

## HORIZONTAL-STABILIZER ANTI-ICING DUCTS - REMOVAL/INSTALLATION

*EFFECTIVITY: ALL*

### 1. General

- A. This section gives the procedures to remove and install the ducts of the Horizontal-Stabilizer Thermal Anti-Icing System.
- B. The ducts of the Horizontal-Stabilizer Thermal Anti-Icing System are installed in the leading edge of the vertical stabilizer and in the horizontal stabilizer.
- 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).

<i>TASK NUMBER</i>	<i>DESCRIPTION</i>	<i>EFFECTIVITY</i>
30-12-07-000-801-A	DUCTS - REMOVAL	ALL
30-12-07-400-801-A	DUCTS - INSTALLATION	ALL

TASK 30-12-07-000-801-A

EFFECTIVITY: ALL

## 2. DUCTS - REMOVAL

### A. General

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

### B. References

REFERENCE	DESIGNATION
AMM MPP 06-30-00/100	-
AMM MPP 06-42-00/100	-
<a href="#">AMM TASK 30-12-11-000-801-A/400</a>	VERTICAL-STABILIZER ANTI-ICING MONITORING TUBES - REMOVAL
<a href="#">AMM TASK 55-13-00-000-801-A/400</a>	HORIZONTAL-STABILIZER LEADING-EDGE ROOT FAIRINGS - REMOVAL
<a href="#">AMM TASK 55-36-00-000-801-A/400</a>	TAIL BOOM - REMOVAL
<a href="#">S.B.145-30-0022</a>	-
<a href="#">S.B.145-30-0030</a>	-

### C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
321		Front fairings of the vertical stabilizer
323		Leading edge of the vertical stabilizer
324	324EL	Vertical stabilizer
324	324FR	Vertical stabilizer
325	325EL	Vertical stabilizer center section
325	325LR	Vertical stabilizer center section
333	333DL	Horizontal stabilizer
334	334DR	Horizontal stabilizer
337	337AZ	Horizontal stabilizer center section
337	337BZ	Horizontal stabilizer center section

### D. Tools and Equipment

Not Applicable

### E. Auxiliary Items

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

### F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Stabilizer
1	Helps the other technician	Stabilizer

I. Preparation

**SUBTASK 841-002-A**

- (1) On the circuit breaker panel, open these circuit breakers and attach DO-NOT-CLOSE tags to them.
  - (PRE-MOD. [S.B.145-30-0022](#))  
STAB: (Location Tip: DC BUS 2/ICE AND RAIN PROTECTION/STAB).
  - (POST-MOD. [S.B.145-30-0022](#))  
STAB: (Location Tip: DC BUS 2/ICE AND RAIN PROTECTION/STAB).  
STAB A/I IND: (Location Tip: DC BUS 1/ICE AND RAIN PROTECTION/STAB A/I IND).
- (2) Remove access panels 324EL, 324FR, 325EL, and 325LR (AMM MPP 06-42-00/100).
- (3) Remove the leading-edge fairings (access panels 333DL and 334DR) ( [AMM TASK 55-13-00-000-801-A/400](#)) (AMM MPP 06-42-00/100).
- (4) Remove the front movable fairings (access panels 337BZ and 337AZ) ( [AMM TASK 55-36-00-000-801-A/400](#)) (AMM MPP 06-42-00/100).
- (5) Remove leading edge 323 from the vertical stabilizer (AMM MPP 06-30-00/100).
- (6) Remove front fairing 321 from the vertical stabilizer (AMM MPP 06-30-00/100).

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. THE HIGH AIR TEMPERATURE CAN CAUSE INJURY TO YOU.**

- (1) Remove the duct (16) as follows:
  - (a) Disconnect the tubes (6) and (7) from the duct (16) ( [AMM TASK 30-12-11-000-801-A/400](#)).
  - (b) Release the ends of the bonding straps (17), (1), (8), and (12), and the clamps (19), (9), and (11), which attach the tube (7) as follows:
    - 1 Remove the nut, three washers, and bolt (20) to release the clamp (19).
    - 2 Remove the nut, three washers, and bolt (69) to release the clamp (9) and the end of the bonding strap (8). Refer to DET. E.

- 3 Remove the nut, three washers, and bolt (71) to release the clamp (11) and the end of the bonding strap (12). Refer to DET. D.
- (c) Remove the protection sleeve (24) from the point of connection of the ducts (16) and (28). For this, remove the cable tiedown straps (64) and (68). Refer to DET. F.
- (d) Disconnect the duct (16) from the duct (28). For this, cut the lockwire, and remove the Gamah joint (25), sleeve (66), and O-rings (67) and (65). Refer to DET. F.
- (e) Loosen the clamp (4) to disconnect the end of the duct (16) from the anti-icing valve (5).
- (f) Disconnect the end of the bonding straps (1) and (8) from the duct (16). For this, remove the nut, three washers, and bolt (70). Refer to DET. E.
- (g) Disconnect the end of the bonding strap (17) from the duct (16). For this, remove the nut, three washers, and bolt (72). Refer to DET. C.
- (h) Remove the clamps (3) and (14) that attach the duct (16) to the supports (2) and (15) in the vertical stabilizer.
- (i) (POST-MOD. [S.B.145-30-0030](#)) Remove the clamp (22) that attaches the duct (16) to the support (23) at the vertical stabilizer.
- (j) Remove the duct (16).
- (2) Remove the duct (28) as follows:
  - (a) Disconnect the end of the bonding strap (29) from the duct (28). For this, remove the nut, three washers, and bolt (72). Refer to DET. C.
  - (b) Remove the protection sleeve (24) from the point of connection of the ducts (28) and (16). For this, remove the cable tiedown straps (64) and (68). Refer to DET. F.
  - (c) Disconnect the duct (28) from the duct (16). For this, cut the lockwire and remove the Gamah joint (25), sleeve (66), and O-rings (65) and (67). Refer to DET. F.
  - (d) Remove the protection sleeve (31) from the point of connection of the ducts (28) and (32). For this, remove the cable tiedown straps (64) and (68). Refer to DET. F.
  - (e) Disconnect the duct (28) from the duct (32). For this, cut the lockwire and remove the Gamah joint (30), sleeve (66), and O-rings (65) and (67). Refer to DET. F.
  - (f) Remove the clamp (26) that attaches the duct (28) to the support (27) at the vertical stabilizer.
  - (g) Remove the duct (28).
- (3) Remove the duct (32) as follows:

