

HORIZONTAL-STABILIZER ANTI-ICING VALVE - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to remove and install the anti-icing valve and anti-icing valve filter of the Horizontal-Stabilizer Thermal Anti-Icing System.
- 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 |
|--------------------|---|-------------|
| 30-12-01-000-801-A | HORIZONTAL STABILIZER ANTI-ICING VALVE - REMOVAL | ALL |
| 30-12-01-400-801-A | HORIZONTAL STABILIZER ANTI-ICING VALVE - INSTALLATION | ALL |
| 30-12-01-000-802-A | HORIZONTAL STABILIZER VALVE FILTER - REMOVAL | ALL |
| 30-12-01-400-802-A | HORIZONTAL STABILIZER VALVE FILTER - INSTALLATION | ALL |
| 30-12-01-040-801-A | STABILIZER ANTI-ICING VALVE DEACTIVATION | ALL |
| 30-12-01-440-801-A | STABILIZER ANTI-ICING VALVE REACTIVATION | ALL |

TASK 30-12-01-000-801-A

EFFECTIVITY: ALL

2. HORIZONTAL STABILIZER ANTI-ICING VALVE - REMOVAL

A. General

- (1) This procedure gives the instructions to remove the anti-icing valve of the Horizontal-Stabilizer Thermal Anti-Icing System.

B. References

| REFERENCE | DESIGNATION |
|---------------------------------|-------------|
| AMM MPP 06-42-00/100 | - |
| S.B.145-30-0021 | - |

C. Zones and Accesses

| ZONE | PANEL/DOOR | LOCATION |
|------|------------|---------------------------|
| 322 | 322AL | LH side of the dorsal fin |

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 | Dorsal fin |
| 1 | Helps the other technician | Dorsal fin |

I. Preparation

SUBTASK 841-002-A

- (1) On the Circuit Breaker Panel, open this circuit breaker and attach a DO-NOT-CLOSE tag to it.
 - STAB: (Location tip: DC BUS 2/ICE AND RAIN PROTECTION/STAB).
- (2) Remove access panel 322AL (AMM MPP 06-42-00/100).

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

SUBTASK 020-002-A

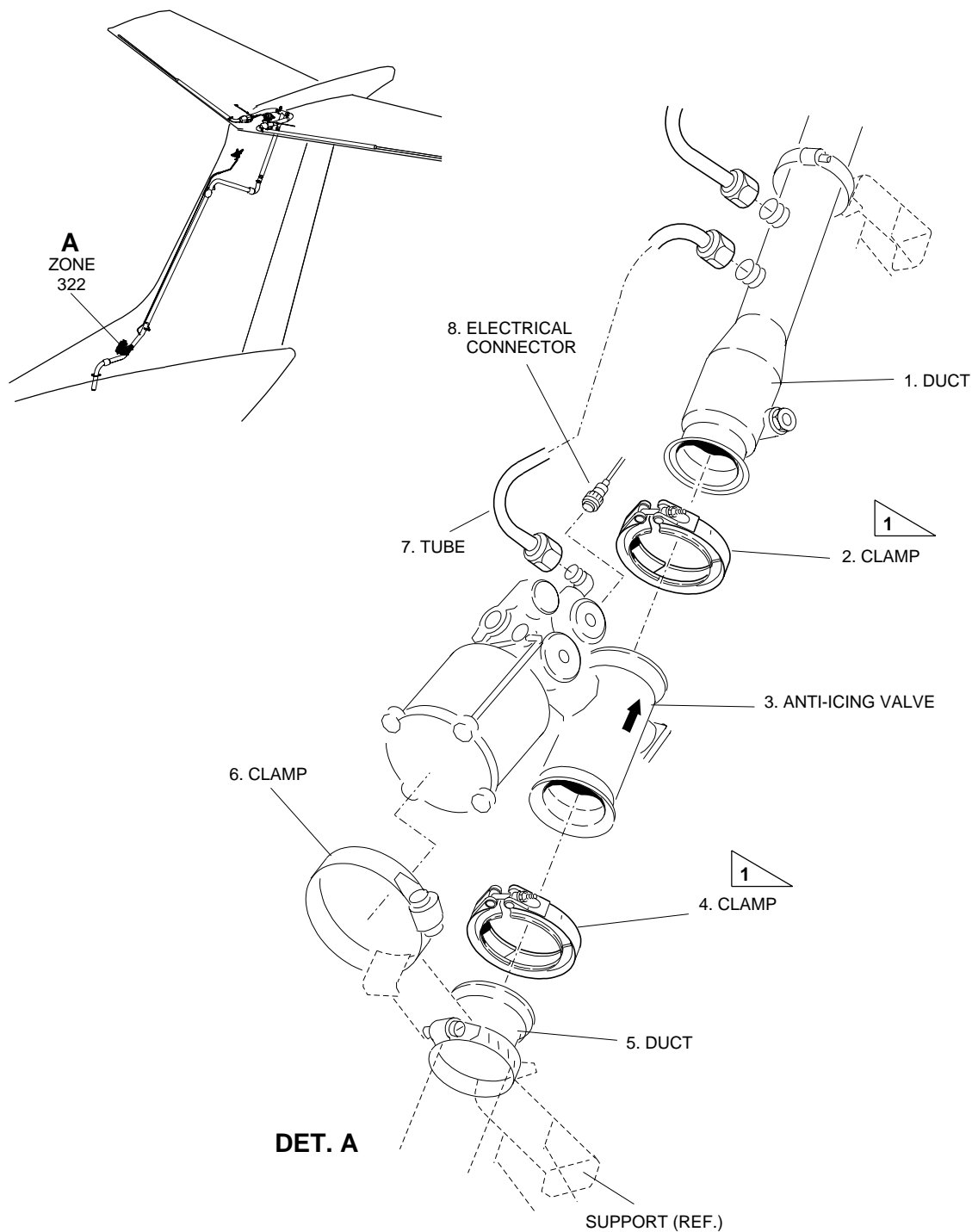
WARNING: DO NOT TOUCH THE DUCTS OR COMPONENTS OF THE ANTI-ICING SYSTEM IMMEDIATELY AFTER THE SYSTEM IS TURNED OFF, BECAUSE THE HIGH AIR TEMPERATURE CAN CAUSE INJURY TO YOU.


