COLD WEATHER MAINTENANCE - INSPECTION/CHECK

EFFECTIVITY: ALL

1. General

   A. This section gives the procedures to examine the control surfaces for dried de-icing/anti-icing fluid residues.

   B. The repeated application of type-II, -III, or -IV fluids, without subsequent application of type I or hot water, can cause residues to collect in aerodynamically quiet areas. These residues can re-hydrate and freeze under certain temperatures and high-humidity condition.

   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*
12-30-01-200-801-A	DE-ICING/ANTI-ICING FLUID RESIDUES - GENERAL VISUAL INSPECTION	ALL
12-30-01-200-802-A	DEICING/ANTI-ICING FLUID RESIDUES IN TAIL BOOM - GENERAL VISUAL INSPECTION	ALL
12-30-01-200-803-A	DE-ICING/ANTI-ICING FLUID RESIDUES IN ELEVATORS HORN TIP - DETAILED INTERNAL INSPECTION	ALL
12-30-01-200-804-A	DE-ICING/ANTI-ICING FLUID RESIDUES IN ELEVATORS - DETAILED INTERNAL INSPECTION	ALL
12-30-01-200-805-A	DE-ICING/ANTI-ICING FLUID RESIDUES IN RUDDER I - DETAILED INTERNAL INSPECTION	ALL

TASK 12-30-01-200-801-A
EFFECTIVITY: ALL

2. DE-ICING/ANTI-ICING FLUID RESIDUES - GENERAL VISUAL INSPECTION

A. General

(1) This task gives the procedures to examine for, and remove, dried de-icing/anti-icing fluid residues on the control surfaces.

(2) The repeated application of type-II, -III, or -IV fluids, without subsequent application of type I or hot water, may cause a residue to collect in aerodynamically quiet areas. This residue may re-hydrate and freeze under certain temperatures and high-humidity condition.

B. References

REFERENCE	*DESIGNATION*
AMM TASK 10-10-01-500-801-A/200	AIRCRAFT NORMAL PARKING
AMM TASK 29-10-00-860-801-A/200	HYDRAULIC SYSTEM - PRESSURIZATION WITH HTS

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Water Spray Bottle	To mist the areas	
Commercially available	Hot-Water Spray Gun	To clean the areas	

E. Auxiliary Items

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Special Platform	To get access to the related areas	2
Commercially available	Flashlight	To make the inspection	1
Commercially available	Inspection mirror	To inspect the related areas	1

F. Consumable Materials

SPECIFICATION (BRAND)	*DESCRIPTION*	*QTY*
AMS 1424 Type I	Anti-ice Fluid	AR (if applicable)

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	Horizontal Stabilizer and Ailerons
1	Actuates the ailerons	Cockpit

I. Preparation

SUBTASK 841-002-A

WARNING: ANTI-ICING/DEICING FLUID IS TOXIC. DO NOT PERMIT THE MATERIAL TO GET INTO YOUR EYES. DO NOT PERMIT IT TO STAY ON YOUR SKIN FOR A LONG TIME. WEAR GLOVES AND GOGGLES.

CAUTION:
- PREFERABLY DO THIS PROCEDURE WHEN THE AMBIENT TEMPERATURE AND THE AIRCRAFT SKIN TEMPERATURE ARE ABOVE 3°C (38°F). OR THE WATER APPLIED CAN FREEZE.
- THE USE OF OTHER ANTI-ICE FLUID THAN AMS 1424 TYPE I CAN CAUSE THE FLUID RESIDUE ACCUMULATION.

(1) If the ambient temperature is below 3°C (38°F), do this task in a hangar with proper temperature or mix AMS 1424 Type I fluid with water whenever water is required in the procedure. It is also recommended to heat the AMS 1424 Type I-and-water solution to 60°C (140°F).

NOTE: Consult the fluid manufacturer to know the fluid limitations, safety data, and the correct percentage of type I fluid to prevent the water freezing.

(2) Obey the procedures given in AMM TASK 10-10-01-500-801-A/200 for normal parking.

J. General Visual Inspection of the Horizontal Stabilizer (Figure 601)

SUBTASK 280-002-A

WARNING: MAKE SURE THAT THE FLIGHT CONTROLS WILL NOT BE ACTUATED WHILE YOU ARE CLOSE TO THE MOVING PARTS, WHICH COULD INJURE YOU.

CAUTION:
- TRAINED AND QUALIFIED PERSONS MUST ALWAYS DO THE INSPECTION AND REMOVAL OF THE DE-ICING/ANTI-ICING DRIED FLUIDS.
- IF YOU DO NOT RE-HYDRATE THE FLUID RESIDUES IT IS POSSIBLE THAT YOU DO NOT SEE THEM. RE-HYDRATED FLUID RESIDUES MAY SWELL MANY TIMES THEIR ORIGINAL VOLUME.

(1) With the aid of a spray bottle, moist but do not soak with water the following parts of the horizontal stabilizer, and wait 10 minutes for the fluid residue to swell.

– Elevator hinge points (Figure 601, sheet 1, DET. A);

– Spring tab hinge points (Figure 601, sheet 1, DET. B);

– Servo tab hinge points (Figure 601, sheet 1, DET. B);

– Elevator root and interface with boom fairing (Figure 601, sheet 1, DET. C);

– Stabilizer trailing edge (Figure 601, sheet 1, DET. C);

– Elevator horn and interface with HS tip fairing (Figure 601, sheet 1, DET. C);

– Elevator trailing edge (forward spring and servo tabs) (Figure 601, sheet 1, DET. C);

– Spring tab fairing (Figure 601, sheet 2, DET. A and DET. B);

– Servo tab fairing (Figure 601, sheet 2, DET. B);

– Spring tab rods, bellcranks, and massbalance (Figure 601, sheet 3, DET. A);

– Servo tab rod and its attachment fittings (Figure 601, sheet 3, DET. B).

CAUTION: USE HOT WATER AT A TEMPERATURE OF 60°C (140°F) AND ADJUST THE WATER STREAM TO A PRESSURE NOT HIGHER THAN 10 PSI. STRONGER WATER STREAM PRESSURES CAN CAUSE DAMAGE TO THE AIRCRAFT SURFACES.

(2) If residues of de-icing/anti-icing fluid are found, do as follows:

(a) With a hot-water spray gun, apply a generous amount of water to remove all the de-icing/anti-icing fluid residues found. Refer to Figure 601, sheet 1, Figure 601, sheet 2, and Figure 601, sheet 3.

(b) Make sure that all examined areas are free from de-icing/anti-icing fluid residues.

(3) Dry all areas to which you applied water.

(4) Make sure that all examined areas are free from water.

(5) Make sure that there is no water in the internal parts of the horizontal tail.

NOTE: Make sure that the horizontal tail drain holes are not clogged.

K. General Visual Inspection of the Ailerons (Figure 602)

SUBTASK 280-003-A

CAUTION: TRAINED AND QUALIFIED PERSONS MUST ALWAYS DO THE INSPECTION AND REMOVAL OF THE DE-ICING/ANTI-ICING DRIED FLUIDS.

(1) Pressurize the hydraulic system (AMM TASK 29-10-00-860-801-A/200).

(2) Inspect the upper part of the aileron as follows:

(a) Set the aileron to the DOWN position.

WARNING: MAKE SURE THAT THE AILERONS WILL NOT BE ACTUATED DURING THE INSPECTION.

CAUTION: IF YOU DO NOT RE-HYDRATE THE FLUID RESIDUES IT IS POSSIBLE THAT YOU DO NOT SEE THEM. RE-HYDRATED FLUID RESIDUES MAY SWELL MANY TIMES THEIR ORIGINAL VOLUME.

(b) With the aid of a spray bottle, mist but do not soak, in water, the following parts of the aileron. Allow 10 minutes for the fluid residue to swell.

– Upper part of the aileron hinge points (Figure 602, DET. B);

– Aileron side edges (Figure 602, DET. A).

NOTE: Use a flashlight to examine the areas.

(3) Inspect the lower part of the aileron as follows:

(a) Set the aileron to the UP position.

WARNING: MAKE SURE THAT THE AILERONS WILL NOT BE ACTUATED DURING THE INSPECTION.

CAUTION: IF YOU DO NOT RE-HYDRATE THE FLUID RESIDUES IT IS POSSIBLE THAT YOU DO NOT SEE THEM. RE-HYDRATED FLUID RESIDUES MAY SWELL MANY TIMES THEIR ORIGINAL VOLUME.

(b) With the aid of a spray bottle, mist but do not soak, in water, the following parts of the aileron. Allow 10 minutes for the fluid residue to swell.

– Lower part of the aileron hinge points (Figure 602, DET. B);

– Aileron PCA-rod ends (Figure 602, VIEW C);

– (ONLY FOR AIRCRAFT WITH DAMPERS INSTALLED) Damper rod end (Figure 602, DET. D).

NOTE: Use a flashlight and an inspection mirror to examine the areas.

(4) Do steps (2) and (3) for the other aileron.

CAUTION: USE HOT WATER AT A TEMPERATURE OF 60°C (140°F) AND ADJUST THE WATER STREAM TO A PRESSURE NOT HIGHER THAN 10 PSI. STRONGER WATER STREAM PRESSURES CAN CAUSE DAMAGE TO THE AIRCRAFT SURFACES.

(5) If residues of de-icing/anti-icing fluid are found, do as follows:

(a) With a hot-water spray gun, apply a generous amount of water to remove all the de-icing/anti-icing fluid residues found.

(b) Make sure that all examined areas are free from de-icing/anti-icing fluid residues.

(6) Dry all areas to which you applied water.

(7) Make sure that all examined areas are free from water.

