

ENGINE HARNESS - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

- A. This section gives the procedure to remove/install the engine harness.
- B. 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
71-51-01-000-801-A	ENGINE HARNESS - REMOVAL	ALL
71-51-01-400-801-A	ENGINE HARNESS - INSTALLATION	ALL

TASK 71-51-01-000-801-A

EFFECTIVITY: ALL

2. ENGINE HARNESS - REMOVAL

A. General

- (1) The procedures given in this section are related to the harness assembly installed on the engine by EMBRAER (Ref. PPBM-145/1139). For removal/installation of the harness supplied with the engine refer to the instructions in Rolls-Royce MM CSP 34022 chapter 76.
- (2) This task is applicable to the LH and RH engines.

B. References

REFERENCE	DESIGNATION
AMM MPP 71-00-00/200	- MAINTENANCE PRACTICES
AMM TASK 71-11-01-000-801-A/400	ENGINE UPPER COWLING - REMOVAL
AMM TASK 71-12-01-000-802-A/400	ENGINE LOWER COWLING - REMOVAL
PPBM-145/1139	-
Rolls-Royce MM CSP 34022	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
412		LH engine upper cowling
422		RH engine upper cowling
413		LH engine lower cowling
423		RH engine lower cowling

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Workstand	To get access to the engine	1

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Engine

I. Preparation

SUBTASK 841-002-A

WARNING: BEFORE YOU DO THE TASK, OBEY THE SAFETY PRECAUTIONS GIVEN IN [AMM MPP 71-00-00/200](#) TO PREVENT INJURY TO PERSONS AND DAMAGE TO MATERIAL.

- (1) On the circuit breaker panel, open the circuit breakers below and attach a DO-NOT-CLOSE tag to them.
 - AIR COND EBV 1/2.
 - ENG AIR INLET 1/2.
 - FUEL PUMP 1B/2A.
 - FUEL PUMP 1A/2B.
 - AIR COND HSV 1/2.
 - POWERPLANT FIRE DET 1/2.
 - START 1/2.
- (2) Put the workstand in the work area.
- (3) Remove the upper cowling ([AMM TASK 71-11-01-000-801-A/400](#)) to get access to the engine.
- (4) Remove the lower cowling ([AMM TASK 71-12-01-000-802-A/400](#)) to get access to the engine.

