZONES ACCESS PANELS

MECH INSP

WORK AREA

OPERATIONALLY CHECK THE BUS TIE BREAKER FOR CORRECT POWER TRANSFER FUNCTION.

24-11-00-5A

MPD ITEM NUMBER

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

I. The Operational Test for the Left IDG

RELATED TASK

- A. References
 - (1) AMM 24-11-01/401, Integrated Drive Generator
 - (2) AMM 24-22-00/201, Electrical Power Control
 - (3) AMM 27-61-00/201, Spoiler/Speedbrake Control System
 - (4) AMM 71-00-00/201, Power Plant (Operating Procedures)
 - (5) AMM 71-00-00/501, Power Plant
 - (6) AMM 71-11-04/201, Fan Cowl Panels
 - (7) AMM 71-11-06/201, Core Cowl Panels
 - (8) AMM 78-31-00/201, Thrust Reverser System
- B. Access
 - (1) Location Zones

212 Flight Compartment (RH Side)

119/120 Main Equipment Center

410 Power Plant Nacelle (Left)

420 Power Plant Necelle (Right)

EFFECTIVITY

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TASK CARD

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MECH	INSP

(2) Access Panels

413/423 Fan Cowl Panels (Left) 414/424 Fan Cowl Panels (Right) 119/120 Main Equipment Center

C. Prepare for the Test

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.

- (1) Do the deactivation procedure for the spoilers (AMM 27-61-00/201) or move all persons and equipment away from the spoilers.
- (2) Do the BITE test (AMM 24-11-00/501).
- (3) Apply external or APU power to the main AC Buses (AMM 24-22-00/201).
- D. The Operation Test
 - (1) Do the operation test as follows:
 - (a) Set the L GEN CONT switch on the P5 panel to the OFF position.
 - (b) Set the R GEN CONT switch on the P5 panel to the OFF position.
 - (c) Push the ELECT/HYD switch on the right side panel P61.
 - (d) Make sure these lights are on:
 - 1) The yellow OFF light in the L GEN CONT switch (P5).
 - 2) The yellow DRIVE light in the L GEN DRIVE DISC switch (P5).
 - 3) The white FIELD OFF light in the left generator field switch (P61).
 - (e) Start the left engine (AMM 71-00-00/201).

EFFECTIVITY

OPERATIONAL | BUS TIE BREAKER

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AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

CAUTION: MAKE SURE THE DRIVE LIGHT IN THE L GEN DRIVE DISC SWITCH (P5) GOES OFF AFTER YOU START THE ENGINE. HIGH OIL OUT TEMPERATURE OR LOW OIL PRESSURE CAN CAUSE DAMAGE TO THE IDG.

- (f) Make sure the yellow DRIVE light in the L GEN DRIVE DISC switch (P5) is off.
 - 1) If the DRIVE light stays on, or comes on while the engine operates, push the L GEN DRIVE DISC switch.
 - a) Stop the engine (AMM 71-00-00/201).
 - b) Isolate the failure which caused the DRIVE light to come on.
- (g) Make sure these lights are on:
 - 1) The yellow OFF light in the L GEN CONT switch (P5).
 - 2) The white FIELD OFF light in the left generator field switch (P61).
- (h) Push the left generator field switch (P61).
 - 1) Make sure the FIELD OFF light in the switch goes off.
- (i) Make sure the DRIVE light in the L GEN DRIVE DISC switch (P5) is off.
- (j) Make sure these red lights on P31 are on:
 - 1) The L GEN HOT BUS WARN.
 - 2) The L 115 AC HOT BUS WARN.
- (k) Make sure these indications for the left power channel show on the EICAS display:
 - 1) AC Volts = 115 ± 5
 - 2) Frequency = 400 ± 5
- (l) Make sure the L GEN OFF shows on the EICAS display.

EFFECTIVITY

OPERATIONAL | BUS TIE BREAKER

24-11-00-5A

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AIRLINE CARD NO.

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BOEING SAS 767 TASK CARD

MECH INSP

- (m) Make sure that no L GEN DRIVE shows on the EICAS display.
- (n) Push the L GEN CONT switch (P5) to the ON position.
- (o) Make sure these lights are off:
 - The OFF light in the L GEN CONT switch (P5).
 - The two BUS OFF lights (P5). 2)
 - The DRIVE light in the L GEN DRIVE DISC switch (P5).
 - The FIELD OFF light in the left generator field switch (P61).
- (p) If ExternaL Power is ON, push and release the EXT PWR switch to remove power.
- If the APU is running, push the APU GEN CONT switch on the P5 (q) panel to the OFF position.
- (r) Make sure the RIGHT BUS OFF light on the P5 panel is off.
- Push the left BUS TIE switch on the P5 panel to the ISLN (out) (s) position.
- (t) Make sure the right BUS OFF light on the P5 panel is on.
- Push the left BUS TIE switch on the P5 panel to the AUTO (in) (u) position.
- (v) Make sure the right BUS OFF light on the P5 panel is off.
- (w) Stop the left engine (AMM 71-00-00/201).
- Make sure these lights come on: (x)
 - 1) The yellow OFF light in the L GEN CONT switch (P5).
 - The yellow DRIVE light in the L GEN DRIVE DISC switch (P5).
- Make sure these lights are off:
 - The FIELD OFF light in the left generator field switch (P61).
 - The L GEN HOT BUS WARN light (P31). 2)

EFFECTIVITY

OPERATIONAL BUS TIE BREAKER

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AIRLINE CARD NO.

SAS



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MECH INSP

- (2) Do the BITE test (AMM 24-11-00/501).
- 2. The Operational Test for the Right IDG
 - A. References
 - (1) AMM 24-22-00/201, Electrical Power Control
 - (2) AMM 27-61-00/201, Spoiler/Speedbrake Control System
 - (3) AMM 71-00-00/201, Power Plant (Operating Procedures)
 - (4) AMM 71-00-00/501, Power Plant
 - (5) AMM 71-11-04/201, Fan Cowl Panels
 - (6) AMM 71-11-06/201, Core Cowl Panels
 - (7) AMM 78-31-00/201, Thrust Reverser System
 - B. Access
 - (1) Access Panels

413/423 Fan Cowl Panels (Left) 414/424 Fan Cowl Panels (Right) 119/120 Main Equipment Center

- C. Prepare for the Test
 - 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.
 - (1) Do the deactivation procedure for the spoilers (AMM 27-61-00/201) or move all persons and equipment away from the spoilers.
 - (2) Do the BITE test (AMM 24-11-00/501).
 - (3) Apply external or APU power to main AC buses (AMM 24-22-00/201).
- D. The Operation Test
 - (1) Do the operation test as follows:

EFFECTIVITY	OPERATIONAL	BUS TIE BREAK	ER		
	24-11-00-5A	24-015-51	PAGE	5 OF	8 APR 22/00

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MECH INSP

- (a) Set the R GEN CONT switch on the pilots' overhead panel P5 to the OFF position.
- (b) Set the L GEN CONT switch on the P5 panel to the OFF position.
- (c) Push the ELEC/HYD switch on the right side panel P61.
- (d) Make sure these lights are on:
 - 1) The yellow OFF light in the R GEN CONT switch (P5).
 - 2) The yellow DRIVE light in the R GEN DRIVE DISC switch (P5).
 - The white FIELD OFF light in the right generator field switch (P61).
- (e) Start the right engine (AMM 71-00-00/201).

CAUTION: MAKE SURE THE DRIVE LIGHT IN THE R GEN DRIVE DISC SWITCH (P5) GOES OFF AFTER YOU START THE ENGINE. HIGH OIL OUT TEMPERATURE OR LOW OIL PRESSURE CAN CAUSE DAMAGE TO THE IDG.

- Make sure the DRIVE light in the R GEN DRIVE DISC switch (P5) is off.
- 2) If the DRIVE light stays on, or comes on while the engine operates, push the R GEN DRIVE DISC switch.
 - a) Stop the engine (AMM 71-00-00/201).
 - b) Isolate the failure which caused the DRIVE light to come on.
- (f) Make sure these lights are on:
 - 1) The yellow OFF light in the R GEN CONT switch (P5).
 - 2) The white FIELD OFF light in the right generator field switch (P61).
- (g) Push the right generator field switch (P61).
- (h) Make sure the FIELD OFF light in the right generator field switch goes off.

EFFECTIVITY

OPERATIONAL | BUS TIE BREAKER

24-11-00-5A

24-015-51

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24-015-51

SAS BOEING 767 TASK CARD

AIRLINE CARD NO.

