AILERON ACTUATOR - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

   A. This section gives the procedures to remove and install the aileron power-control actuator (PCA).

   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*
27-12-01-000-801-A	AILERON POWER-CONTROL ACTUATOR (PCA) - REMOVAL	ALL
27-12-01-400-801-A	AILERON POWER-CONTROL ACTUATOR (PCA) - INSTALLATION	ALL

TASK 27-12-01-000-801-A
EFFECTIVITY: ALL

2. AILERON POWER-CONTROL ACTUATOR (PCA) - REMOVAL

A. General

(1) This task gives the procedures to remove the aileron power-control actuator (PCA).

B. References

REFERENCE	*DESIGNATION*
AMM MPP 06-44-00/100	- COMPONENT LOCATION
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, Phosphate Ester-Base, Fluid-Resistant	Protection for the hands	1
Commercially available	Rubber Goggles, Phosphate Ester-Base, Fluid-Resistant	Protection for the eyes	1

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

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.

J. Removal (Figure 401) (Figure 403)

SUBTASK 020-002-A

WARNING: THE HYDRAULIC SYSTEM CONTAINS PHOSPHATE-ESTER HYDRAULIC FLUID. THE FLUID CAN CAUSE IRRITATION IN YOUR SKIN OR INJURY TO YOUR EYES. USE THE APPLICABLE RUBBER GOGGLES AND 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.

(1) Remove the hydraulic hoses (1), (2), (4) and (5) from the PCA (3). Put a cap on the end of the hoses. Refer to Figure 401, sheet 1.

(2) Remove the bolt (62), washers (63), (64), and (65) to release the jumper (10) from the Aileron Power-Control Actuator (3).

(3) If applicable to aircraft configuration, remove the nut (56), washer (57) and (60), and bolt (61) to release the bonding jumper (58). Refer to Figure 401, Sheet 3, DET. J.

(4) Remove and discard the cotter pin (7). Refer to Figure 401, Sheet 2, DET. C

(5) Remove the nut (14), bolt (18), washer (15) and (17), and bushing (16) to release the rod end (13) of the NRU (6) from the PCA (3). Refer to Figure 401, Sheet 2, DET. C.

(6) Remove and discard the cotter pin (9). Refer to Figure 403, DET. C.

(7) Remove the nut (10), bolt (15), washers (11) and (14), and bushing (12) to release the rod end (6) of the input lever (1) from the PCA input lever (13). Refer to Figure 403, DET. C.

(8) Remove and discard the cotter pin (23). Refer to Figure 401, Sheet 2, DET. D.

(9) Remove the nut (24), bolt (19), washers (20) and (22), and bushings (25) and (26) to release the rod end (21) from the wing support. Refer to Figure 401, Sheet 2, DET. D.

(10) Remove and discard the cotter pin (35). Refer to Figure 401, Sheet 3, DET. F.

(11) Remove the nut (42), bolt (39), washers (40) and (41), and bushings (36) and (38) to release the rod end (37) from the wing support. Refer to Figure 401, Sheet 3, DET. F.

(12) Remove and discard the cotter pin (43). Refer to Figure 401, Sheet 3, DET. G.