(8) Make sure that there is no water in the internal parts of the aileron.

NOTE: Make sure that the aileron drain holes are not clogged.

(9) Set the ailerons to the neutral position.

(10) Release the pressure of the hydraulic system (AMM TASK 29-10-00-860-801-A/200).

L. General Visual Inspection of Flaps (Figure 603)

SUBTASK 280-004-A

CAUTION: TRAINED AND QUALIFIED PERSONS MUST ALWAYS DO THE INSPECTION AND REMOVAL OF THE DE-ICING/ANTI-ICING DRIED FLUIDS.

(1) Inspect the upper part of the flap as follows:

(a) Set the flap to the DOWN position.

WARNING: MAKE SURE THAT THE FLAPS WILL NOT BE ACTUATED DURING THE INSPECTION.

CAUTION: IF YOU DO NOT RE-HYDRATE THE FLUID RESIDUES IT IS POSSIBLE THAT YOU DO NOT SEE THEM. RE-HYDRATED FLUID RESIDUES MAY SWELL MANY TIMES THEIR ORIGINAL VOLUME.

(b) If ice, snow or residues of de-icing/anti-icing fluid are found, do as follows:

CAUTION: USE HOT WATER AT A TEMPERATURE OF 60°C (140°F) AND ADJUST THE WATER STREAM TO A PRESSURE NOT HIGHER THAN 10 PSI. STRONGER WATER STREAM PRESSURES CAN CAUSE DAMAGE TO THE AIRCRAFT SURFACES.

1 With the aid of a spray bottle, mist but do not soak, in water, the following parts of Flaps and its cavities. Allow 10 minutes for the fluid residue to swell.

NOTE: Use a flashlight to examine the areas.

(2) Inspect the lower part of the flap as follows:

(a) Set the flap to the UP position.

WARNING: MAKE SURE THAT THE FLAPS WILL NOT BE ACTUATED DURING THE INSPECTION.

CAUTION: IF YOU DO NOT RE-HYDRATE THE FLUID RESIDUES IT IS POSSIBLE THAT YOU DO NOT SEE THEM. RE-HYDRATED FLUID RESIDUES MAY SWELL MANY TIMES THEIR ORIGINAL VOLUME.

(b) If ice, snow or residues of de-icing/anti-icing fluid are found, do as follows:

CAUTION: USE HOT WATER AT A TEMPERATURE OF 60°C (140°F) AND ADJUST THE WATER STREAM TO A PRESSURE NOT HIGHER THAN 10 PSI. STRONGER WATER STREAM PRESSURES CAN CAUSE DAMAGE TO THE AIRCRAFT SURFACES.

1 With the aid of a spray bottle, mist but do not soak, in water, the following parts of Flaps and its cavities. Allow 10 minutes for the fluid residue to swell.

NOTE: Use a flashlight to examine the areas.

(3) Use the same procedure for the LH and RH sides of the aircraft.

(4) Make sure that all examined areas are free from de-icing/anti-icing fluid residues.

(5) Dry all areas to which you applied water.

(6) Make sure that all examined areas are free from water.

(7) Set the flaps to the neutral position.

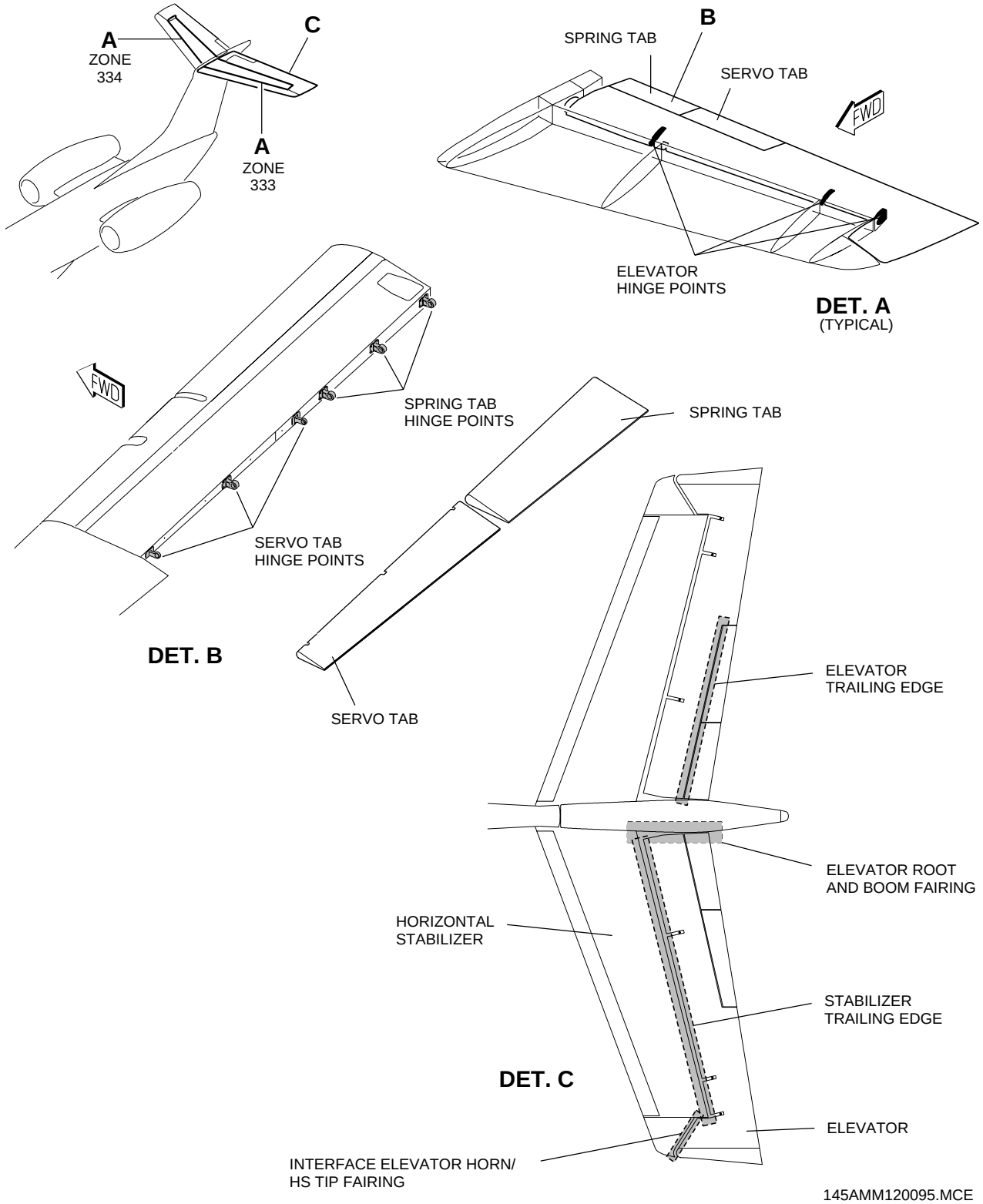
M. Follow-on

SUBTASK 842-002-A

(1) Operate all the control surfaces and make sure that they move freely and are free from ice, snow or de-icing fluid residues on their parts and cavities.

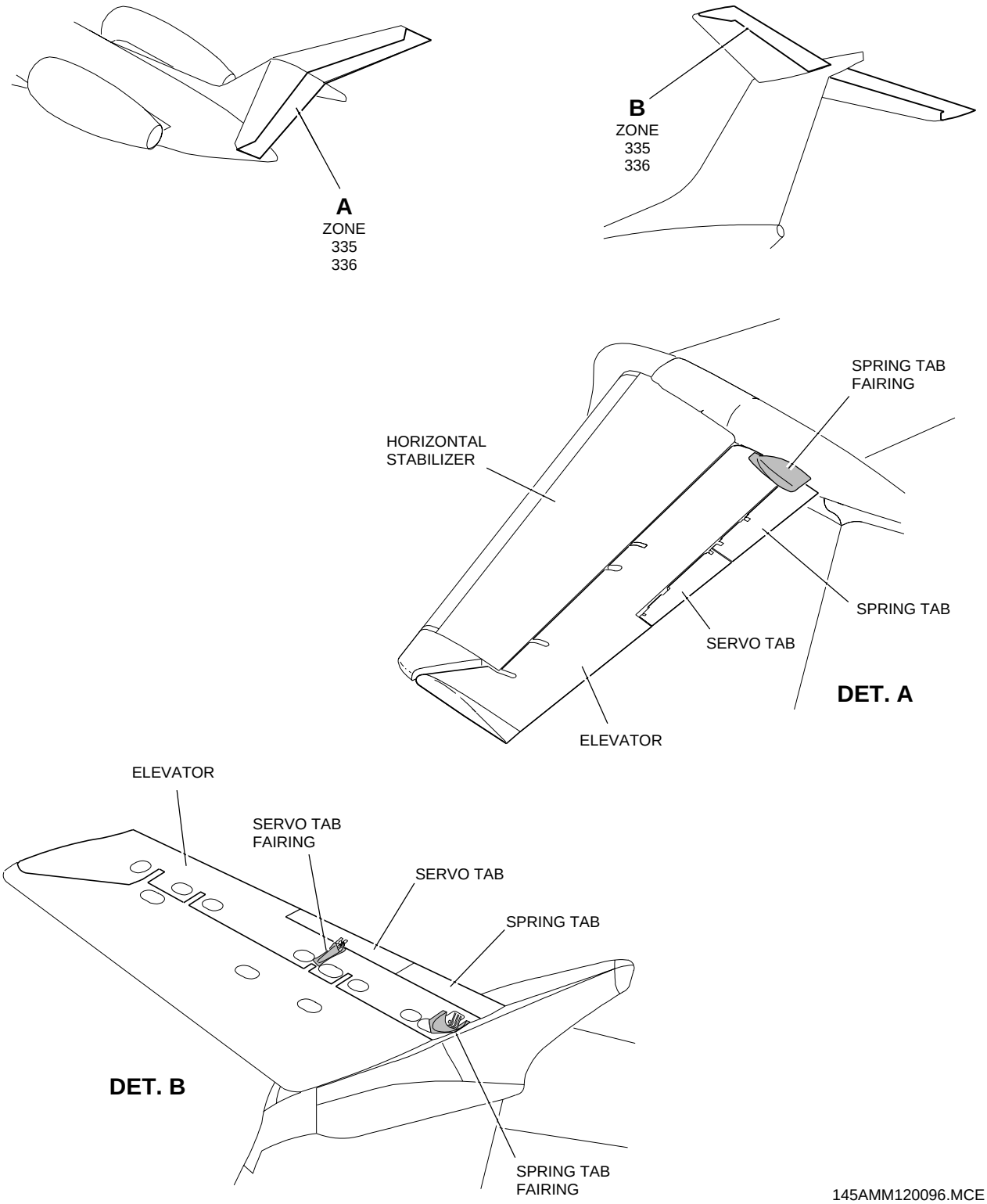
EFFECTIVITY: ALL

Cold Weather - Location of Horizontal-Stabilizer Inspection Points
Figure 601 - Sheet 1