			THE CHIEF
MECI	INSP	-	
			Make sure the DRIVE light in the R GEN DRIVE DISC switch (P5) is off.
		(j)	Make sure these red lights on P31 are on:
			1) The R GEN HOT BUS WARN.
			2) The R 115 AC HOT BUS WARN.
			Make sure these indications for the right power channel show on the EICAS display:
			1) AC Volts = 115 ±5
			2) Frequency = 400 ±5
			3) Make sure the R GEN OFF shows on the EICAS display.
			4) Make sure that no R GEN DRIVE shows on the EICAS display.
		(1)	Push the R GEN CONT switch (P5) to the ON position.
		(m)	Make sure these lights are off:
			1) The OFF light in the R GEN CONT switch (P5).
			2) The two BUS OFF lights (P5).
			3) The DRIVE light in the R GEN DRIVE DISC switch (P5).
			4) The FIELD OFF light in the right generator field switch (P61).
			If External Power is ON, push and release the EXT PWR switch to remove power.
			If the APU is on, push the APU GEN CONT switch to the OFF position.
		(p)	Make sure the LEFT BUS OFF light is off.
		(p)	Push the right BUS TIE switch to the ISLN (out) position.
		(r)	Make sure the left BUS OFF light is on.
		(s)	Push the right BUS TIE switch to the AUTO (in) position.
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EFFECTIVITY

OPERATIONAL BUS TIE BREAKER

BOEING CARD NO.

24-015-51

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			S	SAS	767 TASK CARD		AIRLINE CARD NO.
ECH	INSP						
			(t)	Mak	sure the left BUS OFF light	t is off.	
			(u)		sure no R GEN OFF, or R GEN lay.	N DRIVE shows on the	EICAS
			(v)	Sto	the right engine (AMM 71-00	0-00/201).	
			(W)	Mak	sure these lights come on:		
				1)	The yellow OFF light in the	R GEN CONT switch (P5).
				2)	The yellow DRIVE light in th	he R GEN DRIVE DISC	switch (P5).
			(x)	Mak	sure these lights are off:		
				1)	The FIELD OFF light in the r (P61).	right generator fiel	d switch
				2)	The R GEN HOT BUS WARN light	t (P31).	
		(2)	Do t	he B	TE test (AMM 24-11-00/501).		

EFFECTIVITY

OPERATIONAL BUS TIE BREAKER

24-11-00-5A 24-015-51 PAGE 8 OF 8 APR 22/00

STATION	
TAIL NO.	
DATE	٦

MECH INSP



BOEING CARD NO. 24-016-01-1

AIRLINE CARD NO.

WORK AREA RELATED TASK INTERVAL MPD TASK CARD SKILL PHASE REV REVISION W-24-017-01-1NOTE 012 DEC 22/07 ENGIN | ENGINE 1 101XX 1 A STRUCTURAL ILLUSTRATION REFERENCE AIRPLANE ENGINE **REPLACE** ENGINE 1 IDG SCAVENGE FILTER ELEMENT NOTE NOTE ZONES ACCESS PANELS 411 417AL

MPD ITEM NUMBER

REPLACE THE ENGINE 1 IDG SCAVENGE FILTER ELEMENT.

24-11-02-2A

INTERVAL NOTE: A 1A REPEAT INTERVAL IS RECOMMENDED

UNTIL AN INDIVIDUAL OPERATOR'S EXPERIENCE SUPPORTS INTERVAL OPTIMIZATION IN ACCORDANCE WITH HAMILTON SUNDSTRAND SIL 236. OPERATORS WITH ESTABLISHED PROGRAMS SHOULD MAINTAIN THEIR IDG MAINTENANCE PROGRAMS AT INTERVALS DETERMINED BY THEIR OWN SERVICE EXPERIENCE. SEE SUNDSTRAND SIL 236 FOR MORE INFORMATION

AND INTERVAL OPTIMIZATION METHODS.

AIRPLANE NOTE: THIS TASK IS APPLICABLE TO ALL AIRPLANE

MODELS EXCEPT THE 767-400ER.

ENGINE NOTE: THIS TASK IS APPLICABLE TO THE 4000, 7R4, 80A

AND 80C ENGINES.

NOTE: HAMILTON SUNDSTRAND ALSO RECOMMENDS AN INITIAL

SCAVENGE FILTER CHANGE AT 125 HOURS FOR NEW AIRCRAFT.

- Scavenge Filter Removal (Fig. 201)
 - References
 - (1) AMM 71-11-04/201, Fan Cowl Panels
 - (2) AMM 71-11-06/201, Core Cowl Panels
 - (3) AMM 78-31-00/201, Thrust Reverser System
 - В. Equipment
 - (1) Container 5 gallon capacity.
 - (2) IDG oil overflow drain hose with outlet adapter, Ozone OMP2505-3

EFFECTIVITY REPLACE ENGINE 1 IDG SCAVENGE FILTER ELEMENT 24-11-02-2A 24-016-01-1 PAGE 1 OF 7 DEC 22/07

AIRLINE CARD NO.



MECH INSP

- C. Prepare for the Removal
 - (1) Open the fan cowl panels (AMM 71-11-04/201).

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

(2) Do the procedure Thrust Reverser Deactivation for Ground Maintenance (AMM 78-31-00/201).

OBEY THE INSTRUCTIONS IN AMM 78-31-00/201 WHEN YOU OPEN THE WARNING: THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS INJURY TO PERSONS OR DAMAGE TO EQUIPMENT COULD OCCUR.

- (3) Open the thrust reverser (AMM 78-31-00/201).
- (4) Open the core cowl panels (AMM 71-11-06/201).
- (5) Do these steps to release the pressure from the IDG:
 - (a) Put the container under the IDG to catch the oil.
 - (b) Remove the cover from the overflow drain coupling on the IDG.
 - (c) Put the end of the drain hose into the container.

WHEN YOU CONNECT THE OVERFLOW DRAIN HOSE TO THE OVERFLOW WARNING: DRAIN COUPLING, USE A RAG AROUND THE FITTING. THIS WILL PREVENT OIL SPRAY CAUSED BY PRESSURE IN THE IDG CASE. HOT OIL CAN BURN YOU.

- Connect the overflow drain hose with outlet adapter, Ozone OMP2505-3, to the overflow drain coupling and allow the oil to drain into the container.
- Disconnect the overflow drain hose with outlet adapter, Ozone OMP2505-3, from the overflow drain coupling.
- D. Procedure

EFFECTIVITY

REPLACE

ENGINE 1 IDG SCAVENGE FILTER ELEMENT

24-11-02-2A | 24-016-01-1 PAGE 2 OF 7 DEC 22/07

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (1) Remove the scavenge filter as follows:
 - (a) Remove the wire which locks the scavenge filter cover.

WARNING: USE CARE WHEN REMOVING THE FILTER COVER. HOT OIL MAY FLOW FROM THE SCAVENGE FILTER WHEN THE FILTER COVER IS REMOVED. HOT OIL CAN CAUSE SERIOUS INJURY.

(b) Remove the filter cover (1) and allow the oil to flow out of the filter into the container.

<u>NOTE</u>: Inspect the oil in the filter cover for contamination before you discard the oil.

- (c) Remove and discard the 0-ring (2) from the filter cover (1).
- (d) Remove the filter element (3) and discard the 0-ring (4).
- Scavenge Filter Inspection/Check (Fig. 201)
 - A. General
 - (1) When the Differential Pressure Indicator is extended, the entire Scavenge Filter Inspection/Check must be examined to see if more work is necessary.
 - B. References
 - (1) AMM 24-11-01/401, Integrated Drive Generator
 - (2) AMM 24-11-01/601, Integrated Drive Generator
 - (3) AMM 79-21-01/401, IDG Fuel/0il Heat Exchanger
 - C. Procedure
 - (1) Do a check for the oil and filter as follows:
 - (a) Is there contamination on the scavenge filter element, or in the oil drained from the filter cavity?

EFFECTIVITY

REPLACE

ENGINE 1 IDG SCAVENGE FILTER ELEMENT

24-11-02-2A

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24-010-01-1

AIRLINE CARD NO.

SAS BOEING
767
TASK CARD

MECH INSP

 Contamination is defined as bright metal deposits which can be clearly defined as chunks or pieces caused by breakage (in contrast to nonmagnetic flakes or slivers caused by normal wear).

NOTE: A moderate number of scattered small metallic flakes (bronze or silver colored metal), or flakes of generator insulation are normal products of wear during operation. Even a considerable number of nonmetallic items such as black epoxy chips, sleeving, and other forms of generator insulation do not always indicate damage to IDG.

- 2) Fuel, hydraulic fluid or water in IDG oil is liquid contamination.
- (b) Is there a condition that would allow contaminated oil to bypass the filter and enter the external oil cooling circuit?
 - 1) The condition that would allow oil to bypass the scavenge filter are damaged 0-rings or a damaged filter.
- (2) If the differential pressure indicator (DPI) is not extended, do these steps:
 - (a) If no contamination is found in the filter and in the IDG oil, install a new filter element per section Scavenge Filter Installation.
 - (b) If contamination is found on the filter or in the IDG oil, do the "Examine The Oil In The IDG" (AMM 24-11-01/601).
- (3) If the differential pressure indicator (DPI) is extended, perform the following:
 - (a) Do the "Examine the Pressure Differential Indicator and the Scavenge Filter" (AMM 24-11-01/601).
- Scavenge Filter Installation (Fig. 201)
 - A. References
 - (1) AMM 12-13-03/301, Integrated Drive Generator Servicing
 - (2) AMM 71-00-00/201, Power Plant Maintenance Practices

EFFECTIVITY

REPLACE

ENGINE 1 IDG SCAVENGE FILTER ELEMENT

24-11-02-2A

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AIRLINE CARD NO.

