TR EXHAUST - MAINTENANCE PRACTICES

EFFECTIVITY: ALL

1. General

   A. This section gives the procedures to open/close and/or lock/unlock the thrust-reverser exhaust doors.

   B. This section also gives the procedures to isolate/reconnect the thrust-reverser hydraulic system if there is a leak.

   C. These tasks give you the procedures to open/close and/or lock/unlock the doors in the stowed and in the deployed positions. The inhibition bolts and plugs, and the hold-open stays are stored in the torsion box firewall.

   D. These procedures are applicable to the LH and RH thrust reversers, when you need to do a maintenance task.

   E. 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*
78-31-01-940-801-A	THRUST REVERSER - OPENING PROCEDURE	ALL
78-31-01-940-802-A	THRUST REVERSER - CLOSURE PROCEDURE	ALL
78-31-01-980-801-A	LOCK/UNLOCK THE TR EXHAUST DOOR - STOWED POSITION	ALL
78-31-01-980-802-A	LOCK/UNLOCK THE TR EXHAUST DOOR - DEPLOYED POSITION	ALL
78-31-01-980-803-A	THRUST REVERSER HYDRAULIC SYSTEM - ISOLATION PROCEDURE	ALL

TASK 78-31-01-940-801-A
EFFECTIVITY: ALL

2. THRUST REVERSER - OPENING PROCEDURE

A. General

(1) To open the thrust reverser with the hydraulic power off, do these tasks:

(a) Primary Lock Actuator - Unlock Procedure (AMM TASK 78-32-02-980-801-A/200).

(b) Tertiary Lock Actuator - Manual Operation (AMM TASK 78-32-05-980-801-A/200).

(c) Secondary Lock - Unlock Procedure (AMM TASK 78-32-01-980-801-A/200).

(2) Obey these instructions to do the thrust reverser opening procedure.

B. References

REFERENCE	*DESIGNATION*
AMM MPP 06-42-00/100	-
AMM MPP 78-30-00/200	- MAINTENANCE PRACTICES
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 29-10-00-860-801-A/200	HYDRAULIC SYSTEM - PRESSURIZATION WITH HTS
AMM TASK 32-00-01-910-801-A/200	LG SAFETY PIN - INSTALLATION AND REMOVAL
AMM TASK 78-31-01-980-802-A/200	LOCK/UNLOCK THE TR EXHAUST DOOR - DEPLOYED POSITION
AMM TASK 78-32-01-980-801-A/200	ENGINE THRUST-REVERSER ACTUATOR (SECONDARY LOCK) - UNLOCK PROCEDURE
AMM TASK 78-32-02-980-801-A/200	ENGINE THRUST-REVERSER DOOR PRIMARY LOCK ACTUATOR - UNLOCK PROCEDURE
AMM TASK 78-32-05-980-801-A/200	ENGINE THRUST-REVERSER ACTUATOR (TERTIARY LOCK) - MANUAL OPERATION
AMM TASK 78-33-01-980-801-A/200	ISOLATION CONTROL UNIT - INHIBITION PROCEDURES

C. Zones and Accesses

ZONE	*PANEL/DOOR*	*LOCATION*
312	312AR	Tail cone compartment

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Workstand	To get access to the thrust reverser/ICU	1

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	Cockpit
1	Does the task	External observer

I. Preparation

SUBTASK 841-002-A

WARNING:
- **REFER TO THE GROUND SAFETY PRECAUTIONS GIVEN IN AMM MPP 78-30-00/200 WHEN YOU DO THE THRUST REVERSER MAINTENANCE PROCEDURES.**
- **DURING THE THRUST REVERSER OPERATION PROCEDURES, MAKE SURE THAT THERE IS A TECHNICIAN (EXTERNAL OBSERVER) NEAR THE AIRCRAFT TO MONITOR THE THRUST REVERSER OPERATION. USE THE REAR INTERPHONE SYSTEM (RAMP) FOR COMMUNICATIONS BETWEEN THE COCKPIT AND THE EXTERNAL OBSERVER.**

(1) Make sure that the aircraft is safe for maintenance.

(2) The aircraft must be on the ground, and the landing gear must be down and locked.

(3) Put the workstand in the work area.

NOTE: Make sure that the workstand will not interfere with the thrust reverser doors during the opening procedure.

(4) Open access door 312AR (AMM MPP 06-42-00/100).

(5) Put the thrust lever to the “IDLE” position.

WARNING: TO PREVENT INJURY TO PERSONS AND DAMAGE TO THE MATERIAL, BEFORE YOU OPEN THE N2 CIRCUIT BREAKERS, MAKE SURE THAT THE SENSORS PITOT 1 - TAT 1/AOA 1, PITOT 3, AND PITOT 2 - TAT 2/AOA 2, ON THE OVERHEAD PANEL, ARE SET TO OFF.

(6) On the circuit breaker panel, open these circuit breakers and attach DO-NOT-CLOSE tags to them.

– N2 SIGNAL - 1A/1B

– N2 SIGNAL - 2A/2B

(7) Energize the aircraft with a DC Power Supply (AMM TASK 20-40-01-860-801-A/200).

J. Opening Procedure (Figure 201)

SUBTASK 940-002-A

WARNING:
- **REFER TO THE GROUND SAFETY PRECAUTIONS GIVEN IN AMM MPP 78-30-00/200 WHEN YOU DO THE THRUST REVERSER MAINTENANCE PROCEDURES.**
- **MAKE SURE THAT THE LANDING GEAR SAFETY PINS ARE INSTALLED TO PREVENT INJURY TO PERSONS AND DAMAGE TO MATERIAL (AMM TASK 32-00-01-910-801-A/200).**
- **MAKE SURE THAT THERE ARE NO OBJECTS, PERSONS, AND SUPPORT EQUIPMENT IN THE AREA, BEFORE YOU OPERATE THE THRUST REVERSER.**
- **BE CAREFUL: THE NOMINAL PRESSURE OF THE HYDRAULIC SYSTEM IS 3000 PSI. THUS, A LEAKAGE IN THE HYDRAULIC LINES COULD CAUSE INJURY TO PERSONS AND DAMAGE TO THE MATERIAL AND EQUIPMENT.**

CAUTION:
- DO NOT DO THE POWER-BACK OPERATION DURING MAINTENANCE PROCEDURES.
- MAKE SURE THAT ALL THE HYDRAULIC LINES ARE CONNECTED NOT TO LET THE HYDRAULIC OIL FALL OUT.
- ALWAYS CLEAN THE HYDRAULIC FLUID THAT FALLS FROM THE ENGINE. DAMAGE CAN COME FROM ITS CORROSIVE ACTION.