J. Removal ([Figure 401](#))

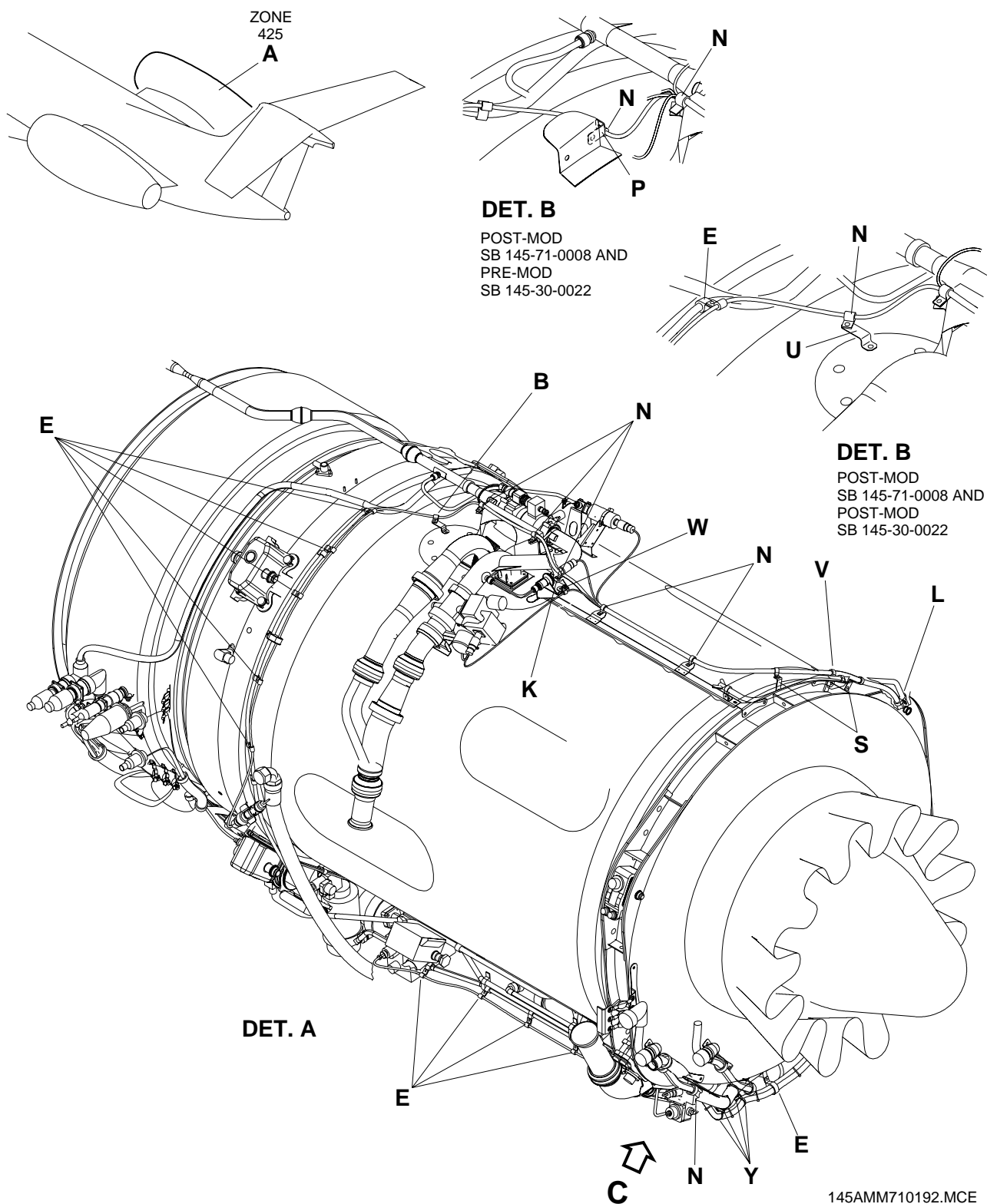
SUBTASK 020-002-A

- (1) Disconnect all the electrical connectors of the harnesses to be removed from the engine.
- (2) Remove the bolts (1), washers (2) and nuts (4) of the clamps (3).
- (3) Remove the engine harness.
- (4) Remove the harness supplied with engine. Refer to the instructions in Rolls-Royce MM CSP 34022 chapter 76.
- (5) Install protection caps to the disconnected points.