24-016-01-1

BOEING 767 TASK CARD

MECH	INSP

- (3) AMM 71-11-04/201, Fan Cowl Panels
- (4) AMM 71-11-06/201, Core Cowl Panels
- (5) AMM 78-31-00/201, Thrust Reverser System
- Consumable Materials
 - (1) D00657 Lubricant, 0-ring Acryloid HF825
 - (2) D00109 Oil, Aircraft Turbine Engine, synthetic base MIL-PRF-23699
 - (3) G01505 Lockwire Safety and Lock (NASM20995)

Parts

- Refer to the AIPC for part numbers and effectivities of items in the table that follows:
 - (a) AIRPLANES WITH PW4000 SERIES ENGINE; Refer to the table that follows:

АММ			AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
201	2 3 4	Packing Filter element Packing	24-11-01	11	125 130 135

D. Procedure

- (1) Install the scavenge filter as follows:
 - Apply Acryloid HF825 lubricant, or MIL-PRF-23699 oil to the (a) 0-ring (2).
 - (b) Install the 0-ring (2) on the filter cover (1).
 - Apply Acryloid HF825 lubricant, or MIL-PRF-23699 oil to the 0-ring (4).
 - (d) Install the 0-ring (4) on a new filter element (3).

EFFECTIVITY

REPLACE

ENGINE 1 IDG SCAVENGE FILTER ELEMENT

24-11-02-2A

24-016-01-1 PAGE 5 OF 7 AUG 22/07

1

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

(e) Install the new filter element (3) in the cavity on the IDG and make sure the 0-ring makes a seal.

WARNING: MAKE SURE THE FILTER ELEMENT IS SEATED CORRECTLY IN THE FILTER CAVITY BEFORE YOU INSTALL THE FILTER COVER. DO NOT TIGHTEN THE FILTER COVER TO FORCE THE FILTER ELEMENT INTO THE HOUSING. IF YOU DO, DAMAGE TO THE FILTER ELEMENT CAN OCCUR.

- (f) Install the filter cover (1) and tighten the cover to 156-180 pound-inches (17.6 20.3 N.m).
- (g) Install a lockwire, GO1505, on the filter cover (1).
- (2) Service the IDG (AMM 12-13-03/301).
- (3) Close the core cowl panels (AMM 71-11-06/201).

WARNING: OBEY THE INSTRUCTIONS IN AMM 78-31-00/201 WHEN YOU CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS INJURY TO PERSONS OR DAMAGE TO EQUIPMENT COULD OCCUR.

- (4) Close the thrust reverser (AMM 78-31-00/201).
- (5) Activate the thrust reverser (AMM 78-31-00/201).
- (6) Close the fan cowl panel (AMM 71-11-04/201).
- (7) Do the test in (AMM 71-00-00/501) and check for leak.
- (8) Stop the engine and wait for five minutes for the oil level to become stable.
- (9) Do this task: "IDG Oil Level Check" (AMM 12-13-03/301).
- (10) If the oil level is incorrect, do this task: "IDG Oil Servicing" (AMM 12-13-03/301).
- (11) Do a check for oil leaks at the IDG and external oil cooling system. Repair any leaks you find.

EFFECTIVITY

REPLACE

ENGINE 1 IDG SCAVENGE FILTER ELEMENT

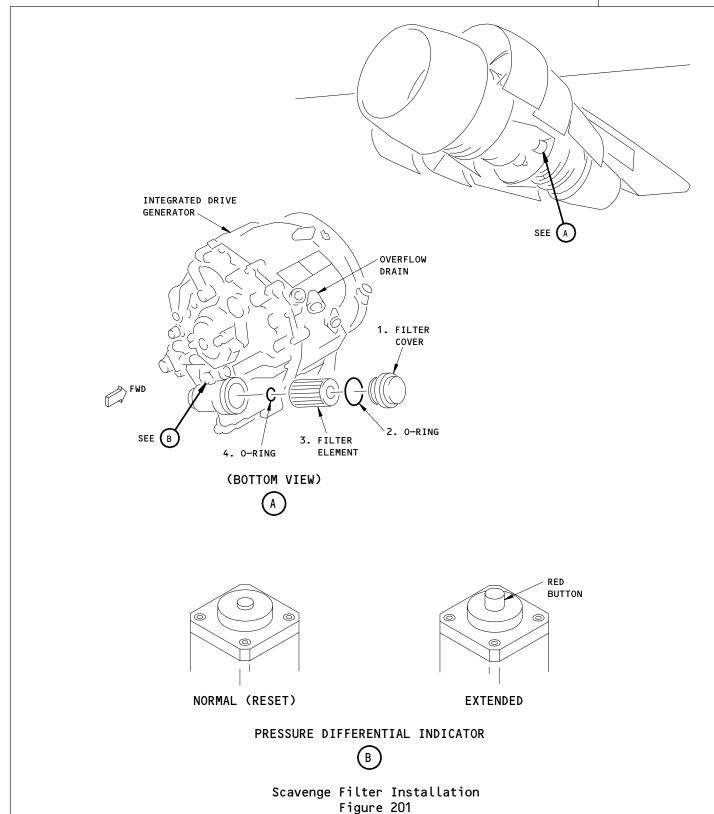
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SAS

767 TASK CARD

AIRLINE CARD NO.



REPLACE

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ENGINE 1 IDG SCAVENGE FILTER ELEMENT

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EFFECTIVITY

STATION	
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BOEING CARD NO. 24-016-01-2

AIRLINE CARD NO.

TASK CARD

NOTE

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NOTE

PHASE

ENGIN ENGINE 2 W-24-017-01-2 1A NOTE 101XX 012 DEC 22/07
TASK TITLE STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY

REPLACE ENGINE 2 IDG SCAVENGE FILTER ELEMENT

INTERVAL

ZONES ACCESS PANELS

421 427AL

RELATED TASK

MECH INSP MPD ITEM NUMBER

REPLACE THE ENGINE 2 IDG SCAVENGE FILTER ELEMENT.

24-11-02-2A

INTERVAL NOTE: A 1A REPEAT INTERVAL IS RECOMMENDED

UNTIL AN INDIVIDUAL OPERATOR'S EXPERIENCE SUPPORTS INTERVAL OPTIMIZATION IN ACCORDANCE WITH HAMILTON SUNDSTRAND SIL 236. OPERATORS WITH ESTABLISHED PROGRAMS SHOULD MAINTAIN THEIR IDG MAINTENANCE PROGRAMS AT INTERVALS DETERMINED BY THEIR OWN SERVICE EXPERIENCE. SEE SUNDSTRAND SIL 236 FOR MORE INFORMATION

AND INTERVAL OPTIMIZATION METHODS.

AIRPLANE NOTE: THIS TASK IS APPLICABLE TO ALL AIRPLANE

MODELS EXCEPT THE 767-400ER.

ENGINE NOTE: THIS TASK IS APPLICABLE TO THE 4000, 7R4, 80A

AND 80C ENGINES.

NOTE: HAMILTON SUNDSTRAND ALSO RECOMMENDS AN INITIAL 125

HOUR SCAVENGE FILTER CHANGE FOR NEW AIRCRAFT.

- Scavenge Filter Removal (Fig. 201)
 - A. References
 - (1) AMM 71-11-04/201, Fan Cowl Panels
 - (2) AMM 71-11-06/201, Core Cowl Panels
 - (3) AMM 78-31-00/201, Thrust Reverser System
 - B. Equipment
 - (1) Container 5 gallon capacity.
 - (2) IDG oil overflow drain hose with outlet adapter, Ozone OMP2505-3

REPLACE ENGINE 2 IDG SCAVENGE FILTER ELEMENT

24-11-02-2A 24-016-01-2 PAGE 1 OF 7 DEC 22/07

AIRLINE CARD NO.



MECH INSP

- C. Prepare for the Removal
 - (1) Open the fan cowl panels (AMM 71-11-04/201).

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

(2) Do the procedure Thrust Reverser Deactivation for Ground Maintenance (AMM 78-31-00/201).

OBEY THE INSTRUCTIONS IN AMM 78-31-00/201 WHEN YOU OPEN THE WARNING: THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS INJURY TO PERSONS OR DAMAGE TO EQUIPMENT COULD OCCUR.

- (3) Open the thrust reverser (AMM 78-31-00/201).
- (4) Open the core cowl panels (AMM 71-11-06/201).
- (5) Do these steps to release the pressure from the IDG:
 - (a) Put the container under the IDG to catch the oil.
 - (b) Remove the cover from the overflow drain coupling on the IDG.
 - (c) Put the end of the drain hose into the container.

WHEN YOU CONNECT THE OVERFLOW DRAIN HOSE TO THE OVERFLOW WARNING: DRAIN COUPLING, USE A RAG AROUND THE FITTING. THIS WILL PREVENT OIL SPRAY CAUSED BY PRESSURE IN THE IDG CASE. HOT OIL CAN BURN YOU.