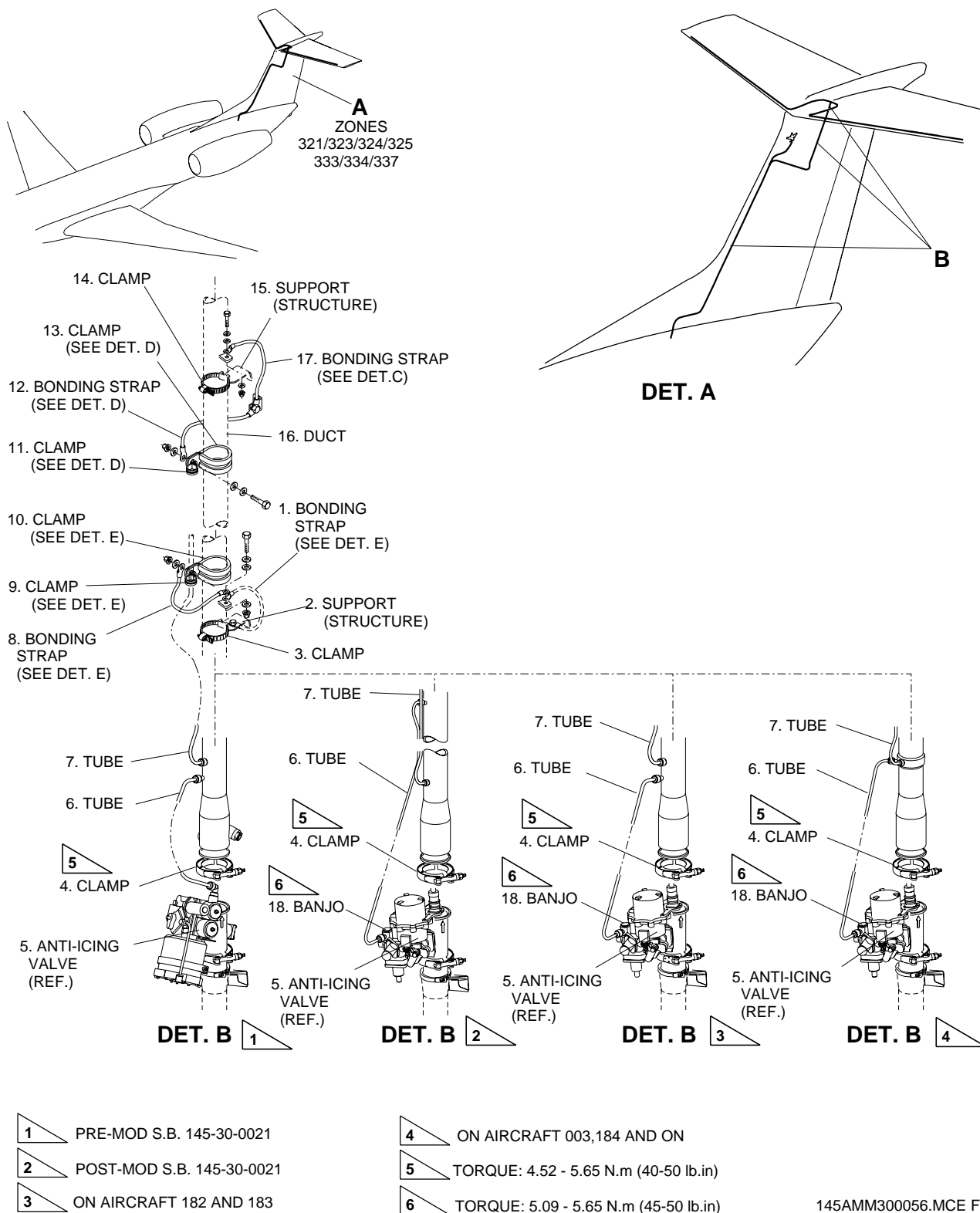
- (a) Remove the protection sleeve (31) from the connection point of the ducts (32) and (28). For this, remove the cable tiedown straps (64) and (68). Refer to DET. F.
- (b) Disconnect the duct (32) from the duct (28). For this, cut the lockwire and remove the Gamah joint (30), sleeve (66), and O-rings (65) and (67). Refer to DET. F.
- (c) Remove the clamp (33) that attaches the duct (32) to the support (34) in the vertical stabilizer.
- (d) Loosen the clamp (35) to disconnect the end of the duct (32) from the end of the duct (38).
- (e) Remove the duct (32).
- (4) Remove the duct (38) as follows:
  - (a) Loosen the clamp (35) to disconnect the end of the duct (38) from the end of the duct (32).
  - (b) Disconnect the duct (38) from the duct (40). For this, cut the lockwire and remove the Gamah joint (39), sleeve (66), and O-rings (65) and (67). Refer to DET. J.
  - (c) Remove the clamp (36) that attaches the duct (38) to the support (37) at the vertical stabilizer.
  - (d) Remove the duct (38).
- (5) Remove the duct (40) as follows:
  - (a) Disconnect the duct (40) from the duct (38). For this, cut the lockwire and remove the Gamah joint (39), sleeve (66), and O-rings (65) and (67). Refer to DET. J.
  - (b) Remove the ducts (45) and (59). Refer to steps (6) and (7).
  - (c) Disconnect the end of the bonding strap (52) from the duct (40). For this, remove the nut, three washers, and bolt (72). Refer to DET. C.
  - (d) Remove the duct (40).
- (6) Remove the duct (45) as follows:
  - (a) Disconnect the end of the bonding strap (44) from the duct (45). For this, remove the nut, three washers, and bolt (72). Refer to DET. C.
  - (b) Remove the clamp (46) that attaches the duct (45) to the support (47) at the vertical stabilizer.
  - (c) Remove the protection sleeve (42) from the point of connection of the duct (45) and piccolo tube (41). For this, remove the cable tiedown straps (64) and (68). Refer to DET. F.
  - (d) Disconnect the duct (45) from the piccolo tube (41). For this, cut the lockwire, and remove the Gamah joint (43), sleeve (66), and O-rings (65) and (67). Refer to DET. F.

- (e) Applicable to aircraft serial numbers 004 thru 031. Remove the spacers (48), screws (49) (2 positions), cover (50), and O-ring assembly (51).
  - (f) Applicable to aircraft serial numbers 003, 032 and on. Remove screws (49) (6 positions), flange (50), and O-ring assembly (51).
  - (g) Remove the duct (45).
- (7) Remove the duct (59) as follows:
- (a) Disconnect the end of the bonding strap (60) from the duct (59). For this, remove the nut, three washers, and bolt (72). Refer to DET. C.
  - (b) Remove the clamp (57) that attaches the duct (59) to the support (58) at the vertical stabilizer.
  - (c) Remove the protection sleeve (62) from the point of connection of the duct (59) and piccolo tube (63). For this, remove the cable tiedown straps (64) and (68). Refer to DET. F.
  - (d) Disconnect the duct (59) from the piccolo tube (63). For this, cut the lockwire and remove the Gamah joint (61), sleeve (66), and O-rings (65) and (67). Refer to DET. F.
  - (e) Applicable to aircraft serial numbers 004 thru 031. Remove the spacers (56), screws (55) (2 positions), cover (54), and O-ring assembly (53).
  - (f) Applicable to aircraft serial numbers 003, 032 and on. Remove screws (55) (6 positions), flange (54), and O-ring assembly (53).
  - (g) Remove the duct (59).