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

NOTE: During the test, turn on only the applicable hydraulic pump to operate the related thrust reverser, when possible.

(2) Open the thrust reverser as follows:

(a) Release the thrust lever idle lock trigger, and move the thrust lever to the maximum reverser position.

Result:

1 The thrust reverser doors go to the maximum deployed position.

NOTE: When you operate only one thrust lever, the FADEC permits the N1 request indication on the EICAS. But, if you operate the two thrust levers, the FADEC will inhibit the N1 request indication unless the engines are in operation.

2 Make sure that the EICAS screen shows the message “REV” (green).

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

(4) Manually inhibit the ICU (AMM TASK 78-33-01-980-801-A/200).

(5) Lock the thrust reverser doors in the deployed position (AMM TASK 78-31-01-980-802-A/200).

TASK 78-31-01-940-802-A
EFFECTIVITY: ALL

3. THRUST REVERSER - CLOSURE PROCEDURE

A. General

(1) Obey these instructions to do the thrust reverser closure procedure.

B. References

REFERENCE	*DESIGNATION*
AMM MPP 06-42-00/100	-
AMM MPP 78-30-00/200	- MAINTENANCE PRACTICES
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 29-10-00-860-801-A/200	HYDRAULIC SYSTEM - PRESSURIZATION WITH HTS
AMM TASK 78-31-01-980-802-A/200	LOCK/UNLOCK THE TR EXHAUST DOOR - DEPLOYED POSITION
AMM TASK 78-33-01-980-801-A/200	ISOLATION CONTROL UNIT - INHIBITION PROCEDURES

C. Zones and Accesses

ZONE	*PANEL/DOOR*	*LOCATION*
312	312AR	Tail cone compartment

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Workstand	To get access to the thrust reverser/ICU	1

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	Cockpit
1	Does the task	External observer

I. Closing Procedure (Figure 201)

SUBTASK 940-003-A

WARNING:
- **REFER TO THE GROUND SAFETY PRECAUTIONS GIVEN IN AMM MPP 78-30-00/200 WHEN YOU DO THE THRUST REVERSER MAINTENANCE PROCEDURES.**
- **MAKE SURE THAT THERE ARE NO OBJECTS, PERSONS, AND SUPPORT EQUIPMENT IN THE AREA BEFORE YOU OPERATE THE THRUST REVERSER.**
- **BE CAREFUL: THE NOMINAL PRESSURE OF THE HYDRAULIC SYSTEM IS 3000 PSI. THUS, A LEAKAGE IN THE HYDRAULIC LINES COULD CAUSE INJURY TO PERSONS AND DAMAGE TO THE MATERIAL AND EQUIPMENT.**

CAUTION:
- MAKE SURE THAT ALL THE HYDRAULIC LINES ARE CONNECTED NOT TO LET THE HYDRAULIC OIL FALL OUT.
- ALWAYS CLEAN THE HYDRAULIC FLUID THAT FALLS FROM THE ENGINE. DAMAGE CAN COME FROM ITS CORROSIVE ACTION.

(1) Unlock the thrust reverser doors (AMM TASK 78-31-01-980-802-A/200).

(2) Deinhibit the ICU (AMM TASK 78-33-01-980-801-A/200).

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

NOTE: During the test, turn on only the applicable hydraulic pump to operate the related thrust reverser, when possible.

(4) Close the thrust reverser as follows:

(a) Move the thrust lever to the idle position.

Result:

1 The thrust reverser doors go to the stowed position.

2 Make sure that the “REV” message goes out of view on the EICAS screen.

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

J. Follow-on

SUBTASK 842-003-A

(1) On the circuit breaker panel, remove the DO-NOT-CLOSE tags and close these circuit breakers:

- N2 SIGNAL 1A/1B
- N2 SIGNAL 2A/2B

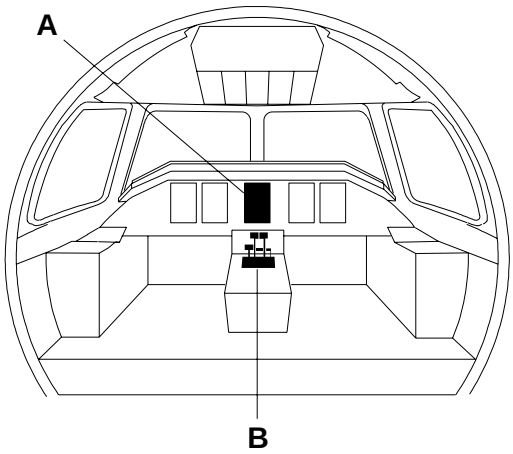
(2) Deenergize the aircraft (AMM TASK 20-40-01-860-801-A/200).

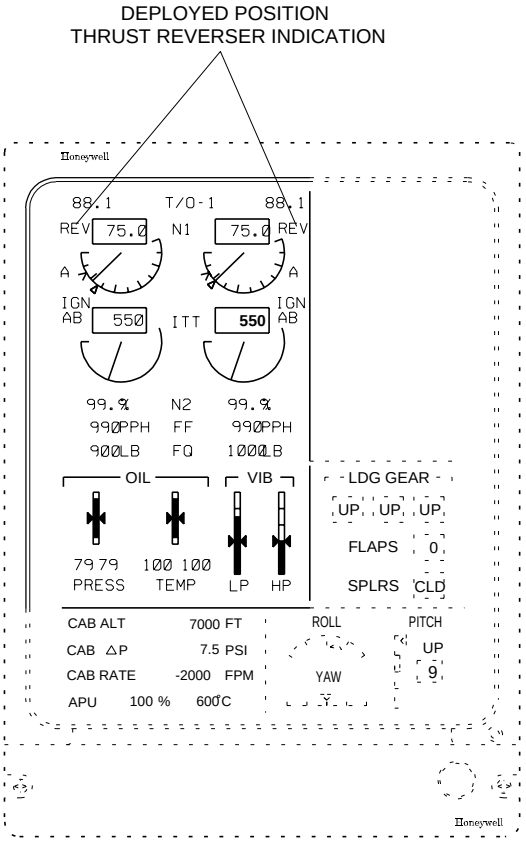
(3) Close access door 312AR (AMM MPP 06-42-00/100).