- Connect the overflow drain hose with outlet adapter, Ozone OMP2505-3, to the overflow drain coupling and allow the oil to drain into the container.
- Disconnect the overflow drain hose with outlet adapter, Ozone OMP2505-3, from the overflow drain coupling.
- D. Procedure

EFFECTIVITY

REPLACE

ENGINE 2 IDG SCAVENGE FILTER ELEMENT

24-11-02-2A | 24-016-01-2 PAGE 2 OF 7 DEC 22/07

AIRLINE CARD NO.

SAS FOEING
767
TASK CARD

MECH INSP

- (1) Remove the scavenge filter as follows:
 - (a) Remove the wire which locks the scavenge filter cover.

WARNING: USE CARE WHEN REMOVING THE FILTER COVER. HOT OIL MAY FLOW FROM THE SCAVENGE FILTER WHEN THE FILTER COVER IS REMOVED. HOT OIL CAN CAUSE SERIOUS INJURY.

(b) Remove the filter cover (1) and allow the oil to flow out of the filter into the container.

<u>NOTE</u>: Inspect the oil in the filter cover for contamination before you discard the oil.

- (c) Remove and discard the 0-ring (2) from the filter cover (1).
- (d) Remove the filter element (3) and discard the 0-ring (4).
- Scavenge Filter Inspection/Check (Fig. 201)
 - A. General
 - (1) When the Differential Pressure Indicator is extended, the entire Scavenge Filter Inspection/Check must be examined to see if more work is necessary.
 - B. References
 - (1) AMM 24-11-01/401, Integrated Drive Generator
 - (2) AMM 24-11-01/601, Integrated Drive Generator
 - (3) AMM 79-21-01/401, IDG Fuel/0il Heat Exchanger
 - C. Procedure
 - (1) Do a check for the oil and filter as follows:
 - (a) Is there contamination on the scavenge filter element, or in the oil drained from the filter cavity?

EFFECTIVITY

REPLACE

ENGINE 2 IDG SCAVENGE FILTER ELEMENT

24-11-02-2A

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AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

 Contamination is defined as bright metal deposits which can be clearly defined as chunks or pieces caused by breakage (in contrast to nonmagnetic flakes or slivers caused by normal wear).

NOTE: A moderate number of scattered small metallic flakes (bronze or silver colored metal), or flakes of generator insulation are normal products of wear during operation. Even a considerable number of nonmetallic items such as black epoxy chips, sleeving, and other forms of generator insulation do not always indicate damage to IDG.

- Fuel, hydraulic fluid or water in IDG oil is liquid contamination.
- (b) Is there a condition that would allow contaminated oil to bypass the filter and enter the external oil cooling circuit?
 - 1) The condition that would allow oil to bypass the scavenge filter are damaged 0-rings or a damaged filter.
- (2) If the differential pressure indicator (DPI) is not extended, do these steps:
 - (a) If no contamination is found in the filter and in the IDG oil, install a new filter element per section Scavenge Filter Installation.
 - (b) If contamination is found on the filter or in the IDG oil, do the "Examine The Oil In The IDG" (AMM 24-11-01/601).
- (3) If the differential pressure indicator (DPI) is extended, perform the following:
 - (a) Do the "Examine the Pressure Differential Indicator and the Scavenge Filter" (AMM 24-11-01/601).
- Scavenge Filter Installation (Fig. 201)
 - A. References
 - (1) AMM 12-13-03/301, Integrated Drive Generator Servicing
 - (2) AMM 71-00-00/201, Power Plant Maintenance Practices

EFFECTIVITY

REPLACE

ENGINE 2 IDG SCAVENGE FILTER ELEMENT

24-11-02-2A

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AIRLINE CARD NO.

SAS BOEING 767 TASK CARD

MECH INSP

- (3) AMM 71-11-04/201, Fan Cowl Panels
- (4) AMM 71-11-06/201, Core Cowl Panels
- (5) AMM 78-31-00/201, Thrust Reverser System
- B. Consumable Materials
 - (1) D00657 Lubricant, 0-ring Acryloid HF825
 - (2) D00109 Oil, Aircraft Turbine Engine, synthetic base MIL-PRF-23699
 - (3) G01505 Lockwire Safety and Lock (NASM20995)
- C. Parts
 - (1) Refer to the AIPC for part numbers and effectivities of items in the table that follows:
 - (a) AIRPLANES WITH PW4000 SERIES ENGINE; Refer to the table that follows:

АММ			AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
201	2 3 4	Packing Filter element Packing	24-11-01	11	125 130 135

- D. Procedure
 - (1) Install the scavenge filter as follows:
 - (a) Apply Acryloid HF825 lubricant, or MIL-PRF-23699 oil to the O-ring (2).
 - (b) Install the 0-ring (2) on the filter cover (1).
 - (c) Apply Acryloid HF825 lubricant, or MIL-PRF-23699 oil to the 0-ring (4).
 - (d) Install the 0-ring (4) on a new filter element (3).

EFFECTIVITY

REPLACE

ENGINE 2 IDG SCAVENGE FILTER ELEMENT

24-11-02-2A

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1

AIRLINE CARD NO.

SAS BOEING TASK CARD

MECH INSP

(e) Install the new filter element (3) in the cavity on the IDG and make sure the 0-ring makes a seal.

WARNING: MAKE SURE THE FILTER ELEMENT IS SEATED CORRECTLY IN THE FILTER CAVITY BEFORE YOU INSTALL THE FILTER COVER. DO NOT TIGHTEN THE FILTER COVER TO FORCE THE FILTER ELEMENT INTO THE HOUSING. IF YOU DO, DAMAGE TO THE FILTER ELEMENT CAN OCCUR.

- (f) Install the filter cover (1) and tighten the cover to 156-180 pound-inches (17.6 - 20.3 N.m).
- (g) Install a lockwire, GO1505, on the filter cover (1).
- (2) Service the IDG (AMM 12-13-03/301).
- (3) Close the core cowl panels (AMM 71-11-06/201).

OBEY THE INSTRUCTIONS IN AMM 78-31-00/201 WHEN YOU CLOSE THE WARNING: THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS INJURY TO PERSONS OR DAMAGE TO EQUIPMENT COULD OCCUR.

- (4) Close the thrust reverser (AMM 78-31-00/201).
- (5) Activate the thrust reverser (AMM 78-31-00/201).
- (6) Close the fan cowl panel (AMM 71-11-04/201).
- (7) Do the test in (AMM 71-00-00/501) and check for leak.
- Stop the engine and wait for five minutes for the oil level to become stable.
- (9) Do this task: "IDG Oil Level Check" (AMM 12-13-03/301).
- (10) If the oil level is incorrect, do this task: "IDG Oil Servicing" (AMM 12-13-03/301).
- (11) Do a check for oil leaks at the IDG and external oil cooling system. Repair any leaks you find.

EFFECTIVITY

REPLACE

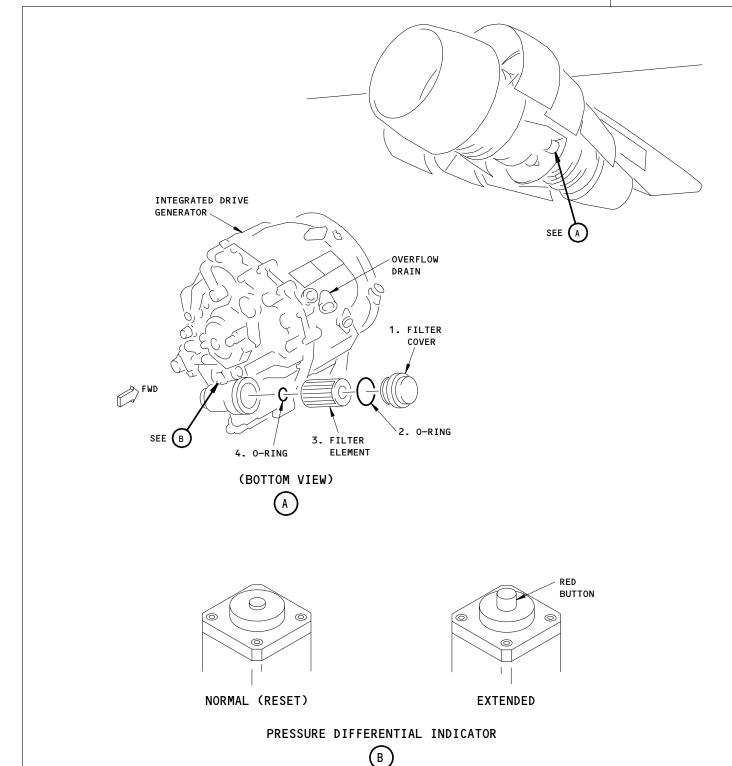
ENGINE 2 IDG SCAVENGE FILTER ELEMENT

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AIRLINE CARD NO.