- (1) On aircraft (004 - 181) PRE-MOD. [S.B.145-30-0021](#) ([Figure 401](#)).
 - (a) Disconnect the electrical connector (8).
 - (b) Disconnect the tube (7).
 - (c) Loosen the clamp (2) to disconnect the duct (1).
 - (d) Hold the anti-icing valve (3).
 - (e) Loosen the clamp (4) to disconnect the duct (5).
 - (f) Loosen the clamp (6).
 - (g) Remove the anti-icing valve (3).
- (2) On aircraft (004 - 181) POST-MOD. [S.B.145-30-0021](#) ([Figure 402](#)).
 - (a) Disconnect the electrical connector (2).
 - (b) Disconnect the tube (12).
 - (c) Loosen the clamp (3) to disconnect the duct (1).
 - (d) Hold the anti-icing valve (11).
 - (e) Loosen the clamp (4) to disconnect the duct (9).
 - (f) Remove the bolts (5), washers (6), and nuts (8) from the anti-rotation support (7).
 - (g) Remove the anti-icing valve (11).
- (3) On aircraft 003, 182 and on ([Figure 403](#)).
 - (a) Disconnect the electrical connector (1).
 - (b) Disconnect the tube (3).
 - (c) Loosen the clamp (7) to disconnect the duct (8).
 - (d) Hold the anti-icing valve (2).
 - (e) Loosen the clamp (6) to disconnect the duct (5).
 - (f) Remove the bolt (9), washer (10), and nut (12) from the anti-rotation support (11).
 - (g) Remove the anti-icing valve (2).

