



EMB145 - EMB135

AIRCRAFT
MAINTENANCE MANUAL

WING ANTI-ICING SYSTEM MONITORING TUBES - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to remove and install the wing anti-icing system monitoring tubes.
- B. The wing anti-icing system monitoring tubes are installed in front of wing spar I and in the wing stub.
- C. These procedures are applicable to the LH and RH wings.
- D. 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
30-11-09-000-801-A	WING ANTI-ICING SYSTEM MONITORING ALL TUBES - REMOVAL	
30-11-09-400-801-A	WING ANTI-ICING SYSTEM MONITORING ALL TUBES - INSTALLATION	



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TASK 30-11-09-000-801-A

EFFECTIVITY: ALL

2. WING ANTI-ICING SYSTEM MONITORING TUBES - REMOVAL

A. General

(1) This procedure gives the instructions to remove the wing anti-icing system monitoring tubes.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM TASK 33-41-02-000-801-A/400	LANDING LIGHT LAMP - REMOVAL
AMM TASK 57-41-00-000-801-A/400	LEADING EDGE I - REMOVAL
AMM TASK 57-42-00-000-801-A/400	LEADING EDGE II - REMOVAL
AMM TASK 57-43-00-000-801-A/400	LEADING EDGE III - REMOVAL
S.B.145-30-0022	-

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
191	191EL	Forward lower fairing
191	191ML	Forward lower fairing
191	191FR	Forward lower fairing
191	191NR	Forward lower fairing
192	192BR	Center lower fairing
192	192AL	Center lower fairing
511		LH Wing
512		LH Wing
513		LH Wing
611		RH Wing
612		RH Wing
613		RH Wing

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Ladder	To get access to the tubes	1

F. Consumable Materials

Not Applicable



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G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	A - Does the task	LH/RH Wing and Wing stub
1	B - Helps the technician A	LH/RH Wing and Wing stub

I. Preparation

SUBTASK 841-002-A

WARNING: DO NOT TOUCH THE DUCTS OR COMPONENTS OF THE ANTI-ICING SYSTEM IMMEDIATELY AFTER THE SYSTEM IS TURNED OFF BECAUSE THE HIGH AIR TEMPERATURE CAN CAUSE INJURY TO YOU.

- (1) On the overhead Circuit Breaker Panel, open the circuit breaker below and attach a DO-NOT-CLOSE tag to it.
 - WING: (Location Tip: DC BUS 1/ICE AND RAIN PROTECTION/WING).
 - (POST-MOD. [S.B.145-30-0022](#) or S.B. 145-30-0026)
WING A/I IND 1 (Location Tip: DC BUS 2/ICE AND RAIN PROTECTION/WING A/I IND 1).
- (2) Remove leading edge I 511 or 611 ([AMM TASK 57-41-00-000-801-A/400](#)), leading edge II 512 or 612 ([AMM TASK 57-42-00-000-801-A/400](#)), and leading edge III 513 or 613([AMM TASK 57-43-00-000-801-A/400](#)) to get access to the wing anti-icing system monitoring tubes.
- (3) Open access panels 191EL, 191ML, 191FR, 191NR, 192AL, and 192BR (AMM MPP 06-41-01/100) to get access to the wing anti-icing system monitoring tubes of the wing stub.
- (4) Remove the landing light assembly ([AMM TASK 33-41-02-000-801-A/400](#)).

J. Removal ([Figure 401](#)) ([Figure 402](#)) ([Figure 403](#))

SUBTASK 020-002-A

- (1) Remove the lockwire (1) and loosen the clamp (2).
- (2) Remove the hose (3) from the tube (4).
- (3) Remove the bolts (5), washers (6), nuts (7), and clamps (8) that hold the tubes (4), (9), (10), and (11).
- (4) Disconnect the tube nuts (12) and the unions (13).
- (5) Remove the tubes (4), (9), (10), and (11).
- (6) PRE-MOD. [S.B.145-30-0022](#) ([Figure 402](#)).
 - (a) Remove the metallic hose (14) and the tube (15) from the "T" connection (16).
 - (b) Remove the "T" connection (16) from the tubes (17) and (22).



