MAIN GENERATOR - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

   A. This section gives the procedure to remove/install the main generators.

   B. Main generators 1 and 3 are installed below the LH engine.

   C. Main generators 2 and 4 are installed below the RH engine.

   D. You can get access to main generators 1 and 3 through lower cowling 413.

   E. You can get access to main generators 2 and 4 through lower cowling 423.

   F. The procedures in this section are given in the sequence below. The tasks identified with (♦) are part of the Scheduled Maintenance Requirements Document (SMRD).

TASK NUMBER	*DESCRIPTION*	*EFFECTIVITY*
24-31-01-000-801-A	MAIN GENERATOR - REMOVAL	ALL
24-31-01-400-801-A	MAIN GENERATOR - INSTALLATION	ALL

TASK 24-31-01-000-801-A
EFFECTIVITY: ALL

2. MAIN GENERATOR - REMOVAL

A. General

(1) This task gives the procedure to remove the main generators.

B. References

REFERENCE	*DESIGNATION*
AMM TASK 71-12-01-000-801-A/400	ENGINE LOWER COWLING - OPENING

C. Zones and Accesses

ZONE	*PANEL/DOOR*	*LOCATION*
413	413	LH Engine
423	423	RH Engine

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	Engines

I. Preparation

SUBTASK 841-002-A

(1) Make sure that the GPU pushbutton, on the electrical panel, on the overhead panel, is set at OFF (The striped bar is off).

(2) Attach a DO-NOT-SET-ON tag to the GPU pushbutton.

(3) Make sure that the BATT 1 and BATT 2 switches, on the electrical panel, on the overhead panel, are set at OFF.

(4) Attach a DO-NOT-SET-AUTO tag to the BATT 1 and BATT 2 switches.

(5) Open LH lower cowling 413 (AMM TASK 71-12-01-000-801-A/400) to remove main generators 1 and/or 3.

(6) Open RH lower cowling 423 (AMM TASK 71-12-01-000-801-A/400) to remove main generators 2 and/or 4.

J. Removal (Figure 401)

SUBTASK 020-002-A

(1) Disconnect the electrical connector (3) from the main generator (2).

(2) Remove the two screws (16) which attach the terminal cover (15).

(3) Remove the self-locking nuts (13) and Belleville washers (12) which attach the electrical cable (11) and interconnection bar (14) to the main generator (2).

(4) Disconnect the electrical cable (11) and interconnection bar (14) from the main generator (2).

NOTE: If the electrical cable is without identification code, identify the electrical cable to make the installation easier.

(5) If the removal of the two electrical cables (8) from the interconnection bar (14) is necessary, do as follows:

(a) Remove the self-locking nut (10), lock washer (9), two washers (7), and bolt (6) which attach the two electrical cables (8) to the interconnection bar (14).

(b) Disconnect the two electrical cables (8) from the interconnection bar (14).

NOTE: If the electrical cables are without identification code, identify the electrical cables to make the installation easier.

(6) Loosen the clamp (4) which attaches the air duct (5) to the main generator (2).

(7) Disconnect the air duct (5) from the main generator (2).

(8) Remove the screw (20) which attaches the support (19) to the exhaust header (22).

(9) Loosen the V-band clamp (1) which attaches the main generator (2) to the mounting pad (18).