EFFECTIVITY: ALL

Ducts - Removal/Installation

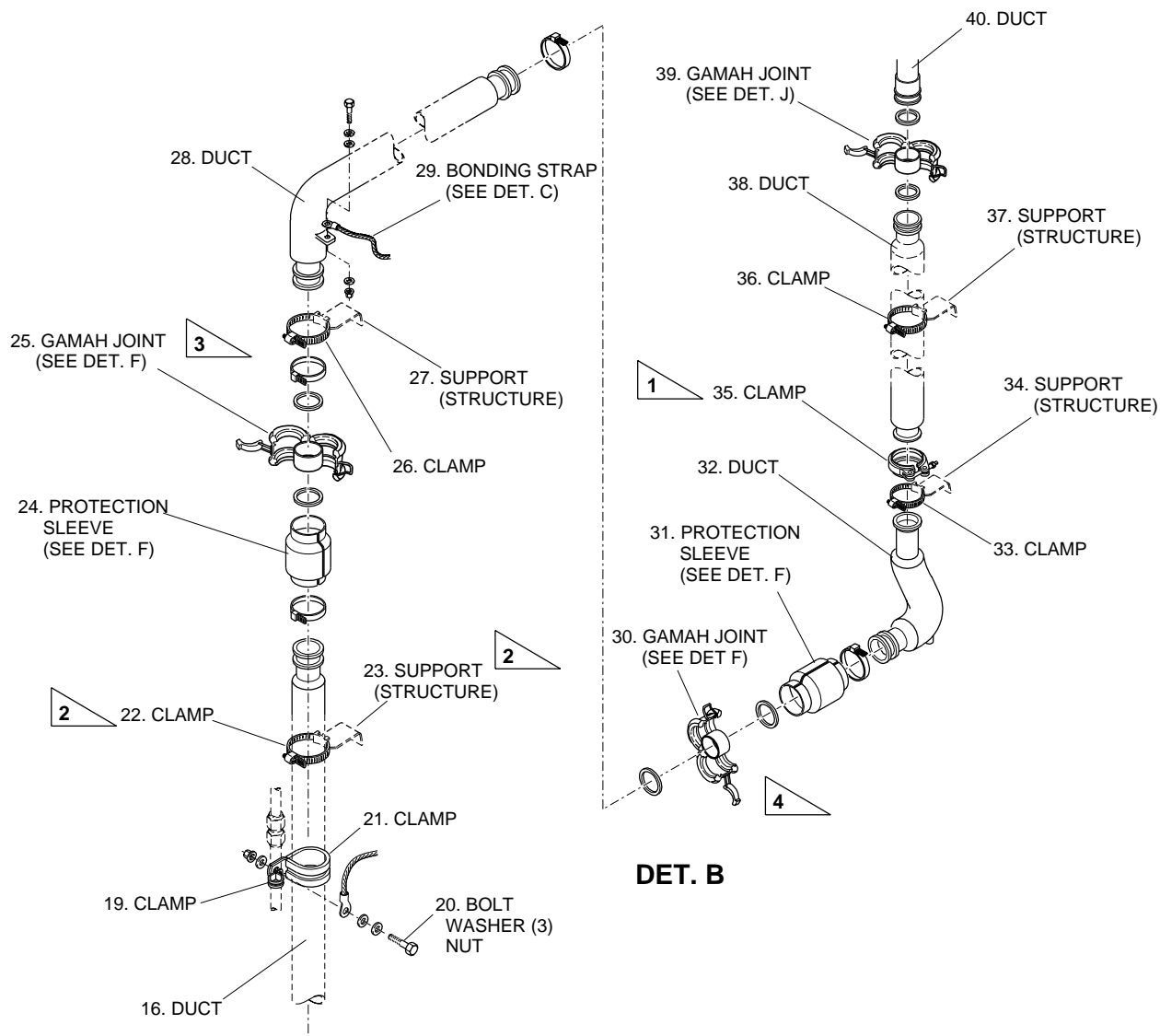
Figure 401 - Sheet 1



EFFECTIVITY: ALL

Ducts - Removal/Installation

Figure 401 - Sheet 2



1 TORQUE: 3.95 - 5.08 N.m (35 - 45 lb.in)

2 POST-MOD. S. B. 145-30-0030

3 (PRE-MOD. S. B. 145-30-0030) GAP BETWEEN THE ENDS OF THE DUCTS REQUIRED FOR JOINT INSTALLATION: 4-8 mm