EFFECTIVITY: ALL

Engine Harness - Removal/Installation

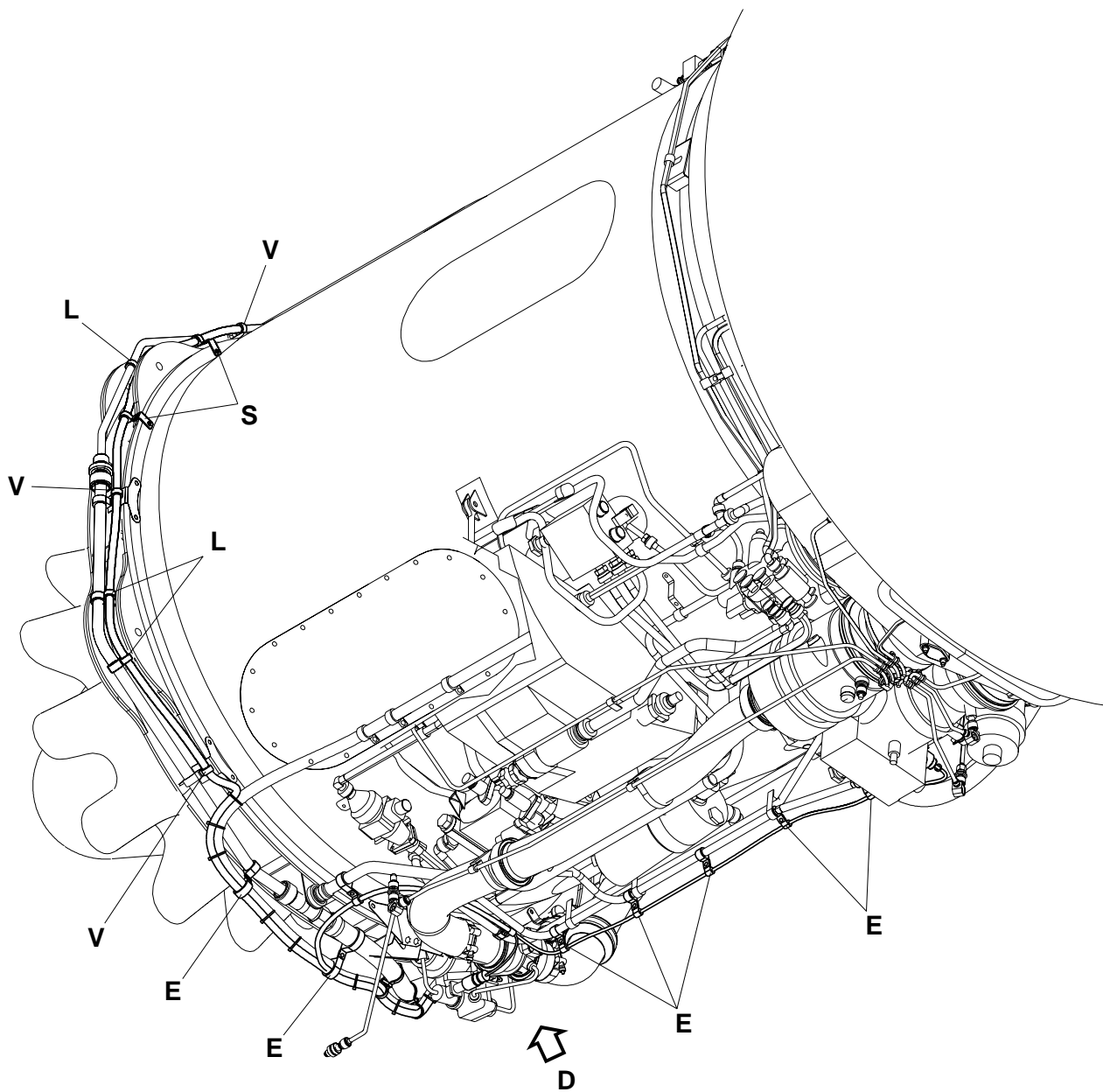
Figure 401 - Sheet 1



EFFECTIVITY: ALL

Engine Harness - Removal/Installation

Figure 401 - Sheet 2



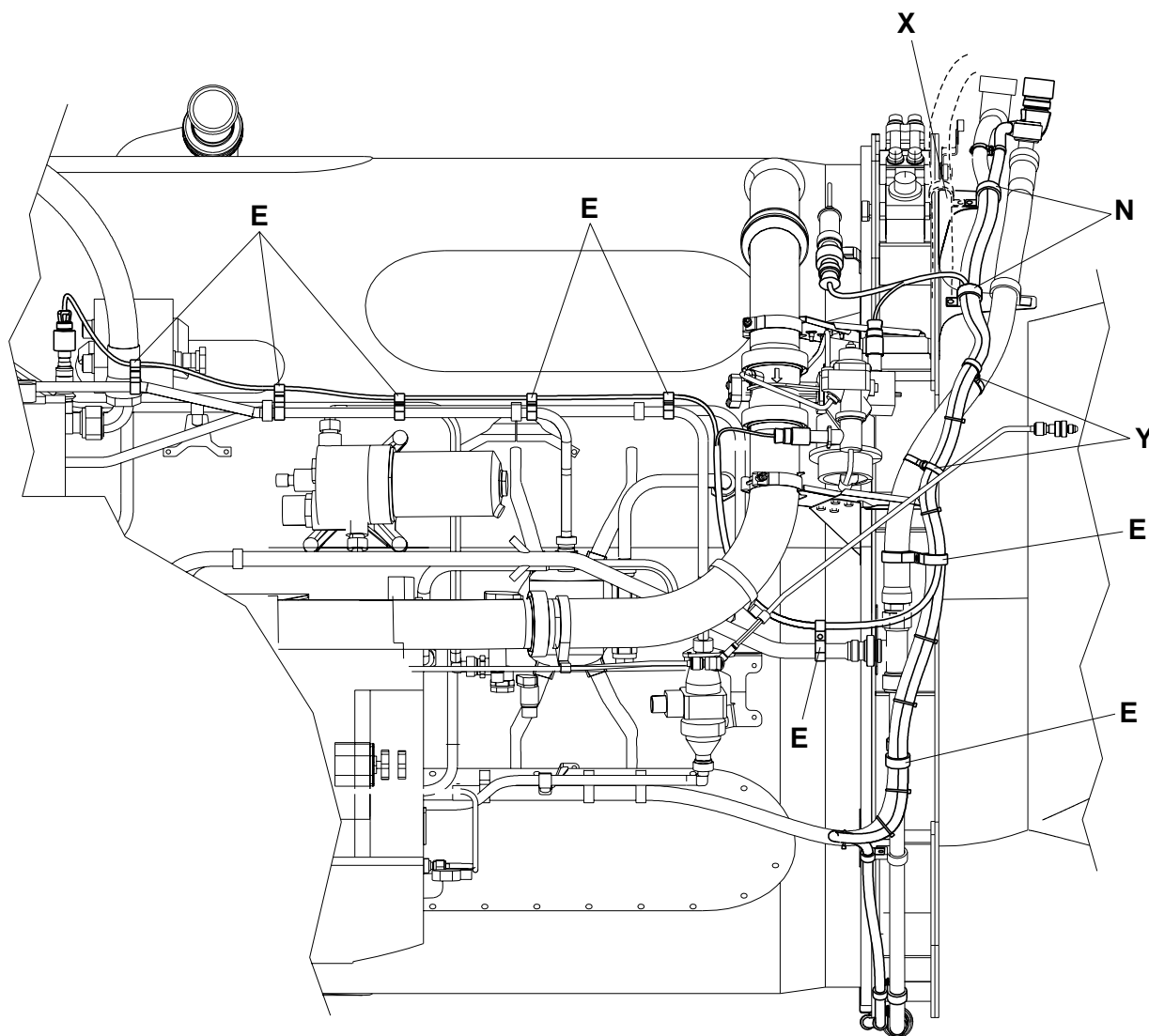