EFFECTIVITY: (004 - 181) PRE-MOD. S.B. 145-30-0021

Anti-Icing Valve - Removal/Installation

Figure 401



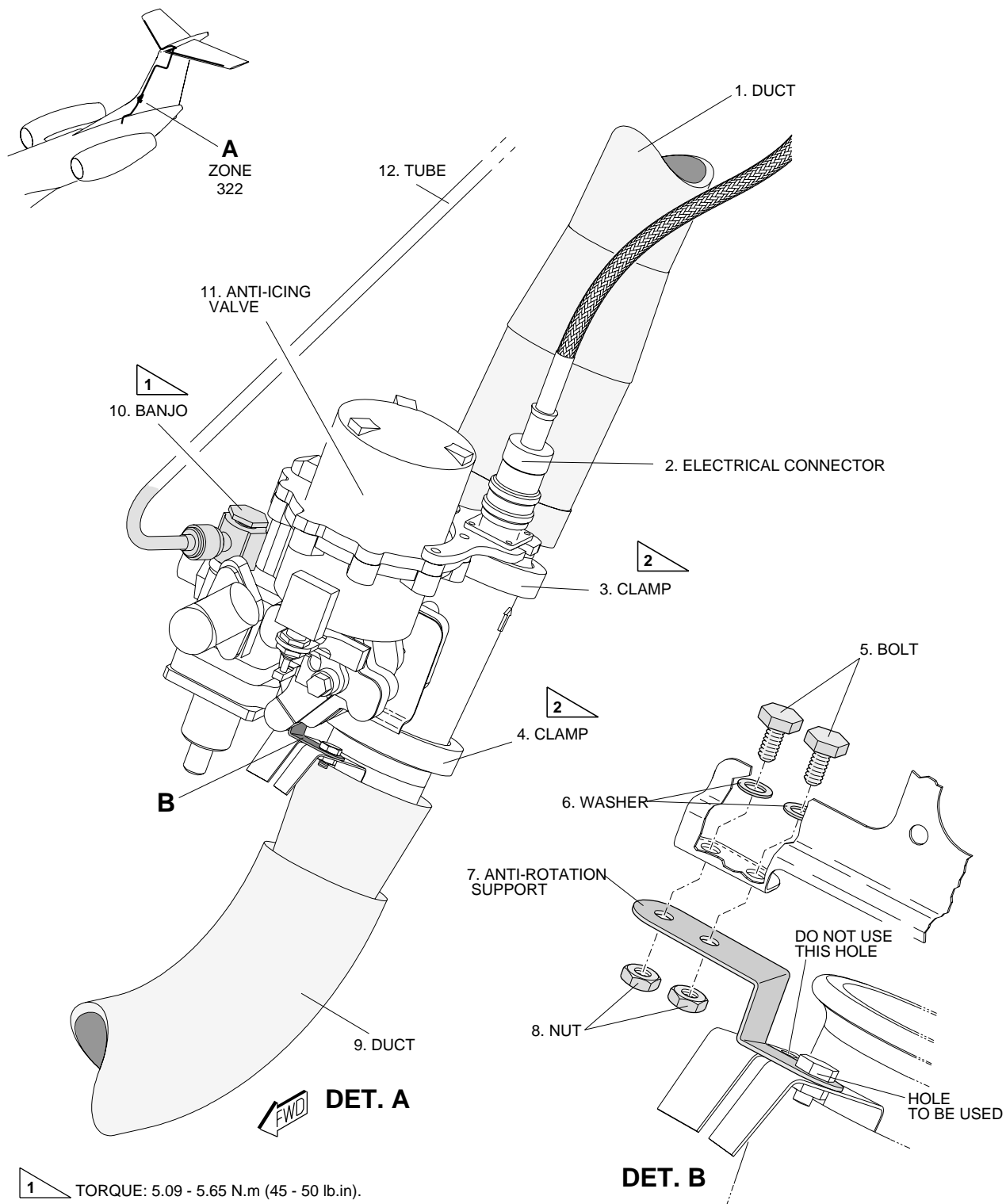

TORQUE: 4.52 - 5.65 N.m (40 - 50 lb.in)