(POST-MOD. S. B. 145-30-0030) GAP BETWEEN THE ENDS OF THE DUCTS REQUIRED FOR JOINT INSTALLATION: 6-8 mm

4 GAP BETWEEN THE ENDS OF THE DUCTS REQUIRED FOR JOINT INSTALLATION: 4-8 mm

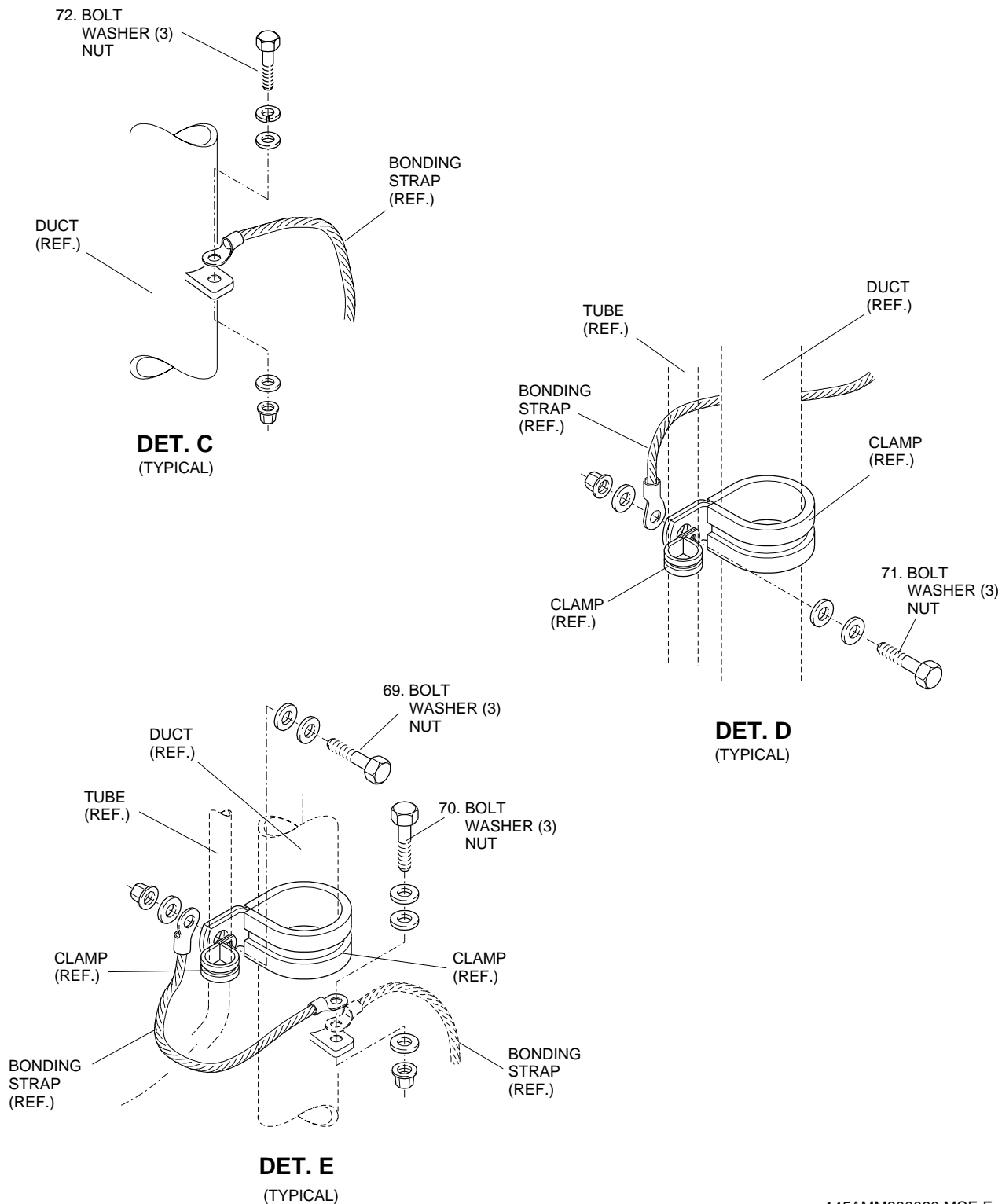
145AMM300057.MCE G



EFFECTIVITY: ALL

Ducts - Removal/Installation

Figure 401 - Sheet 3

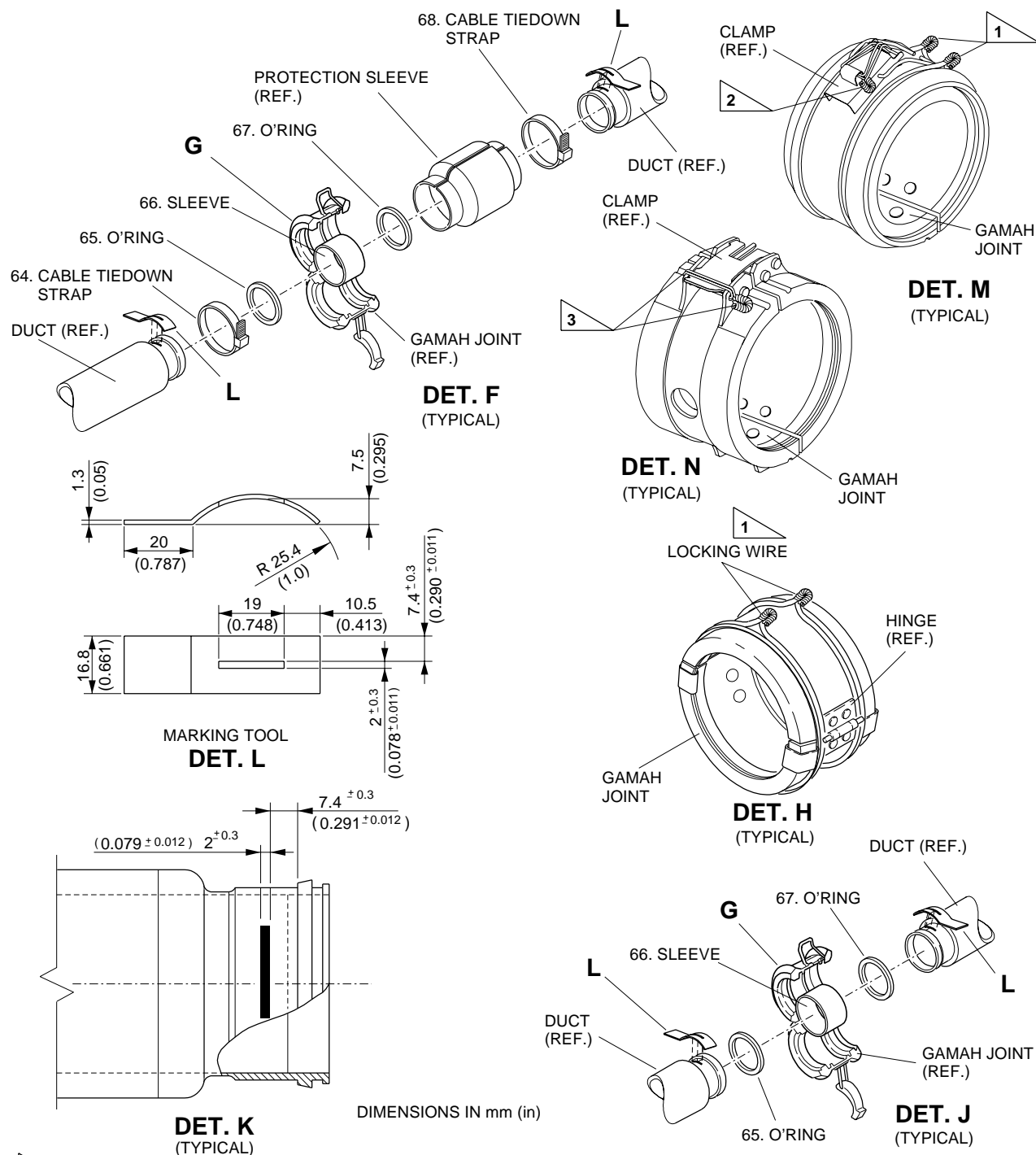


