

## PIVOT BOLTS - REMOVAL/INSTALLATION

*EFFECTIVITY: ALL*

1. General

- A. This section gives the procedures to remove and install the thrust-reverser pivot bolts.
- B. These procedures are applicable to the LH and RH thrust reversers.
- 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
78-31-05-000-801-A	THRUST-REVERSER PIVOT BOLTS - RE-MOVAL	ALL
78-31-05-400-801-A	THRUST-REVERSER PIVOT BOLTS - INSTALLATION	ALL

TASK 78-31-05-000-801-A

EFFECTIVITY: ALL

## 2. THRUST-REVERSER PIVOT BOLTS - REMOVAL

### A. General

(1) Obey the instructions below to remove the thrust-reverser pivot bolts.

### B. References

REFERENCE	DESIGNATION
AMM MPP 06-43-00/100	- COMPONENT LOCATION
AMM MPP 78-30-00/200	- MAINTENANCE PRACTICES
AMM TASK 54-52-01-000-801-A/400	PYLON FAIRINGS - REMOVAL
AMM TASK 78-31-01-980-801-A/200	LOCK/UNLOCK THE TR EXHAUST DOOR - STOWED POSITION

### C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
416	416SL/416VZ/416WZ/416UL	LH Thrust reverser left side
416	416RR/416XZ/416YZ/416TR	LH Thrust reverser right side
426	426SL/426VZ/426WZ/426UL	RH Thrust reverser left side
426	426RR/426XZ/426YZ/426TR	RH Thrust reverser right side

### D. Tools and Equipment

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

### 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

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.

- MAKE SURE THAT THE ELECTRICAL POWER SUPPLY IS REMOVED FROM THE THRUST REVERSERS. ENERGIZED CIRCUITS CAN CAUSE INJURY TO PERSONS.
- MAKE SURE THAT THE HYDRAULIC TEST STAND IS NOT CONNECTED.

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

- (1) On the circuit breaker panel, open the circuit breakers below and attach a DO-NOT-CLOSE tag to them:
  - THRUST REVERSER 1/2.
  - HYD. ELEC. PUMP 1/2.
- (2) Put a DO-NOT-OPERATE-THE-THRUST-REVERSERS sign on the instrument panel, in the cockpit.
- (3) Put the workstand under the engine thrust reverser.
- (4) Remove the pylon trailing-edge fairing ( [AMM TASK 54-52-01-000-801-A/400](#)).
- (5) Lock the thrust-reverser exhaust door (stowed position) ([AMM TASK 78-31-01-980-801-A/200](#)).
- (6) Remove pivot access panels 416SL, 416RR, 416UL, 416TR, 426SL, 426RR, 426UL, and 426TR ( [AMM MPP 06-43-00/100](#)), to get access at pivot point to the door attaching point outer side of the 3-o'clock beam and 9-o'clock beam.
- (7) Through the thrust-reverser exhaust hole, remove pivot-point cover access panels 416VZ, 416XZ, 416WZ, 416YZ, 426VZ, 426XZ, 426WZ, and 426YZ ( [AMM MPP 06-43-00/100](#)), to get access at pivot point to the door attaching point inner side of the 3-o'clock door side and 9-o'clock door side.

