

ENGINE ANTI-ICING DUCT - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to remove and install the engine thermal anti-icing duct.
- B. These procedures are applicable to the LH engine and to the RH engine.
- C. 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
30-21-05-000-801-A	ENGINE ANTI-ICING DUCT - REMOVAL	ALL
30-21-05-400-801-A	ENGINE ANTI-ICING DUCT - INSTALLATION	ALL

TASK 30-21-05-000-801-A

EFFECTIVITY: ALL

2. ENGINE ANTI-ICING DUCT - REMOVAL

A. General

- (1) This procedure gives the instructions to remove the duct of the engine thermal anti-icing system.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-30-00/100	-
AMM TASK 30-21-01-200-801-A/600	ENGINE ANTI-ICING VALVE - INSPECTION/CHECK
AMM TASK 30-21-05-200-801-A/600	ENGINE ANTI-ICING DUCT - DETAILED INSPECTION
AMM TASK 30-21-05-200-802-A/600	ENGINE ANTI-ICING DUCT - BORESCOPIC INSPECTION
AMM TASK 71-11-01-000-801-A/400	ENGINE UPPER COWLING - REMOVAL
S.B.145-30-0006	-
S.B.145-30-0022	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
412	412AT	Upper cowling of the LH powerplant
422	422AT	Upper cowling of the RH powerplant

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	LH or RH powerplant

I. Preparation

SUBTASK 841-002-A

- (1) On the overhead circuit breaker panel, open these circuit breakers and attach a DO-NOT-CLOSE tag to them.

- (PRE-MOD. [S.B.145-30-0022](#))
ENG AIR INLET 1 (Location tip: DC BUS 1/ICE AND RAIN PROTECTION/ENG AIR INLET 1).
ENG AIR INLET 2 (Location tip: DC BUS 2/ICE AND RAIN PROTECTION/ENG AIR INLET 2).
 - (POST-MOD. [S.B.145-30-0022](#))
ENG AIR INLET 1 (Location tip: DC BUS 1/ICE AND RAIN PROTECTION/ENG AIR INLET 1).
ENG AIR INLET 2 (Location tip: DC BUS 2/ICE AND RAIN PROTECTION/ENG AIR INLET 2).
ENG 1 A/I IND (Location tip: ESSENTIAL DC BUS 1/POWERPLANT/ENG 1 A/I IND).
ENG 2 A/I IND (Location tip: ESSENTIAL DC BUS 2/POWERPLANT/ENG 2 A/I IND).
- (2) Remove powerplant upper cowling 412 or 422 (AMM MPP 06-30-00/100) ([AMM TASK 71-11-01-000-801-A/400](#)).