EFFECTIVITY: ALL

Cold Weather - Location of Horizontal-Stabilizer Inspection Points
Figure 601 - Sheet 2



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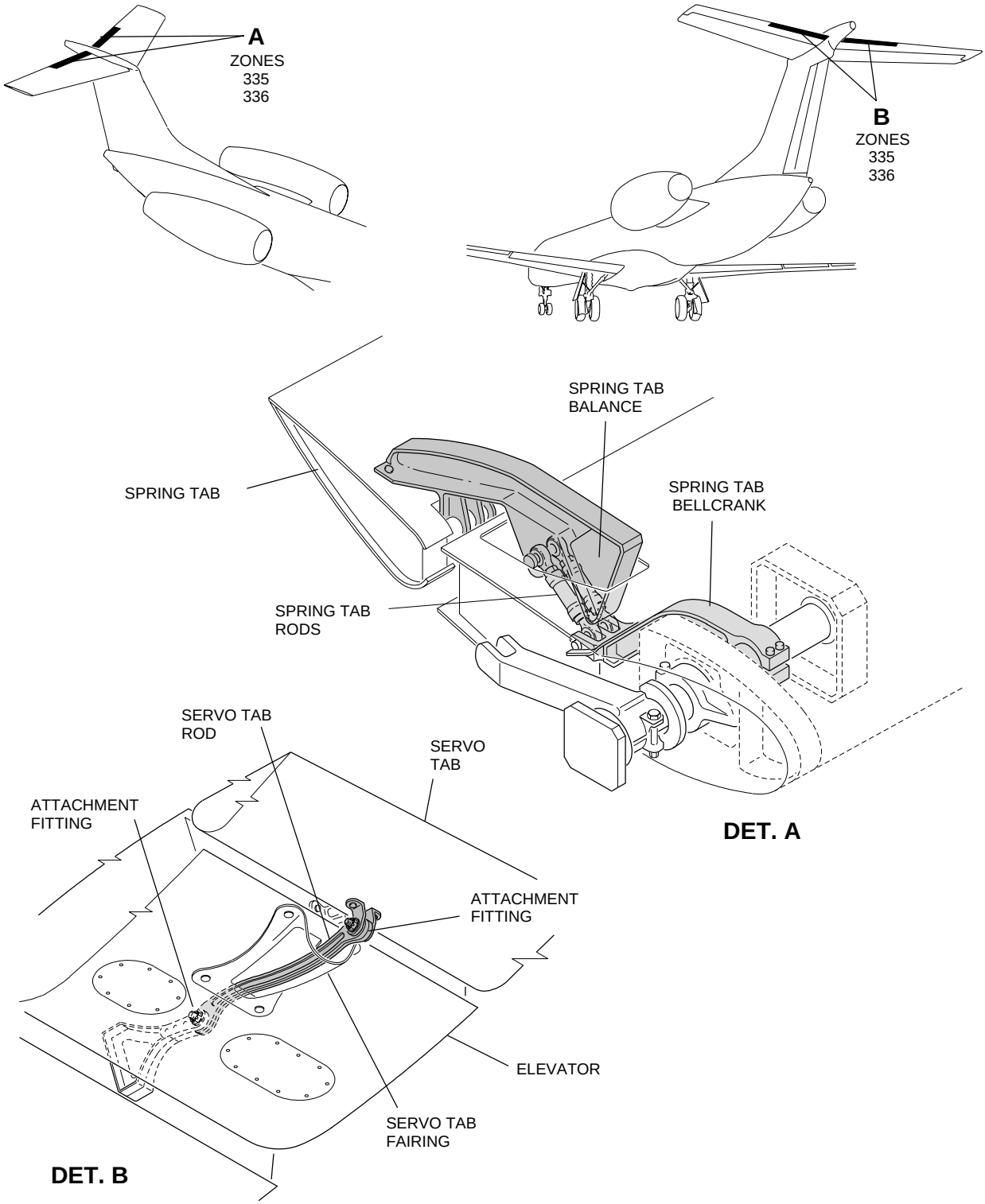
EFFECTIVITY: ALL

Cold Weather - Location of Horizontal-Stabilizer Inspection Points
Figure 601 - Sheet 3



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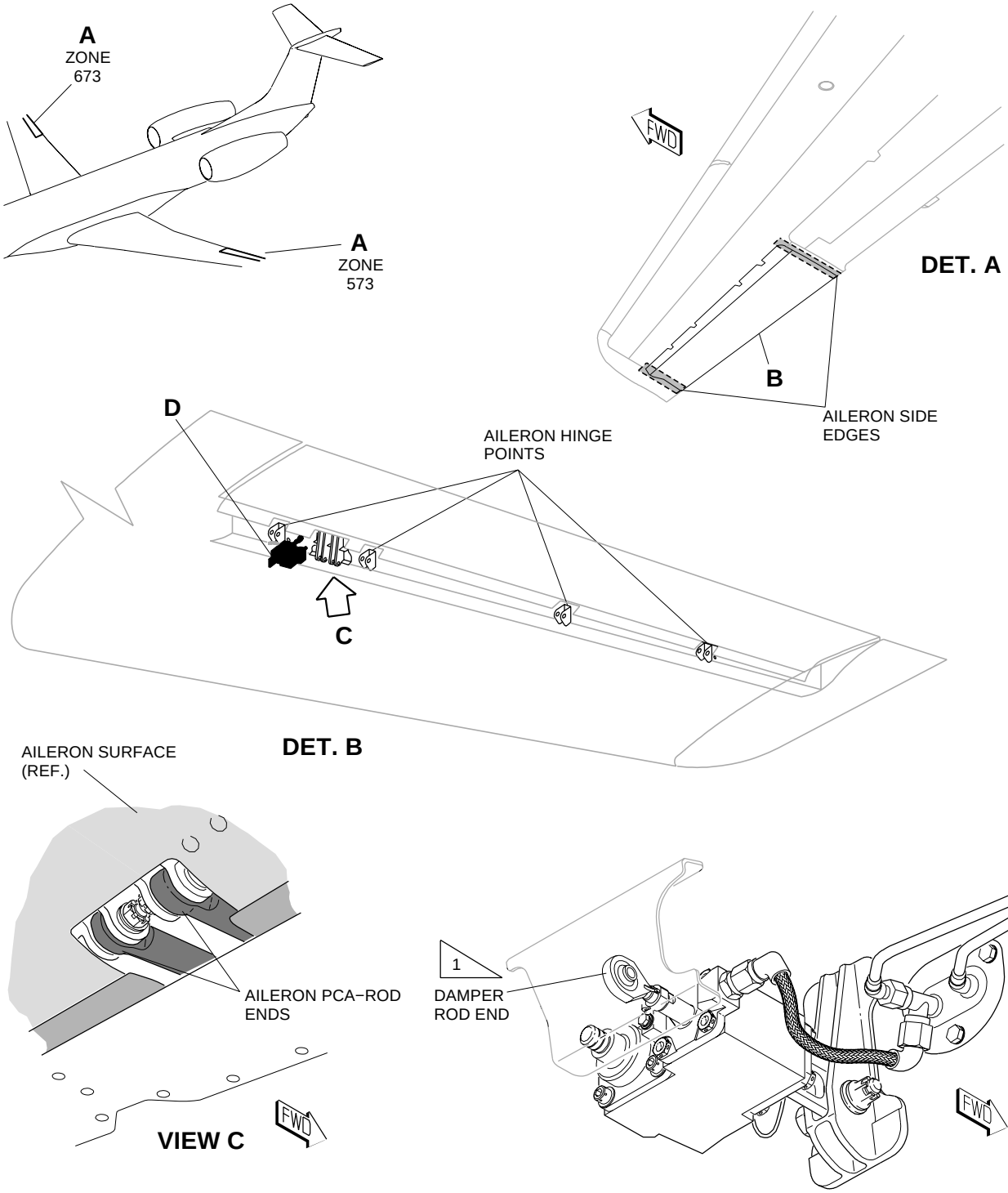
EFFECTIVITY: ALL