(4) Remove the workstand from the work area.

EFFECTIVITY: ALL

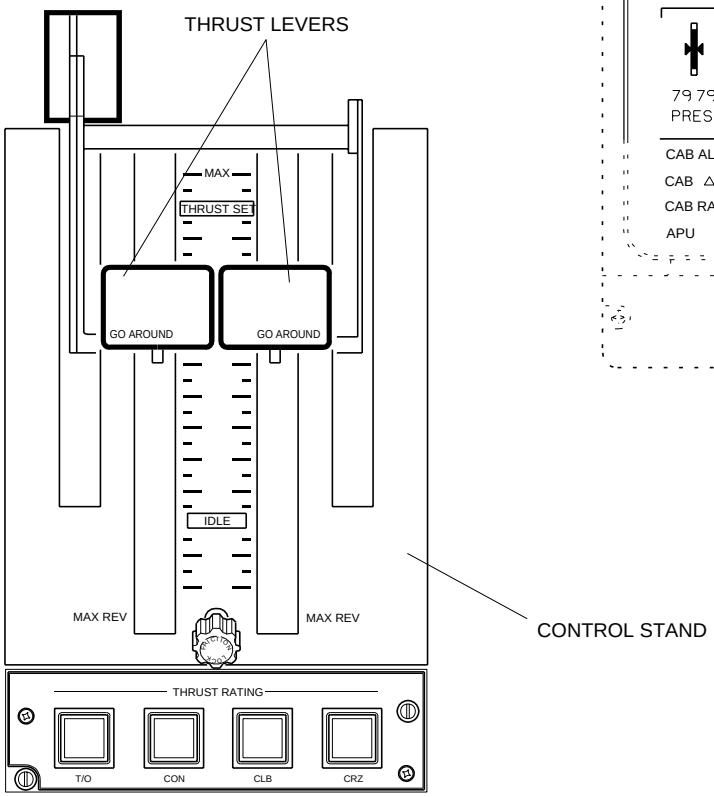
Thrust Reverser Opening/Closing Procedure - Component Locations
Figure 201 - Sheet 1