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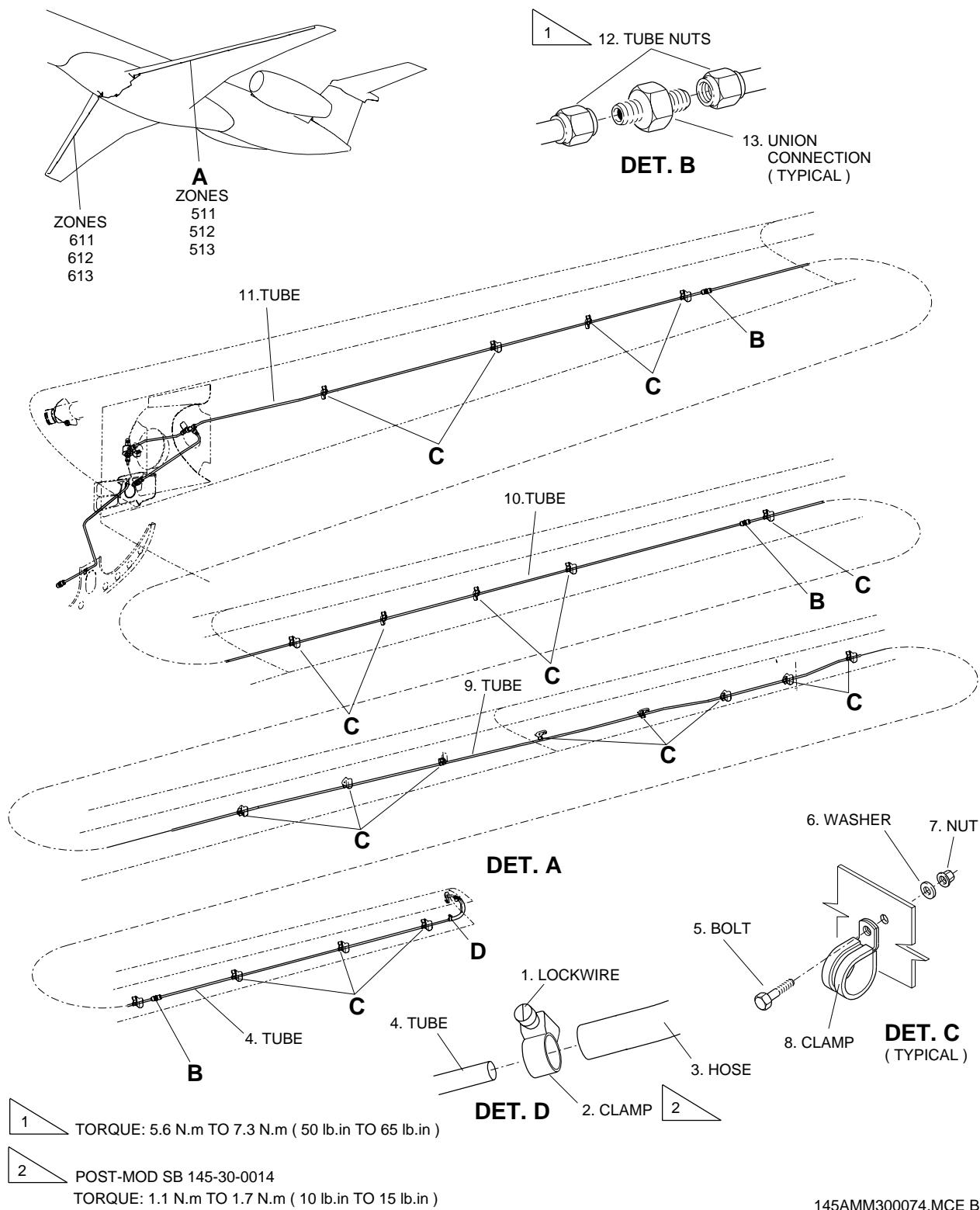
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- (c) Remove the bolt (18), washer (19), and clamp (20) from the tubes (17), (21), and (22).
 - (d) Disconnect the tube nuts (23) and the union (24).
 - (e) Remove the tube (17).
 - (f) Disconnect and remove the tubes (21) and (22) from the "T" connections (25).
- (7) POST-MOD. [S.B.145-30-0022 \(Figure 403\)](#).
- (a) Remove the metallic hose (16) and (14) from the union connection (20).
 - (b) Remove the bolt (24), washer (25), and clamp (23) from the tubes (15), (17) and (18).
 - (c) Disconnect the tube (17) from the union connection (20), and remove it.
 - (d) Disconnect and remove the tubes (15) and (18) from the "T" connections (21).