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

SUBTASK 020-002-A

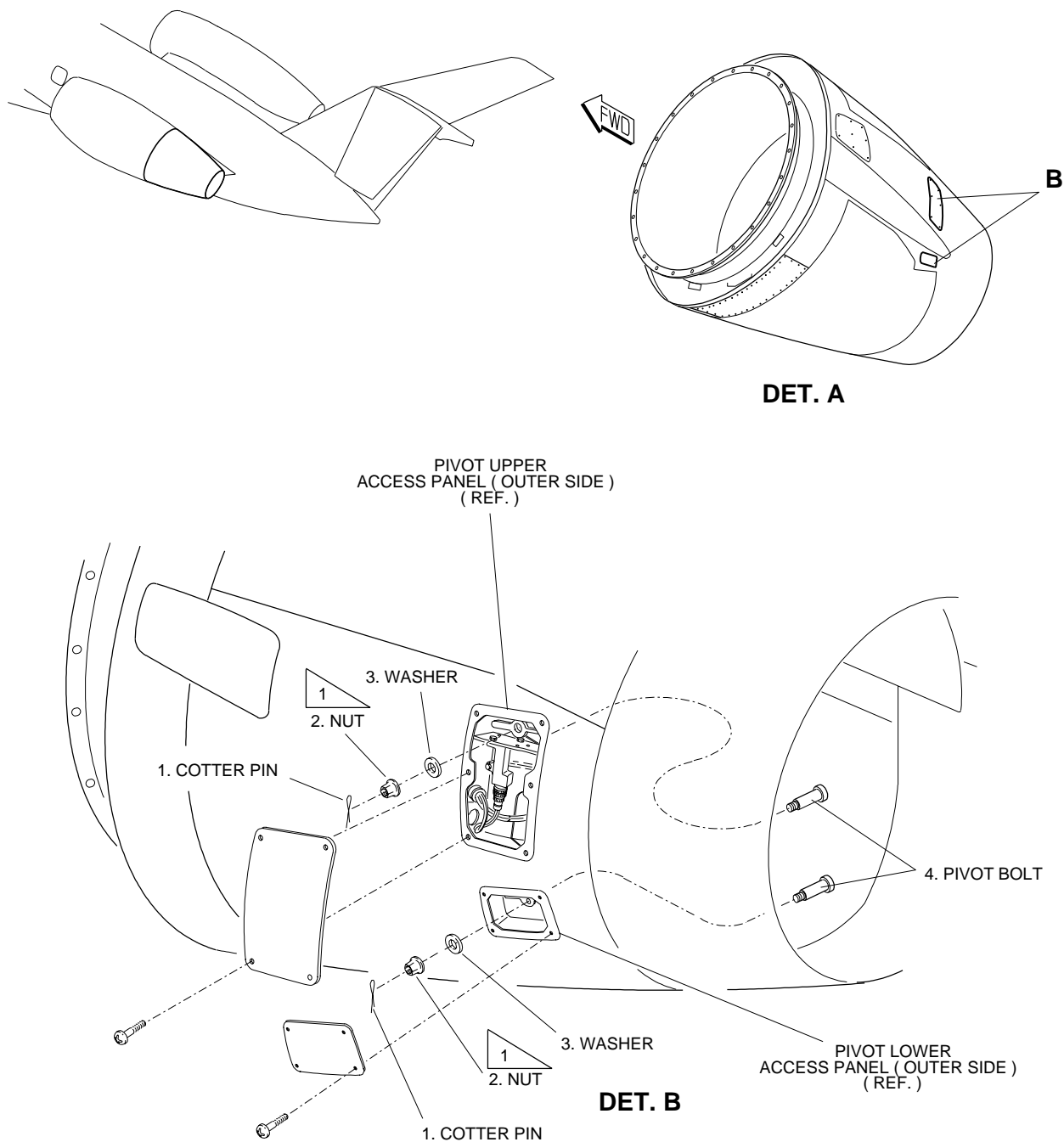
**WARNING:** DO NOT APPLY HYDRAULIC POWER TO THE AIRCRAFT, AND DO NOT OPERATE THE THRUST REVERSER WHILE THE MAINTENANCE PERSONS ARE AT WORK.

- (1) Through the access panels removed before, on the 3-o'clock beam and 9-o'clock beam outer surface (step 3) and on the pivot door 3-o'clock side and 9-o'clock side inner surface (step 4), remove the cotter pin ( 1), nut (2), washer (3), and pivot bolt (4).

EFFECTIVITY: ALL

Thrust-Reverser Pivot Bolts - Removal/Installation

Figure 401



TORQUE: 120 N.m TO 140 N.m ( 1062 lb.in TO 1239 lb.in )

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TASK 78-31-05-400-801-A  
EFFECTIVITY: ALL

### 3. THRUST-REVERSER PIVOT BOLTS - INSTALLATION

#### A. General

(1) Obey the instructions below to install the thrust-reverser pivot bolts.

#### B. References

REFERENCE	DESIGNATION
-	-
AMM MPP 06-43-00/100	- COMPONENT LOCATION
AMM MPP 78-30-00/200	- MAINTENANCE PRACTICES
AMM TASK 54-52-01-400-801-A/400	PYLON FAIRINGS - INSTALLATION
AMM TASK 78-31-01-700-801-A/500	THRUST REVERSER - OPERATIONAL CHECK
AMM TASK 78-31-01-980-801-A/200	LOCK/UNLOCK THE TR EXHAUST DOOR - STOWED POSITION

#### C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
416	416SL/416VZ/416WZ/416UL	LH Thrust reverser left side
416	416RR/416XZ/416YZ/416TR	LH Thrust reverser right side
426	426SL/426VZ/426WZ/426UL	RH Thrust reverser left side
426	426RR/426XZ/426YZ/426TR	RH Thrust reverser right side

#### D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Workstand	To get access to the engine nacelle	
Commercially available	Torque wrench	To tighten the attachment nuts	

#### E. Auxiliary Items

Not Applicable

#### F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
ASTM-D-740	Methyl-ethyl-ketone	AR

G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
Cotter pin	-	1

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.

