



## AIRCRAFT MAINTENANCE MANUAL

### AILERON ACTUATOR ROD ENDS - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

#### 1. General

- A. This section gives the procedures to remove and install the aileron power-control actuator rod ends and extension rod .
- B. The procedures in this section are given in the sequence below. The tasks identified with (♦) are part of the Scheduled Maintenance Requirements Document (SMRD).

TASK NUMBER	DESCRIPTION	EFFECTIVITY
27-12-04-000-801-A	AILERON POWER-CONTROL ACTUATOR ALL RODS - REMOVAL	
27-12-04-400-801-A	AILERON POWER-CONTROL ACTUATOR ALL RODS - INSTALLATION	



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TASK 27-12-04-000-801-A

EFFECTIVITY: ALL

2. AILERON POWER-CONTROL ACTUATOR RODS - REMOVAL

A. General

- (1) This task gives the procedures to remove the aileron power-control actuator rod ends and extension rod.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-44-00/100	- COMPONENT LOCATION
AMM TASK 27-12-01-000-801-A/400	AILERON POWER-CONTROL ACTUATOR (PCA) - REMOVAL
AMM TASK 29-10-00-860-801-A/200	HYDRAULIC SYSTEM - PRESSURIZATION WITH HTS
AMM TASK 57-56-04-000-801-A/400	AILERON LOWER SHROUD - REMOVAL

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
551	551CB	Wing lower skin
651	651CB	Wing lower skin
551	551FT	Wing upper skin
651	651FT	Wing upper skin

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 058	Kit, Rig Pins	To lock the aileron system in the neutral position	

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Rubber Gloves, Resistant to Phosphate Ester-Base Fluid	Protection of the hands	1
Commercially available	Rubber Goggles, Resistant to Phosphate Ester-Base Fluid	Protection of the eyes	1

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable



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## H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Wing

## I. Preparation

## SUBTASK 841-002-A

- (1) Make sure that the aircraft is safe for maintenance.
- (2) Do not do other tasks on the aileron system.
- (3) Remove the aileron lower shroud ([AMM TASK 57-56-04-000-801-A/400](#)).
- (4) Release the pressure of the hydraulic system ([AMM TASK 29-10-00-860-801-A/200](#)).
- (5) Remove access doors 551CB, 551FT, 651CB, and 651FT ([AMM MPP 06-44-00/100](#)).
- (6) Install the rig pin on the wing sector of the aileron.
- (7) Remove the PCA. Refer to [AMM TASK 27-12-01-000-801-A/400](#).

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

## SUBTASK 020-002-A

- (1) Do this procedure to remove the rod end (7) and extension rod (21) from the manifold assembly. Refer to DET. C and DET. E.

**NOTE:** If the bearing of the rod end has free play, refer to CMM 27-10-06/5001.

- (a) Cut the lockwire and loosen the nut (10), and nut (8) on the coupler (9).
- (b) Remove the rod end (7) from the PCA piston.

**WARNING: MAKE SURE THAT ALL PRESSURE IS RELIEVED FROM THE PCA BEFORE YOU REMOVE THE EXTENSION ROD ASSEMBLY (21). IF NOT, THE PISTON ROD END BEARING CAN POP OUT AND OIL CAN EJECT.**

- (c) Remove the two maintenance caps from the PCA leak detection valves to relieve the PCA internal pressure.
  - (d) Look to see that the compensator level indicator sight window is red.
  - (e) Put the PCA over a container with the hydraulic fitting open and pull the two pistons to the fully extended position.
  - (f) Remove the four bolts (22) from the extension rod assembly (21).
  - (g) Remove the extension rod (21) from the manifold assembly.
- (2) Do this procedure to remove the rod ends (19) from the manifold assembly. Refer to DET. D.

**NOTE:** If the bearing of the rod end has free play, refer to CMM 27-10-06/5001 for bearing-replacement procedure instructions.