DET. A

EICAS DISPLAY

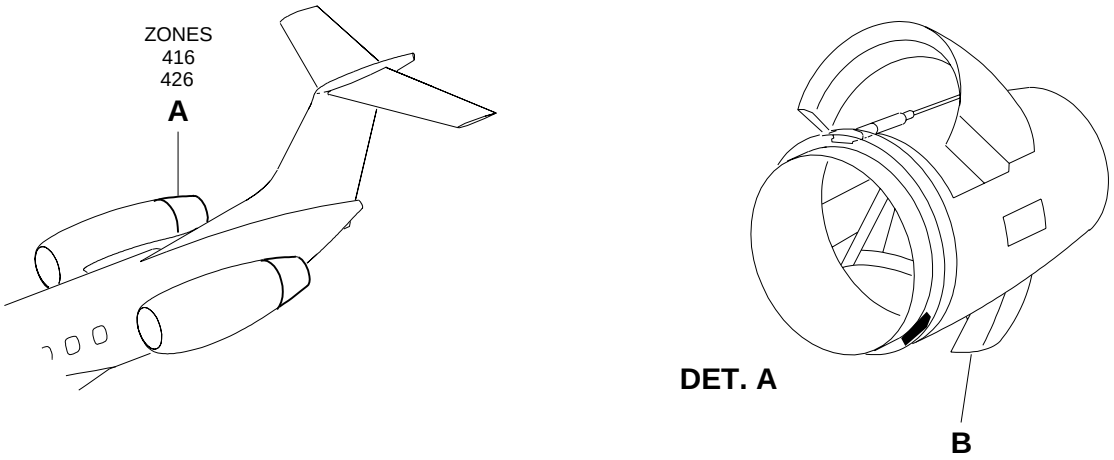


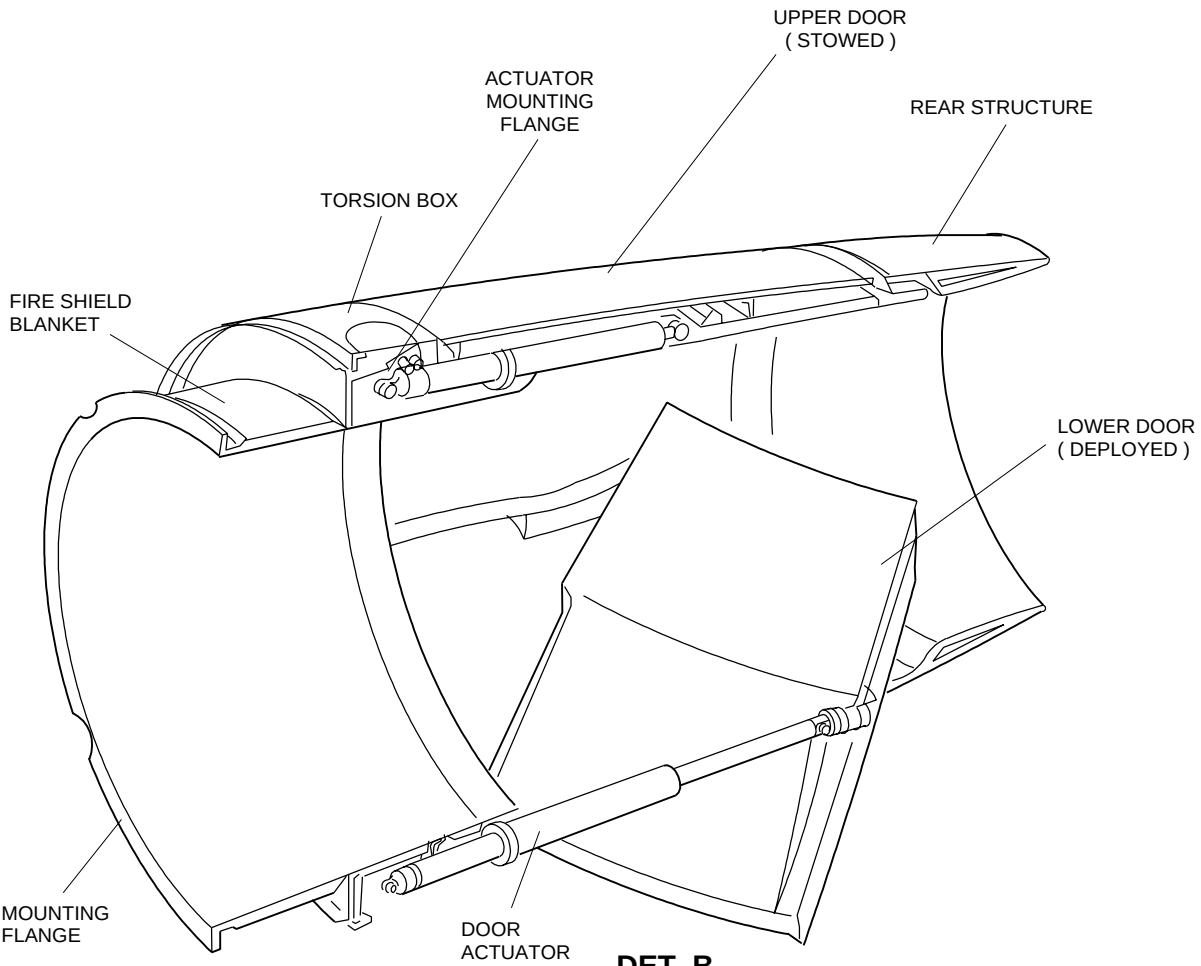
DET. B

145AMM780044.MCE A

EFFECTIVITY: ALL

Thrust Reverser Opening/Closing Procedure - Component Locations
Figure 201 - Sheet 2





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TASK 78-31-01-980-801-A
EFFECTIVITY: ALL

4. LOCK/UNLOCK THE TR EXHAUST DOOR - STOWED POSITION

A. General

(1) Obey these instructions to lock/unlock the thrust reverser exhaust doors in the stowed position. There is one subtask for the lock procedure and other for the unlock procedure.

(2) Use inhibition bolts when the aircraft operates with the reversers locked. The function of the bolts is to permit the aircraft to operate with the reversers in a non-operational condition.

B. References

REFERENCE	*DESIGNATION*
AMM MPP 06-43-00/100	- COMPONENT LOCATION
AMM MPP 78-30-00/200	- MAINTENANCE PRACTICES
AMM TASK 71-12-01-000-801-A/400	ENGINE LOWER COWLING - OPENING
AMM TASK 71-12-01-400-801-A/400	ENGINE LOWER COWLING - CLOSING
AMM TASK 78-33-01-980-801-A/200	ISOLATION CONTROL UNIT - INHIBITION PROCEDURES

C. Zones and Accesses

ZONE	*PANEL/DOOR*	*LOCATION*
413	LH Lower cowling	Engine nacelle
423	RH Lower cowling	Engine nacelle
416	416LT/416DB	LH Thrust reverser
426	426LT/426DB	RH Thrust reverser
312	312AR	Rear Fuselage ll

D. Tools and Equipment

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
	Workstand	To get access to the work area	
	Door Inhibition Bolt (Installed on the thrust reverser torsion box firewall)	To lock the thrust reverser doors in the stowed position	

E. Auxiliary Items

Not Applicable

F. Consumable Materials

SPECIFICATION (BRAND)	*DESCRIPTION*	*QTY*
Lubricant - grease 33	Molykote (Dow Corning)	AR

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	Thrust reverser

I. Preparation

SUBTASK 841-003-A

WARNING: REFER TO THE GROUND SAFETY PRECAUTIONS GIVEN IN AMM MPP 78-30-00/200 WHEN YOU DO THE THRUST REVERSER MAINTENANCE PROCEDURES.

(1) On the circuit breaker panel, open these circuit breakers and attach DO-NOT-CLOSE tags to them:

– THRUST REVERSER 1

– THRUST REVERSER 2

– HYD. ELEC. PUMP 1

– HYD. ELEC. PUMP 2

(2) Put a sign on the instrument panel, in the cockpit, with this warning: “DO NOT OPERATE THE THRUST REVERSERS”.

(3) Put the Isolation Control Unit in the inhibit position (AMM TASK 78-33-01-980-801-A/200).

(4) Put the workstand in the work area.

(5) Open the engine lower cowling (AMM TASK 71-12-01-000-801-A/400).

J. TR Exhaust Door Locking Procedure (Figure 202)

SUBTASK 980-002-A

WARNING: KEEP THE ICU IN THE INHIBIT POSITION ALL THE TIME WHEN YOU HAVE THE THRUST REVERSER DOORS LOCKED IN THE STOWED POSITION.

(1) Get access to the torsion box firewall and open the clamps (1).

(2) Remove the door inhibition bolts (2) from their location and close the clamps (1).

(3) Remove the screws (3) and inhibition plugs (4) 416LT/416DB/426LT/426DB (AMM MPP 06-43-00/100) from the upper and lower thrust reverser doors.

(4) Install the door inhibition bolts (2) to the hole in the thrust reverser doors and tighten them.

NOTE: • Install the shorter inhibition bolt in the upper inhibition hole, and the longer inhibition bolt in the lower inhibition hole.

- Apply Molykote (grease 33) lubricant to the bolt thread if necessary. Tighten the bolt with a 3/8 inch spanner. The doors must stay in line with the structure when the inhibition bolts are correctly installed.

(5) Install the inhibition plugs (4) to the inhibition plug storage location on the torsion box firewall.

K. TR Exhaust Door Unlocking Procedure (Figure 202)

SUBTASK 980-003-A

(1) Remove the inhibition plugs (4) from the inhibition-plug storage location on the torsion box firewall.

(2) Remove the door inhibition bolts (2) from the upper and lower thrust reverser doors.

(3) With the screws (3), install inhibition plugs (4) 416LT/416DB/426LT/426DB (AMM MPP 06-43-00/100) to the upper and lower thrust reverser doors.

(4) Get access to the torsion-box firewall and open the clamps (1).

(5) Install the door inhibition bolts (2) to its storage location and close the clamps (1).

(6) Deinhibit the ICU (AMM TASK 78-33-01-980-801-A/200).

L. Follow-on

SUBTASK 842-002-A

(1) Close the engine lower cowling (AMM TASK 71-12-01-400-801-A/400).

(2) Remove the workstand from the work area.