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EFFECTIVITY: ALL

Ducts - Removal/Installation

Figure 401 - Sheet 4



1 (APPLICABLE TO GAMAH JOINT P/N CA33015) APPLY TWO TURNS OF LOCKING WIRE AT EACH POSITION

2 APPLY LOCKING WIRE UNDER CLAMP LOCKING ELEMENT

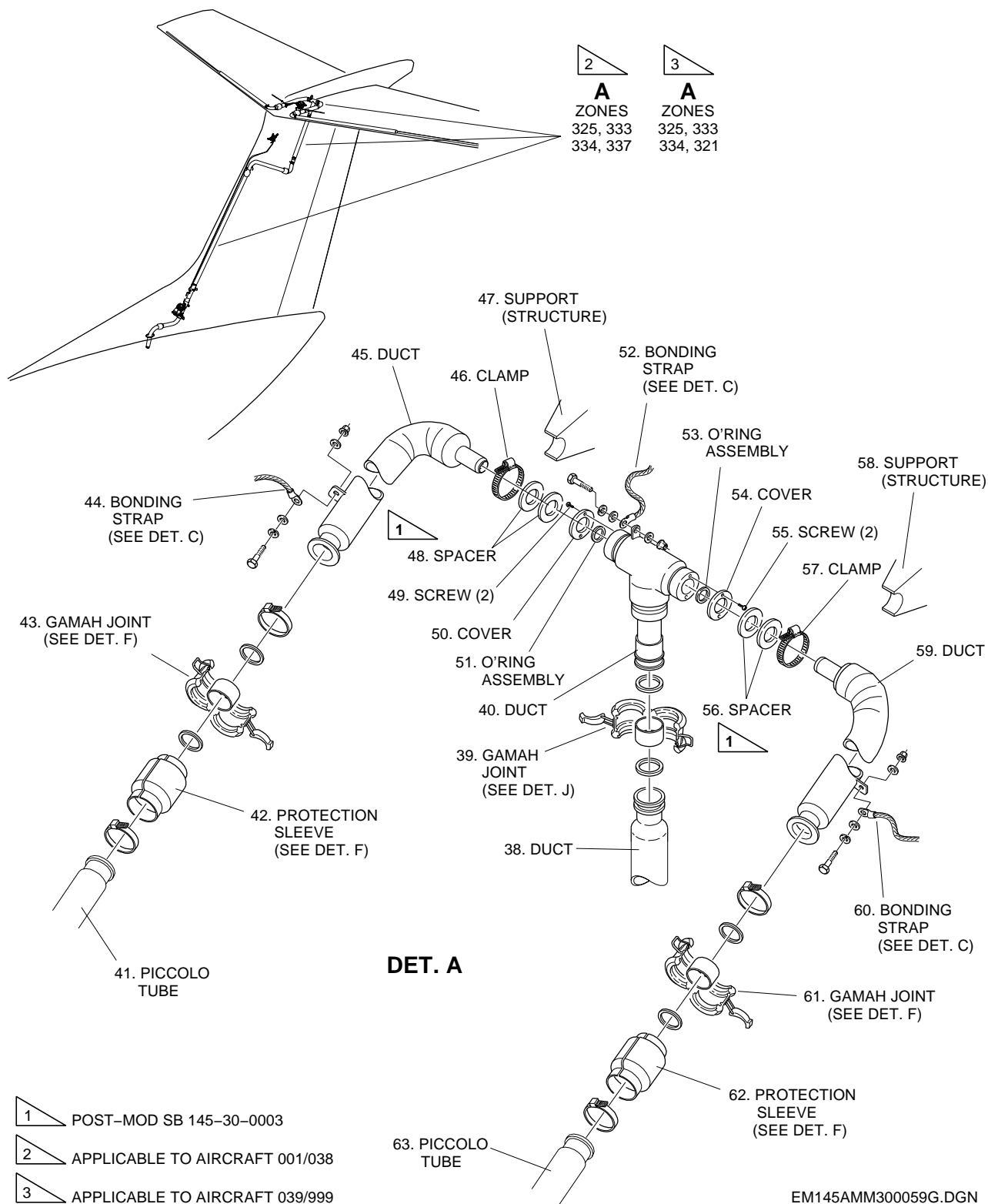
3 (APPLICABLE TO GAMAH JOINT P/N CA36115C)  
– APPLY LOCKING WIRE UNDER CLAMP LOCKING ELEMENT