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767 TASK CARD



Scavenge Filter Installation Figure 201

REPLACE ENGINE 2 IDG SCAVENGE FILTER ELEMENT

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STATION	
TAIL NO.	
DATE	



BOEING CARD NO. 24-017-01-1

AIRLINE CARD NO.

WORK AREA RELATED TASK INTERVAL MPD TASK CARD SKILL PHASE REV REVISION W-24-016-01-100750 HRS NOTE 012 APR 22/04 ENGIN | ENGINE 1 101XX APPLICABILITY
ANE ENGINE STRUCTURAL ILLUSTRATION REFERENCE AIRPLANE **REPLACE** ENGINE 1 IDG OIL CHANGE NOTE NOTE ZONES ACCESS PANELS 411 417AL

MECH INSP

MPD ITEM NUMBER

REPLACE THE ENGINE 1 IDG OIL.

12-13-03-3B

INTERVAL NOTE: A 750 HOUR REPEAT INTERVAL IS RECOMMENDED UNTIL AN INDIVIDUAL OPERATOR'S EXPERIENCE SUPPORTS INTERVAL OPTIMIZATION IN ACCORDANCE WITH HAMILTON SUNDSTRAND SIL 236. OPERATORS WITH ESTABLISHED PROGRAMS SHOULD MAINTAIN THEIR IDG MAINTENANCE PROGRAMS AT INTERVALS DETERMINED BY THEIR OWN SERVICE EXPERIENCE.

SEE SUNDSTRAND SIL 236 FOR MORE INFORMATION

AND INTERVAL OPTIMIZATION METHODS.

ENGINE NOTE: THIS TASK IS APPLICABLE TO THE 4000, 7R4, 80A,

AND 80C ENGINES.

AIRPLANE NOTE: THIS TASK IS APPLICABLE TO ALL AIRPLANE

MODELS EXCEPT THE 767-400ER.

1. <u>IDG Oil Change</u> (Fig. 303)

A. Equipment

- (1) Oil Service Dispenser Risbridger UZ/7/1826 (preferred)
- (2) Oil Service Dispenser Malabar WF150-1
- (3) Oil Service Cart Malabar 53361

NOTE: The cart must have a Ozone coupling OMP2506-3 or the equivalent to connect with the pressure fill coupling.

- (4) Container 5-gallon capacity
- (5) Overflow drain hose with adapter, Ozone OMP2505-3

REPLACE ENGINE 1 IDG OIL CHANGE

12-13-03-3B 24-017-01-1 PAGE 1 OF 7 AUG 22/01

AIRLINE CARD NO.

SAS BOEING
767
TASK CARD

MECH INSP

- B. Consumable Materials
 - (1) Oil Aircraft turbine engines, synthetic base, MIL-PRF-23699 or MIL-PRF-7808 (AMM 20-30-04/201).

NOTE: When you change an oil type for the IDG, contact the vender, Hamilton Sundstrand, for their list of approved oils.

- C. References
 - (1) AMM 24-11-02/201, Scavenge Filter
- D. Change the IDG Oil
 - (1) Drain the oil from the IDG (AMM 12-13-03/301), but do not install the drain plug.
 - (2) Do these steps to change the IDG oil:
 - (a) Replace the Scavenge Filter (AMM 24-11-02/201).
 - (b) Remove the cover from the pressure fill coupling.
 - (c) Connect the hose from the oil service equipment to the pressure fill coupling on the IDG.

CAUTION: WHEN YOU FILL THE IDG WITH OIL, YOU MUST NOT MIX TYPES OF OIL. IF YOU MIX THE OILS, YOU CAN CAUSE DAMAGE TO THE IDG.

- (d) Use the pump on the oil service equipment to flush the IDG with oil.
- (e) Pump oil slowly into the IDG until the color of the oil that flows from the case drain is the same color of the oil pumped into the IDG or until 1.0 to 1.5 gallons (3.7 to 5.6 liters) of oil are collected from the case drain.

NOTE: The 1 to 1.5 gallons of oil does not include the oil that was already drained in previous steps.

(f) Lubricate and install a new 0-ring on the drain plug for the IDG.

EFFECTIVITY

REPLACE

ENGINE 1 IDG OIL CHANGE

12-13-03-3B

24-017-01-1 PAGE 2 OF 7 APR 22/04

BOEING CARD NO.

24-017-01-1

AIRLINE CARD NO.

SAS FOR TASK CARD

		TASK CARD	
INSP			
		(g) Install the drain plug in the IDG.	
		(h) Tighten the drain plug to torque of 55-75 pound-inc	hes.
		(i) Install a lock wire on the drain plug.	
	(3)	Do the IDG oil servicing (AMM 12-13-03/301).	
	(4)	Do the Engine Ground Test for Idle Power to do a check for (AMM 71-00-00/501).	or leaks
	(5)	Stop the engine and wait for five minutes for the oil lebecome stable (AMM $71-00-00/501$).	vel to
	(6)	Do this task: "IDG Oil Level Check" (AMM 12-13-03/301).	
	(7)	If the oil level is incorrect, do this task: "IDG Oil S (AMM 12-13-03/301).	ervicing"
	(8)	Do a check for oil leaks at the IDG and external oil coo Repair any leaks you find.	ling system.
	NSP	(3) (4) (5) (6) (7)	(g) Install the drain plug in the IDG. (h) Tighten the drain plug to torque of 55-75 pound-incl (i) Install a lock wire on the drain plug. (3) Do the IDG oil servicing (AMM 12-13-03/301). (4) Do the Engine Ground Test for Idle Power to do a check for (AMM 71-00-00/501). (5) Stop the engine and wait for five minutes for the oil lebecome stable (AMM 71-00-00/501). (6) Do this task: "IDG Oil Level Check" (AMM 12-13-03/301). (7) If the oil level is incorrect, do this task: "IDG Oil Sincamm 12-13-03/301). (8) Do a check for oil leaks at the IDG and external oil coo

EFFECTIVITY

SAS



24-017-01-1

AIRLINE CARD NO.

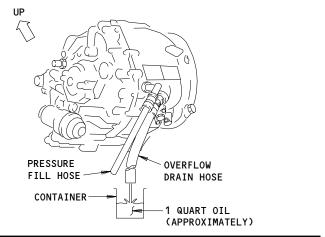
NOTE: DO NOT SERVICE IDG IF IDG IS DISCONNECTED. REFER TO 24-20-00 FAULT ISOLATION AND CORRECT "DISCONNECT TRIP" BITE MESSAGE.

STEP ONE

ATTACH OVERFLOW DRAIN AND PRESSURE FILL HOSES.

SOME OIL MAY COME OUT OVERFLOW DRAIN HOSE WHEN HOSE IS CONNECTED.

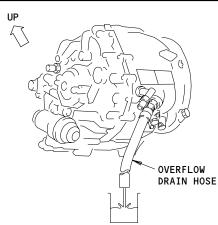
PUMP OIL INTO IDG UNTIL APPROXIMATELY ONE QUART OF OIL COMES OUT OVERFLOW DRAIN HOSE.



STEP TWO

REMOVE PRESSURE FILL HOSE ONLY.

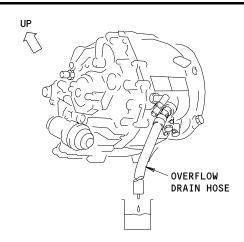
INSTALL COVER.



STEP THREE

REMOVE OVERFLOW DRAIN HOSE WHEN DRAINAGE SLOWS TO DROPS.

INSTALL COVER.



Summarized Servicing Procedure Figure 301

EFFECTIVITY

REPLACE

ENGINE 1 IDG OIL CHANGE

12-13-03-3B

24-017-01-1 PAGE 4 OF 7 APR 22/99

SAS

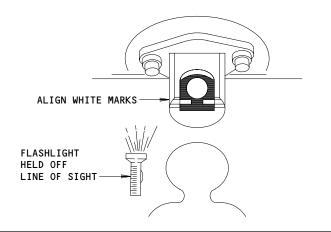


24-017-01-1

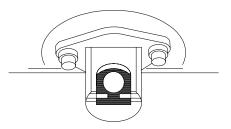
AIRLINE CARD NO.

NOTE: DO NOT CHECK OIL LEVEL IF IDG IS DISCONNECTED. REFER TO 24-20-00 FAULT ISLOATION AND CORRECT "DISCONNECT TRIP" BITE MESSAGE.

- LOOK AT VIEWING FACE OF LOW OIL LEVEL INDICATOR.
 - WIPE CLEAN IF DIRTY
 - USE FLASHLIGHT IF IDG HAS "OK"
 LOW OIL INDICATOR OR IF TOO DARK
 TO SEE WHITE ALIGNMENT MARKS.
 DO NOT SHINE FLASHLIGHT DIRECTLY
 ON VIEWING FACE BECAUSE REFLECTION
 WILL MAKE READING DIFFICULT.
- CHANGE YOUR LINE OF SIGHT UNTIL. WHITE MARKS ARE ALIGNED.



- LOOK FOR SILVER SPOT IN VIEWING FACE.
 - SILVER SPOT SEEN SERVICING REQUIRED.
 - "OK" SEEN SERVICING NOT REQUIRED.