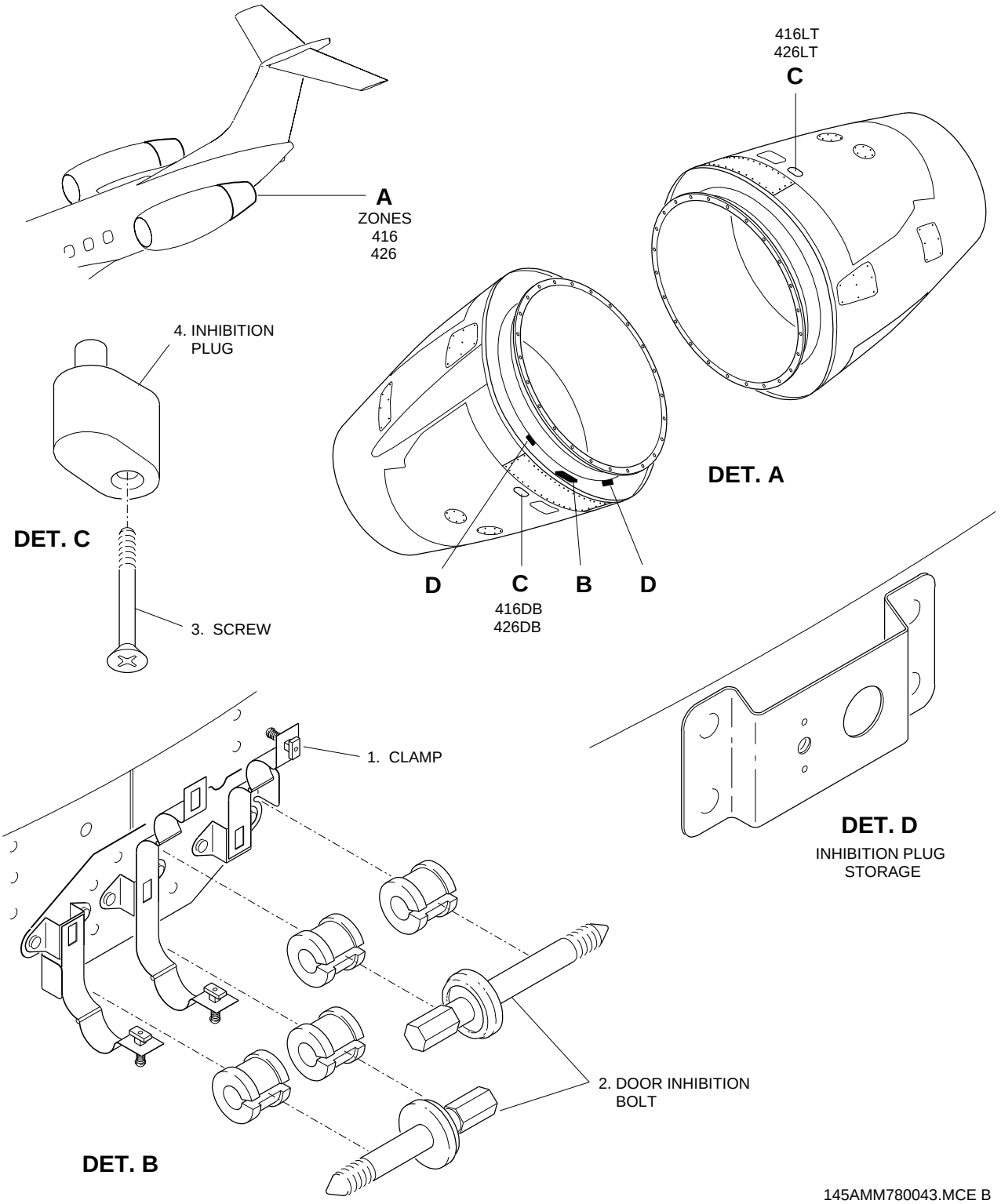
(3) Remove the DO-NOT-OPERATE-THE-THRUST-REVERSERS warning from the instrument panel, in the cockpit.

(4) On the circuit breaker panel, remove the DO-NOT-CLOSE tags and close these circuit breakers:

- THRUST REVERSER 1
- THRUST REVERSER 2
- HYD. ELEC. PUMP 1
- HYD. ELEC. PUMP 2

EFFECTIVITY: ALL

TR Exhaust Door Locking/Unlocking - Stowed Position
Figure 202



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TASK 78-31-01-980-802-A
EFFECTIVITY: ALL

5. LOCK/UNLOCK THE TR EXHAUST DOOR - DEPLOYED POSITION

A. General

(1) This task gives you the necessary instructions to lock the thrust-reverser exhaust door in the deployed position for maintenance purposes.

B. References

REFERENCE	*DESIGNATION*
AMM MPP 78-30-00/200	- MAINTENANCE PRACTICES
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 71-12-01-000-801-A/400	ENGINE LOWER COWLING - OPENING
AMM TASK 71-12-01-400-801-A/400	ENGINE LOWER COWLING - CLOSING
AMM TASK 78-31-01-940-801-A/200	THRUST REVERSER - OPENING PROCEDURE
AMM TASK 78-31-01-940-802-A/200	THRUST REVERSER - CLOSURE PROCEDURE
AMM TASK 78-33-01-980-801-A/200	ISOLATION CONTROL UNIT - INHIBITION PROCEDURES

C. Zones and Accesses

ZONE	*PANEL/DOOR*	*LOCATION*
413	LH Lower cowling	Engine nacelle
423	RH Lower cowling	Engine nacelle
312	312AR	Rear fuselage ll

D. Tools and Equipment

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
	Workstand	To get access to the work area	
	Hold-Open Stay (Installed on the thrust reverser)	To lock the thrust reverser doors in the deployed position	

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	Thrust reverser/cockpit

I. Preparation

SUBTASK 841-004-A

WARNING: REFER TO THE GROUND SAFETY PRECAUTIONS GIVEN IN AMM MPP 78-30-00/200 WHEN YOU DO THE THRUST REVERSER MAINTENANCE PROCEDURES.

CAUTION: MAKE SURE THAT ALL THE HYDRAULIC LINES ARE CONNECTED NOT TO LET THE HYDRAULIC OIL FALL OUT.

(1) Put the workstand in the work area.

(2) Open the engine lower cowling (AMM TASK 71-12-01-000-801-A/400).

(3) Loosen the bolts that attach the hold-open stay to the torsion box firewall and remove the hold-open stay from its location.

WARNING: TO PREVENT INJURY TO PERSONS AND DAMAGE TO THE MATERIAL, BEFORE YOU OPEN THE N2 CIRCUIT BREAKERS, MAKE SURE THAT THE SENSORS PITOT 1 - TAT 1/AOA 1, PITOT 3, AND PITOT 2 - TAT 2/AOA 2, ON THE OVERHEAD PANEL, ARE SET TO OFF.