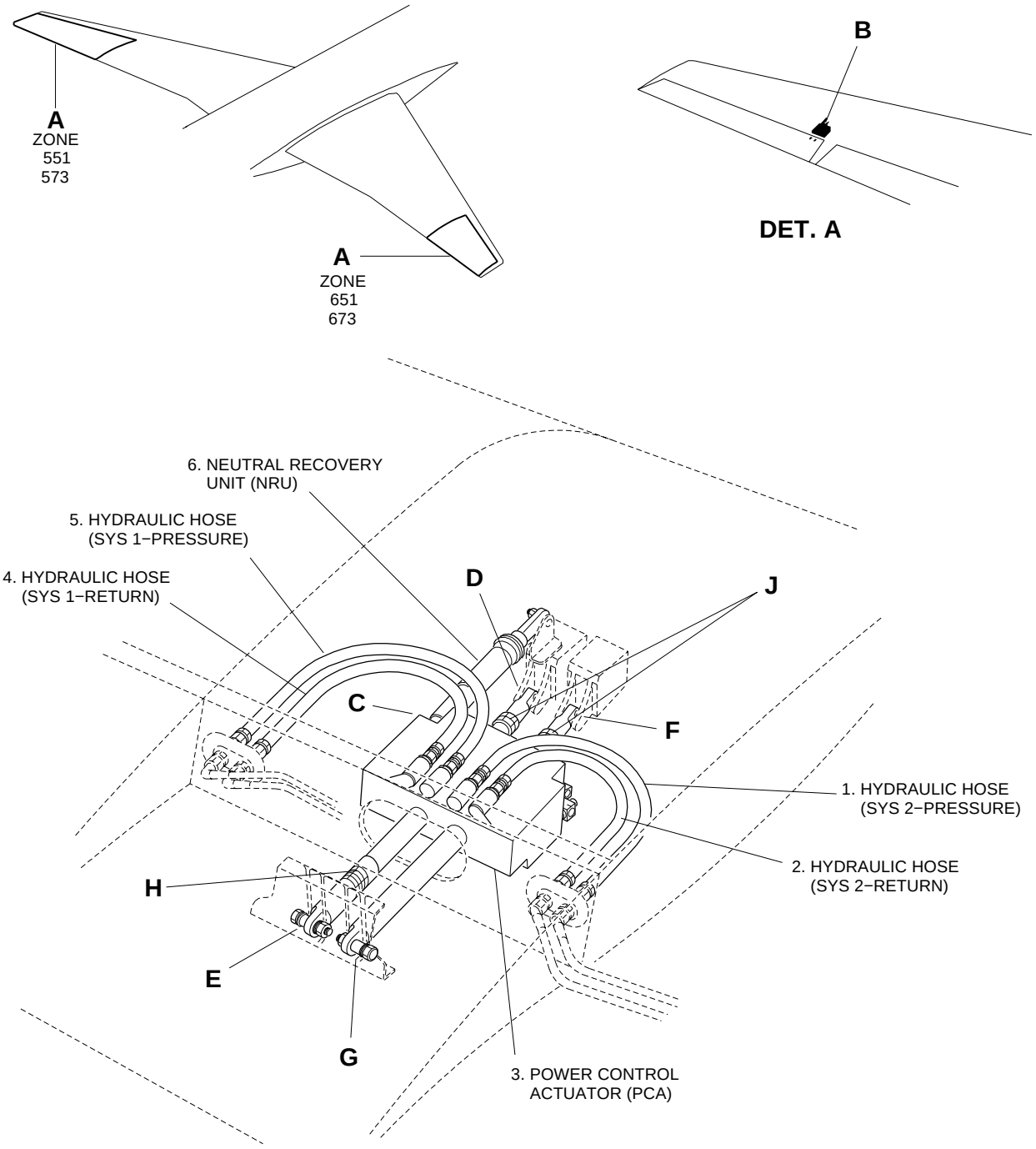
(13) Remove the nut (49), bolt (45), washers (46) and (48), and bushing (44) to release the rod end (47) from the aileron surface. Refer to Figure 401, Sheet 3, DET. G.

(14) Remove and discard the cotter pin (31). Refer to Figure 401, Sheet 2, DET. E.

(15) Hold PCA (3) and remove the nut (32), bolt (27), washers (28) and (30), and bushings (29) and (33) to release the rod end (34) from the aileron surface. Refer to Figure 401, Sheet 2, DET. E.