145AMM300038.MCE C

EFFECTIVITY: (004 - 181) POST-MOD. S.B. 145-30-0021

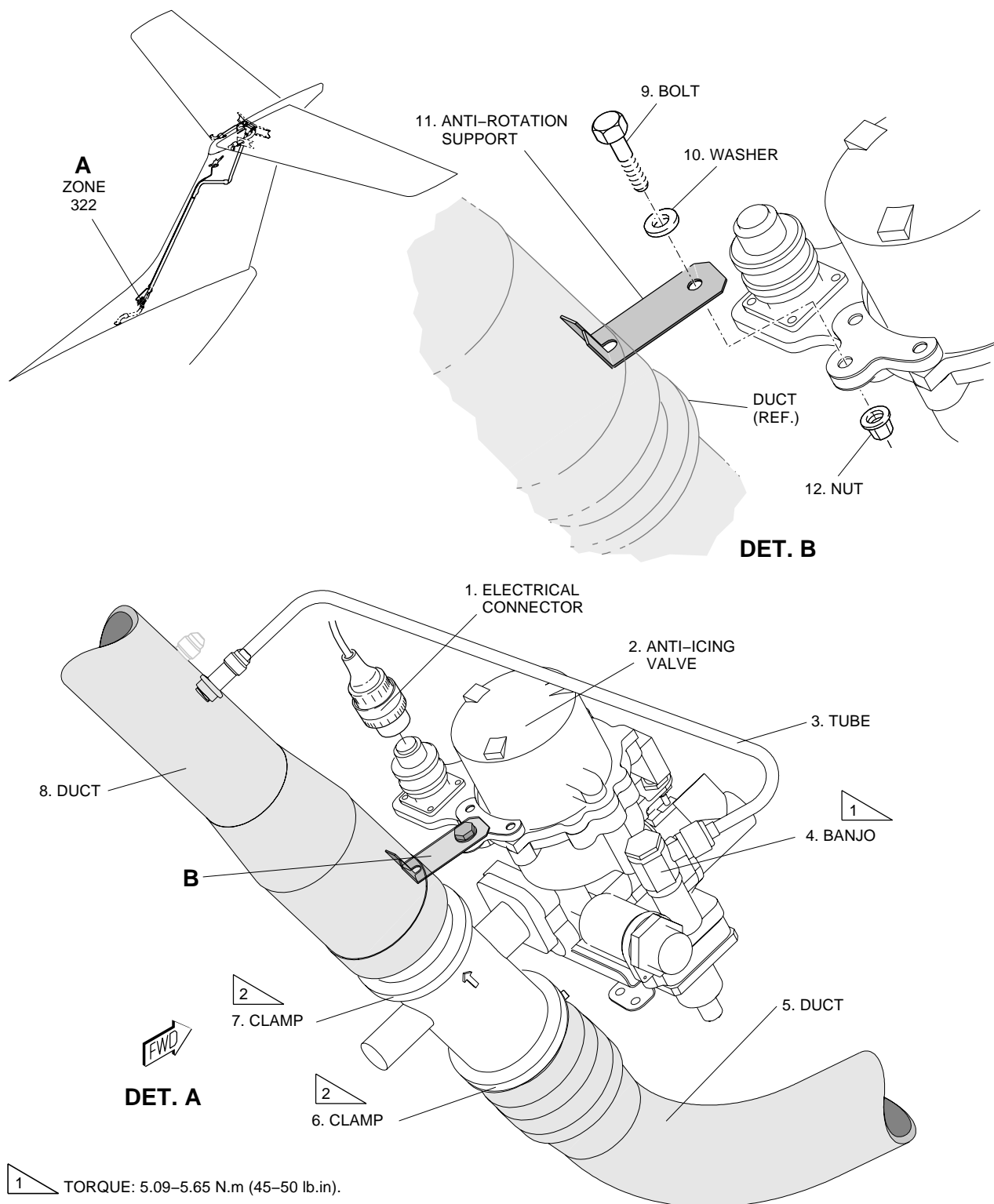
Anti-Icing Valve - Removal/Installation

Figure 402



145AMM300110.MCE C

EFFECTIVITY: 003, 182 AND ON
Anti-Icing Valve - Removal/Installation
Figure 403



EM145AMM300137D.DGN

TASK 30-12-01-400-801-A
EFFECTIVITY: ALL

3. HORIZONTAL STABILIZER ANTI-ICING VALVE - INSTALLATION

A. General

- (1) This procedure gives the instructions to install the anti-icing valve of the Horizontal-Stabilizer Thermal Anti-Icing System.

B. References

| REFERENCE | DESIGNATION |
|---|--------------------------------------|
| AMM MPP 06-42-00/100 | - |
| AMM TASK 20-10-10-910-801-A/200 | V-BAND CLAMPS - INSTALLATION |
| AMM TASK 30-00-00-700-803-A/500 | ANTI-ICING VALVES - OPERATIONAL TEST |
| S.B.145-30-0021 | - |

C. Zones and Accesses

| ZONE | PANEL/DOOR | LOCATION |
|------|------------|---------------------------|
| 322 | 322AL | LH side of the dorsal fin |

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 | Dorsal fin |
| 1 | Helps the other technician | Dorsal fin |

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

SUBTASK 420-002-A

- (1) On aircraft (004 -181) PRE-MOD. [S.B.145-30-0021](#) (Figure 401).
 - (a) Put the anti-icing valve (3) in the clamp (6).
 - (b) Connect the duct (5) and tighten the clamp (4) ([AMM TASK 20-10-10-910-801-A/200](#)).

- (c) Connect the duct (1) and tighten the clamp (2) ([AMM TASK 20-10-10-910-801-A/200](#)).
- (d) Tighten the clamp (6) to attach the anti-icing valve (3).
- (e) Connect the tube (7).
- (f) Connect the electrical connector (8).
- (2) On aircraft (004 -181) POST-MOD. [S.B.145-30-0021](#) (Figure 402).
 - (a) Put the anti-icing valve (11) in its position at the anti-rotation support (7).
 - (b) Tighten the bolts (5), washers (6), and nuts (8) to attach the anti-icing valve (11).
 - (c) Connect the duct (9) and tighten the clamp (4) ([AMM TASK 20-10-10-910-801-A/200](#)).
 - (d) Connect the duct (1) and tighten the clamp (3) ([AMM TASK 20-10-10-910-801-A/200](#)).
 - (e) Put the tube (12) on the banjo (10). If necessary, carefully turn the banjo fitting of the valve to the correct position and apply the necessary torque to the hex fastener.
 - (f) Connect the tube (11).
 - (g) Connect the electrical connector (2).
- (3) On aircraft 003, 182 and on (Figure 403).
 - (a) Put the anti-icing valve (2) in its position at the support (11).
 - (b) Tighten the bolt (9), washer (10), and nut (12) to attach the anti-icing valve (2).
 - (c) Connect the duct (5) and tighten the clamp (6) ([AMM TASK 20-10-10-910-801-A/200](#)).
 - (d) Connect the duct (8) and tighten the clamp (7) ([AMM TASK 20-10-10-910-801-A/200](#)).
 - (e) Put the tube (3) on the banjo (4). If necessary, carefully turn the banjo fitting of the valve to the correct position and apply the necessary torque to the hex fastener.
 - (f) Connect the tube (3).
 - (g) Connect the electrical connector (1).

J. Follow-on

SUBTASK 842-002-A

- (1) On the Circuit Breaker Panel, close this circuit breaker and remove the DO-NOT-CLOSE tag from it.
 - STAB: (Location tip: DC BUS 2/ICE AND RAIN PROTECTION/STAB).

- (2) Examine the tube and duct connections for leaks.
- (3) Do an operational check of the Anti-Icing System ([AMM TASK 30-00-00-700-803-A/500](#)).
- (4) Install access panel 322AL (AMM MPP 06-42-00/100).

TASK 30-12-01-000-802-A

EFFECTIVITY: ALL

4. HORIZONTAL STABILIZER VALVE FILTER - REMOVAL

A. General

- (1) This task gives the instructions to remove the filter from the Horizontal Stabilizer Anti-ice Valve.