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

- N2 SIGNAL 1A/1B
- N2 SIGNAL 2A/2B

(5) Energize the aircraft with DC Power Supply (AMM TASK 20-40-01-860-801-A/200).

J. TR Exhaust Doors Locking Procedure (Figure 203)

SUBTASK 980-004-A

WARNING: DURING THE TR OPERATION, KEEP A SAFE DISTANCE FROM THE THRUST REVERSER DOORS TO PREVENT INJURIES.

(1) Open the thrust reverser (AMM TASK 78-31-01-940-801-A/200).

(2) Inhibit the ICU (AMM TASK 78-33-01-980-801-A/200).

CAUTION: DAMAGE TO THE PIVOT DOOR ACTUATOR ROD CAN DAMAGE THE ACTUATOR SEALS. THIS WILL RESULT IN LEAKAGE OF HYDRAULIC FLUID FROM THE ACTUATOR. TAKE CARE NOT TO DAMAGE THE ACTUATOR ROD WHEN YOU REMOVE THE HOLD-OPEN STAY AND WHEN YOU USE MAINTENANCE TOOLS NEAR THE PIVOT DOOR ACTUATOR.

(3) Install the hold-open stay to the door-actuator rod.

CAUTION: DAMAGE TO THE ACTUATOR ROD CAN OCCUR IF BOLTS ARE NOT FULLY IN.

(4) Install the bolts to attach the hold-open stay to the actuator rod. Make sure that the stay attachment bolts go fully into the self-locking nuts.

K. TR Exhaust Doors Unlocking Procedure (Figure 203)

SUBTASK 980-005-A

WARNING: REFER TO THE GROUND SAFETY PRECAUTIONS GIVEN IN AMM MPP 78-30-00/200 WHEN YOU DO THE THRUST REVERSER MAINTENANCE PROCEDURES.

CAUTION: MAKE SURE THAT THE SYSTEM HAS NO PRESSURE APPLIED.

(1) Remove the bolts from the hold-open stays.

CAUTION: DAMAGE TO THE PIVOT DOOR ACTUATOR ROD CAN DAMAGE THE ACTUATOR SEALS. THIS WILL RESULT IN LEAKAGE OF HYDRAULIC FLUID FROM THE ACTUATOR. TAKE CARE NOT TO DAMAGE THE ACTUATOR ROD WHEN YOU REMOVE THE HOLD-OPEN STAY AND WHEN YOU USE MAINTENANCE TOOLS NEAR THE PIVOT DOOR ACTUATOR.

(2) Remove the hold-open stay from the door-actuator rod.

(3) Deinhibit the ICU (AMM TASK 78-33-01-980-801-A/200).

(4) Close the thrust reverser (AMM TASK 78-31-01-940-802-A/200).

L. Follow-on

SUBTASK 842-004-A

(1) Deenergize the aircraft DC Power Supply (AMM TASK 20-40-01-860-801-A/200).

(2) On the circuit breaker panel, remove the DO-NOT-CLOSE tags and close these circuit breakers:

- N2 SIGNAL 1A/1B
- N2 SIGNAL 2A/2B

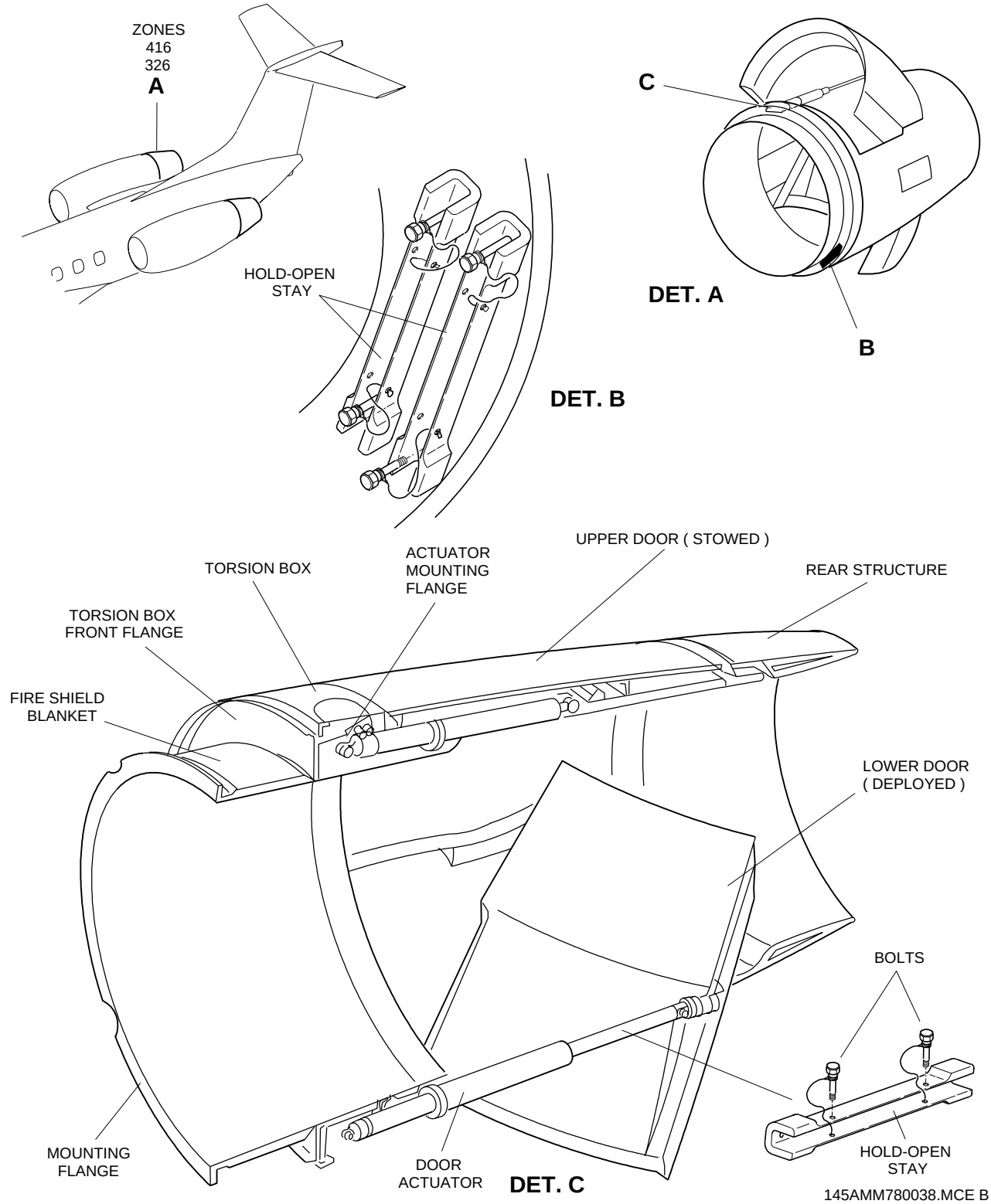
(3) Install the hold-open stay to the torsion-box firewall with its bolts.