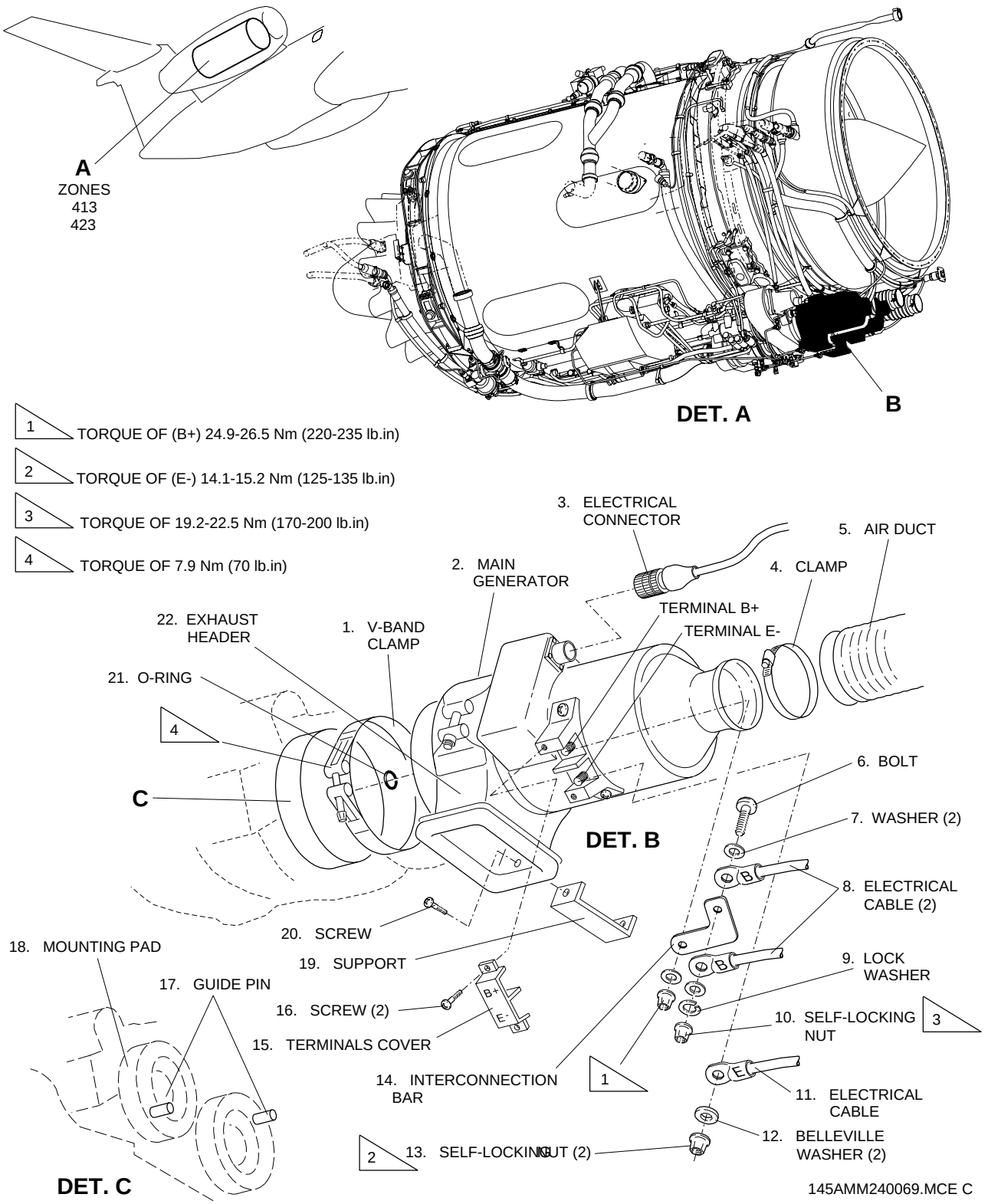
(10) Remove the main generator (2).

(11) Remove the exhaust header (22) from the main generator (2).

(12) Discard the O-ring (21).

EFFECTIVITY: ALL

Main Generator - Removal/Installation
Figure 401



TASK 24-31-01-400-801-A
EFFECTIVITY: ALL

3. MAIN GENERATOR - INSTALLATION

A. General

(1) This task gives the procedure to install the Main Generators.

B. References

REFERENCE	*DESIGNATION*
AMM TASK 24-31-00-700-803-A/500	MAIN GENERATION SYSTEM - OPERATIONAL TEST
AMM TASK 71-12-01-400-801-A/400	ENGINE LOWER COWLING - CLOSING
FIM CSP 34064	-
IPC 24-31-01	MAIN GENERATOR
MM CSP 34022	-

C. Zones and Accesses

ZONE	*PANEL/DOOR*	*LOCATION*
413	413	LH Engine
423	423	RH Engine

D. Tools and Equipment

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Torque wrench (For the torque range, refer to Figure 401)	To torque fasteners correctly	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

SPECIFICATION (BRAND)	*DESCRIPTION*	*QTY*
MS20995C20	Lockwire	100 (mm)

G. Expendable Parts

ITEM	*IPC REFERENCE (VENDOR REFERENCE)*	*QTY*
O-ring	IPC 24-31-01	1 for each genera-tor

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	Engines

I. Installation (Figure 401)

SUBTASK 420-002-A

CAUTION: MAKE SURE THAT THE GPU PUSHBUTTON, BATT 1 AND BATT 2 SWITCHES, ON THE ELECTRICAL PANEL, ON THE OVERHEAD PANEL, ARE SET AT OFF.