B. References

| REFERENCE | DESIGNATION |
|----------------------|-------------|
| AMM MPP 06-42-00/100 | - |
| CMM 30-10-03 | - |

C. Zones and Accesses

| ZONE | PANEL/DOOR | LOCATION |
|------|------------|---------------------------|
| 322 | 322AL | LH side of the dorsal fin |

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 | dorsal fin |

I. Preparation

SUBTASK 841-005-A

- (1) Make sure that the aircraft is safe for maintenance.
- (2) Remove access panel 322AL (AMM MPP 06-42-00/100).
- (3) On the circuit breakers panel, open the STAB circuit breaker and attach a DO-NOT-CLOSE tag to it.

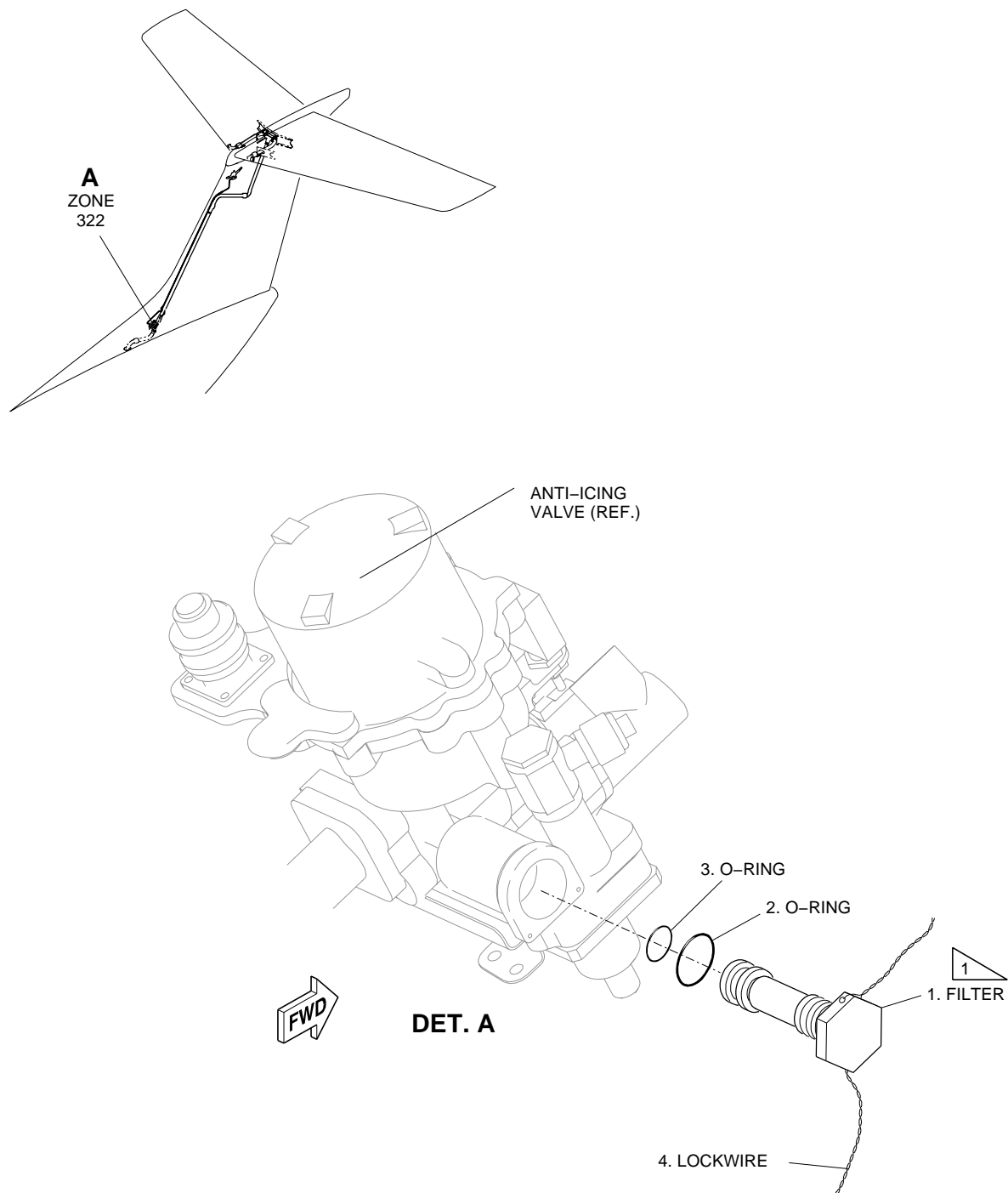
J. Removal (Figure 402)

SUBTASK 020-003-A

WARNING: DO NOT TOUCH THE HORIZONTAL STABILIZER ANTI-ICE SYSTEM DUCTS OR COMPONENTS IMMEDIATELY AFTER THE ENGINE OR APU STOPS BECAUSE OF THE HIGH BLEED-AIR TEMPERATURE. THIS WILL HELP TO PREVENT INJURIES TO PERSON AND/OR DAMAGE TO THE EQUIPMENT.

- (1) Refer to the latest revision CMM 30-10-03 (Part Number 1000649-2), or do the steps that follow:
 - (a) Remove the lockwire (4) from the filter of the Horizontal Stabilizer Anti-ice Valve.
 - (b) Remove the filter (1) from the Horizontal Stabilizer Anti-ice Valve.
 - (c) Install the protective cap.
 - (d) Remove the O-ring (2) and O-ring (3) from the filter (1).