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

SUBTASK 020-002-A

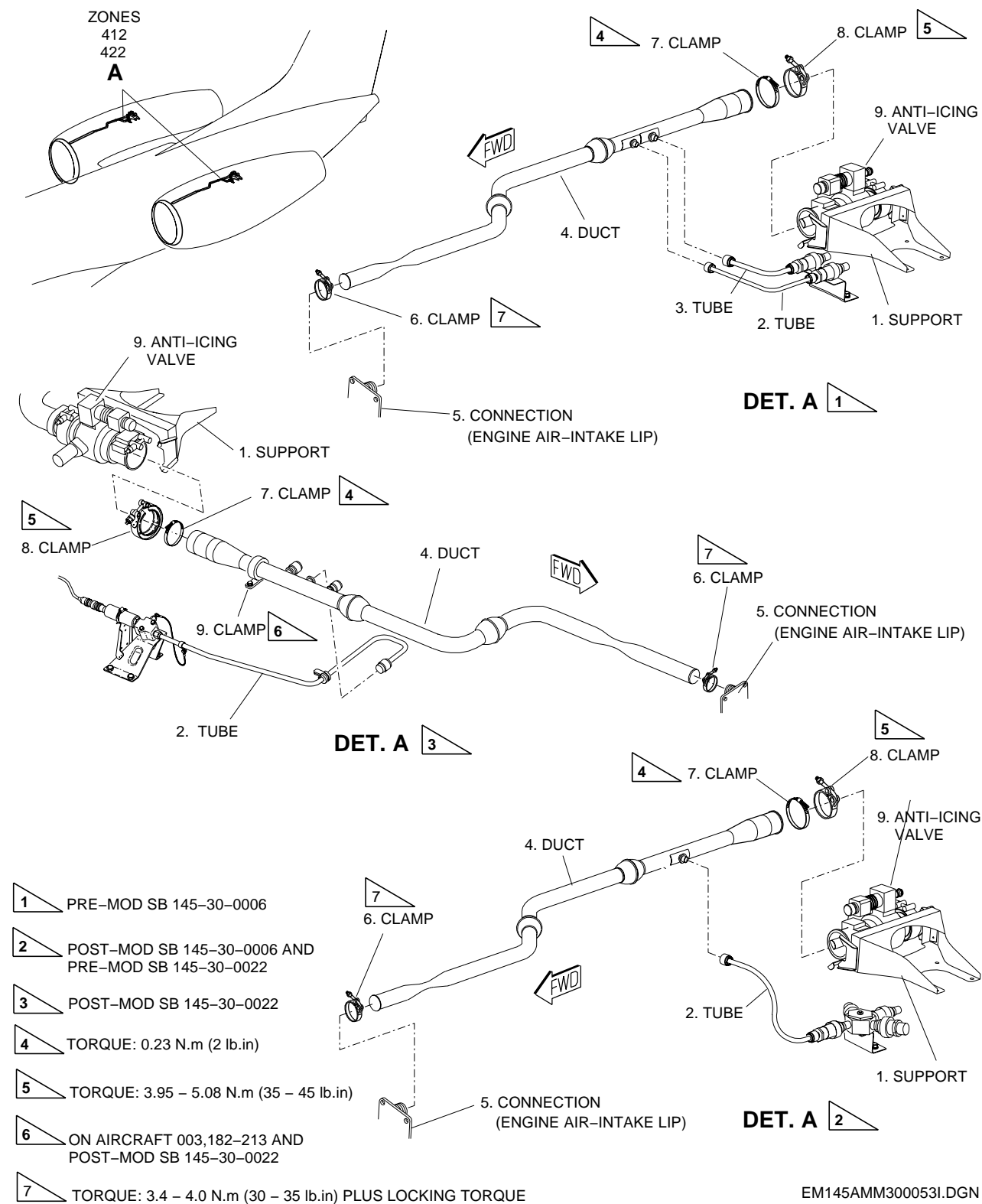
- (1) (PRE-MOD. [S.B.145-30-0006](#)) Disconnect the tubes (2) and (3) from the duct (4).
- (2) (POST-MOD. [S.B.145-30-0006](#) and PRE-MOD. S.B. 145-30-0022) Disconnect the tube (2) from the duct (4).
- (3) (On aircraft 003, 182-213 and POST-MOD. [S.B.145-30-0022](#)) Loosen the clamp (9) and disconnect the tube (2) from the duct (4).
- (4) (On aircraft 214 and on) Disconnect the tube (2) from the duct (4).
- (5) Loosen the clamp (7) to release the duct (4) from the support (1) at the powerplant.
- (6) Loosen the clamp (8) to disconnect the duct (4) from the anti-icing valve (9).
- (7) Loosen the clamp (6) to disconnect the duct (4) from the connection (5) at the lip of the engine air intake.
- (8) Remove the duct (4).
- (9) Do a detailed inspection on the duct ([AMM TASK 30-21-05-200-801-A/600](#)) or do a boroscopic inspection on the duct ([AMM TASK 30-21-05-200-802-A/600](#)).

NOTE: If there is piece of a broken valve or debris in the duct, do a special detailed inspection on the engine anti-ice valve for integrity ([AMM TASK 30-21-01-200-801-A/600](#)).