- CLEANING PRODUCTS ARE TOXIC AND FLAMMABLE. A GOOD FLOW OF AIR MUST BE AVAILABLE WHEN THE WORK IS DONE IN A CLOSED AREA.

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

- DO NOT PERMIT THE CLEANING PRODUCT TO TOUCH PAINT-FINISH SURFACES NOT TO CAUSE DAMAGE TO THEM.
- USE CLEAN, SOFT (COTTON), NON-SYNTHETIC AND LINT-FREE CLOTHS ONLY. DO NOT PUT REMAINING CLEANING MATERIAL BACK INTO ORIGINAL CONTAINERS TO PREVENT CONTAMINATION.
- DO NOT POUR CLEANING PRODUCT DIRECTLY ON THE SURFACE TO BE CLEANED.
- DO NOT PERMIT CLEANING PRODUCT TO EVAPORATE BEFORE IT IS DRIED WITH THE CLOTH.

- (1) Soak a cloth with methyl-ethyl-ketone and clean the pivot bolts (4) that attach the door to the beam structure, and their receptacles.
- (2) Dry the area with other clean and dry cloth before the methyl-ethyl-ketone evaporates.
- (3) Do steps 1 and 2 again. Replace the cloths when they become dirty. Stop only when no signs of discoloration stay in the dry cloth.
- (4) Make sure that, on the circuit breaker panel, the circuit breakers below are open and tagged:
  - THRUST REVERSER 1/2.
  - HYD. ELEC. PUMP 1/2.

J. Installation (Figure 401)

*SUBTASK 420-002-A*

**WARNING:** • **MAKE SURE THAT ELECTRICAL POWER SUPPLY IS REMOVED FROM THE THRUST REVERSERS. ENERGIZED CIRCUITS CAN CAUSE INJURY TO PERSONS.**

- **MAKE SURE THAT THE HYDRAULIC TEST STAND IS NOT CONNECTED.**

- (1) Install the pivot bolts (4) in the two positions to attach the door to the beam structure, through the access holes in the exhaust inner surface 3-o'clock and 9-o'clock positions.
- (2) Install the washer (3) and nut (2), and torque it.
- (3) Install the cotter pin (1).

K. Follow-on

*SUBTASK 842-002-A*

**CAUTION:** EXAMINE ALL THE WORK ZONES TO MAKE SURE YOU DID NOT LET TOOLS OR OTHER EQUIPMENT STAY BEHIND, PARTICULARLY INSIDE THE THRUST REVERSER EXHAUST HOLE.

- (1) Through the thrust-reverser exhaust hole, install pivot point cover access panels 416VZ, 416XZ, 416WZ, 416YZ, 426VZ, 426XZ, 426WZ, and 426YZ ( [AMM MPP 06-43-00/100](#)), on the inner side of the door at the 3-o'clock and 9-o'clock positions.
- (2) Install the two upper-pivot access panels 416SL, 416RR, 416UL, 416TR, 426SL, 426RR, 426UL, and 426TR ( [AMM MPP 06-43-00/100](#)), in the 3-o'clock and 9-o'clock outer surface.
- (3) On the circuit breaker panel, close the circuit breakers below and remove the DO-NOT-CLOSE tag from them:
  - THRUST REVERSER 1/2.
  - HYD. ELEC. PUMP 1/2.
- (4) Install the pylon trailing-edge fairing ( [AMM TASK 54-52-01-400-801-A/400](#)).
- (5) Unlock the thrust-reverser exhaust doors (stowed position) ( [AMM TASK 78-31-01-980-801-A/200](#)).
- (6) Remove the DO-NOT-OPERATE-THE-THRUST-REVERSERS sign from the instrument panel, in the cockpit.
- (7) Remove the workstand from the work area.
- (8) Do the thrust reverser operational check ( [AMM TASK 78-31-01-700-801-A/500](#)).