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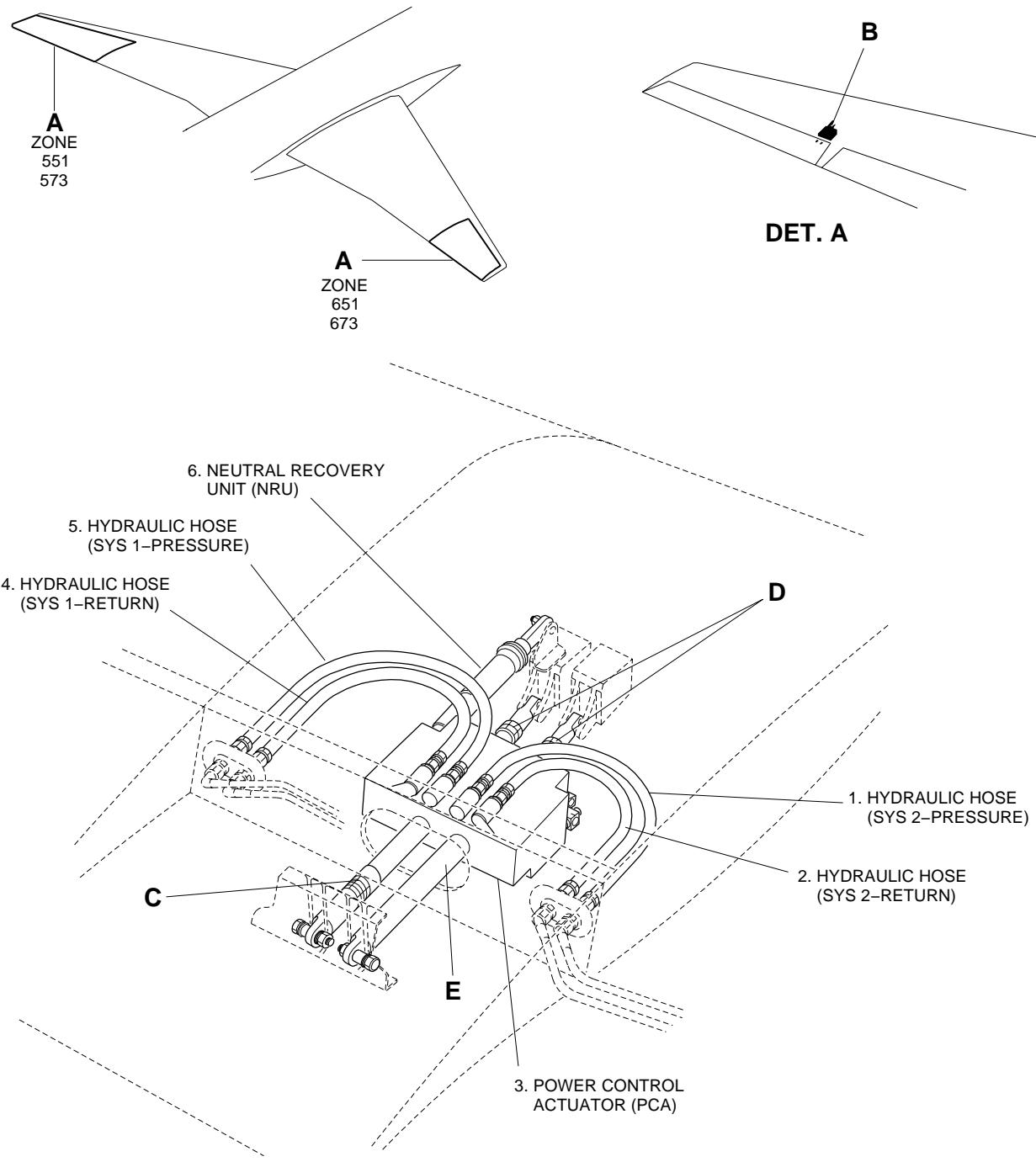
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- (a) Cut the lockwire and loosen the nut (12).
- (b) Remove the rod end (19). Be careful not to lose the bonding connector (16), and washer (20) from the thread end of the piston.
- (c) Do this procedure again to remove the other rod end.