EFFECTIVITY: ALL
Filter - Removal/Installation
Figure 404



1 TORQUE: 4.0–4.5 N.m (35 – 40 lb.in)

EM145AMM300383B.DGN

TASK 30-12-01-400-802-A
EFFECTIVITY: ALL

5. HORIZONTAL STABILIZER VALVE FILTER - INSTALLATION

A. General

(1) This task gives the instructions to install the filter in the Horizontal Stabilizer Anti-Ice Valve.

B. References

| REFERENCE | DESIGNATION |
|----------------------|-------------|
| AMM MPP 06-42-00/100 | - |
| CMM 30-10-03 | - |

C. Zones and Accesses

| ZONE | PANEL/DOOR | LOCATION |
|------|------------|---------------------------|
| 322 | 322AL | LH side of the dorsal fin |

D. Tools and Equipment

| ITEM | DESCRIPTION | PURPOSE | QTY |
|------------------------|-------------------------------------|-----------------------|-----|
| Commercially available | Torque wrench (Range: 0 - 75 lb.in) | To tighten the filter | |

E. Auxiliary Items

Not Applicable

F. Consumable Materials

| SPECIFICATION (BRAND) | DESCRIPTION | QTY |
|---------------------------------|-------------|-----|
| Dow Corning 4 or Dow Corning 44 | Grease | |

G. Expandable Parts

Not Applicable

H. Persons Recommended

| QTY | FUNCTION | PLACE |
|-----|---------------|------------|
| 1 | Does the task | dorsal fin |

I. Installation (Figure 402)

SUBTASK 420-003-A

- (1) Refer to the latest revision CMM 30-10-03 (Part Number 1000649-2), or do the steps that follow:
 - (a) Remove the protective cap on the unit.

- (b) Lubricate the O-ring (2) and O-ring (3) with Grease Dow Corning 4 or Dow Corning 44 and install them on the filter (1).

- (c) Install the filter (1) in the Horizontal Stabilizer Anti-ice valve.

NOTE: REFER TO FIGURE 402 FOR THE CORRECT INSTALLATION POSITION OF THE FILTER IN THE HORIZONTAL STABILIZER ANTI-ICE VALVE.

- (d) Tighten the filter (1) to the specified torque 4.0 - 4.5 N.m (35 - 40 lb.in).

- (e) Safety the filter (1) with lockwire (4).

J. Follow-on

SUBTASK 842-005-A

- (1) Install the access panel 322AL (AMM MPP 06-42-00/100).
- (2) On the circuit breakers panel, close the STAB circuit breaker and remove the DO-NOT-CLOSE tag from it.

TASK 30-12-01-040-801-A

EFFECTIVITY: ALL

6. STABILIZER ANTI-ICING VALVE DEACTIVATION

A. General

- (1) This task gives the procedures to deactivate the Stabilizer Anti-icing Valve.
- (2) The aircraft can be dispatched with the Stabilizer Anti-icing Valve inoperative provided that they are in the closed position and if the aircraft is not operated in known or forecasted icing conditions.
- (3) The aircraft can be dispatched with the Stabilizer Anti-icing Valve OPEN light inoperative provided that the system is checked for normal operation before departure.

B. References

| REFERENCE | DESIGNATION |
|---|--------------------------------------|
| AMM MPP 06-41-00/100 | - |
| AMM MPP 06-42-00/100 | - |
| AMM TASK 30-00-00-700-803-A/500 | ANTI-ICING VALVES - OPERATIONAL TEST |
| S.B.145-30-0021 | - |

C. Zones and Accesses

| ZONE | PANEL/DOOR | LOCATION |
|------|------------|--------------------------------|
| 193 | 193BL | Hydraulic System 1 compartment |

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 | Stabilizer |

I. Preparation

SUBTASK 841-003-A

- (1) Remove access panel 322AL (AMM MPP 06-42-00/100), as applicable (AMM MPP 06-41-00/100).

J. Deactivation Procedure

SUBTASK 040-002-A

- (1) For Aircraft PRE-MOD. [S.B.145-30-0021](#), do as follows:
 - (a) With the position indicator in the STOW POSITION, loosen the bolt lock bolt.
 - (b) Rotate the position indicator to the LOCK position.
 - (c) Retighten the lock bolt until there is a gap of 0.25 to 1.25 mm between the underside of the bolt head and the top surface of the position indicator.
- (2) For Aircraft POST-MOD. [S.B.145-30-0021](#), do as follows:
 - (a) With the anti-icing valve de-energized, the actuator pressure is vented to ambient and the valve is in the closed position. The position indicator is directed to "CL" on the valve housing.
 - (b) Remove the locking screw from the normal position.
 - (c) Set the locking crank to the closed (CL) position.
 - (d) Install the locking screw in the threaded hole in order to keep the locking crank in closed position.
 - (e) Apply a maximum torque of 8 ft.lb in the locking screw.
 - (f) If the Horizontal Stabilizer Valves OPEN indication light is inoperative refer to ([AMM TASK 30-00-00-700-803-A/500](#)) to do the thermal anti-icing system operational check.