EFFECTIVITY: ALL

Duct - Removal/Installation

Figure 401



TASK 30-21-05-400-801-A
EFFECTIVITY: ALL

3. ENGINE ANTI-ICING DUCT - INSTALLATION

A. General

- (1) This procedure gives the instructions to install the duct of the engine thermal anti-icing system.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-30-00/100	-
AMM TASK 20-10-10-910-801-A/200	V-BAND CLAMPS - INSTALLATION
AMM TASK 30-21-00-700-803-A/500	ENGINE THERMAL ANTI-ICING SYSTEM - OPERATIONAL TEST
AMM TASK 71-11-01-400-801-A/400	ENGINE UPPER COWLING - INSTALLATION
S.B.145-30-0006	-
S.B.145-30-0022	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
412	412AT	Upper cowling of the LH powerplant
422	422AT	Upper cowling of the RH powerplant

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Torque wrench	To tighten the clamps	

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	LH or RH powerplant

I. Installation (Figure 401)

SUBTASK 420-002-A

- (1) Put the duct (4) between the piccolo tube (5) and the anti-icing valve (9).
- (2) Connect the duct (4) to the anti-icing valve (9) and tighten the clamp (8) to the torque shown in (Figure 401).

NOTE: Refer to [AMM TASK 20-10-10-910-801-A/200](#) for a correct installation of the clamp.
- (3) Connect the duct (4) to the fitting (5) at the lip of the engine air intake and tighten the clamp (6) to the torque shown in (Figure 401).

NOTE: Refer to [AMM TASK 20-10-10-910-801-A/200](#) for a correct installation of the clamp.
- (4) Attach the duct (4) to the support (1) at the engine with the clamp (7) to torque shown in (Figure 401).
- (5) (PRE-MOD. [S.B.145-30-0006](#)) Connect the tubes (2) and (3) to the duct (4).
- (6) (POST-MOD. [S.B.145-30-0006](#) and PRE-MOD. S.B. 145-30-0022) Connect the tube (2) to the duct (4).
- (7) (On aircraft 003, 182-213 and POST-MOD. [S.B.145-30-0022](#)) Connect the tube (2) to the duct (4) and tighten the clamp (9).
- (8) (On aircraft 214 and on) Connect the tube (2) to the duct (4).

J. Follow-on

SUBTASK 842-002-A

- (1) On the overhead circuit breaker panel, close these circuit breakers and remove the DO-NOT-CLOSE tag from them.
 - (PRE-MOD. [S.B.145-30-0022](#))
ENG AIR INLET 1 (Location tip: DC BUS 1/ICE AND RAIN PROTECTION/ENG AIR INLET 1).
ENG AIR INLET 2 (Location tip: DC BUS 2/ICE AND RAIN PROTECTION/ENG AIR INLET 2).
 - (POST-MOD. [S.B.145-30-0022](#))
ENG AIR INLET 1 (Location tip: DC BUS 1/ICE AND RAIN PROTECTION/ENG AIR INLET 1).
ENG AIR INLET 2 (Location tip: DC BUS 2/ICE AND RAIN PROTECTION/ENG AIR INLET 2).
ENG 1 A/I IND (Location tip: ESSENTIAL DC BUS 1/POWERPLANT/ENG 1 A/I IND).
ENG 2 A/I IND (Location tip: ESSENTIAL DC BUS 2/POWERPLANT/ENG 2 A/I IND).
- (2) Make sure that all parts and clamps of the engine thermal anti-icing system are correctly installed and torqued.

NOTE: Refer to [AMM TASK 20-10-10-910-801-A/200](#) for a correct installation of the clamp.

- (3) Do an operational check of the engine thermal anti-icing system ([AMM TASK 30-21-00-700-803-A/500](#)).
- (4) Install engine upper cowling 412 or 422 (AMM MPP 06-30-00/100) ([AMM TASK 71-11-01-400-801-A/400](#)).