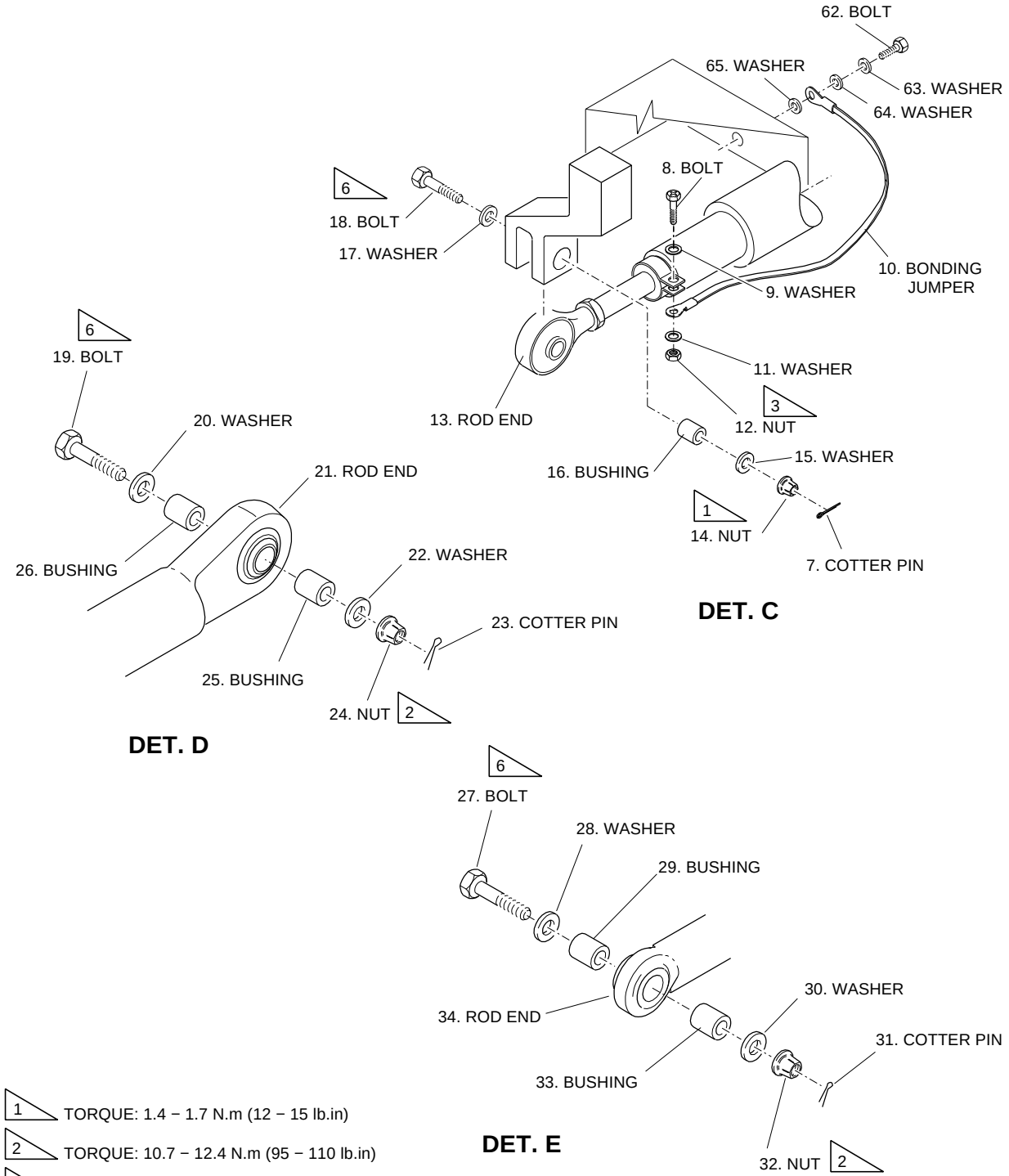
(16) Remove the PCA (3). Refer to Figure 401, Sheet 1.