K. Follow-On

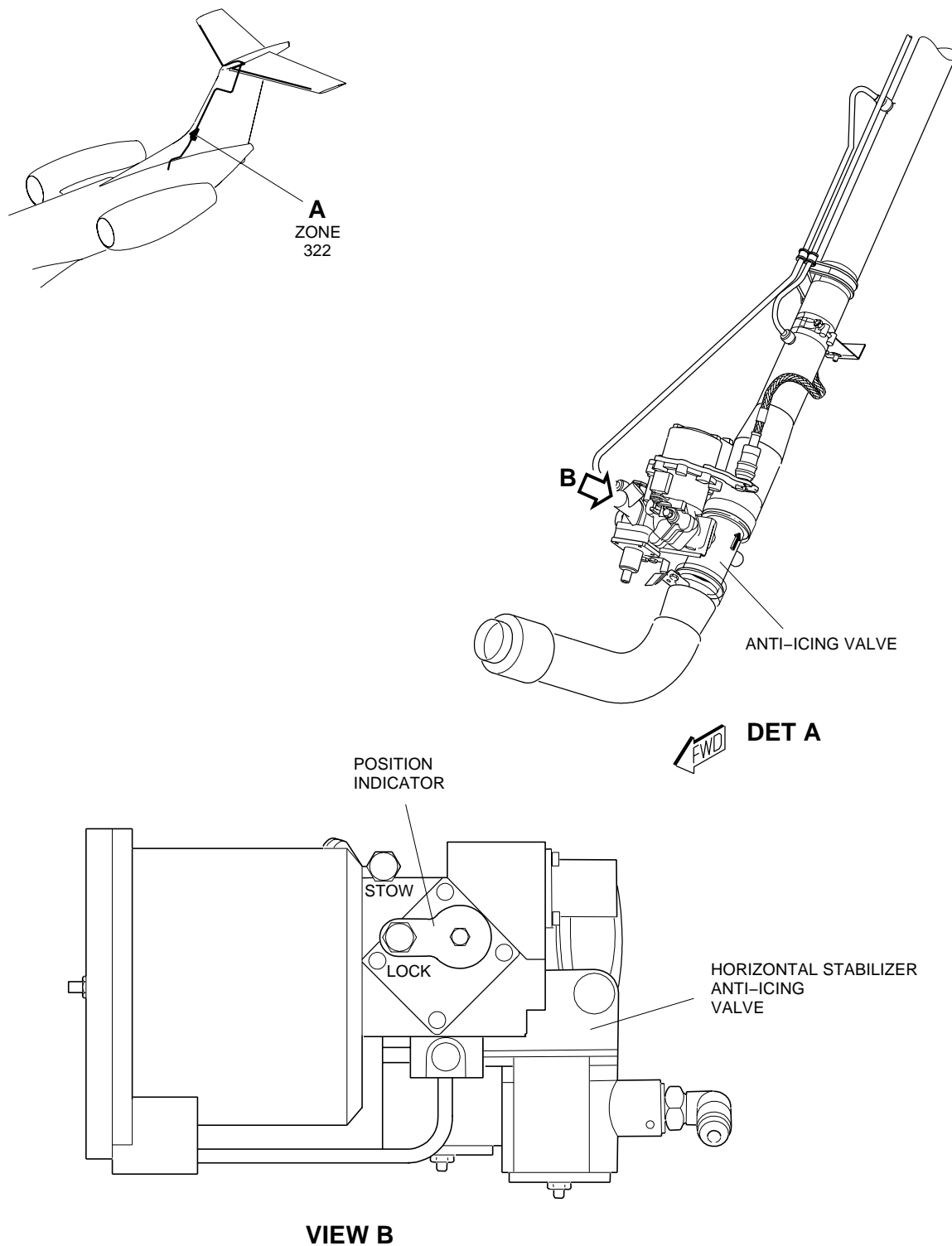
SUBTASK 842-003-A

- (1) Install access panel 322AL (AMM MPP 06-42-00/100), as applicable (AMM MPP 06-41-00/100).