DET. C

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EFFECTIVITY: ALL

Engine Harness - Removal/Installation

Figure 401 - Sheet 3



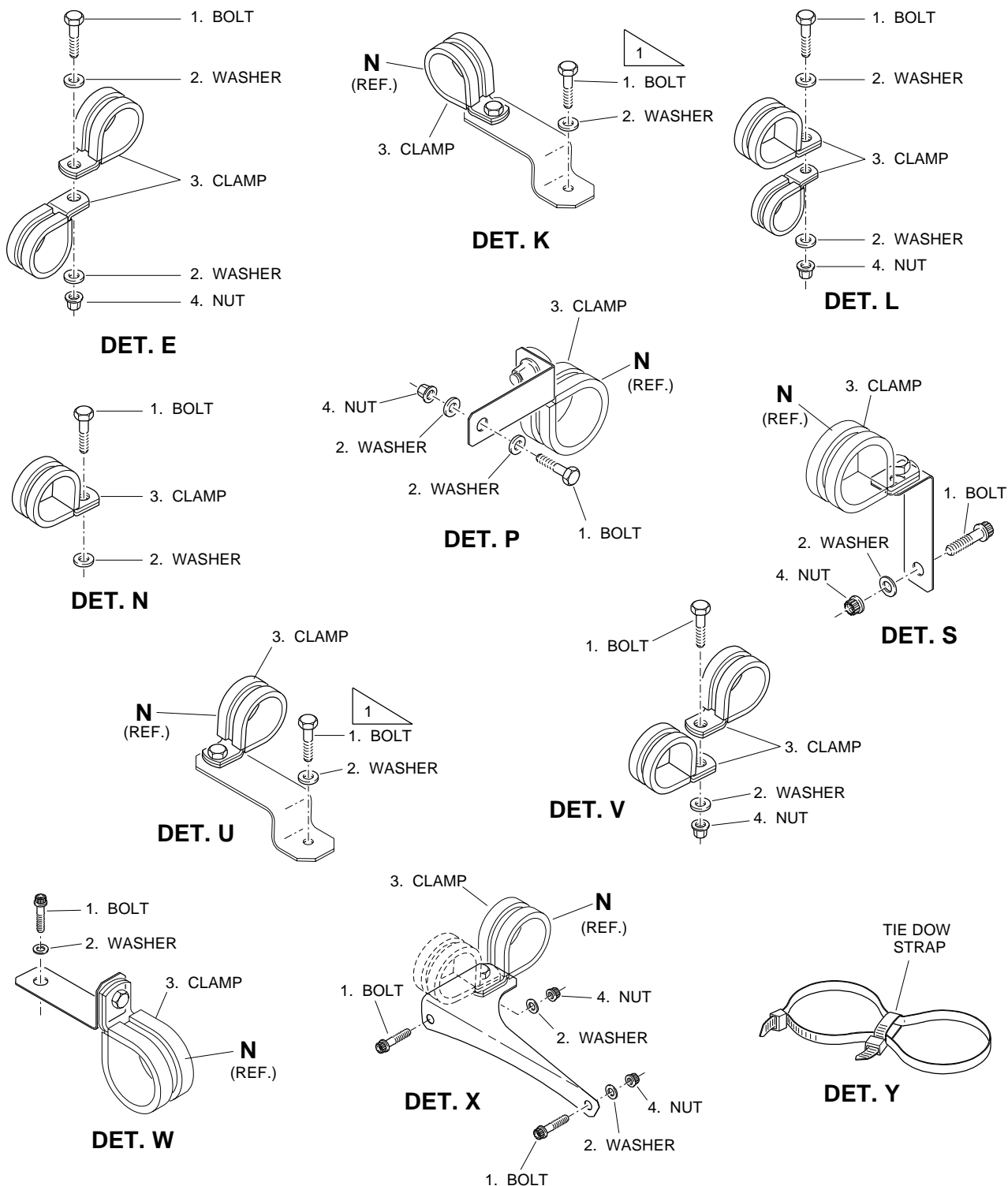
DET. D