ANY SILVER SPOT LARGE OR SMALL SERVICING REQUIRED



"OK"
NO SERVICING REQUIRED

Summarized Low Oil Level Check Procedure Figure 302

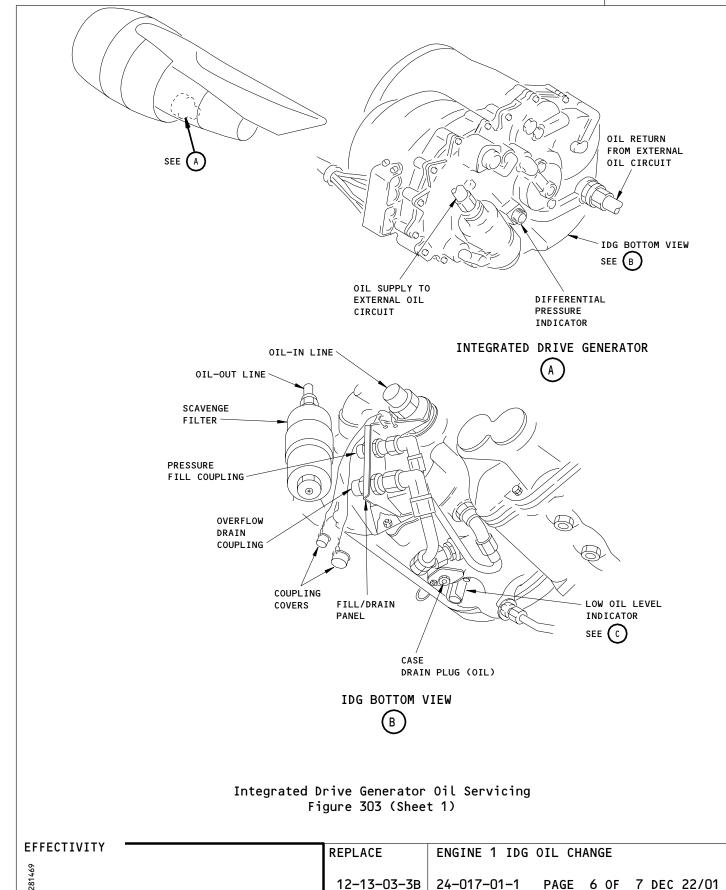
BOEING CARD NO.

24-017-01-1

AIRLINE CARD NO.

SAS

767 TASK CARD



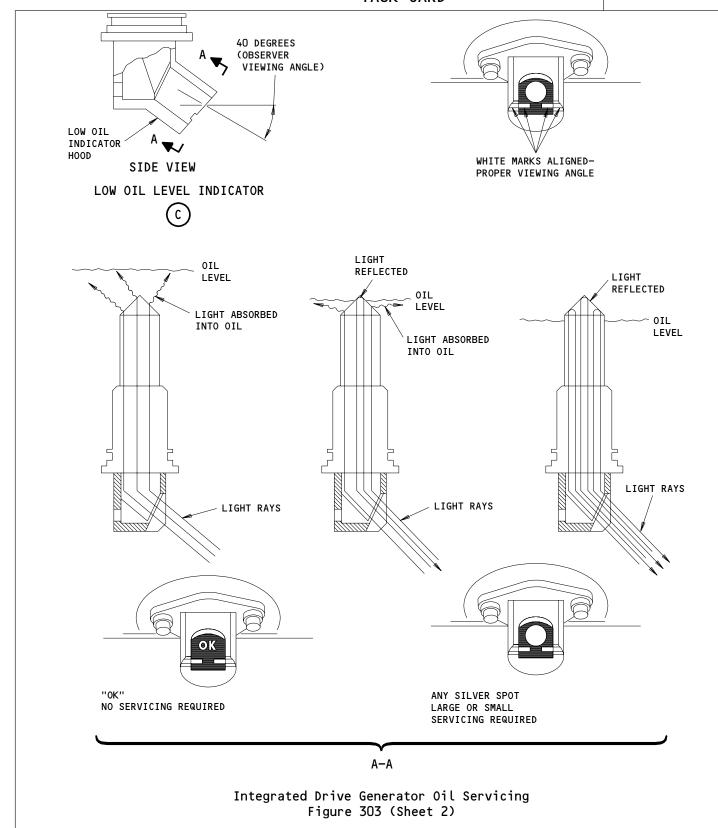
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AIRLINE CARD NO.

24-017-01-1

SAS

BOEING 767 TASK CARD



REPLACE

12-13-03-3B

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ENGINE 1 IDG OIL CHANGE

PAGE 7 OF 7 AUG 10/96

24-017-01-1

EFFECTIVITY

STATION	
01/1/1014	
	_
TAIL NO.	
=	
	_
DATE	
2/116	

SKILL

WORK AREA



BOEING CARD NO. 24-017-01-2

AIRLINE CARD NO.

TASK CARD

NOTE

MPD

NOTE

PHASE

ENGIN ENGINE 2 W-24-016-01-2 00750 HRS NOTE 101XX 012 APR 22/04

TASK TITLE STRUCTURAL ILLUSTRATION REFERENCE APPLICABILITY AIRPLANE ENGINE REPLACE ENGINE 2 IDG OIL CHANGE

INTERVAL

ZONES ACCESS PANELS

421 427AL

RELATED TASK

MECH INSP MPD ITEM NUMBER

REPLACE THE ENGINE 2 IDG OIL.

12-13-03-3B

INTERVAL NOTE: A 750 HOUR REPEAT INTERVAL IS RECOMMENDED

UNTIL AN INDIVIDUAL OPERATOR'S EXPERIENCE SUPPORTS INTERVAL OPTIMIZATION IN ACCORDANCE WITH HAMILTON SUNDSTRAND SIL 236. OPERATORS WITH ESTABLISHED PROGRAMS SHOULD MAINTAIN THEIR IDG MAINTENANCE PROGRAMS AT INTERVALS DETERMINED BY THEIR OWN SERVICE EXPERIENCE. SEE SUNDSTRAND SIL 236 FOR MORE INFORMATION

AND INTERVAL OPTIMIZATION METHODS.

ENGINE NOTE: THIS TASK IS APPLICABLE TO THE 4000, 7R4, 80A

AND 80C ENGINES.

AIRPLANE NOTE: THIS TASK IS APPLICABLE TO ALL AIRPLANE

MODELS EXCEPT THE 767-400ER.

1. <u>IDG Oil Change</u> (Fig. 303)

A. Equipment

- (1) Oil Service Dispenser Risbridger UZ/7/1826 (preferred)
- (2) Oil Service Dispenser Malabar WF150-1
- (3) Oil Service Cart Malabar 53361

NOTE: The cart must have a Ozone coupling OMP2506-3 or the equivalent to connect with the pressure fill coupling.

- (4) Container 5-gallon capacity
- (5) Overflow drain hose with adapter, Ozone OMP2505-3

REPLACE ENGINE 2 IDG OIL CHANGE

12-13-03-3B 24-017-01-2 PAGE 1 OF 7 AUG 22/01

1

AIRLINE CARD NO.

SAS BOEING
767
TASK CARD

MECH INSP

- B. Consumable Materials
 - (1) Oil Aircraft turbine engines, synthetic base, MIL-PRF-23699 or MIL-PRF-7808 (AMM 20-30-04/201).

NOTE: When you change an oil type for the IDG, contact the vender, Hamilton Sundstrand, for their list of approved oils.

- C. References
 - (1) AMM 24-11-02/201, Scavenge Filter
- D. Change the IDG Oil
 - (1) Drain the oil from the IDG (AMM 12-13-03/301), but do not install the drain plug.
 - (2) Do these steps to change the IDG oil:
 - (a) Replace the Scavenge Filter (AMM 24-11-02/201).
 - (b) Remove the cover from the pressure fill coupling.
 - (c) Connect the hose from the oil service equipment to the pressure fill coupling on the IDG.

CAUTION: WHEN YOU FILL THE IDG WITH OIL, YOU MUST NOT MIX TYPES OF OIL. IF YOU MIX THE OILS, YOU CAN CAUSE DAMAGE TO THE IDG.

- (d) Use the pump on the oil service equipment to flush the IDG with oil.
- (e) Pump oil slowly into the IDG until the color of the oil that flows from the case drain is the same color of the oil pumped into the IDG or until 1.0 to 1.5 gallons (3.7 to 5.6 liters) of oil are collected from the case drain.

NOTE: The 1 to 1.5 gallons of oil does not include the oil that was already drained in previous steps.

(f) Lubricate and install a new 0-ring on the drain plug for the IDG.

EFFECTIVITY

REPLACE

ENGINE 2 IDG OIL CHANGE

12-13-03-3B

24-017-01-2 PAGE 2 OF 7 APR 22/04

AIRLINE CARD NO.