EFFECTIVITY: ALL

Wing Anti-icing System Monitoring Tubes - Removal/Installation

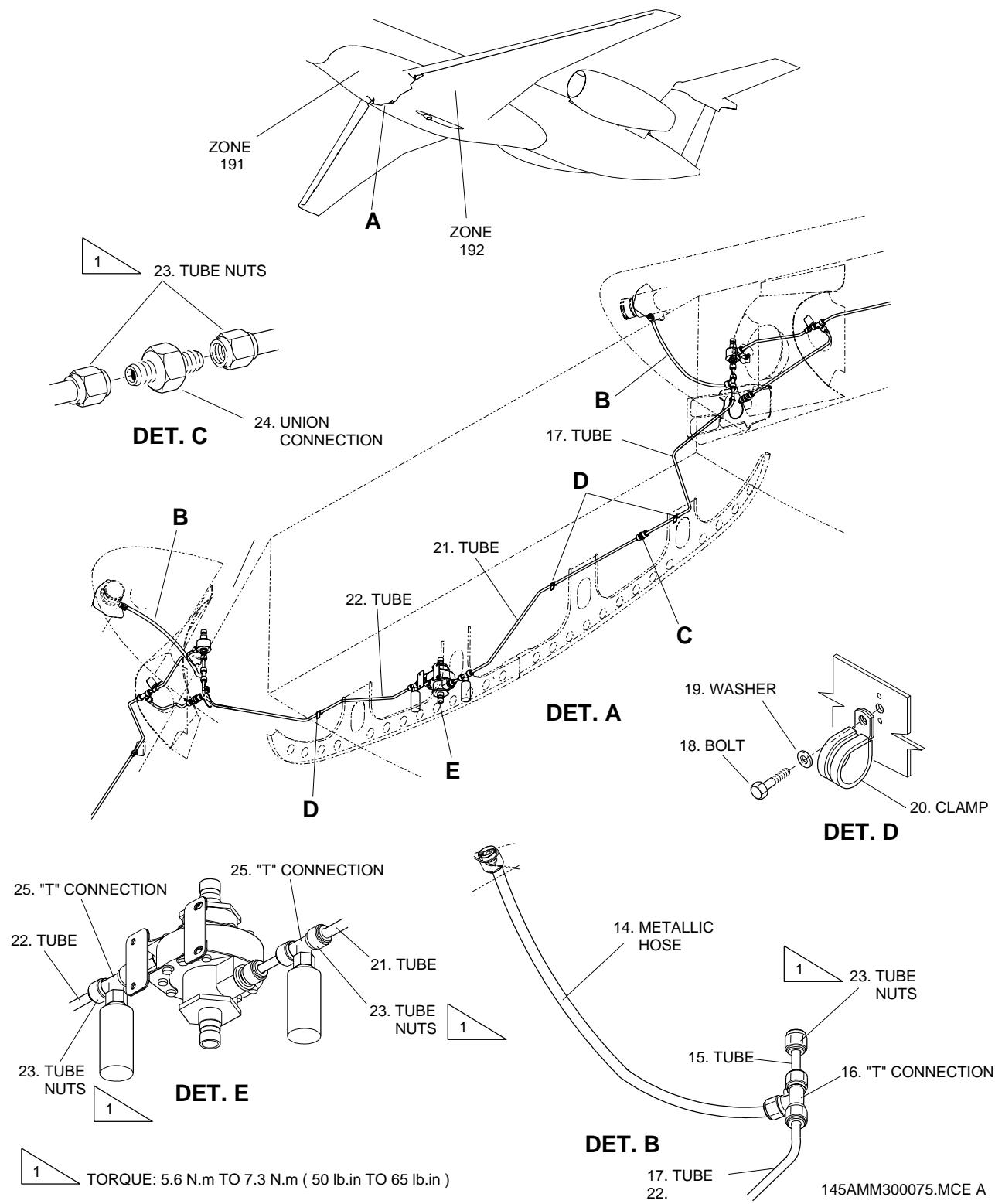
Figure 401



EFFECTIVITY: PRE-MOD. S.B. 145-30-0022

Wing Anti-icing System Monitoring Tubes - Removal/Installation

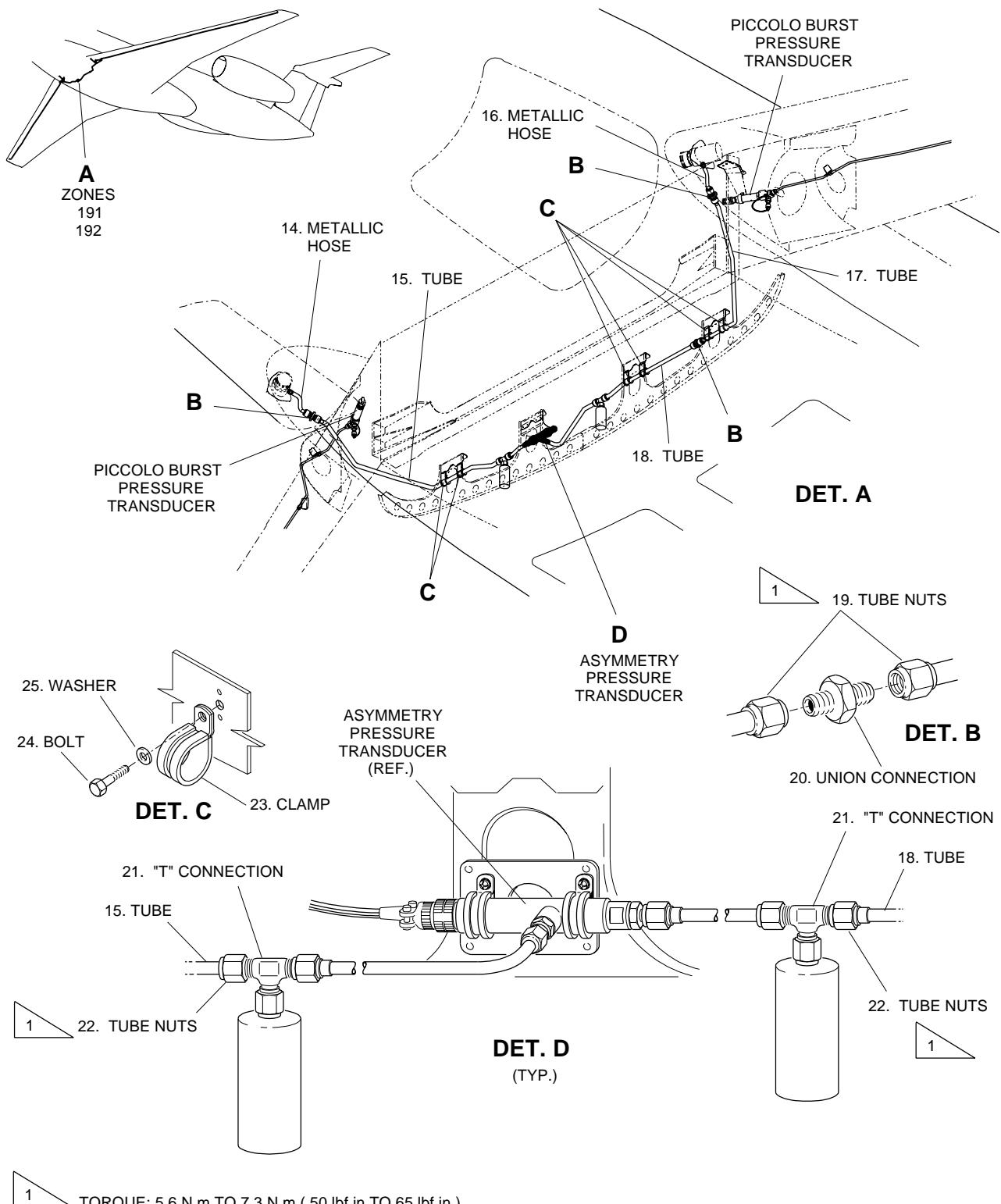
Figure 402



EFFECTIVITY: POST-MOD. S.B. 145-30-0022

Wing Anti-icing System Monitoring Tubes - Removal/Installation

Figure 403



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TASK 30-11-09-400-801-A

EFFECTIVITY: ALL

3. WING ANTI-ICING SYSTEM MONITORING TUBES - INSTALLATION

A. General

(1) This procedure gives the instructions to install the wing anti-icing system monitoring tubes.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-41-01/100	-
AMM TASK 28-41-00-200-801-A/600	-
AMM TASK 30-11-09-700-801-A/500	WING ANTI-ICING SYSTEM MONITORING TUBES - LEAKAGE/TEST
AMM TASK 33-41-02-400-801-A/400	LANDING LIGHT LAMP - INSTALLATION
AMM TASK 57-41-00-400-801-A/400	LEADING EDGE I - INSTALLATION
AMM TASK 57-42-00-400-801-A/400	LEADING EDGE II - INSTALLATION
AMM TASK 57-43-00-400-801-A/400	LEADING EDGE III - INSTALLATION
S.B.145-30-0022	-