(4) Close the engine lower cowling (AMM TASK 71-12-01-400-801-A/400).

(5) Remove the workstand from the work area.

EFFECTIVITY: ALL

TR Exhaust Door Locking/Unlocking - Deployed Position
Figure 203



TASK 78-31-01-980-803-A
EFFECTIVITY: ALL

6. THRUST REVERSER HYDRAULIC SYSTEM - ISOLATION PROCEDURE

A. General

(1) Obey these instructions to isolate/reconnect the thrust-reverser hydraulic system from/to the aircraft hydraulic system. There is one subtask to isolate the system and other to reconnect it.

(2) Do this procedure when you have a leak in the thrust-reverser hydraulic system. Refer to the Dispatch Deviations Procedures Manual (DDPM 78-30-00) before you get approval for aircraft flight.

B. References

REFERENCE	*DESIGNATION*
AMM MPP 06-42-00/100	-
AMM MPP 78-30-00/200	- MAINTENANCE PRACTICES
AMM TASK 29-10-00-860-801-A/200	HYDRAULIC SYSTEM - PRESSURIZATION WITH HTS
AMM TASK 29-10-00-860-802-A/200	HYDRAULIC SYSTEM - PRESSURIZATION WITH EMDP
AMM TASK 54-52-01-000-801-A/400	PYLON FAIRINGS - REMOVAL
AMM TASK 71-12-01-000-801-A/400	ENGINE LOWER COWLING - OPENING
AMM TASK 71-12-01-400-801-A/400	ENGINE LOWER COWLING - CLOSING
AMM TASK 78-31-01-700-801-A/500	THRUST REVERSER - OPERATIONAL CHECK
AMM TASK 78-33-01-980-801-A/200	ISOLATION CONTROL UNIT - INHIBITION PROCEDURES
DDPM 78-30-00	-

C. Zones and Accesses

ZONE	*PANEL/DOOR*	*LOCATION*
312	312AR	Rear fuselage ll
414	Pylon Lower Fairing	LH Pylon
424	Pylon Lower Fairing	RH Pylon
416		LH Thrust Reverser
426		RH Thrust Reverser

D. Tools and Equipment

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Workstand	To get access to the engine nacelle	

E. Auxiliary Items

ITEM	*DESCRIPTION*	*PURPOSE*	*QTY*
Commercially available	Rubber Gloves, Phosphate Ester-Base, Fluid-Resistant	Protection for the hands	1
Commercially available	Rubber Goggles, Phosphate Ester-Base, Fluid-Resistant	Protection for the eyes	1
SAE-AS-18280	Pressure line cap (P/N MS 21914-6)	To isolate the hydraulic pressure line	2
SAE-AS-4841	Return line cap (P/N AN929-6J)	To isolate the hydraulic return line	2

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	*FUNCTION*	*PLACE*
1	Does the task	Thrust Reverser area

I. Preparation

SUBTASK 841-005-A

WARNING:
- **REFER TO THE GROUND SAFETY PRECAUTIONS GIVEN IN AMM MPP 78-30-00/200 WHEN YOU DO THE THRUST REVERSER MAINTENANCE PROCEDURES.**
- **MAKE SURE THAT THE ELECTRICAL POWER SUPPLY IS REMOVED FROM THRUST REVERSERS. ENERGIZED CIRCUITS CAN CAUSE INJURY TO PERSONS.**
- **MAKE SURE THAT THE HYDRAULIC TEST STAND IS NOT CONNECTED. THE THRUST LEVERS MUST BE IN THE IDLE OR FORWARD THRUST POSITION BEFORE YOU START THE JOB.**
- **THE HYDRAULIC SYSTEM CONTAINS PHOSPHATE-ESTER HYDRAULIC FLUID. THE FLUID CAN CAUSE IRRITATION IN YOUR SKIN OR INJURY TO YOUR EYES. USE THE APPLICABLE GOGGLES AND RUBBER GLOVES. IF THE FLUID TOUCHES YOU, FLUSH YOUR SKIN WITH WATER. IF IT GETS IN YOUR EYES, FLUSH THEM WITH WATER AND GET MEDICAL HELP.**

CAUTION:
- ALWAYS CLEAN THE HYDRAULIC FLUID THAT FALLS FROM THE ENGINE. DAMAGE CAN COME FROM ITS CORROSIVE ACTION.
- USE APPLICABLE CONTAINERS TO COLLECT THE REMAINING FLUIDS FROM THE OPEN LINES TO KEEP THE WORK AREA CLEAN AND SAFE.

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

- THRUST REVERSER 1.
- THRUST REVERSER 2.
- HYD. ELEC. PUMP 1.
- HYD. ELEC. PUMP 2.

(2) Put a DO-NOT-OPERATE-THE-THRUST-REVERSERS sign on the instrument panel, in the cockpit.

(3) Fully release the pressure from the hydraulic system (AMM TASK 29-10-00-860-801-A/200).

NOTE: Hydraulic system No. 1 pressurizes the LH engine thrust reverser, and hydraulic system No. 2 pressurizes the RH engine thrust reverser.

(4) Get access to the right side of rear fuselage ll and open access door 312AR (AMM MPP 06-42-00/100).

(5) Inhibit the ICU (AMM TASK 78-33-01-980-801-A/200).

(6) Put the workstand in the work area.

(7) Remove the pylon lower fairing (AMM TASK 54-52-01-000-801-A/400).

(8) Open the engine lower cowling (AMM TASK 71-12-01-000-801-A/400).

(9) Put a container below the hydraulic connections.