Cold Weather - Location of Aileron Inspection Points
Figure 602



1 ONLY FOR AIRCRAFT WITH DAMPERS INSTALLED.

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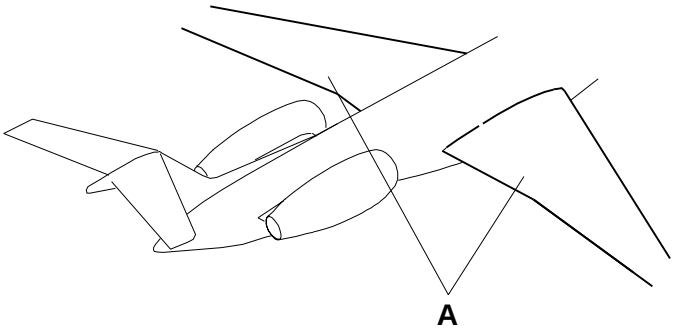
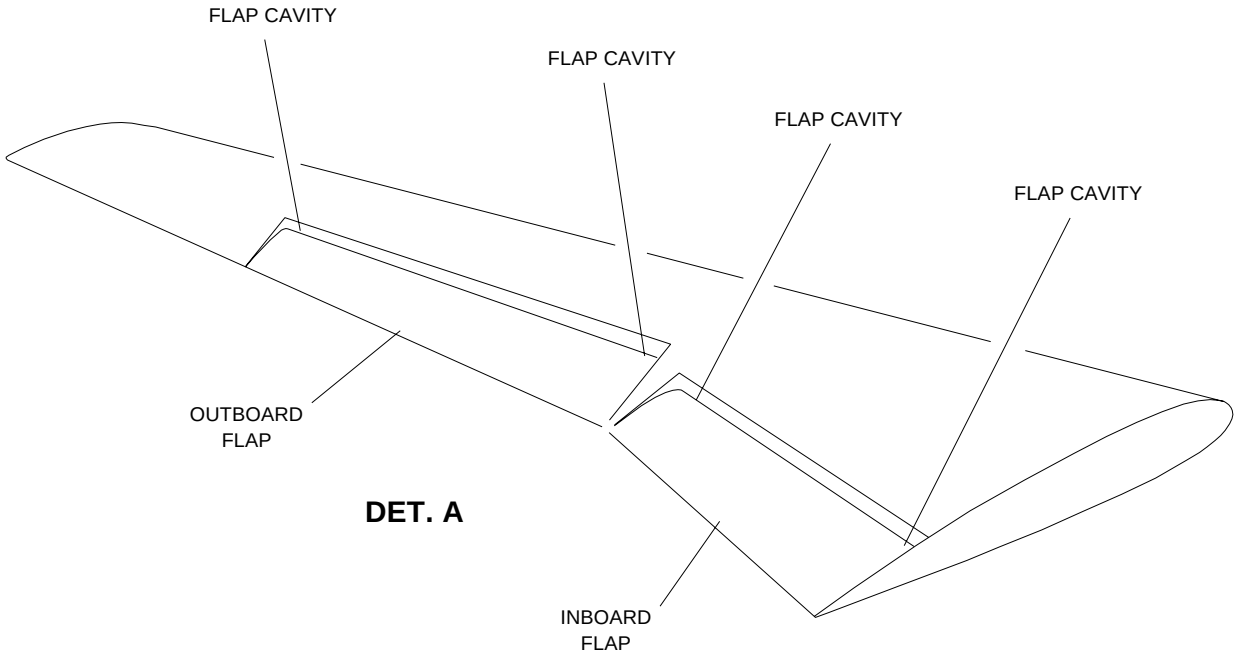
EFFECTIVITY: ALL

Cold Weather - Location of Flap Inspection Points
Figure 603





DET. A

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TASK 12-30-01-200-802-A
EFFECTIVITY: ALL

3. DEICING/ANTI-ICING FLUID RESIDUES IN TAIL BOOM - GENERAL VISUAL INSPECTION

A. General

(1) This task gives the procedures to examine for, and remove, dried deicing/anti-icing fluid residues on the elevator control system installed in the tail boom. This procedure is separate from AMM TASK 12-30-01-200-801-A/600 because the time to do it is longer. And it is longer because, to do this procedure, it is necessary to remove and install the tail boom.

(2) The repeated application of type-II, -III, or -IV fluids, without subsequent application of type I or hot water, can cause residues to collect in aerodynamically quiet areas. These residues can re-hydrate and freeze under certain temperatures and high-humidity condition.

B. References

REFERENCE	*DESIGNATION*
AMM TASK 10-10-01-500-801-A/200	AIRCRAFT NORMAL PARKING
AMM TASK 12-30-01-200-801-A/600	DE-ICING/ANTI-ICING FLUID RESIDUES - GENERAL VISUAL INSPECTION
AMM TASK 27-71-00-700-801-A/500	ELECTROMECHANICAL GUST LOCK - OPERATIONAL CHECK
AMM TASK 55-36-00-000-801-A/400	TAIL BOOM - REMOVAL
AMM TASK 55-36-00-400-801-A/400	TAIL BOOM - INSTALLATION

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
GSE 058	Rig Pin Kit	To lock the control surface in the neutral position	
Commercially available	Water Spray Bottle	To mist the areas	
Commercially available	Hot-Water Spray Gun	To clean the areas	

E. Auxiliary Items

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Ladder	To get access to the related areas	1
Commercially available	Lint-free cloth	To clean some areas	AR

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	Tail boom

I. Preparation

SUBTASK 841-003-A

CAUTION: DO THIS PROCEDURE WHEN THE AMBIENT TEMPERATURE AND THE AIRCRAFT SKIN TEMPERATURE ARE HIGHER THAN 3°C (38°F). OR THE WATER APPLIED CAN FREEZE.

(1) If the ambient temperature is below 3°C (38°F), do this task in a hangar with proper temperature.

(2) Obey the procedures given in AMM TASK 10-10-01-500-801-A/200 for normal parking.

(3) Remove the tail boom (AMM TASK 55-36-00-000-801-A/400).

(4) Install the rig pin to the the sector assembly to lock the elevator control system (Figure 604).

J. General Visual Inspection at Tail Boom (Figure 604)

SUBTASK 280-005-A

CAUTION:
- TRAINED AND QUALIFIED PERSONS MUST ALWAYS DO THE INSPECTION FOR, AND REMOVAL OF, DEICING/ANTI-ICING DRIED FLUIDS.
- IF YOU DO NOT RE-HYDRATE THE FLUID RESIDUES IT IS POSSIBLE THAT YOU DO NOT SEE THEM. RE-HYDRATED FLUID RESIDUES CAN SWELL MANY TIMES THEIR ORIGINAL VOLUME.
- DO NOT WET ELECTRICAL PARTS. WATER CAN CAUSE DAMAGE TO THEM.

(1) With the aid of a spray bottle, mist, but do not soak, with water these parts installed in the tail boom, and allow 10 minutes for the fluid residue to swell.

NOTE: Be specially careful with the movable parts and their adjacent areas.

– Elevator torque tubes;

– Bellcranks;

– Rods;

– Sector and bellcrank assembly;

– Control cables;

– Pulleys;

– Horizontal stabilizer hinges.

CAUTION: USE HOT WATER AT A TEMPERATURE OF 60°C (140°F) AND ADJUST THE WATER STREAM TO A PRESSURE NOT HIGHER THAN 10 PSI. STRONGER WATER STREAM PRESSURES CAN CAUSE DAMAGE TO THE AIRCRAFT.

(2) If residues of deicing/anti-icing fluid are found, do as follows:

CAUTION:
- DO NOT WET ELECTRICAL PARTS. WATER CAN CAUSE DAMAGE TO THEM.
- DO NOT WET THE ELECTROMECHANICAL GUST LOCK COMPONENTS. MOISTURE CAN FREEZE AND JAM THEM.
- DO NOT LET THE WATER GET INTO THE INTERNAL PART OF VERTICAL FIN. THE WATER CAN ACCUMULATE IN IT.

(a) With a hot-water spray gun, apply a large amount of water to remove all the deicing/anti-icing fluid residues found.

(b) Make sure that all examined areas are free from deicing/anti-icing fluid residues.

(3) Dry all areas to which you applied water.

(4) For aircraft with electromechanical gust lock, clean all gust lock mechanisms with a dry lint-free cloth to remove moisture from water spillage.

(5) Make sure that all examined areas are free from water.

(6) Make sure that there is no water in the internal parts of the horizontal tail.

NOTE: Make sure that the horizontal tail drain holes are not clogged.

K. Follow-on

SUBTASK 842-003-A

(1) Remove the rig pin from the sector assembly.

(2) Do the operational check of the electromechanical gust lock (AMM TASK 27-71-00-700-801-A/500).

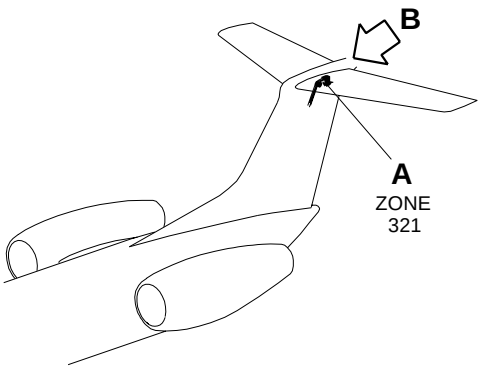
WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM TAIL BOOM AND CONTROL SURFACE AREAS. THIS IS TO PREVENT DAMAGE TO THE EQUIPMENT AND/OR INJURY TO PERSONS.