C. Zones and Accesses

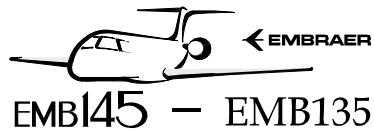
ZONE	PANEL/DOOR	LOCATION
191	191EL/191ML/191FR/191NR	Forward lower fairing
192	192AL/192BR	Center lower fairing
511		LH Wing
512		LH Wing
513		LH Wing
611		RH Wing
612		RH Wing
613		RH Wing

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Torque wrench	To tighten the attachment nuts	

E. Auxiliary Items

Not Applicable



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F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
MS 20995C20	Lockwire	AR

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	A - Does the task	LH/RH Wing and Wing stub
1	B - Helps technician A	LH/RH Wing and Wing stub

I. Installation (Figure 401) (Figure 402) (Figure 403)

SUBTASK 420-002-A

- (1) PRE-MOD. [S.B.145-30-0022](#) (Figure 402).
 - (a) Connect and torque the tubes (21) and (22) on the "T" connections (25).
 - (b) Connect the union (24) to the tube nuts (23) of the tubes (21) and (17).
 - (c) Install the bolt (18), washer (19), and clamp (20) on the tubes (17), (21), and (22) and at their supports.
 - (d) Install the "T" connection (16) on the tubes (17) and (22).
 - (e) Install the metallic hose (14) and the tube (15) on the "T" connection (16).
- (2) POST-MOD. [S.B.145-30-0022](#) (Figure 403).
 - (a) Connect and torque the tubes (18) and (15) on the "T" connections (21).
 - (b) Connect the union (20) to the tube nuts (19) of the tubes (17) and (18).
 - (c) Install the metallic hose (14) and (16).
 - (d) Install the bolt (24), washer (25), and clamp (23) on the tubes (17), (18), and (15) and at their supports.
- (3) Install the tubes (11), (10), (9), and (4) with the bolts (5), washers (6), nuts (7), and clamps (8).
- (4) Connect and torque the tube nuts (12) to the union (13).
- (5) Install the hose (3) and the clamp (2) to the tube (4).
- (6) Torque tighten the clamp (2), as required.
- (7) Install the lockwire (1) to the clamp (2).



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J. Follow-on

SUBTASK 842-002-A

- (1) Do the leakage test of the wing anti-icing system monitoring tubes ([AMM TASK 30-11-09-700-801-A/500](#)).
- (2) Install the landing light assembly ([AMM TASK 33-41-02-400-801-A/400](#)).
- (3) Install leading edge I 511 or 611 ([AMM TASK 57-41-00-400-801-A/400](#)) leading edge II 512 or 612 ([AMM TASK 57-42-00-400-801-A/400](#)), and leading edge III 513 or 613([AMM TASK 57-43-00-400-801-A/400](#)).
- (4) Do an inspection on the fuel quantity indication harness (AMM TASK 28-41-00-200-801-A/600).

NOTE: The inspection of fuel quantity indication harness is a part of Critical Design Configuration Control Limitations (CDCCL) in the Airworthiness Limitations (Section 6) of the Maintenance Review Board Report (MRB).

- (5) Close access panels 191EL, 191ML, 191FR, 191NR, 192AL, and 192BR (AMM MPP 06-41-01/100).
- (6) On the overhead Circuit Breaker Panel, close the circuit breaker below and remove the DO-NOT-CLOSE tag from it.
 - WING: (Location tip: DC BUS 1/ICE AND RAIN PROTECTION/WING).
 - (POST-MOD. [S.B.145-30-0022](#) or S.B. 145-30-0026)
WING A/I IND 1 (Location Tip: DC BUS 2/ICE AND RAIN PROTECTION/WING A/I IND 1).