EM145AMM300239B.DGN

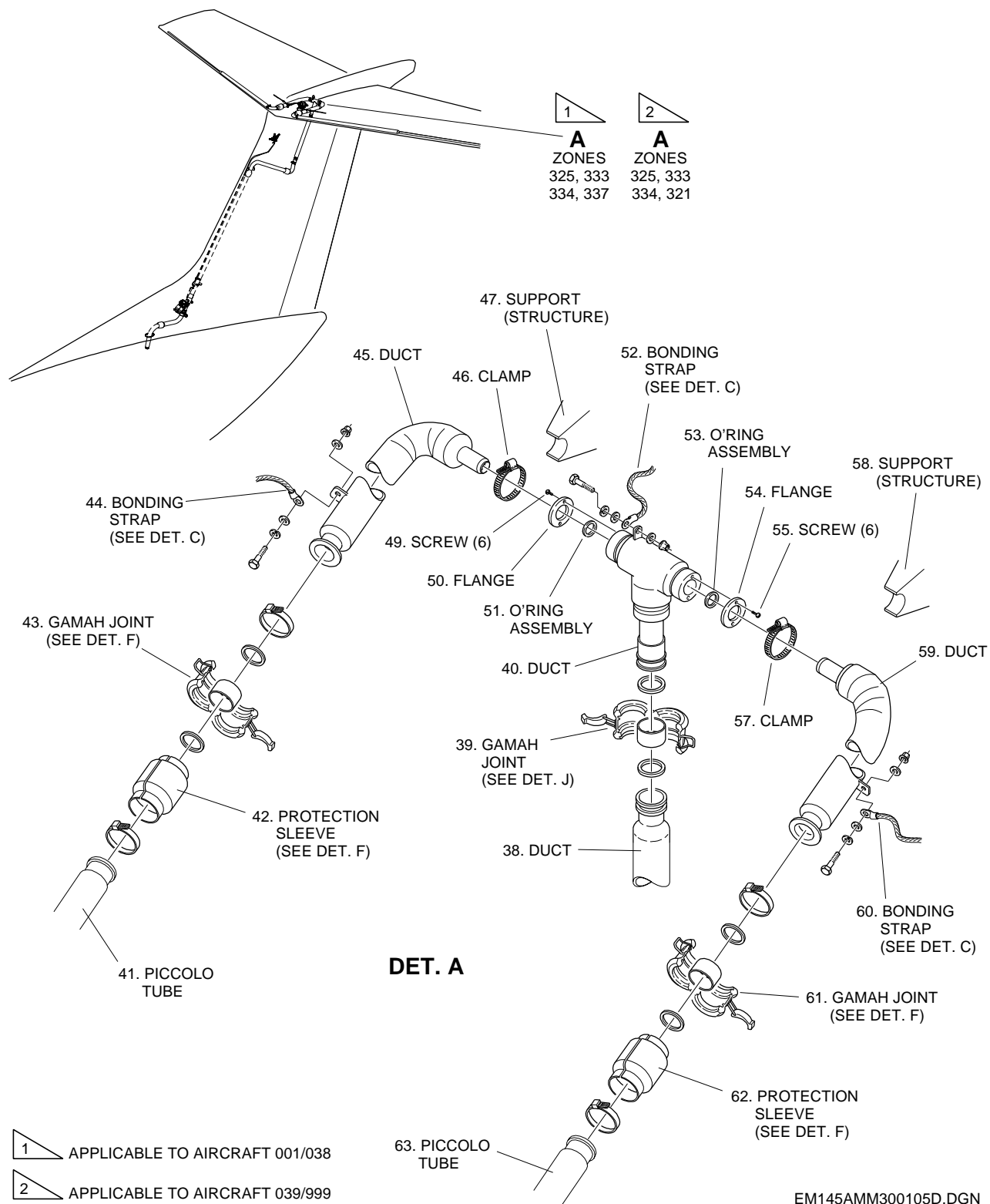
EFFECTIVITY: S/N 004 thru 031

Ducts - Removal/Installation

Figure 402



EFFECTIVITY: S/N 003, 032 and on  
Ducts - Removal/Installation  
Figure 403



EM145AMM300105D.DGN

TASK 30-12-07-400-801-A

EFFECTIVITY: ALL

### 3. DUCTS - INSTALLATION

#### A. General

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

#### B. References

REFERENCE	DESIGNATION
AMM MPP 06-30-00/100	-
AMM MPP 06-42-00/100	-
AMM TASK 20-10-10-910-801-A/200	V-BAND CLAMPS - INSTALLATION
AMM TASK 20-13-21-910-801-A/200	TYPES OF ELECTRICAL BONDING AND SURFACE PREPARATION - STANDARD PROCEDURES
AMM TASK 30-12-00-700-804-A/500	HORIZONTAL-STABILIZER THERMAL ANTI-ICING SYSTEM DUCTS - LEAKAGE TEST
AMM TASK 30-12-11-400-801-A/400	VERTICAL-STABILIZER ANTI-ICING MONITORING TUBES - INSTALLATION
AMM TASK 36-11-10-400-801-A/400	AIR-BLEED LINE PAIRS OF O-RINGS - INSTALLATION
AMM TASK 55-13-00-400-801-A/400	HORIZONTAL-STABILIZER LEADING-EDGE ROOT FAIRINGS - INSTALLATION
AMM TASK 55-36-00-400-801-A/400	TAIL BOOM - INSTALLATION
IPC 30-12-00	HORIZONTAL-STABILIZER THERMAL ANTI-ICING SYSTEM
S.B.145-30-0021	-
S.B.145-30-0022	-
S.B.145-30-0030	-

#### C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
321		Front fairings of the vertical stabilizer
323		Leading edge of the vertical stabilizer
324	324EL	Vertical stabilizer
324	324FR	Vertical stabilizer
325	325EL	Vertical stabilizer center section
325	325LR	Vertical stabilizer center section
333	333DL	Horizontal stabilizer
334	334DR	Horizontal stabilizer
337	337AZ	Horizontal stabilizer center section
337	337BZ	Horizontal stabilizer center section

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Porous-point pen marker	To make marks on the flanges	1

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
MS20995C20	Lockwire	AR
780 Type II Class A	Silicon sealant	AR
ASTM C 920	Sealant	AR

G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
O-ring	IPC 30-12-00	AR
Cable tiedown strap	IPC 30-12-00	AR

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Stabilizer
1	Helps the other technician	Stabilizer

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

**SUBTASK 420-002-A**

- (1) Install the duct (45) as follows:
  - (a) Put a new O-ring assembly (51) in the end of the duct (40).
  - (b) Applicable to aircraft serial numbers 004 thru 031. Put the cover (50) on the end of the duct (45).
  - (c) Applicable to aircraft serial numbers 003, 032 and on. Put the flange (50) on the end of the duct (45).
  - (d) Put the duct (45) between the duct (40) and the piccolo tube (41), and on the support (47) at the horizontal stabilizer.
  - (e) Push the duct (45) to connect it to the duct (40).
  - (f) Applicable to aircraft serial numbers 004 thru 031. Attach the cover (50) to the duct (40) with the screws (49) (2 positions).

- (g) Applicable to aircraft serial numbers 003, 032 and on. Attach the flange (50) to the duct (40) with the screws (49) (6 positions).
- (h) Applicable to aircraft serial numbers 004 thru 031. Install the spacers (48).
- (i) Attach the duct (45) to the support (47) with the clamp (46).
- (j) Refer to DET. K and mark the duct flanges with a porous-point pen marker with the aid of a marking tool. Refer to DET. F and DET. L.
- (k) Install the new O-rings (65) and (67) ( [AMM TASK 36-11-10-400-801-A/400](#)). Refer to DET. F.
- (l) Connect the duct (45) to the piccolo tube (41) with the Gamah joint (43) over the sleeve (66), engage the latch mechanism on the joint, and snap it shut. Refer to DET. F, DET. M. and DET. N.

NOTE: Make sure the flange marks are visible under the Gamah joint edges.

- (m) (Applicable to Gamah joint P/N CA36115C) Lockwire the clamp of the Gamah joint (43). Refer to DET. N.
- (n) (Applicable to Gamah joint P/N CA33015) Safety the Gamah joint (43) with a lockwire. Refer to DET. H and DET. M.
- (o) Install the protection sleeve (42) to the point of connection of the duct (45) and piccolo tube (41), and attach it with the cable tiedown straps (64) and (68). Refer to DET. F.
- (p) Connect the end of the bonding strap (44) to the duct (45) with the bolt, three washers, and nut (72). Refer to DET. C.

NOTE: Refer to [AMM TASK 20-13-21-910-801-A/200](#) for the correct installation of the bonding strap (44).

- (2) Install the duct (59) as follows:
  - (a) Put a new O-ring assembly (53) in the end of the duct (40).
  - (b) Applicable to aircraft serial numbers 004 thru 031. Put the cover (54) on the end of the duct (59).
  - (c) Applicable to aircraft serial numbers 003, 032 and on. Put the flange (54) on the end of the duct (59).
  - (d) Put the duct (59) between the duct (40) and the piccolo tube (63), and on the support (58) at the horizontal stabilizer.
  - (e) Push the duct (59) to connect it to the duct (40).
  - (f) Applicable to aircraft serial numbers 004 thru 031. Attach the cover (54) to the duct (40) with the screws (55) (2 positions).
  - (g) Applicable to aircraft serial numbers 003, 032 and on. Attach the flange (54) to the duct (40) with the screws (55) (6 positions).