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EFFECTIVITY: ALL

Engine Harness - Removal/Installation

Figure 401 - Sheet 4



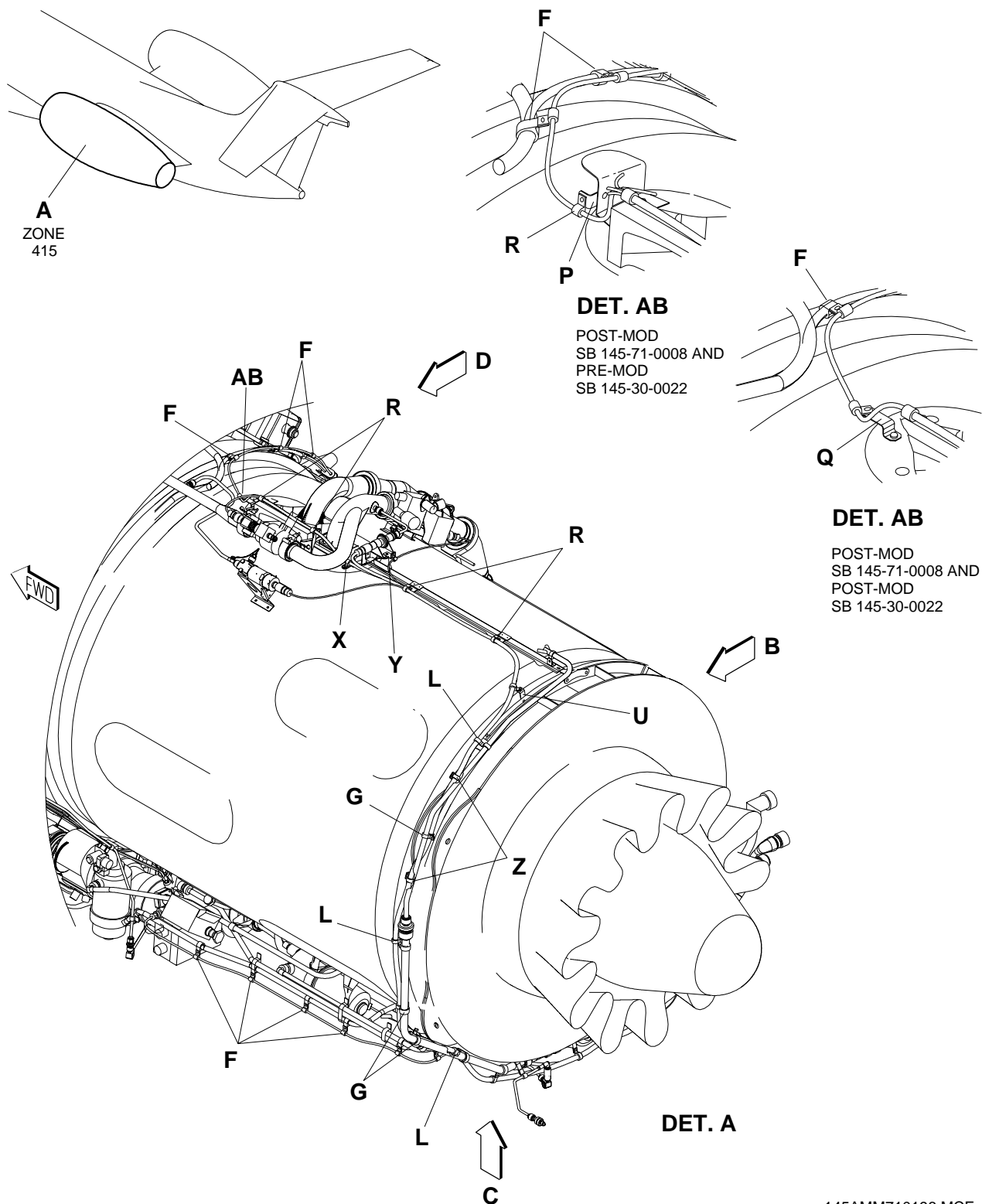
1 REFER TO ROLLS-ROYCE MM CSP34022 TASK 75-31-30-400-801 FOR TORQUE VALUES