EFFECTIVITY: PRE-MOD. SB 145-30-0040

Horizontal Stabilizer Anti-Icing Valve - Deactivation Procedure

Figure 405

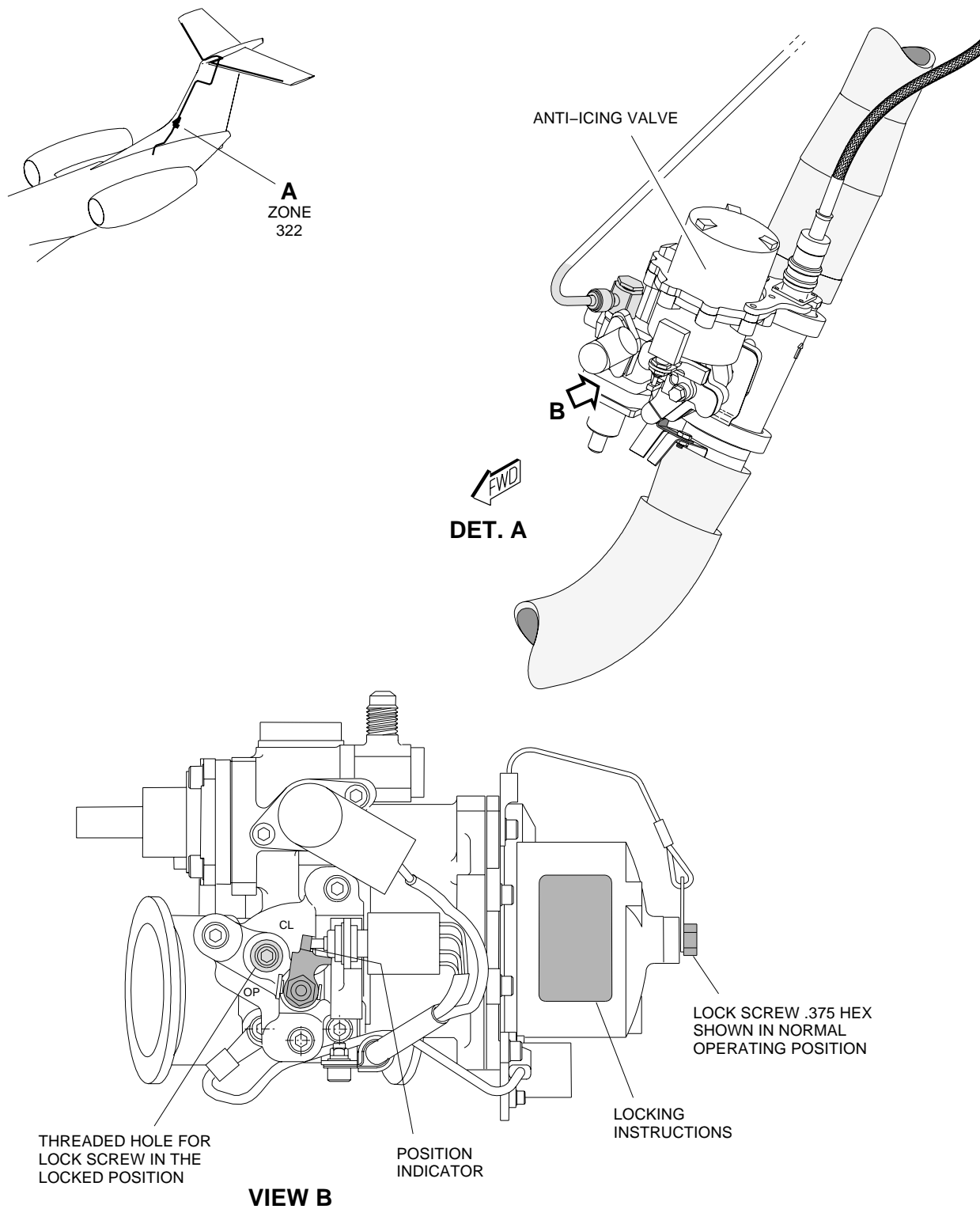


EM145AMM300333B.DGN

EFFECTIVITY: POST-MOD. SB 145-30-0040

Horizontal Stabilizer Anti-Icing Valve - Deactivation Procedure

Figure 406



EM145AMM300334A.DGN

TASK 30-12-01-440-801-A
EFFECTIVITY: ALL

7. STABILIZER ANTI-ICING VALVE REACTIVATION

A. General

(1) This task gives the procedures to deactivate the Stabilizer Anti-icing Valve.

B. References

| REFERENCE | DESIGNATION |
|---|--------------------------------------|
| AMM MPP 06-41-00/100 | - |
| AMM MPP 06-42-00/100 | - |
| AMM TASK 30-00-00-700-802-A/500 | ANTI-ICING SYSTEM - OPERATIONAL TEST |
| S.B.145-30-0021 | - |

C. Zones and Accesses

| ZONE | PANEL/DOOR | LOCATION |
|------|------------|--------------------------------|
| 193 | 193BL | Hydraulic System 1 compartment |

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 | Stabilizer |

I. Preparation

SUBTASK 841-004-A

(1) Remove access panel 322AL (AMM MPP 06-42-00/100), as applicable (AMM MPP 06-41-00/100).

J. Reactivation Procedure

SUBTASK 040-003-A

(1) For Aircraft PRE-MOD. [S.B.145-30-0021](#), do as follows:

(a) With the position indicator in the STOW POSITION, loosen the bolt lock bolt.

- (b) Rotate the position indicator to the UNLOCK position.
- (2) For Aircraft POST-MOD. [S.B.145-30-0021](#), do as follows:
 - (a) De-energize the Anti-icing Valve.
 - (b) Remove the locking screw in the threaded hole and install the screw in the normal operating position. Refer to Figure 405.

K. Follow-On

SUBTASK 842-004-A

- (1) Do an operational check of the Anti-Icing System ([AMM TASK 30-00-00-700-802-A/500](#)).
- (2) Install the access panel 322AL (AMM MPP 06-42-00/100), as applicable (AMM MPP 06-41-00/100).