EFFECTIVITY: ALL
PCA - Removal/Installation
Figure 401 - Sheet 1

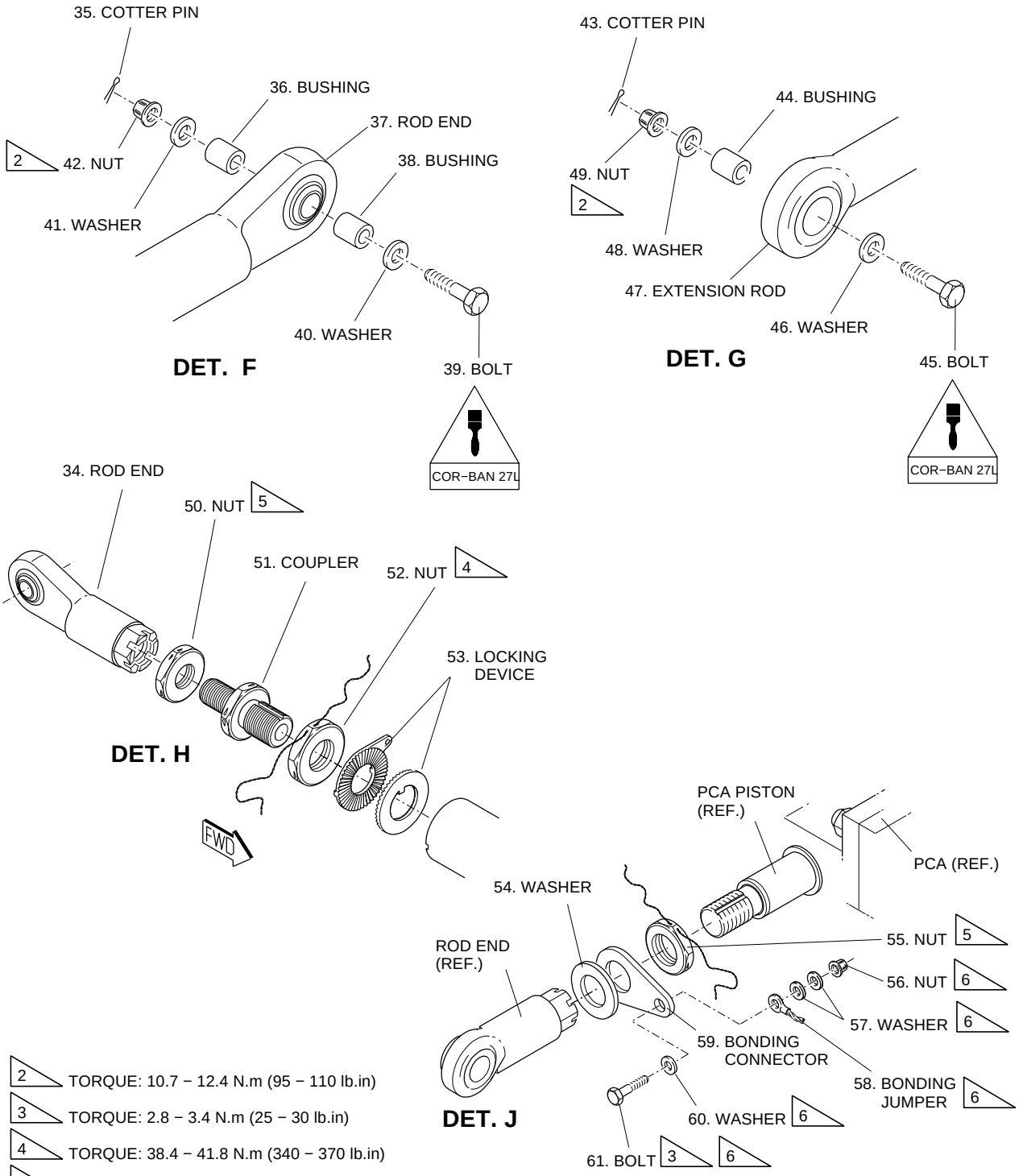


EM145AMM270079E.DGN