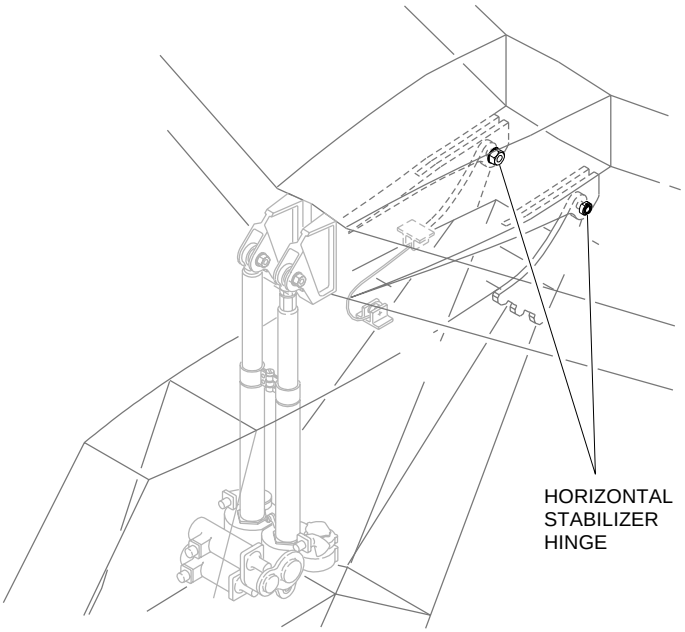
(3) Operate all control surfaces and make sure that they move freely.

(4) Install the tail boom (AMM TASK 55-36-00-400-801-A/400).

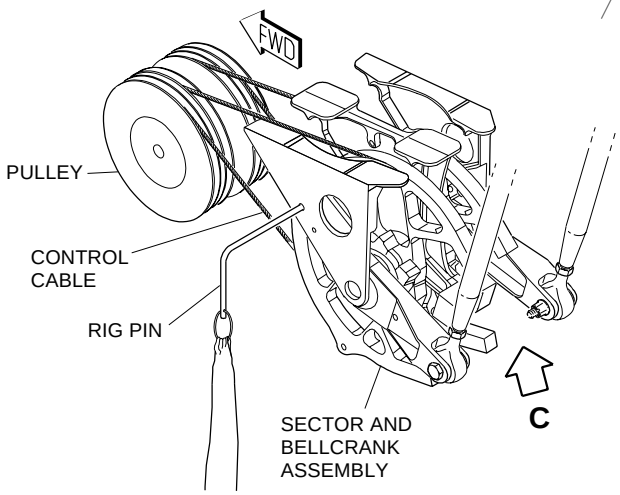
EFFECTIVITY: ALL

Cold Weather - Location of Tail-Boom Inspection Points
Figure 604

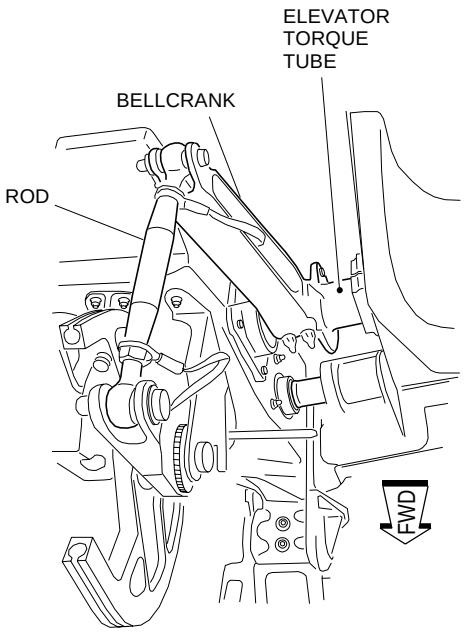




DET. A



VIEW B



VIEW C

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TASK 12-30-01-200-803-A
EFFECTIVITY: ALL

4. DE-ICING/ANTI-ICING FLUID RESIDUES IN ELEVATORS HORN TIP - DETAILED INTERNAL INSPECTION

A. General

(1) This task gives the procedures to examine for, and remove, dried de-icing/anti-icing fluid residues on the elevator horn tips.

(2) The repeated application of type-II, -III, or -IV fluids, without subsequent application of type I or hot water, can cause residues to collect in aerodynamically quiet areas. These residues can re-hydrate and freeze under certain temperatures and high-humidity condition.

B. References

REFERENCE	*DESIGNATION*
AMM TASK 10-10-01-500-801-A/200	AIRCRAFT NORMAL PARKING
AMM TASK 55-20-01-000-801-A/400	ELEVATOR TIPS - REMOVAL
AMM TASK 55-20-01-400-801-A/400	ELEVATOR TIPS - INSTALLATION

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Water Spray Bottle	To mist the areas	
Commercially available	Hot-Water Spray Gun	To clean the areas	

E. Auxiliary Items

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Special Platform	To get access to the related areas	1
Commercially available	Flashlight	To make the inspection	1
Commercially available	Inspection mirror	To do the inspection in the related areas	1
Commercially available	Gloves	To remove residues at the related areas	1

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	Tip of Elevator Horn
1	Helps the technician that does the task	Tip of Elevator Horn

I. Preparation

SUBTASK 841-004-A

WARNING: ANTI-ICING/DE-ICING FLUID IS TOXIC. DO NOT PERMIT THE MATERIAL TO GET INTO YOUR EYES. DO NOT PERMIT IT TO STAY ON YOUR SKIN FOR A LONG TIME. WEAR GLOVES AND GOGGLES.

CAUTION: PREFERABLY DO THIS PROCEDURE WHEN THE AMBIENT TEMPERATURE AND THE AIRCRAFT SKIN TEMPERATURE ARE ABOVE 3°C (38°F). OR THE WATER APPLIED CAN FREEZE.

(1) If the ambient temperature is below 3°C (38°F), do this task in a hangar with correct temperature or mix AMS 1424 Type-I fluid with water when water is necessary in the procedure. We also recommend that you heat the AMS 1424 Type I-and-water solution to 60°C (140°F).

NOTE: Refer to the fluid manufacturer's instructions to know the fluid limitations, safety data, and the correct percentage of type I fluid to prevent the water freezing.

(2) Obey the procedures for normal parking (AMM TASK 10-10-01-500-801-A/200).

(3) Remove the two elevator horn tips (AMM TASK 55-20-01-000-801-A/400).

J. Internal Inspection of Elevator Horn Tips

SUBTASK 280-006-A

WARNING: MAKE SURE THAT THE FLIGHT CONTROLS WILL NOT BE OPERATED WHILE YOU ARE NEAR THE MOVING PARTS, WHICH COULD INJURE YOU.

CAUTION: TRAINED AND QUALIFIED PERSONS MUST ALWAYS DO THE INSPECTION AND REMOVAL OF THE DE-ICING/ANTI-ICING DRIED FLUIDS.
IF YOU DO NOT RE-HYDRATE THE FLUID RESIDUES, IT IS POSSIBLE THAT YOU DO NOT SEE THEM. RE-HYDRATED FLUID RESIDUES CAN INCREASE THEIR ORIGINAL VOLUME MANY TIMES .
USE HOT WATER AT A TEMPERATURE OF 60°C (140°F) AND ADJUST THE WATER STREAM TO A PRESSURE NOT HIGHER THAN 10 PSI. STRONGER WATER STREAM PRESSURES CAN CAUSE DAMAGE TO THE AIRCRAFT SURFACES.

(1) Do an inspection on the internal surface of the horn tip fairing (Figure 605) (DET. C).

(2) Do an inspection on the all region of the elevator horn tip.

(3) Use the flashlight to do a detailed inspection in the elevator holes (Figure 605) (DET. D).

(4) If residues of de-icing/anti-icing fluid are found, do as follows:

(a) Remove all the de-icing/anti-icing fluid residues found. The use of hot-water spray gun is recommended. Apply a large quantity of water to clean the area fully.

(b) Make sure that all the area is cleaned and the drains are not clogged.

(c) Make sure that all examined areas are free from de-icing/anti-icing fluid residues.

(d) Dry all areas to which you applied water.

(5) Make sure that all examined areas are free from water.

(6) Make sure that there is no water in the internal parts of the horn tips.