		TASK CARD	
MECH	INSP		
		(g) Install the drain plug in the IDG	
		(h) Tighten the drain plug to torque	
		(i) Install a lock wire on the drain	
		(3) Do the IDG oil servicing (AMM 12-13-03	
		(4) Do the Engine Ground Test for Idle Pow (AMM 71-00-00/501).	er to do a check for leaks
		(5) Stop the engine and wait for five minu become stable (AMM 71-00-00/501).	tes for the oil level to
		(6) Do this task: "IDG Oil Level Check" (AMM 12-13-03/301).
		(7) If the oil level is incorrect, do this (AMM 12-13-03/301).	task: "IDG Oil Servicing"
		(8) Do a check for oil leaks at the IDG an Repair any leaks you find.	d external oil cooling system.

EFFECTIVITY

AIRLINE CARD NO.

SAS

767 TASK CARD

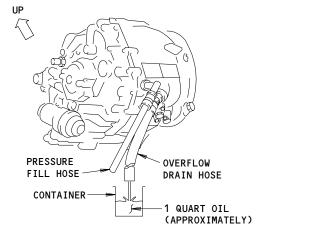
NOTE: DO NOT SERVICE IDG IF IDG IS DISCONNECTED. REFER TO 24-20-00 FAULT ISOLATION AND CORRECT "DISCONNECT TRIP" BITE MESSAGE.

STEP ONE

ATTACH OVERFLOW DRAIN AND PRESSURE FILL HOSES.

SOME OIL MAY COME OUT OVERFLOW DRAIN HOSE WHEN HOSE IS CONNECTED.

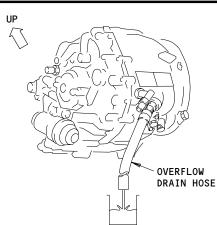
PUMP OIL INTO IDG UNTIL APPROXIMATELY ONE QUART OF OIL COMES OUT OVERFLOW DRAIN HOSE.



STEP TWO

REMOVE PRESSURE FILL HOSE ONLY.

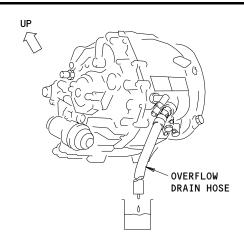
INSTALL COVER.



STEP THREE

REMOVE OVERFLOW DRAIN HOSE WHEN DRAINAGE SLOWS TO DROPS.

INSTALL COVER.



Summarized Servicing Procedure Figure 301

EFFECTIVITY

REPLACE

ENGINE 2 IDG OIL CHANGE

12-13-03-3B

24-017-01-2 PAGE 4 OF 7 APR 22/99

1

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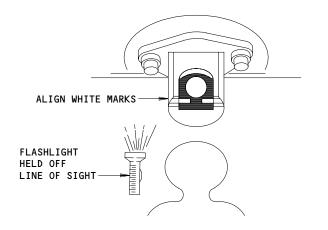


24-017-01-2

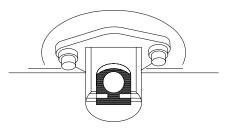
AIRLINE CARD NO.

NOTE: DO NOT CHECK OIL LEVEL IF IDG IS DISCONNECTED. REFER TO 24-20-00 FAULT ISLOATION AND CORRECT "DISCONNECT TRIP" BITE MESSAGE.

- LOOK AT VIEWING FACE OF LOW OIL LEVEL INDICATOR.
 - WIPE CLEAN IF DIRTY
 - USE FLASHLIGHT IF IDG HAS "OK" LOW OIL INDICATOR OR IF TOO DARK TO SEE WHITE ALIGNMENT MARKS.
 DO NOT SHINE FLASHLIGHT DIRECTLY ON VIEWING FACE BECAUSE REFLECTION WILL MAKE READING DIFFICULT.
- CHANGE YOUR LINE OF SIGHT UNTIL. WHITE MARKS ARE ALIGNED.



- LOOK FOR SILVER SPOT IN VIEWING FACE.
 - SILVER SPOT SEEN SERVICING REQUIRED.
 - "OK" SEEN SERVICING NOT REQUIRED.



ANY SILVER SPOT LARGE OR SMALL SERVICING REQUIRED



"OK"
NO SERVICING REQUIRED

Summarized Low Oil Level Check Procedure Figure 302

EFFECTIVITY

REPLACE

ENGINE 2 IDG OIL CHANGE

12-13-03-3B

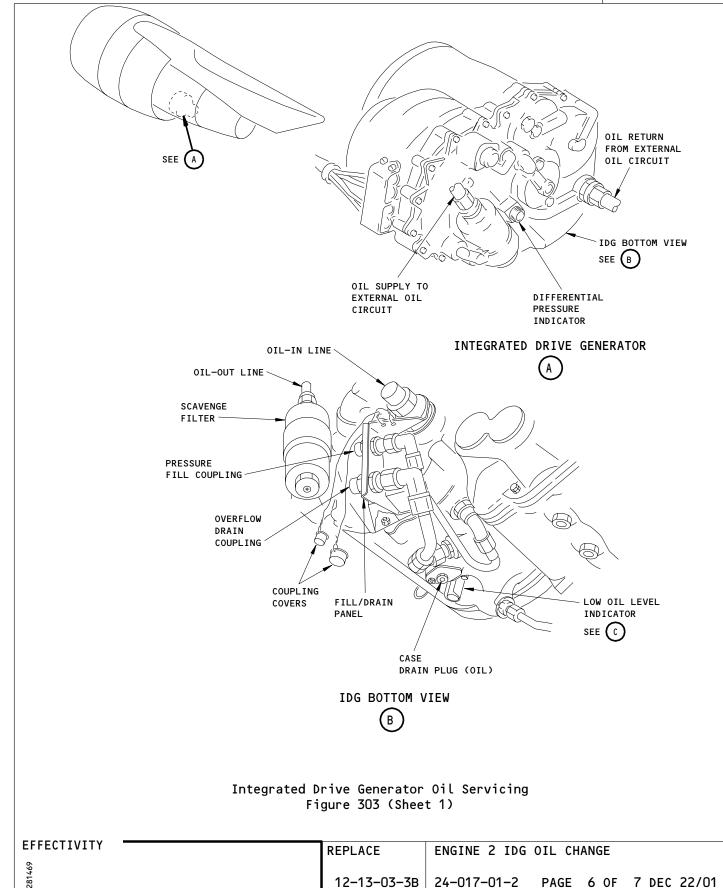
24-017-01-2 PAGE 5 OF 7 MAY 10/96

BOEING CARD NO.

FOEING 767 TASK CARD

SAS

24-017-01-2
AIRLINE CARD NO.

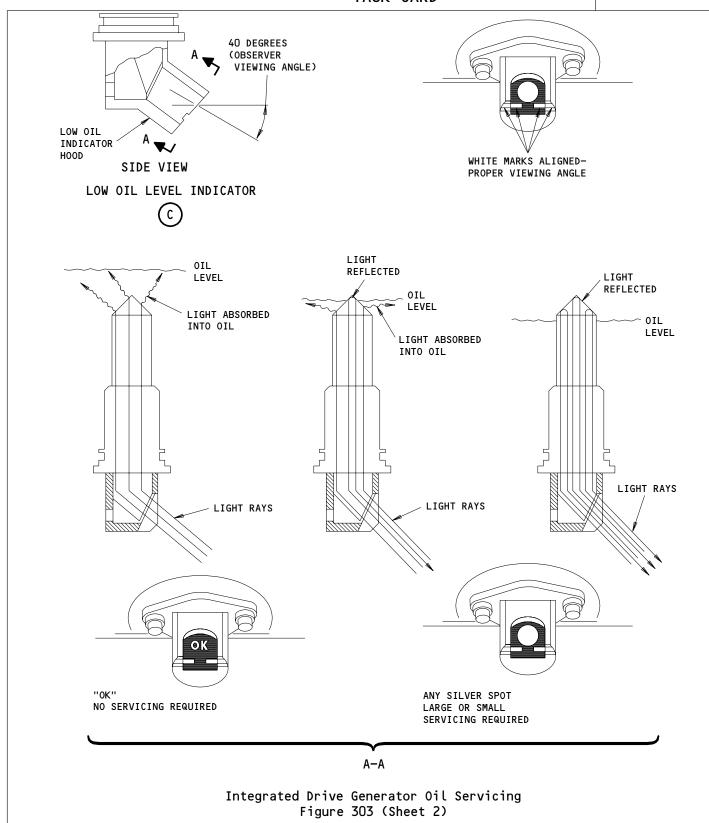


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AIRLINE CARD NO.

SAS

767 TASK CARD



EFFECTIVITY

12-13-03-3B

REPLACE

ENGINE 2 IDG OIL CHANGE

PAGE 7 OF 7 AUG 10/96

24-017-01-2

STATION	
TAIL NO.	
DATE	٦



BOEING CARD NO. 24-031-01

AIRLINE CARD NO.