J. TR Hydraulic Lines - Isolation Procedure (Figure 204)

SUBTASK 980-006-A

CAUTION: KEEP THE HOSES CORRECTLY PROTECTED TO PREVENT CONTAMINATION OF THE HYDRAULIC SYSTEM WHEN YOU INSTALL THEM AGAIN.

(1) Remove the supply and return hydraulic hoses (1) and keep them to be used again. Refer to VIEW B of Figure 204.

CAUTION: TORQUE THE HYDRAULIC FITTINGS CAREFULLY TO PREVENT TORSION OF THE HYDRAULIC TUBES, WHICH CAN CAUSE RUPTURES AND LEAKS.

(2) Install caps (2) to the open ends. Refer to DET. C and DET. D of Figure 204.

K. TR Hydraulic Lines - Reconnect Procedure (Figure 204)

SUBTASK 980-007-A

(1) Remove the caps (2) from the open ends. Refer to DET. C and DET. D of Figure 204.

CAUTION: TORQUE THE HYDRAULIC FITTINGS CAREFULLY TO PREVENT TORSION OF THE HYDRAULIC TUBES, WHICH CAN CAUSE RUPTURES AND LEAKS.

(2) Install the supply and return hydraulic hoses (1) back. Refer to VIEW B of Figure 204.

(3) De-inhibit the ICU (AMM TASK 78-33-01-980-801-A/200).

(4) Do these steps and then do the engine thrust-reverser operational check (AMM TASK 78-31-01-700-801-A/500).

L. Follow-on

SUBTASK 842-005-A

(1) Remove the container from the work place.

(2) Close the engine lower cowling (AMM TASK 71-12-01-400-801-A/400).

(3) Install the pylon lower fairing AMM TASK 54-52-01-000-801-A/400.

(4) Remove all tools, material, and equipment from the work area. Make sure that the area is clean.

(5) Remove the workstand from the work area.

(6) On the circuit breaker panel, close these circuit breakers and remove the DO-NOT-CLOSE tag from them:

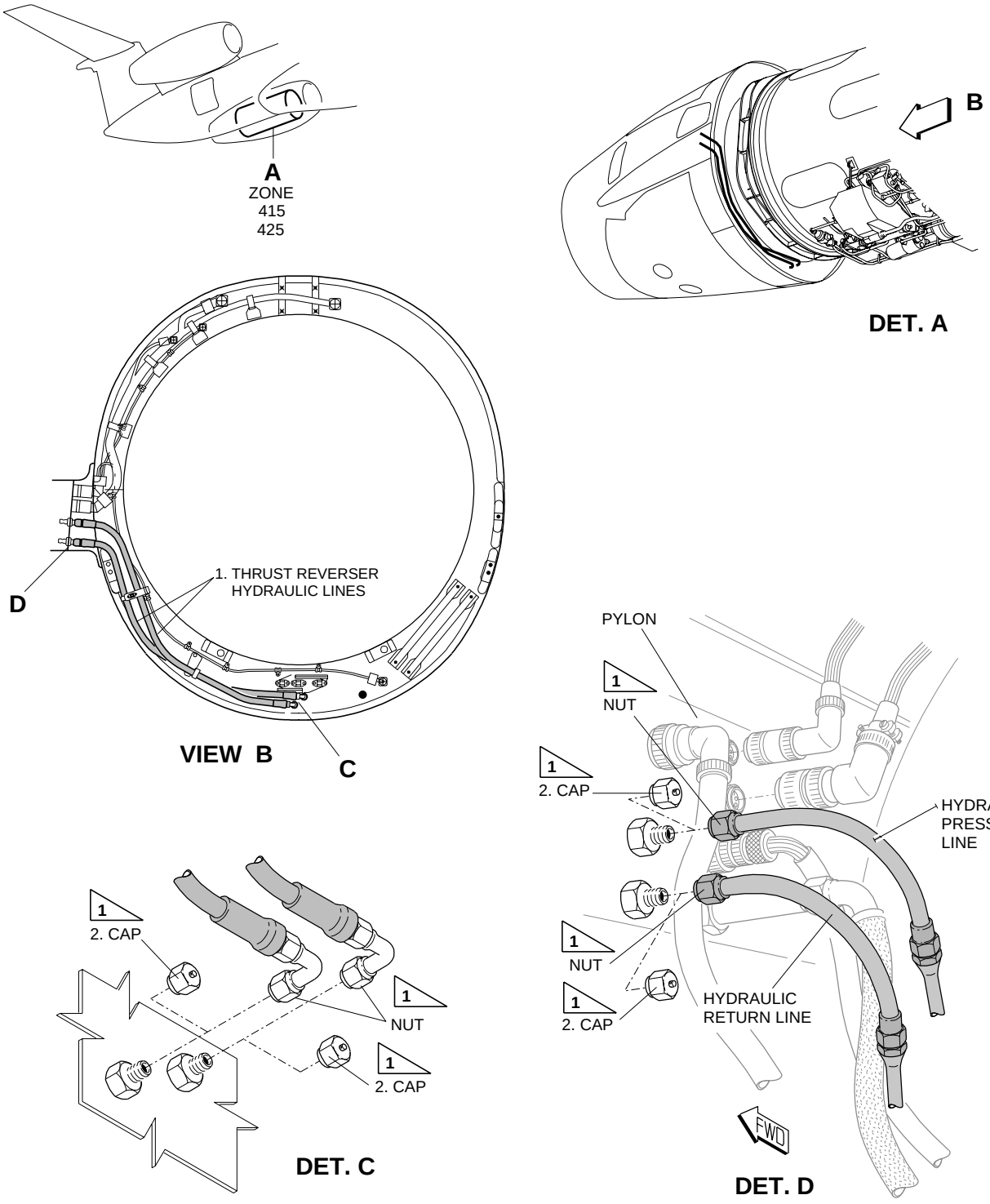
- THRUST REVERSER 1.
- THRUST REVERSER 2.
- HYD. ELEC. PUMP 1.
- HYD. ELEC. PUMP 2.

(7) Remove the DO-NOT-OPERATE-THE-THRUST-REVERSERS warning sign.

(8) Pressurize the aircraft hydraulic system (AMM TASK 29-10-00-860-802-A/200).

EFFECTIVITY: ALL

TR Hydraulic System - Isolation/Reconnection Procedure
Figure 204



1 TORQUE VALUE OF HYDRAULIC INTERFACE CONNECTIONS 30.5 Nm (270 lb.in)

145AMM780135.MCE