EM145AMM710195A.DGN

EFFECTIVITY: ALL

Engine Harness - Removal/Installation

Figure 401 - Sheet 5

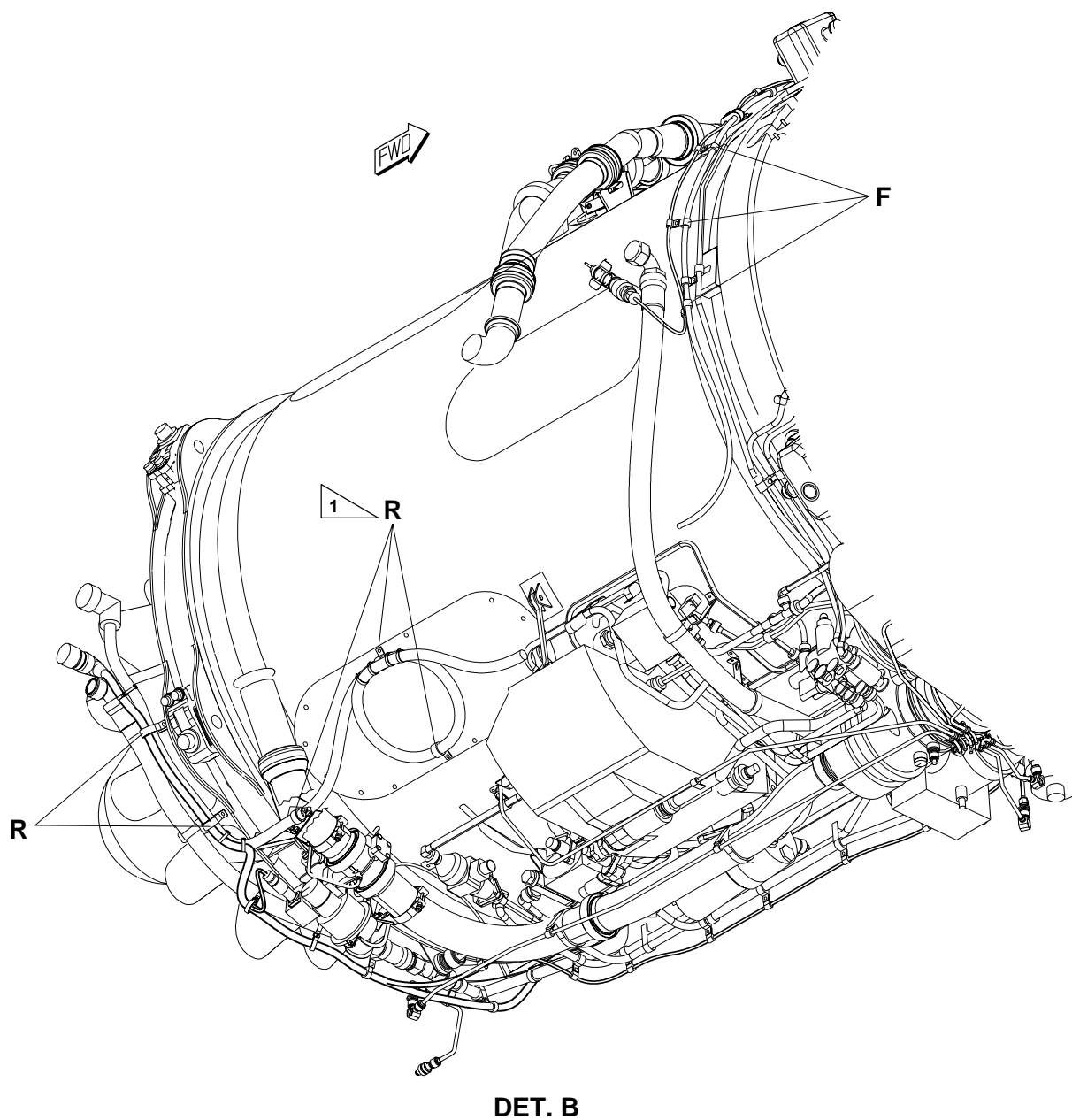


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EFFECTIVITY: ALL

Engine Harness - Removal/Installation

Figure 401 - Sheet 6

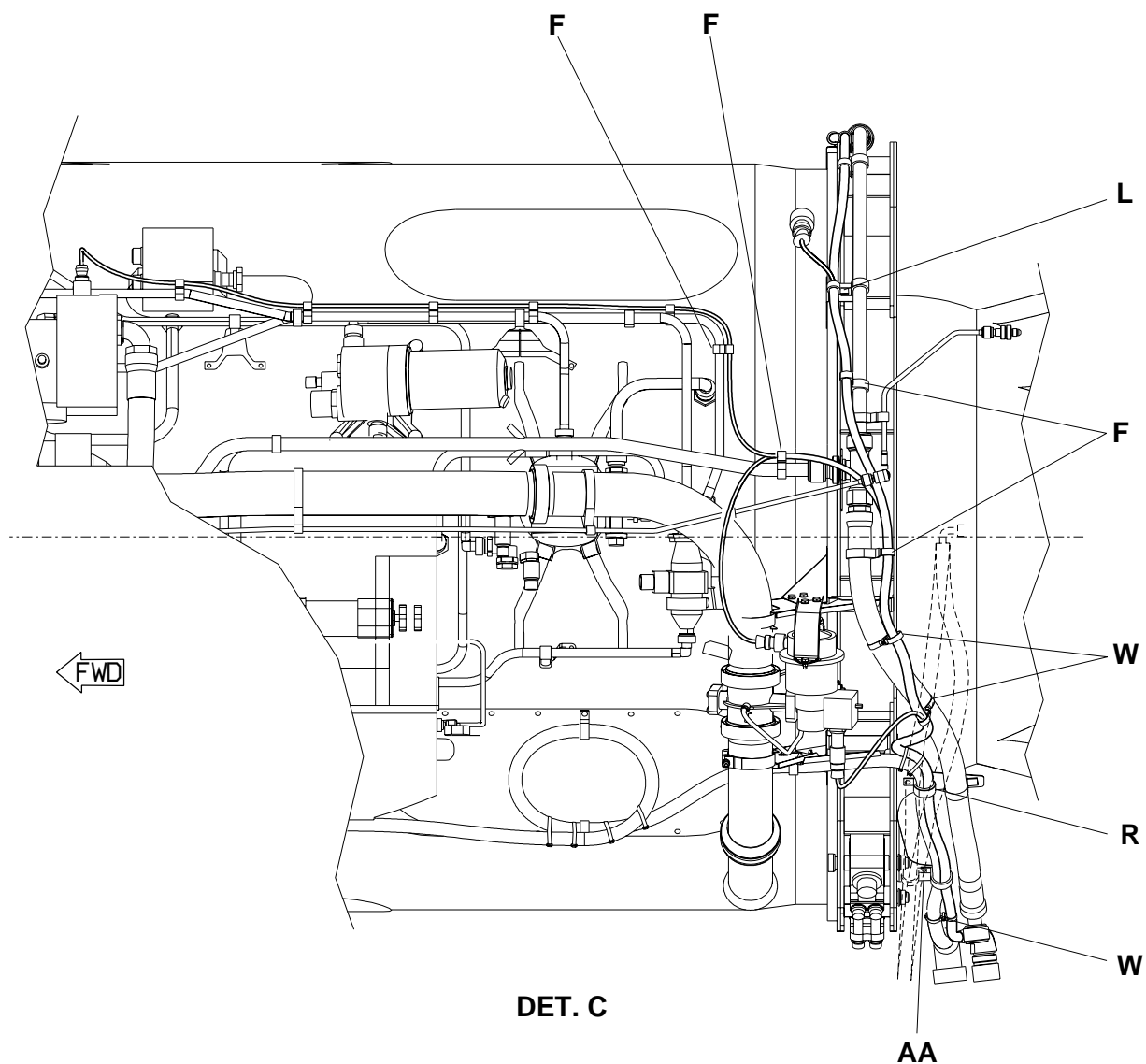


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EFFECTIVITY: ALL

Engine Harness - Removal/Installation

Figure 401 - Sheet 7

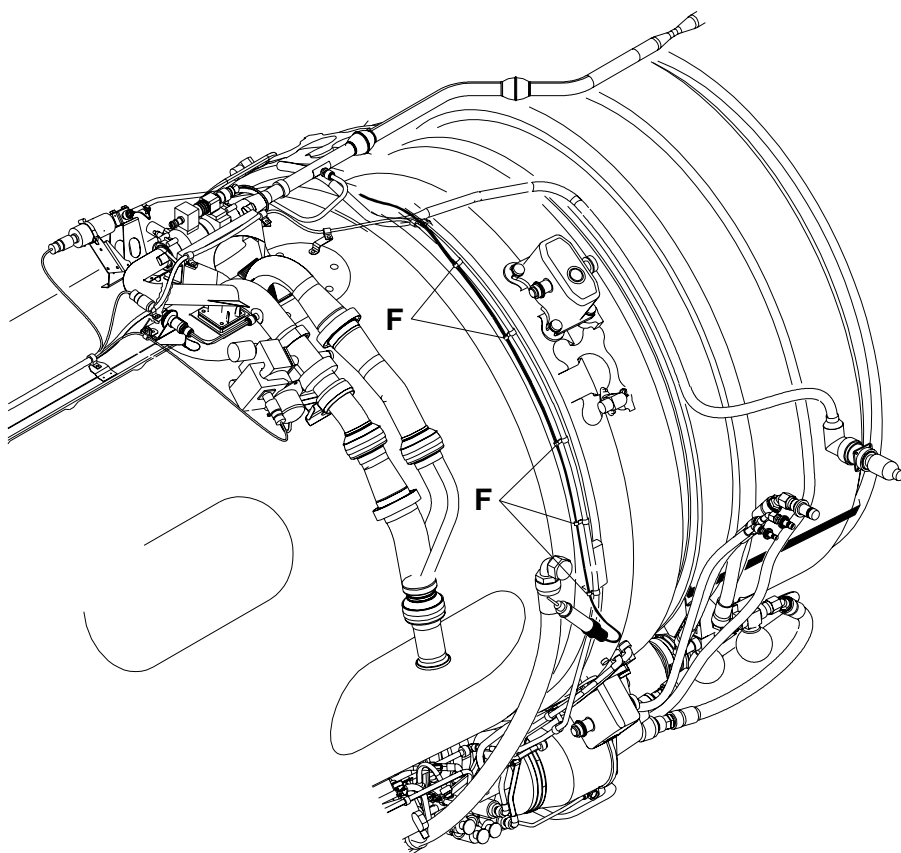


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EFFECTIVITY: ALL

Engine Harness - Removal/Installation