K. Follow-on

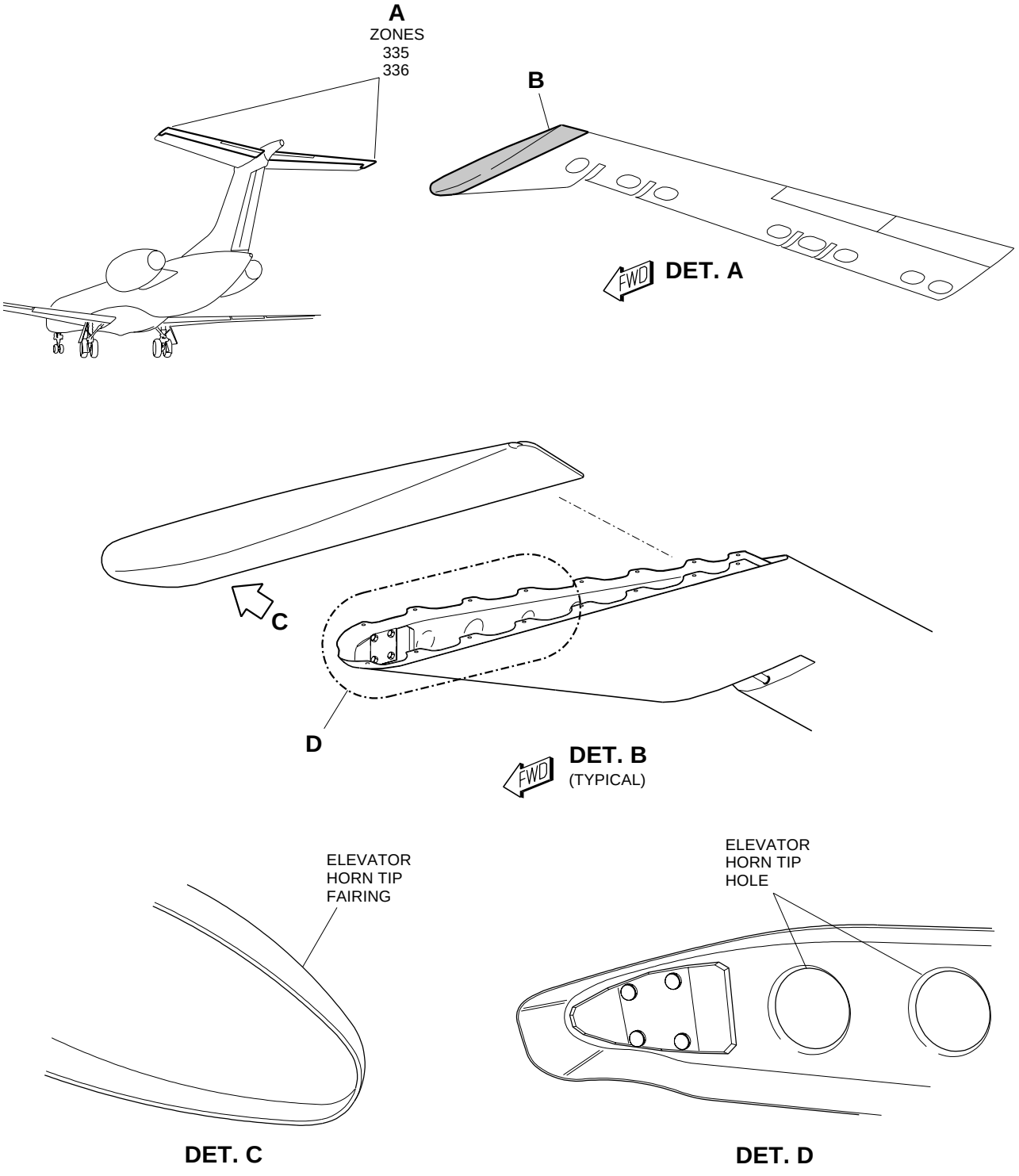
SUBTASK 842-004-A

(1) Install the two elevator horn tips (AMM TASK 55-20-01-400-801-A/400).

(2) Operate all control surfaces and make sure that they move freely.

EFFECTIVITY: ALL

Cold Weather - Location of Elevator Horn Tip Internal Inspection
Figure 605



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TASK 12-30-01-200-804-A
EFFECTIVITY: ALL

5. DE-ICING/ANTI-ICING FLUID RESIDUES IN ELEVATORS - DETAILED INTERNAL INSPECTION

A. General

(1) This task gives the procedures to examine for, and remove, dried de-icing/anti-icing fluid residues on the control surfaces.

(2) The repeated application of type-II, -III, or -IV fluids, without subsequent application of type I or hot water, can cause residues to collect in aerodynamically quiet areas. These residues can re-hydrate and freeze under certain temperatures and high-humidity condition.

B. References

REFERENCE	*DESIGNATION*
AMM MPP 06-42-00/100	-
AMM TASK 10-10-01-500-801-A/200	AIRCRAFT NORMAL PARKING

C. Zones and Accesses

ZONE	*PANEL/DOOR*	*LOCATION*
335	335AB	LH Elevator
335	335BB	LH Elevator
335	335CB	LH Elevator
335	335DB	LH Elevator
335	335EB	LH Elevator
335	335FB	LH Elevator
335	335GB	LH Elevator
335	335HB	LH Elevator
336	336AB	RH Elevator
336	336BB	RH Elevator
336	336CB	RH Elevator
336	336DB	RH Elevator
336	336EB	RH Elevator
336	336FB	RH Elevator
336	336GB	RH Elevator
336	336HB	RH Elevator

D. Tools and Equipment

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Water Spray Bottle	To mist the areas	
Commercially available	Hot-Water Spray Gun	To clean the areas	

E. Auxiliary Items

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Special Platform	To get access to the related areas	1
Commercially available	Flashlight	To make the inspection	1
Commercially available	Inspection mirror	To do the inspection in the related areas	1
Commercially available	Gloves	To remove residues in the related areas	2

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	Elevators
1	Helps the technician that does the task	Elevators

I. Preparation

SUBTASK 841-005-A

WARNING: ANTI-ICING/DE-ICING FLUID IS TOXIC. DO NOT PERMIT THE MATERIAL TO GET INTO YOUR EYES. DO NOT PERMIT IT TO STAY ON YOUR SKIN FOR A LONG TIME. WEAR GLOVES AND GOGGLES.

CAUTION: PREFERABLY DO THIS PROCEDURE WHEN THE AMBIENT TEMPERATURE AND THE AIRCRAFT SKIN TEMPERATURE ARE ABOVE 3°C (38°F). OR THE WATER APPLIED CAN FREEZE.

(1) If the ambient temperature is below 3°C (38°F), do this task in a hangar with correct temperature or mix AMS 1424 Type-I fluid with water when water is necessary in the procedure. We also recommend that you heat the AMS 1424 Type I-and-water solution to 60°C (140°F).

NOTE: Refer to the fluid manufacturer's instructions to know the fluid limitations, safety data, and the correct percentage of type I fluid to prevent the water freezing.

(2) Obey the procedures for normal parking (AMM TASK 10-10-01-500-801-A/200).

(3) Remove access panels 335AB, 335BB, 335CB, 335DB, 335EB, 335FB, 335GB, 335HB, 336AB, 336BB, 336CB, 336DB, 336EB, 336FB, 336GB, and 336HB (AMM MPP 06-42-00/100).

NOTE: It is necessary to remove the protective panel of the spring tab actuator before you remove panels 335AB and 336AB.

J. Internal Inspection of Elevators (Figure 606)

SUBTASK 280-007-A

WARNING: MAKE SURE THAT THE FLIGHT CONTROLS WILL NOT BE OPERATED WHILE YOU ARE NEAR THE MOVING PARTS, WHICH COULD INJURE YOU.

CAUTION:
- TRAINED AND QUALIFIED PERSONS MUST ALWAYS DO THE INSPECTION AND REMOVAL OF THE DE-ICING/ANTI-ICING DRIED FLUIDS.
- IF YOU DO NOT RE-HYDRATE THE FLUID RESIDUES, IT IS POSSIBLE THAT YOU DO NOT SEE THEM. RE-HYDRATED FLUID RESIDUES CAN INCREASE THEIR ORIGINAL VOLUME MANY TIMES .
- USE HOT WATER AT A TEMPERATURE OF 60°C (140°F) AND ADJUST THE WATER STREAM TO A PRESSURE NOT HIGHER THAN 10 PSI. STRONGER WATER STREAM PRESSURES CAN CAUSE DAMAGE TO THE AIRCRAFT SURFACES.

(1) Use a mirror and a flashlight to do a detailed inspection in the elevator internal areas through the access panels. Also examine all internal contour of the access panels. If there are structural holes near access panels, examine into them (Refer. Figure 606) (Sheet 1) (Sheet 2).

(2) If residues of de-icing/anti-icing fluid are found, do as follows:

(a) Remove all the de-icing/anti-icing fluid residues found. The use of hot-water spray gun is recommended. Apply a large quantity of water to clean the area fully.

(b) Make sure that all examined areas are free from de-icing/anti-icing fluid residues.

(3) Dry all areas to which you applied water.

(4) Make sure that all examined areas are free from water.

(5) Make sure that the elevator drain holes are not clogged.

K. Follow-on

SUBTASK 842-005-A

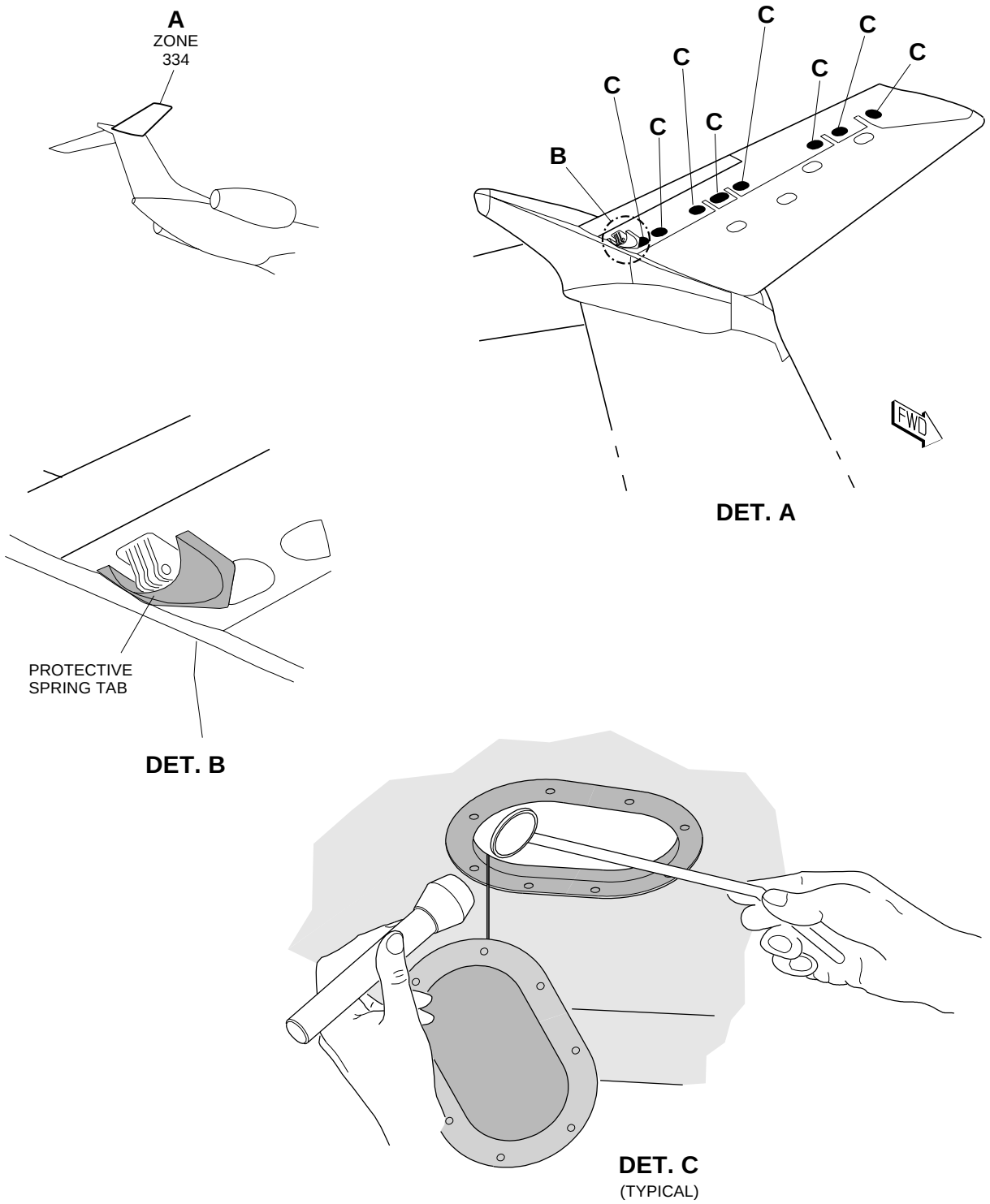
(1) Install access panels 335AB, 335BB, 335CB, 335DB, 335EB, 335FB, 335GB, 335HB, 336AB, 336BB, 336CB, 336DB, 336EB, 336FB, 336GB, and336HB (AMM MPP 06-42-00/100).