**EFFECTIVITY: ALL**

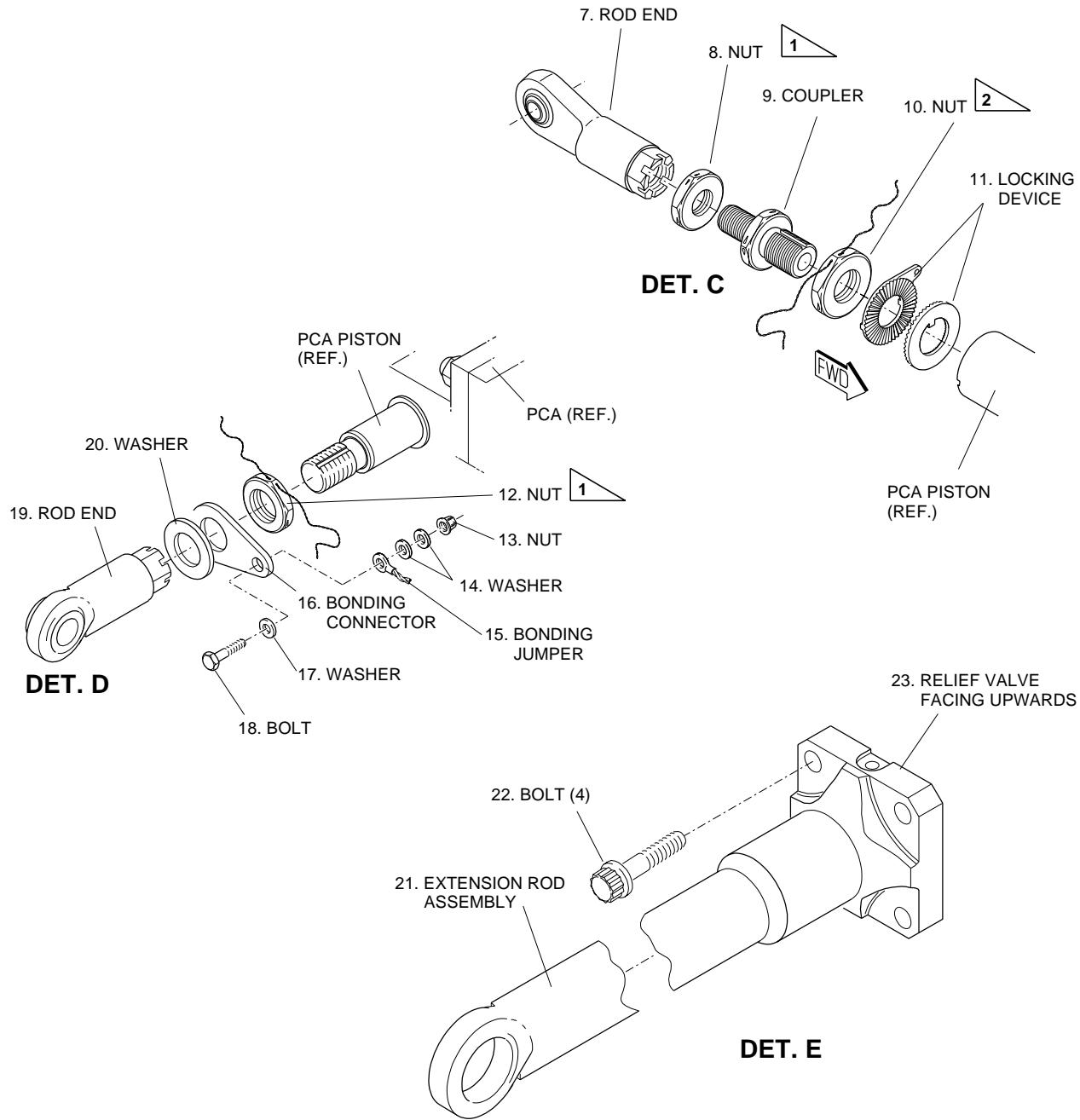
PCA Rod End - Removal/Installation

Figure 401 - Sheet 1



**DET. B**

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**EFFECTIVITY: ALL**
**PCA Rod End - Removal/Installation**
**Figure 401 - Sheet 2**


**1** APPLY TORQUE OF 32.76 TO 36.16 N.m (290 TO 320 lbf.in).

**2** APPLY TORQUE OF 38.41 TO 41.80 N.m  
(340 TO 370 lbf.in).

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TASK 27-12-04-400-801-A

EFFECTIVITY: ALL

3. AILERON POWER-CONTROL ACTUATOR RODS - INSTALLATION

A. General

- (1) This task gives the procedures to install the aileron power-control actuator rod ends and extension rod.