(1) Lubricate the new O-ring (21) (IPC 24-31-01) with engine oil and install it at the main generator (2) shaft, whether the main generator (2) is new or not.

(2) Install the exhaust header (22) to the main generator (2).

(3) Put the main generator (2) V-band clamp (1) on the mounting pad (18).

(4) Tighten the nut of the V-band clamp (1) to approximately 2/3 of the specified torque value.

(5) Connect the air duct (5) to the main generator (2).

(6) Lightly hit the V-band clamp (1) at different locations around the external diameter with a rubber mallet and a stick.

(7) Tighten the nut of the V-band clamp (1) to the specified value.

NOTE: Do step (6) and then do step (7) as many times as necessary to get a condition in which there is no reduction in torque.

(8) Tighten the clamp (4) which attaches the air duct (5) to the main generator (2).

(9) Safety (lockwire P/N = MS20995C20) the clamp (4).

(10) If the two electrical cables (8) were disconnected from the interconnection bar (14), do as follows:

(a) Connect the two electrical cables (8) to the interconnection bar (14).

CAUTION: SEE THEIR IDENTIFICATION MARKS TO MAKE SURE THAT THE ELECTRICAL CABLES ARE INSTALLED CORRECTLY AND THAT THE TORQUE VALUE IS APPLIED CORRECTLY. INCORRECT INSTALLATION OF THE CABLES WILL CAUSE IMPORTANT PROBLEMS IN THE AIRCRAFT.

(b) Tighten the self-locking nut (10), lock washer (9), two washers (7), and bolt (6) which attach the two electrical cables (8) to the interconnection bar (14).

(11) Make sure that there are two or more threads on the other side of the nut (10). If not, replace the bolt (6) with a longer one and do step (10).

(12) Connect the electrical cable (11) and interconnection bar (14) to the main generator (2).

CAUTION: SEE THEIR IDENTIFICATION MARKS TO MAKE SURE THAT THE ELECTRICAL CABLE AND INTERCONNECTION BAR ARE INSTALLED CORRECTLY AND THAT THE TORQUE VALUE IS APPLIED CORRECTLY (THE TORQUE VALUE OF STUD "B+" IS DIFFERENT FROM STUD "E-"). INCORRECT INSTALLATION OF THE CABLE AND INTERCONNECTION BAR WILL CAUSE IMPORTANT PROBLEMS IN THE AIRCRAFT.

(13) Tighten the two self-locking nuts (13) and two Belleville washers (12) which attach the electrical cable (11) and interconnection bar (14) to the main generator (2).

CAUTION: SEE THEIR IDENTIFICATION MARKS TO MAKE SURE THAT THE ELECTRICAL CABLES AND INTERCONNECTION BAR ARE INSTALLED CORRECTLY AND THAT THE TORQUE VALUE IS APPLIED CORRECTLY. INCORRECT INSTALLATION OF THE CABLES AND INTERCONNECTION BAR WILL CAUSE IMPORTANT PROBLEMS IN THE AIRCRAFT.

(14) Put the terminal cover (15) in its installation position.

(15) Tighten the two screws (16) which attach the terminal cover (15).

(16) Tighten the screw (20) which attaches the support (19) to the exhaust header (22).

(17) Connect the electrical connector (3) to the main generator (2).

J. Follow-on

SUBTASK 842-002-A

(1) Close LH lower cowling 413 or RH lower cowling 423 (AMM TASK 71-12-01-400-801-A/400) as applicable.

(2) Remove the DO-NOT-SET-ON tag from the GPU pushbutton.

(3) Remove the DO-NOT-SET-AUTO tag from the BATT 1 and BATT 2 switches.

(4) Do the operational test of the Main Generation System (AMM TASK 24-31-00-700-803-A/500).

(5) Do the engine leak test (operate at max. takeoff power for 3 minutes minimum, but not for more than 5 minutes). Refer to the latest revision of Rolls-Royce (MM CSP 34022).

NOTE: Make sure that there is no leakage through generator mounting-pad drain. If the leakage comes from the O-ring of the generator, replace the O-ring. If the leakage does not come from the O-ring, refer to the latest revision of Rolls-Royce (FIM CSP 34064).