NOTE: Only after you install panels 335AB and 336AB it is possible to install the protective panel of the spring tab actuator.

(2) Operate all control surfaces and make sure that they move freely.

EFFECTIVITY: ALL

Cold Weather - Location of Elevator Internal Inspection
Figure 606 - Sheet 1



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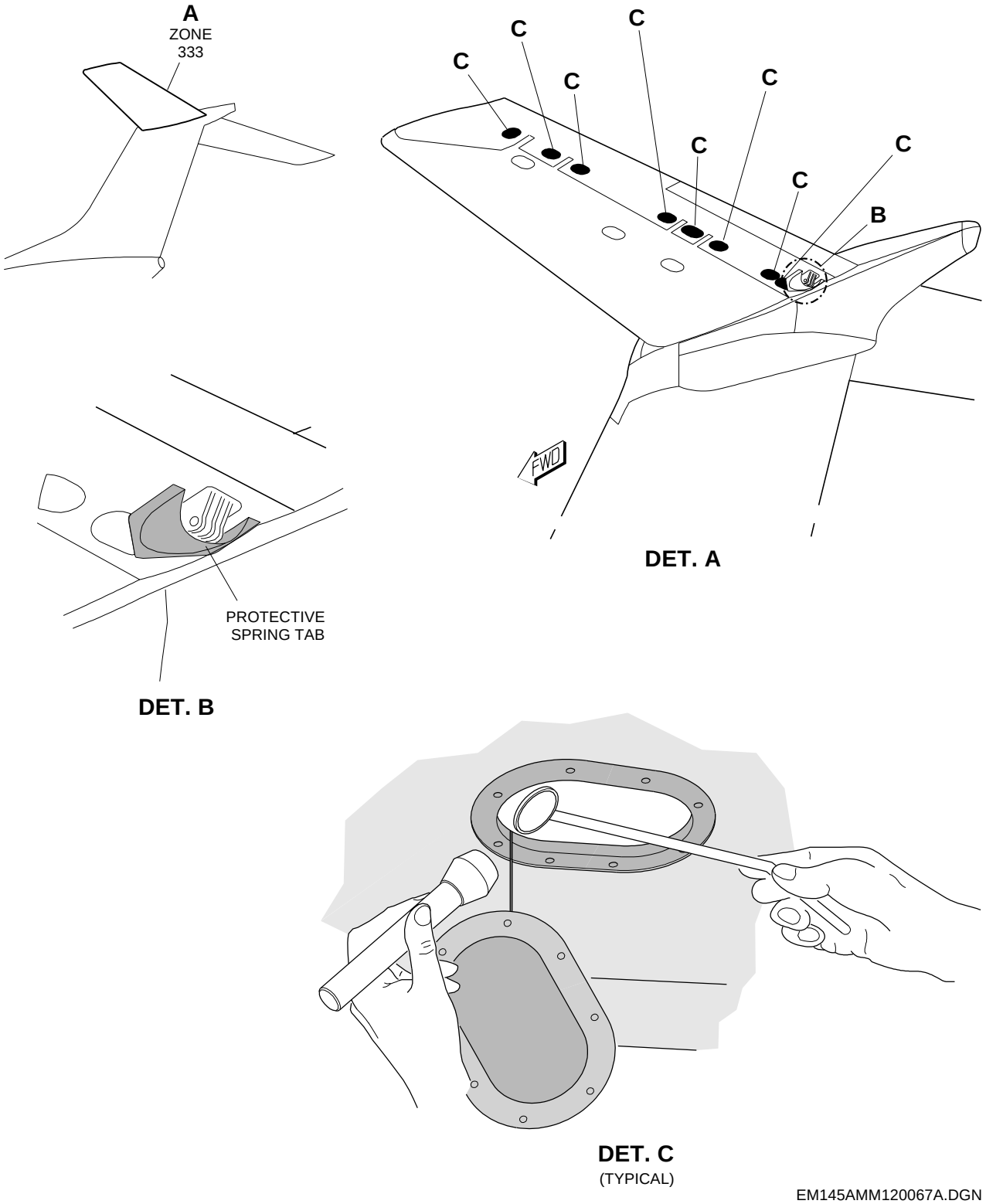
EFFECTIVITY: ALL

Cold Weather - Location of Elevator Internal Inspection
Figure 606 - Sheet 2



TASK 12-30-01-200-805-A
EFFECTIVITY: ALL

6. DE-ICING/ANTI-ICING FLUID RESIDUES IN RUDDER I - DETAILED INTERNAL INSPECTION

A. General

(1) This task gives the procedures to examine for, and remove, dried de-icing/anti-icing fluid residues on the control surfaces.

(2) The repeated application of type-II, -III, or -IV fluids, without subsequent application of type I or hot water, can cause residues to collect in aerodynamically quiet areas. These residues can re-hydrate and freeze under certain temperatures and high-humidity condition.

B. References

REFERENCE	*DESIGNATION*
AMM TASK 10-10-01-500-801-A/200	AIRCRAFT NORMAL PARKING
AMM TASK 27-21-08-000-801-A/400	RUDDER-II CONTROL RODS - REMOVAL
AMM TASK 27-21-08-400-801-A/400	RUDDER-II CONTROL RODS - INSTALLATION
AMM TASK 27-22-02-000-801-A/400	RUDDER ACTUATOR - REMOVAL
AMM TASK 27-22-02-400-801-A/400	RUDDER ACTUATOR - INSTALLATION

C. Zones and Accesses

ZONE	*PANEL/DOOR*	*LOCATION*
326	326AL	Rudder-I Leading Edge

D. Tools and Equipment

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Water Spray Bottle	To mist the areas	
Commercially available	Hot-Water Spray Gun	To clean the areas	

E. Auxiliary Items

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Special Platform	To get access to the related areas	1
Commercially available	Flashlight	To make the inspection	1
Commercially available	Inspection mirror	To do the inspection in the related areas	1
Commercially available	Gloves	As protection for your hands when you remove the residues	2

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	Horn Tips
1	Helps the technician that does the task	Horn Tips

I. Preparation

SUBTASK 841-006-A

WARNING: ANTI-ICING/DE-ICING FLUID IS TOXIC. DO NOT PERMIT THE MATERIAL TO GET INTO YOUR EYES. DO NOT PERMIT IT TO STAY ON YOUR SKIN FOR A LONG TIME. WEAR GLOVES AND GOGGLES.

CAUTION: PREFERABLY DO THIS PROCEDURE WHEN THE AMBIENT TEMPERATURE AND THE AIRCRAFT SKIN TEMPERATURE ARE ABOVE 3°C (38°F). OR THE WATER APPLIED CAN FREEZE.

(1) If the ambient temperature is below 3°C (38°F), do this task in a hangar with correct temperature or mix AMS 1424 Type-I fluid with water when water is necessary in the procedure. We also recommend that you heat the AMS 1424 Type I-and-water solution to 60°C (140°F).

NOTE: Refer to the fluid manufacturer's instructions to know the fluid limitations, safety data, and the correct percentage of type I fluid to prevent the water freezing.

(2) Obey the procedures for normal parking (AMM TASK 10-10-01-500-801-A/200).

(3) Disconnect the bearing rod end of the control rod from rudder II (AMM TASK 27-21-08-000-801-A/400).

NOTE: The control rod must not be removed from the vertical stabilizer.

(4) Disconnect the bearing rod end of the actuator rod from rudder I (AMM TASK 27-22-02-000-801-A/400).

NOTE: The actuator rod must not be removed from the vertical stabilizer.

(5) Only disconnect the feedback rod from rudder I. Refer Figure 608.

NOTE: The cotter pin (10), locking nut (6), and bushing (5) must not be removed. If they are removed, the rudder surface will go out of its neutral position (Figure 608) (DET. C).