				TASK	CARD					
SKILL	WORK ARI	EA	RELATED TASK	INTERVAL		PHASE	MPD REV	TASK CARD REVISION		
ELECT	AFT CAR	GO		10			11212	010	APR	22/09
TAS	TASK		TITLE			STRUCTURAL ILLUSTRATION RE	FERENCE		PLICABI	
CLEAN	CLEAN ADII BATTE		TTERY CHARGER					AIRPLAN	E	ENGINE
CLL/III		All O BA	TIERT CHARGER					NOT	E	ALL
	ZONES					ACCESS PANELS				
154			822							
1 1								N	IDD ITEM	NIIMRED

MECH INSP

CLEAN (OFF-AIRCRAFT) THE APU BATTERY CHARGER IN ACCORDANCE WITH THE INSTRUCTIONS IN THE VENDOR'S COMPONENT MAINTENANCE MANUAL.

24-31-05-4A

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

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

- 1. APU Battery Charger Removal
 - A. References
 - (1) AMM 20-10-01/401, E/E Rack Mounted Components
 - (2) AMM 20-41-01/201, Electrostatic Discharge Sensitive Devices
 - B. Access

 - (2) Access Panels 822 Aft cargo compartment door
 - C. Removal
 - (1) Open this circuit breaker on the P33 forward miscellaneous electrical equipment panel and attach a D0-NOT-CLOSE tag:

<u>NOTE</u>: Make sure the APU is not operating when you open this circuit breaker. The APU will automatically shut-down when you open this circuit breaker.

CLEAN APU BATTERY CHARGER

24-31-05-4A 24-031-01 PAGE 1 OF 5 DEC 22/00

24-031-01

AIRLINE CARD NO.

SAS FOR TASK CARD

MECH INSP

- (a) 33E5, APU BAT CHARGER
- (2) Open this circuit breaker on the P49 APU Auxiliary panel or the E6-1 aft equipment center rack and attach a D0-NOT-CLOSE tag:

<u>NOTE</u>: Make sure the APU is not operating when you open this circuit breaker. The APU will automatically shut-down when you open this circuit breaker.

- (a) 49E4, APU BAT CHGR
- (3) Do these steps to remove the APU battery charger:
 - (a) Open the access cover on the forward side of the E6 rack.

CAUTION: DO NOT TOUCH THE APU BATTERY CHARGER BEFORE YOU DO THE PROCEDURE FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE APU BATTERY CHARGER.

- (b) Do the procedure for devices that are sensitive to electrostatic discharge (AMM 20-41-01/201).
- (c) Remove the electrical connector from the APU battery charger.
- (d) Remove the cover from the terminal block on the APU battery charger.
- (e) Identify the wires on the terminal block for installation.
- (f) Remove the wires from the terminal block.
- (g) Remove the APU battery charger (AMM 20-10-01/401).
- 2. APU Battery Charger Installation
 - A. References
 - (1) AMM 20-10-01/401, E/E Rack Mounted Components
 - (2) AMM 20-41-01/201, Electrostatic Discharge Sensitive Devices
 - (3) AMM 24-22-00/201, Electrical Power Control

EFFECTIVITY CLEAN APU BATTERY CHARGER

24-31-05-4A

24-031-01

PAGE 2 OF 5 APR 22/05

24-031-01

AIRLINE CARD NO.

SAS BOEING
767
TASK CARD

MECH INSP

B. Access

(1) Location Zones 154

Aft cargo compartment (Right)

211/212 Flight compartment

(2) Access Panels

822 Aft cargo compartment door

C. Installation

CAUTION: DO NOT TOUCH THE APU BATTERY CHARGER BEFORE YOU DO THE PROCEDURE FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE APU BATTERY CHARGER.

- (1) Do the procedure for devices that are sensitive to electrostatic discharge (AMM 20-41-01/201).
- (2) Install the APU battery charger (AMM 20-10-01/401).
- (3) Do these steps to connect the APU battery charger:
 - (a) Install the wire, washer, lockwasher and nut on the positive terminal of the battery charger.
 - (b) Tighten the nut on the positive terminal of the battery charger to 170-190 inch-pounds (19.2-21.5 Newton meters).
 - (c) Install the wire, washer, lockwasher and nut on the negative terminal of the battery charger.
 - (d) Tighten the nut on the negative terminal of the battery charger to 135-145 inch-pounds (15.3-16.4 Newton meters).
 - (e) Install the terminal cover on the battery charger.
 - (f) Connect the electrical connector to the APU battery charger.
- (4) Do a visual check of the APU Battery Charger Shunt. Check for cracks in the shunt body, thread damage or corrosion on terminals. If any of these conditions exist, replace the shunt and do the following:
 - (a) Torque the jam nuts on the shunt to 35 + -5 inch-pounds.

EFFECTIVITY

CLEAN APU

APU BATTERY CHARGER

24-31-05-4A

24-031-01

PAGE 3 OF 5 DEC 22/00

24-031-01

24-051-01

AS BOEING
767
TASK CARD

AIRLINE CARD NO.

- (5) Close the access cover on the forward side of the E6 rack.
- (6) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P49 panel or E6 rack:
 - (a) 49E4, APU BAT CHGR
- (7) Remove the DO-NOT-CLOSE tag and close this circuit breaker on the P33 panel:
 - (a) 33E5, APU BAT CHGR
- D. Do a test of the APU battery charger:
 - (1) Supply electrical power (AMM 24-22-00/201).
 - (2) Do a test of the APU battery charger as follows:
 - (a) Push the ELEC HYD switch on the EICAS MAINT panel on the right side panel, P61.
 - (b) Make sure the STBY POWER switch on the P5 panel is set to the AUTO position.
 - (c) Make sure the BAT switch on the standby power panel is in the ON position.
 - (d) Turn the STBY POWER switch on the P5 panel to the BAT position for one minute.
 - (e) Make sure these values are below APU/BAT on the bottom EICAS display:

DC-V	26 ±3
DC-A	0

(f) Turn the STBY POWER switch on the standby power panel to the AUTO position.

NOTE: Watch the EICAS display closely. The values on the display will change quickly.

(g) Make sure these values show below APU/BAT on the bottom EICAS display:

EFFECTIVITY

CLEAN APU BATTERY CHARGER

24-31-05-4A

24-031-01

PAGE 4 OF 5 DEC 22/05

1

BOEING CARD NO.

24-031-01

AIRLINE CARD NO.

		TASK CARD
MECH	INSP	
		1) DC-A value increases quickly to 38 ±5 (BAO6) or 45 ±5 (BA35).
		2) DC-V value increases to 33 ±4 then decreases to 28 ±2.
		NOTE: It will usually take less than one minute for the voltage value to increase and then decrease. A fully discharged battery can extend this time to 75 minutes.
		3) After the DC-V value decreases to 28 ±2 make sure the DC-A value is 0 ±5.
		(3) Remove electrical power if it is not necessary (AMM 24-22-00/201).

EFFECTIVITY

CLEAN

	STA	TION			
	TAI	L NO.			
	D	ATE			
\vdash	SKILL	WORK	AR	EA	Τ



BOEING CARD NO. 24-041-03

AIRLINE CARD NO.

					IASN	CAND					
SKILL	ILL WORK AREA RE		REL	ATED TASK INTERVAL			PHASE	MPD			
									REV	RE	VISION
ELECT	FUSELAG	iΕ			1 C			11212	011	APR	22/08
TASK				TITLE STRUCTURAL ILLUSTRATION		STRUCTURAL ILLUSTRATION RE	FERENCE		APPLICABILITY		
OUE OK / TNOD EVTERNAL		-DAIAI F	DOLLED DECED	TACLE DING				AIRPLAN	.E	ENGINE	
CHECK/INSP EXTERNAL		KNAL F	POWER RECEP	TACLE PINS							
									NOT	E	ALL
ZONES							ACCESS PANELS				
124				120AR							

MECH INSP

INSPECT THE EXTERNAL POWER RECEPTACLE PINS FOR APPARENT DAMAGE.

24-41-02-2B

MPD ITEM NUMBER

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

- 1. External Power Receptacle Inspection/Check
 - A. Equipment
 - (1) F70284-1, Wear Gage Set, External Power Plug and Receptacle
 - Do an Inspection/Check of the External Power Receptacle
 - (1) Do these steps to examine the receptacles from the outer side of the airplane:
 - (a) Look for pins that are loose, bent, or have a crack.
 - (b) Look for damage or cracks on the base insulation.
 - (c) Look for discolored, burned, or pitted pins.

NOTE: Discoloration of the pins is due to excessive heat, which is caused by excessive corrosion and poor contact between the pin and socket.

- (2) Try to move wear gage F70284-2 across pins A, B, C, and N.
 - If a pins accepts the "No-Go" gage or is damaged, replace the receptacle.
- (3) Try to move wear gage F70284-3 across pins E and F.

EFFECTIVITY CHECK/INSP EXTERNAL POWER RECEPTACLE PINS 24-41-02-2B 24-041-03 PAGE 1 OF 2 APR 22/08

BOEING CARD NO.

24-041-03

AIRLINE CARD NO.

SAS BOEING
767
TASK CARD

MECH INSP (a) If a pins accepts the "No-Go" gage or is damaged, replace the receptacle. **EFFECTIVITY** CHECK/INSP EXTERNAL POWER RECEPTACLE PINS