Figure 401 - Sheet 8



DET. D

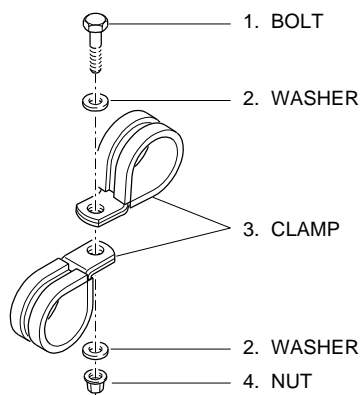


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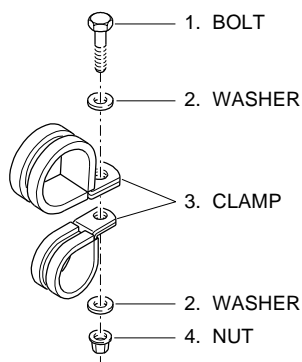
EFFECTIVITY: ALL

Engine Harness - Removal/Installation

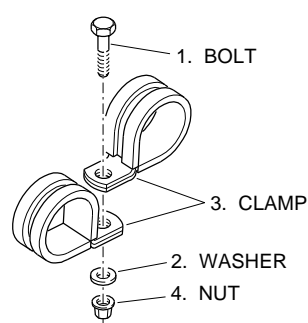
Figure 401 - Sheet 9



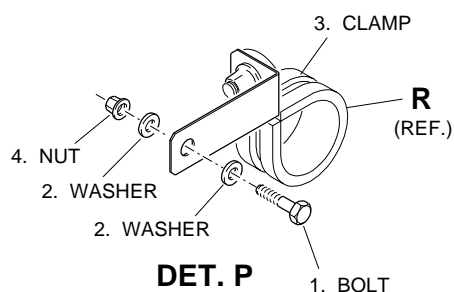
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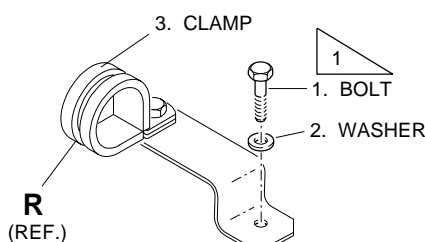
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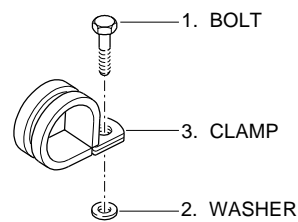
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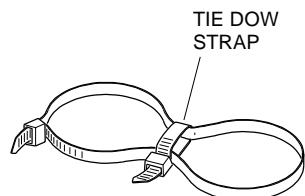
DET. P