(6) Remove access panel 326AL.

J. Internal Inspection of Rudder I (Figure 607) (Figure 608)

SUBTASK 280-008-A

WARNING: MAKE SURE THAT THE RUDDER CANNOT BE OPERATED ACCIDENTALLY. AN ACCIDENTAL OPERATION OF THE RUDDER CAN CAUSE INJURY TO PERSONS.

CAUTION:
- TRAINED AND QUALIFIED PERSONS MUST ALWAYS DO THE INSPECTION AND REMOVAL OF THE DE-ICING/ANTI-ICING DRIED FLUIDS.
- IF YOU DO NOT RE-HYDRATE THE FLUID RESIDUES, IT IS POSSIBLE THAT YOU DO NOT SEE THEM. RE-HYDRATED FLUID RESIDUES CAN INCREASE THEIR ORIGINAL VOLUME MANY TIMES .
- USE HOT WATER AT A TEMPERATURE OF 60°C (140°F) AND ADJUST THE WATER STREAM TO A PRESSURE NOT HIGHER THAN 10 PSI. STRONGER WATER STREAM PRESSURES CAN CAUSE DAMAGE TO THE AIRCRAFT SURFACES.

(1) Do a detailed internal inspection in the rudder-I internal area through the access panel. Refer Figure 607.

(2) If residues of de-icing/anti-icing fluid are found, do as follows:

(a) Manually remove all the de-icing/anti-icing fluid residues that you found.

(b) Make sure that all examined area is free from de-icing/anti-icing fluid residues.

K. Follow-on

SUBTASK 842-006-A

(1) Install access panel 326AL.

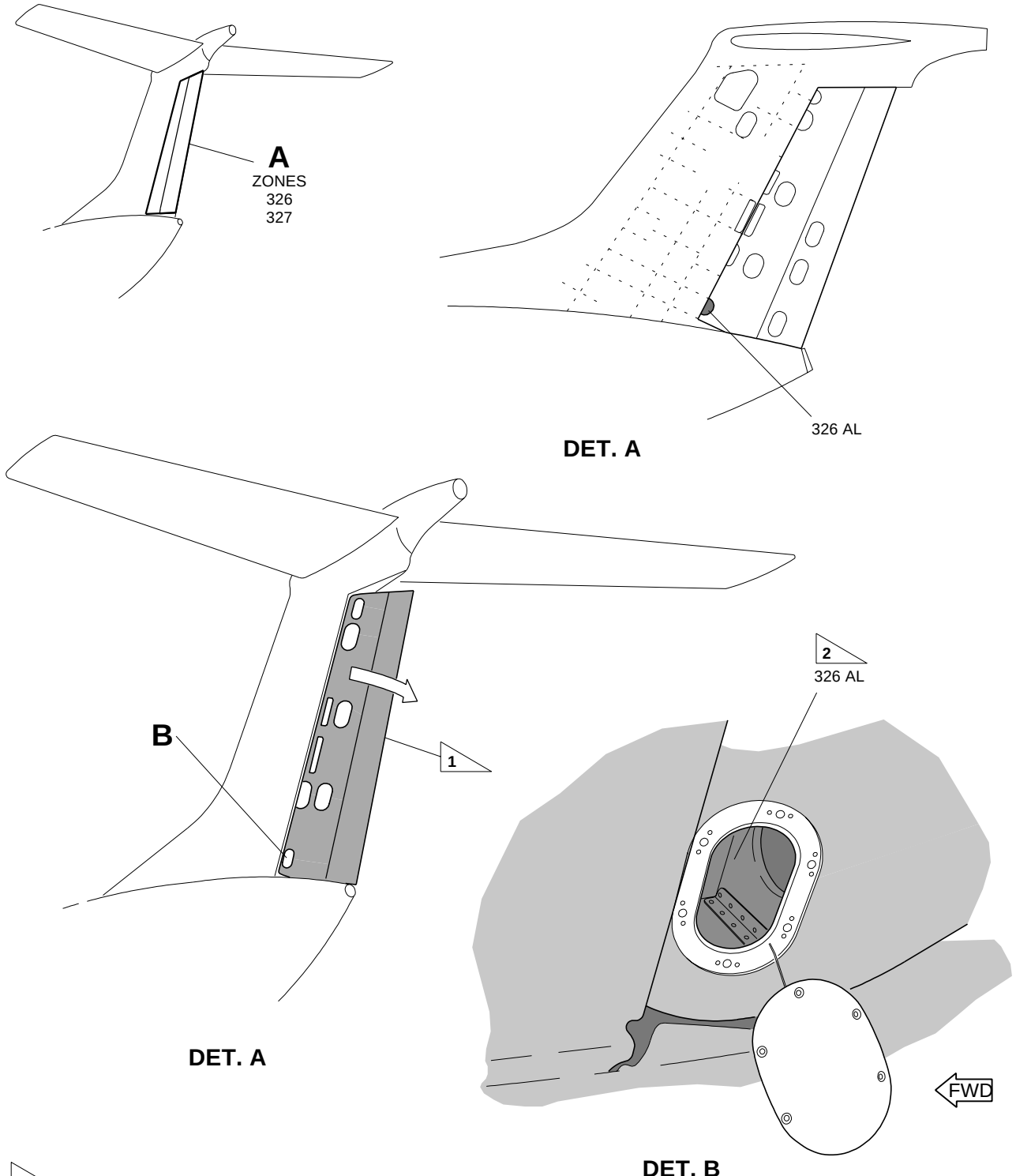
(2) Connect the bearing rod end of the control rod back to rudder II (AMM TASK 27-21-08-400-801-A/400).

(3) Connect the feedback rod back to rudder I (Figure 608).

(4) Connect the bearing rod end of the actuator rod back to rudder I (AMM TASK 27-22-02-400-801-A/400).

EFFECTIVITY: ALL

Cold Weather - Location of Rudder-I Internal Inspection
Figure 607



1 TURNED TO THE RIGHT SIDE

2 INTERNAL INSPECTION.

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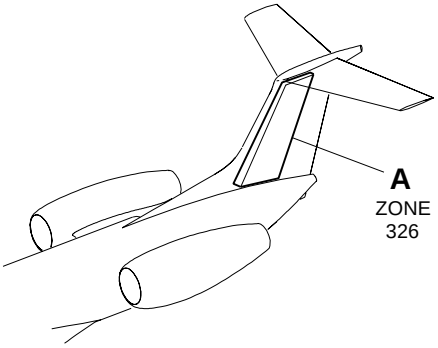
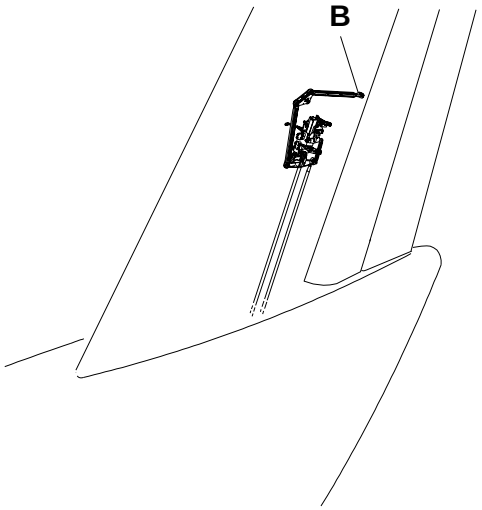
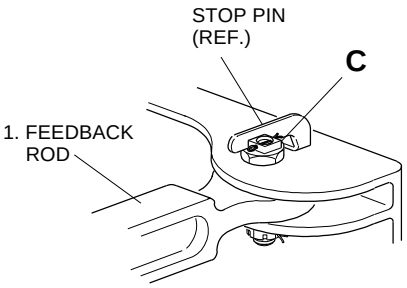
EFFECTIVITY: ALL

Feedback Rod Disconnection
Figure 608

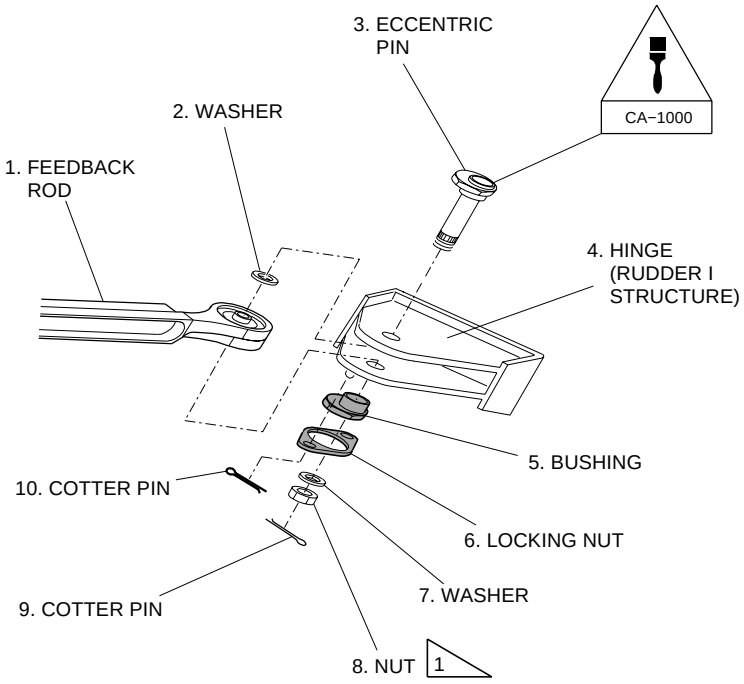




DET. A



DET. B



DET. C

1 TORQUE: 11.3−15.8 N.m (100−140 lb.in)

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