- (h) Applicable to aircraft serial numbers 004 thru 031. Install the spacers (56).
- (i) Attach the duct (59) to the support (58) with the clamp (57).
- (j) Refer to DET. K and mark the duct flanges with a porous-point pen marker with the aid of a marking tool. Refer to DET. F and DET. L.
- (k) Install the new O-rings (65) and (67) ( [AMM TASK 36-11-10-400-801-A/400](#)). Refer to DET. F.
- (l) Connect the duct (59) to the piccolo tube (63) with the Gamah joint (61) over the sleeve (66), engage the latch mechanism on the joint, and snap it shut. Refer to DET. F, DET. M and DET. N.

NOTE: Make sure the flange marks are visible under the Gamah joint edges.

- (m) (Applicable to Gamah joint P/N CA36115C) Lockwire the clamp of the Gamah joint (61). Refer to DET. N.
- (n) (Applicable to Gamah joint P/N CA33015) Safety the Gamah joint (61) with a lockwire. Refer to DET. H and DET. M.
- (o) Install the protection sleeve (62) to the point of connection of the duct (59) and piccolo tube (63), and attach it with the cable tiedown straps (64) and (68). Refer to DET. F.
- (p) Connect the end of the bonding strap (60) to the duct (59) with the bolt, three washers, and nut (72). Refer to DET. C.

NOTE: Refer to [AMM TASK 20-13-21-910-801-A/200](#) for the correct installation of the bonding strap (60).

- (3) Install the duct (40) as follows:
  - (a) Refer to DET. K and mark the duct flanges with a porous-point pen marker with the aid of a marking tool. Refer to DET. F and DET. L.
  - (b) Install the new O-rings (65) and (67) ( [AMM TASK 36-11-10-400-801-A/400](#)). Refer to DET. J.
  - (c) Connect the duct (40) to the duct (38) with the Gamah joint (39) over the sleeve (66), engage the latch mechanism on the joint, and snap it shut. Refer to DET. F, DET. M and DET. N.

NOTE: Make sure the flange marks are visible under the Gamah joint edges.

- (d) (Applicable to Gamah joint P/N CA36115C) Lockwire the clamp of the Gamah joint (39). Refer to DET. N.
- (e) (Applicable to Gamah joint P/N CA33015) Safety the Gamah joint (39) with a lockwire. Refer to DET. H and DET. M.
- (f) Install the ducts (45) and (59). Refer to steps (1) and (2).
- (g) Tighten the clamps (46) and (57).



- (h) Connect the end of the bonding strap (52) to the duct (40) with the bolt, three washers, and nut (72). Refer to DET. C.

NOTE: Refer to [AMM TASK 20-13-21-910-801-A/200](#) for the correct installation of the bonding strap (52).

- (4) Install the duct (38) as follows:

- (a) Put the duct (38) between the ducts (40) and (32), and on the support (37) at the vertical stabilizer.
- (b) Put the clamp (36) on the duct (38) and support (37).
- (c) Refer to DET. K and mark the duct flanges with a porous-point pen marker with the aid of a marking tool. Refer to DET. F and DET. L.
- (d) Install the new O-rings (65) and (67) ( [AMM TASK 36-11-10-400-801-A/400](#)). Refer to DET. J.
- (e) Connect the duct (38) to the duct (40) with the Gamah joint (39) over the sleeve (66), engage the latch mechanism on the joint, and snap it shut. Refer to DET. F, DET. M and DET. N.

NOTE: Make sure the flange marks are visible under the Gamah joint edges.

- (f) (Applicable to Gamah joint P/N CA36115C) Lockwire the clamp of the Gamah joint (39). Refer to DET. N.
- (g) (Applicable to Gamah joint P/N CA33015) Safety the Gamah joint (39) with a lockwire. Refer to DET. H and DET. M.
- (h) Install the clamp (35) to connect the end of the duct (32) to the end of the duct (38) ([AMM TASK 20-10-10-910-801-A/200](#)).
- (i) Tighten the clamp (36) to attach the duct (38) to the support (37) at the vertical stabilizer.

- (5) Install the duct (32) as follows:

- (a) Put the duct (32) between the ducts (38) and (28), and on the support (34) at the vertical stabilizer.
- (b) Put the clamp (33) on the duct (32) and the support (34).
- (c) Install the clamp (35) to connect the end of the duct (32) to the end of the duct (38) ([AMM TASK 20-10-10-910-801-A/200](#)).
- (d) Refer to DET. K and mark the duct flanges with a porous-point pen marker with the aid of a marking tool. Refer to DET. F and DET. L.
- (e) Install the new O-rings (65) and (67) ( [AMM TASK 36-11-10-400-801-A/400](#)). Refer to DET. F.
- (f) Connect the duct (32) to the duct (28) with the Gamah joint (30) over the sleeve (66), engage the latch mechanism on the joint, and snap it shut. Refer to DET. F, DET. M and DET. N.

**NOTE:** Make sure the flange marks are visible under the Gamah joint edges.

- (g) (Applicable to Gamah joint P/N CA36115C) Lockwire the clamp of the Gamah joint (30). Refer to DET. N.
  - (h) (Applicable to Gamah joint P/N CA33015) Safety the Gamah joint (30) with a lockwire. Refer to DET. H and DET. M.
  - (i) Install the protection sleeve (31) to the point of connection of the duct (32) and duct (28), and attach it with the cable tiedown straps (64) and (68). Refer to DET. F.
  - (j) Tighten the clamp (33) to attach the duct (32) to the support (34) at the vertical stabilizer.
- (6) Install the duct (28) as follows:
- (a) Put the duct (28) between the ducts (32) and (16), and on the support (27) at the vertical stabilizer.
  - (b) Put the clamp (26) on the duct (28) and the support (27).
  - (c) Refer to DET. K and mark the duct flanges with a porous-point pen marker with the aid of a marking tool. Refer to DET. F and DET. L.
  - (d) Install the new O-rings (65) and (67) ( [AMM TASK 36-11-10-400-801-A/400](#)). Refer to DET. F.
  - (e) Connect the duct (28) to the duct (32) with the Gamah joint (30) over the sleeve (66), engage the latch mechanism on the joint, and snap it shut. Refer to DET. F, DET. M and DET. N.

**NOTE:** Make sure the flange marks are visible under the Gamah joint edges.

- (f) (Applicable to Gamah joint P/N CA36115C) Lockwire the clamp of the Gamah joint (30). Refer to DET. N.
- (g) (Applicable to Gamah joint P/N CA33015) Safety the Gamah joint (30) with a lockwire. Refer to DET. H and DET. M.
- (h) Install the protection sleeve (31) to the point of connection of the duct (28) and duct (32), and attach it with the cable tiedown straps (64) and (68). Refer to DET. F.
- (i) Refer to DET. K and mark the duct flanges with a porous-point pen marker with the aid of a marking tool. Refer to DET. F and DET. L.
- (j) Install the new O-rings (65) and (67) ( [AMM TASK 36-11-10-400-801-A/400](#)). Refer to DET. F.
- (k) Connect the duct (28) to the duct (16) with the Gamah joint (25) over the sleeve (66), engage the latch mechanism on the joint, and snap it shut. Refer to DET. F, DET. M and DET. N.