B. References

REFERENCE	DESIGNATION
AMM MPP 06-44-00/100	- COMPONENT LOCATION
AMM TASK 27-12-01-400-801-A/400	AILERON POWER-CONTROL ACTUATOR (PCA) - INSTALLATION
AMM TASK 57-56-04-400-801-A/400	AILERON LOWER SHROUD - INSTALLATION
IPC 27-12-00	AILERON HYDRAULIC ACTUATION

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
551	551CB	Wing lower skin
651	651CB	Wing lower skin
551	551FT	Wing upper skin
651	651FT	Wing upper skin

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 058	Kit, Rig Pins	To lock the aileron system in the neutral position	
Commercially available	Torque wrench (See Figure 401)	To apply the torques	

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Rubber Gloves, Resistant to Phosphate Ester-Base Fluid	Protection of the hands	1
Commercially available	Rubber Goggles, Resistant to Phosphate Ester-Base Fluid	Protection of the eyes	1

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
Lockwire	MS20995C32	AR
MEP 09-075	Corrosion-Inhibiting Compound (Cor-Ban 27L)	AR



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SPECIFICATION (BRAND)	DESCRIPTION	QTY
Commercially Available	Scotchbrite	AR

G. Expendable Parts

ITEM	IPC REFERENCE (VENDOR REFERENCE)	QTY
Cotter pin	IPC 27-12-00	6

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Does the task	Wing

I. Preparation

SUBTASK 841-003-A

**WARNING: BE CAREFUL WHEN YOU USE THE COR-BAN 27L CORROSION-INHIBITING COMPOUND. PUT ON SAFETY GOGGLES AND PROTECTIVE CLOTHING. DO NOT BREATHE THE GAS OR DUST. DO THE WORK IN AN AREA WHICH HAS A GOOD FLOW OF AIR. COR-BAN 27L IS POISONOUS AND HIGHLY FLAMMABLE.**

- (1) Apply corrosion-inhibiting compound Cor-Ban 27L to the bolts (19), (21), and (23), and bushings (18), (20), and (22). Use gloves and a brush for it.

J. Installation (Figure 401)

SUBTASK 420-002-A

- (1) Do this procedure to install the rod end (7) and extension rod assembly (21) into the manifold assembly. Refer to (Figure 401), DET. C and DET. E:

- (a) Install the nut (8) and rod end assembly (7) on the coupler (9).

**NOTE:** Do not torque the two nuts at this time. This is done during the PCA installation.

- (b) Adjust the coupler (9), nut (8), and rod end assembly (7) on the PCA piston until there is a 1.3 to 3.8 mm (0.05 to 0.15 inch) clearance between the nut and the coupler.

- (c) Install the extension rod assembly (21) in the manifold assembly with the relief valve pointed up.

- (d) Attach the extension rod assembly (22) to the manifold assembly with four bolts.

- (e) Torque the four bolts (21) to 3,39 to 4,52 N.m (30 to 40 lbf.in).

- (f) Safety the bolts (22).



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- (2) Do this procedure to install the rod ends (19) onto the piston rod. Refer to (Figure 401), DET. D:

- (a) If removed, install the nut (12), bonding connectors (16), and washer (20) and then install the rod end assembly (19) on the PCA piston end of the manifold assembly.

NOTE: Do not torque the nut (13) at this time. This is done during the PCA installation.

- (3) Do this procedure again to install the other rod end.

K. Follow-on

SUBTASK 842-002-A

- (1) Install the PCA. Refer to [AMM TASK 27-12-01-400-801-A/400](#).
- (2) Install the aileron lower shroud ([AMM TASK 57-56-04-400-801-A/400](#)).
- (3) Install access doors 551CB, 551FT, 651CB, and 651FT ([AMM MPP 06-44-00/100](#)).