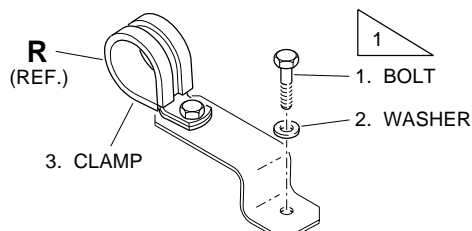
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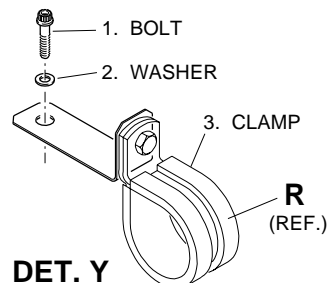
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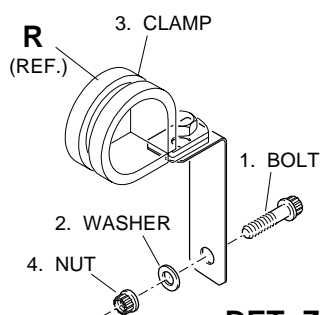
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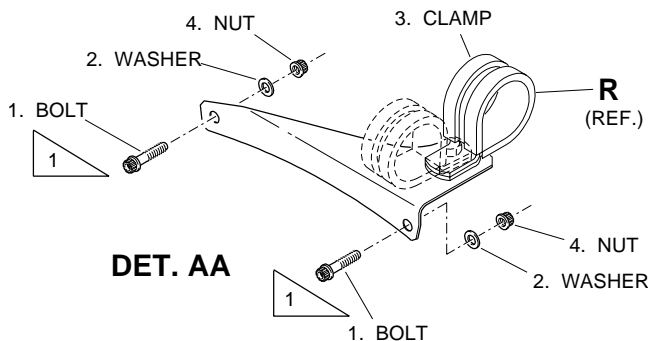
DET. X



DET. Y



DET. Z



DET. AA

1 REFER TO ROLLS-ROYCE MM CSP34022 TASK 75-31-30-400-801 FOR TORQUE VALUES

EM145AMM710200A.DGN

TASK 71-51-01-400-801-A

EFFECTIVITY: ALL

3. ENGINE HARNESS - INSTALLATION

A. General

- (1) The procedures given in this section are related to the harness assembly installed on the engine by EMBRAER (Ref. PPBM-145/1139). For removal/installation of the harness supplied with the engine refer to the instructions in Rolls-Royce MM CSP 34022 chapter 76.
- (2) This task is applicable to the LH and RH engines.

B. References

REFERENCE	DESIGNATION
AMM MPP 71-00-00/200	- MAINTENANCE PRACTICES
AMM TASK 71-11-01-400-801-A/400	ENGINE UPPER COWLING - INSTALLATION
AMM TASK 71-12-01-400-802-A/400	ENGINE LOWER COWLING - INSTALLATION
AMM TASK 71-51-01-200-801-A/600	ENGINE HARNESS - VISUAL INSPECTION
PPBM-145/1139	-
Rolls-Royce MM CSP 34022	-
WM 20-21-00	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
412		LH engine upper cowling
422		RH engine upper cowling
413		LH engine lower cowling
423		RH engine lower cowling

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Workstand	To get access to the engine	1

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Engine

I. Installation (Figure 401)

SUBTASK 420-002-A

WARNING: BEFORE YOU DO THE TASK, OBEY THE SAFETY PRECAUTIONS GIVEN IN [AMM MPP 71-00-00/200](#) TO PREVENT INJURY TO PERSONS AND DAMAGE TO MATERIAL.

- (1) Remove the protection caps from the disconnected points, if applicable.

CAUTION: • MAKE SURE THAT THE ENGINE HARNESSSES ARE CORRECTLY ATTACHED AND THERE IS NO CHAFING AGAINST THE ENGINE COMPONENTS, COWLINGS AND PYLON STRUCTURE. THIS CAN CAUSE SERIOUS PROBLEMS TO THE CORRECT ENGINE OPERATION. REFER TO FIGURE 601 FOR CORRECT ROUTING OF THE ENGINE HARNESSSES.

- TO MAKE SURE THAT THE ENGINE HARNESSSES ARE CORRECTLY INSTALLED, OBEY THE INSTRUCTIONS GIVEN IN THE HARNESS GENERAL REQUIREMENTS SECTION, ON WM 20-21-00.

- (2) Put the harness on the engine. See the Build-up Manual PPBM-145/1139 for more details of installation.
- (3) Install the harness supplied with engine. Refer to Rolls-Royce MM CSP 34022 chapter 76.

NOTE: You can install a spiral wrap if there is chafing of engine harnessses. Refer to the instructions in Rolls-Royce SB AE3007A-76-009.

- (4) Install the bolts (1), washers (2) and nuts (4) with the clamps (3) to attach the harness to the engine.
- (5) Connect the electrical connectors.

J. Follow-on

SUBTASK 842-002-A

- (1) Do an inspection procedure on the engine harness system ([AMM TASK 71-51-01-200-801-A/600](#)).
- (2) Install the upper cowling ([AMM TASK 71-11-01-400-801-A/400](#)).
- (3) Install the lower cowling ([AMM TASK 71-12-01-400-802-A/400](#)).
- (4) Remove the workstand.
- (5) On the circuit breaker panel, close the circuit breakers below and remove the DO-NOT-CLOSE tag from them:
 - AIR COND EBV 1/2.



- ENG AIR INLET 1/2.
- FUEL PUMP 1B/2A.
- FUEL PUMP 1A/2B.
- AIR COND HSV 1/2.
- POWERPLANT FIRE DET 1/2.
- START 1/2.