**NOTE:** Make sure the flange marks are visible under the Gamah joint edges.

- (l) (Applicable to Gamah joint P/N CA36115C) Lockwire the clamp of the Gamah joint (25). Refer to DET. N.
- (m) (Applicable to Gamah joint P/N CA33015) Safety the Gamah joint (25) with a lockwire. Refer to DET. H and DET. M.
- (n) Install the protection sleeve (24) to the connection point of the duct (28) and duct (16), and attach it with the cable tiedown straps (64) and (68). Refer to DET. F.
- (o) Tighten the clamp (26) to attach the duct (28) to the support (27) at the vertical stabilizer.
- (p) Connect the end of the bonding strap (29) to the duct (28) with the bolt, three washers, and nut (72). Refer to DET. C.

NOTE: Refer to [AMM TASK 20-13-21-910-801-A/200](#) for the correct installation of the bonding strap (29).

- (7) Install the duct (16) as follows:
  - (a) Put the clamps (21), (10), and (12) on the duct (16).
  - (b) (PRE-MOD. [S.B.145-30-0030](#)) Put the duct (16) between the duct (28) and the anti-icing valve (5), and on the supports (2) and (15) at the vertical stabilizer.
  - (c) (POST-MOD. [S.B.145-30-0030](#)) Put the duct (16) between the duct (28) and the anti-icing valve (5), and on the supports (2), (23), and (15) at the vertical stabilizer.
  - (d) Put the clamps (3) and (14) on the duct (16), and the supports (2) and (15).
  - (e) (POST-MOD. [S.B.145-30-0030](#)) Put the clamp (22) on the duct (16) and the support (23).
  - (f) Refer to DET. K and mark the duct flanges with a porous-point pen marker with the aid of a marking tool. Refer to DET. F and DET. L.
  - (g) Install the new O-rings (65) and (67) ( [AMM TASK 36-11-10-400-801-A/400](#)). Refer to DET. F.
  - (h) Connect the duct (16) to the duct (28) with the Gamah joint (25) over the sleeve (66), engage the latch mechanism on the joint, and snap it shut. Refer to DET. F, DET. M and DET. N.

NOTE: Make sure the flange marks are visible under the Gamah joint edges.

- (i) (Applicable to Gamah joint P/N CA36115C) Lockwire the clamp of the Gamah joint (25). Refer to DET. N.
- (j) (Applicable to Gamah joint P/N CA33015) Safety the Gamah joint (25) with a lockwire. Refer to DET. H and DET. M.
- (k) Install the protection sleeve (24) to the point of connection of the duct (16) and duct (28), and attach it with the cable tiedown straps (64) and (68). Refer to DET. F.

- (l) Install the clamp (4) to connect the end of the duct (16) to the anti-icing valve (5) ([AMM TASK 20-10-10-910-801-A/200](#)).
- (m) Tighten the clamps (3) and (14) to attach the duct (16) to the supports (2) and (15) at the vertical stabilizer.
- (n) (POST-MOD. [S.B.145-30-0030](#)) Tighten the clamp (22) to attach the duct (16) to the support (23) at the vertical stabilizer.
- (o) (PRE-MOD. [S.B.145-30-0021](#)) Connect the tube (6) to the duct (16) ( [AMM TASK 30-12-11-400-801-A/400](#)).
- (p) (POST-MOD. [S.B.145-30-0021](#)) or (On aircraft 182 and 183) or (On aircraft 003, 184 and on) Put the tube (6) on the banjo (18). If necessary, carefully turn the banjo fitting of the valve to the correct position and apply the necessary torque to the hex fastener ( [AMM TASK 30-12-11-400-801-A/400](#)).
- (q) Connect the tube (7) to the duct (16) ( [AMM TASK 30-12-11-400-801-A/400](#)).
- (r) Put the clamp (9) (at the tube (7)) and the end of the bonding strap (8) on the clamp (10) (at the duct (16)), and attach them with the bolt, three washers, and nut (69). Refer to DET. E.  
  
NOTE: Refer to [AMM TASK 20-13-21-910-801-A/200](#) for the correct installation of the bonding strap (8).
- (s) Put the clamp (11) (at the tube (7)) and the end of the bonding strap (12) on the clamp (13) (at the duct (16)), and attach them with the bolt, three washers, and nut (71). Refer to DET. D.  
  
NOTE: Refer to [AMM TASK 20-13-21-910-801-A/200](#) or the correct installation of the bonding strap (12).
- (t) Connect the ends of the bonding straps (1) and (8) to the duct (16) with the bolt, three washers, and nut (70). Refer to DET. E.  
  
NOTE: Refer to [AMM TASK 20-13-21-910-801-A/200](#) for the correct installation of the bonding straps (1) and (8).
- (u) Connect the end of the bonding strap (17) to the duct (16) with the bolt, three washers, and nut (72). Refer to DET. C.  
  
NOTE: Refer to [AMM TASK 20-13-21-910-801-A/200](#) for the correct installation of the bonding strap (17).
- (v) Put the clamp (19) (at the tube (7)) on the clamp (21) (at the duct (16)) and attach it with the bolt, three washers, and nut (20).

J. Follow-on

**SUBTASK 842-002-A**

- (1) On the circuit breaker panel, close these circuit breakers and remove the DO-NOT-CLOSE tag from them.
  - (PRE-MOD. [S.B.145-30-0022](#))  
STAB: (Location Tip: DC BUS 2/ICE AND RAIN PROTECTION/STAB).

- (POST-MOD. [S.B.145-30-0022](#))  
STAB: (Location Tip: DC BUS 2/ICE AND RAIN PROTECTION/STAB).  
STAB A/I IND: (Location Tip: DC BUS 1/ICE AND RAIN PROTECTION/STAB A/I IND).
- (2) Do a leakage test of the Horizontal-Stabilizer Thermal Anti-Icing System ( [AMM TASK 30-12-00-700-804-A/500](#)).
  - (3) Install access panels 324EL, 324FR, 325EL, and 325LR (AMM MPP 06-42-00/100).
  - (4) Install the leading edge fairings (access panels 333DL and 334DR) ( [AMM TASK 55-13-00-400-801-A/400](#)) (AMM MPP 06-42-00/100).
  - (5) Install the front movable fairings (access panels 337BZ and 337AZ) ( [AMM TASK 55-36-00-400-801-A/400](#)) (AMM MPP 06-42-00/100).
  - (6) Install leading edge 323 of the vertical stabilizer (AMM MPP 06-30-00/100).
  - (7) Install front fairing 321 of the vertical stabilizer (AMM MPP 06-30-00/100).