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



EFFECTIVITY: ALL
PCA - Removal/Installation
Figure 401 - Sheet 3



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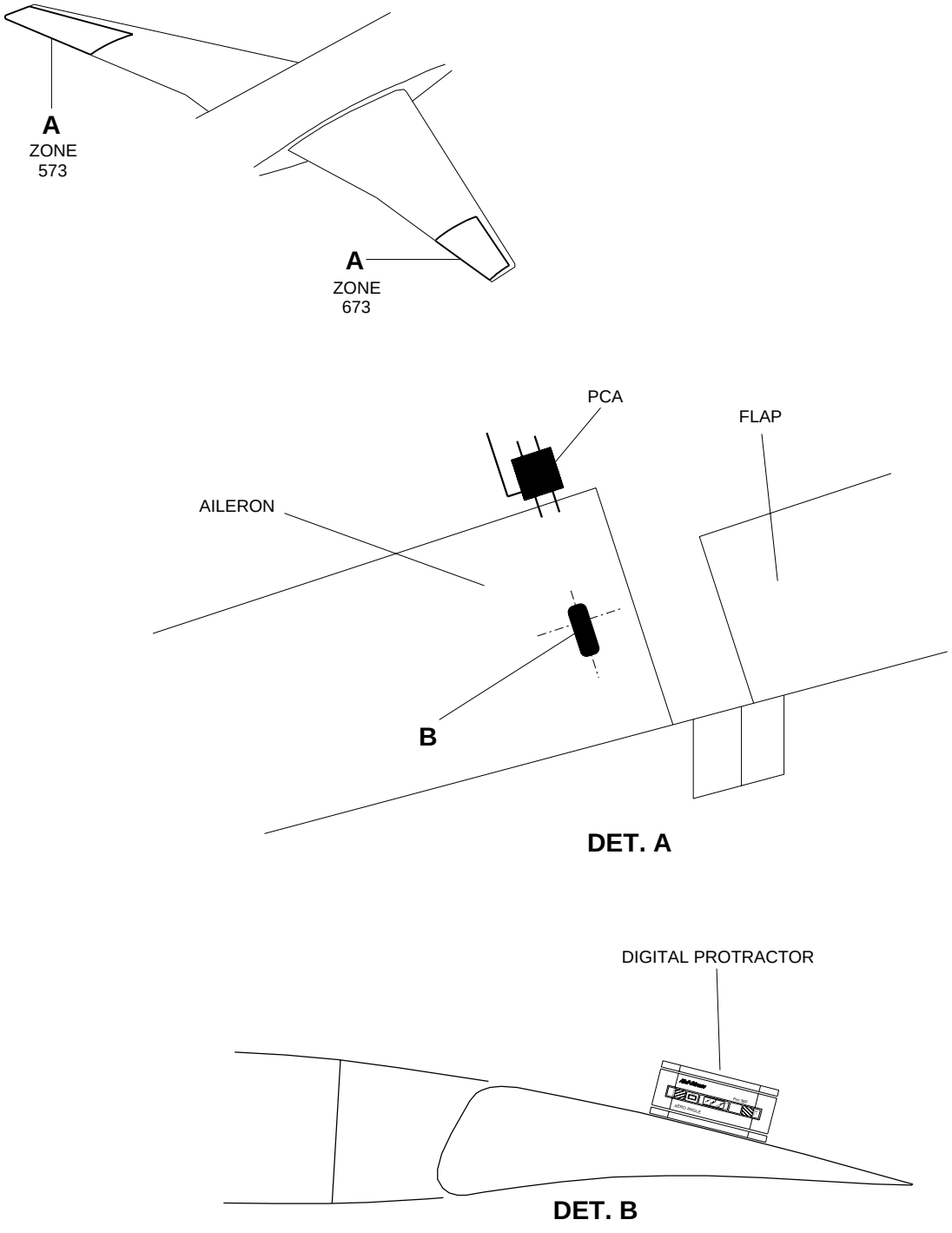
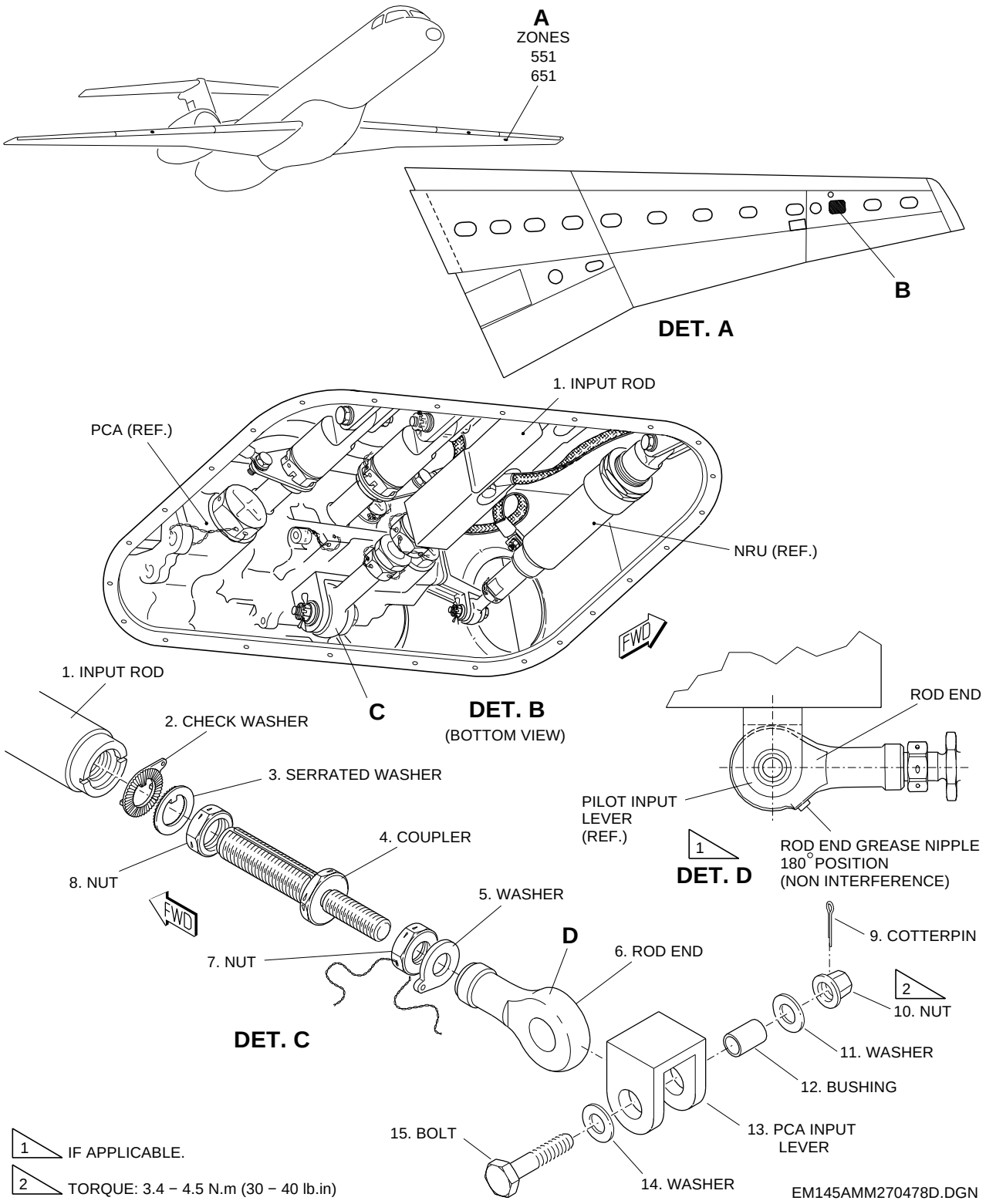
EFFECTIVITY: ALL
Digital Protractor Location
Figure 402



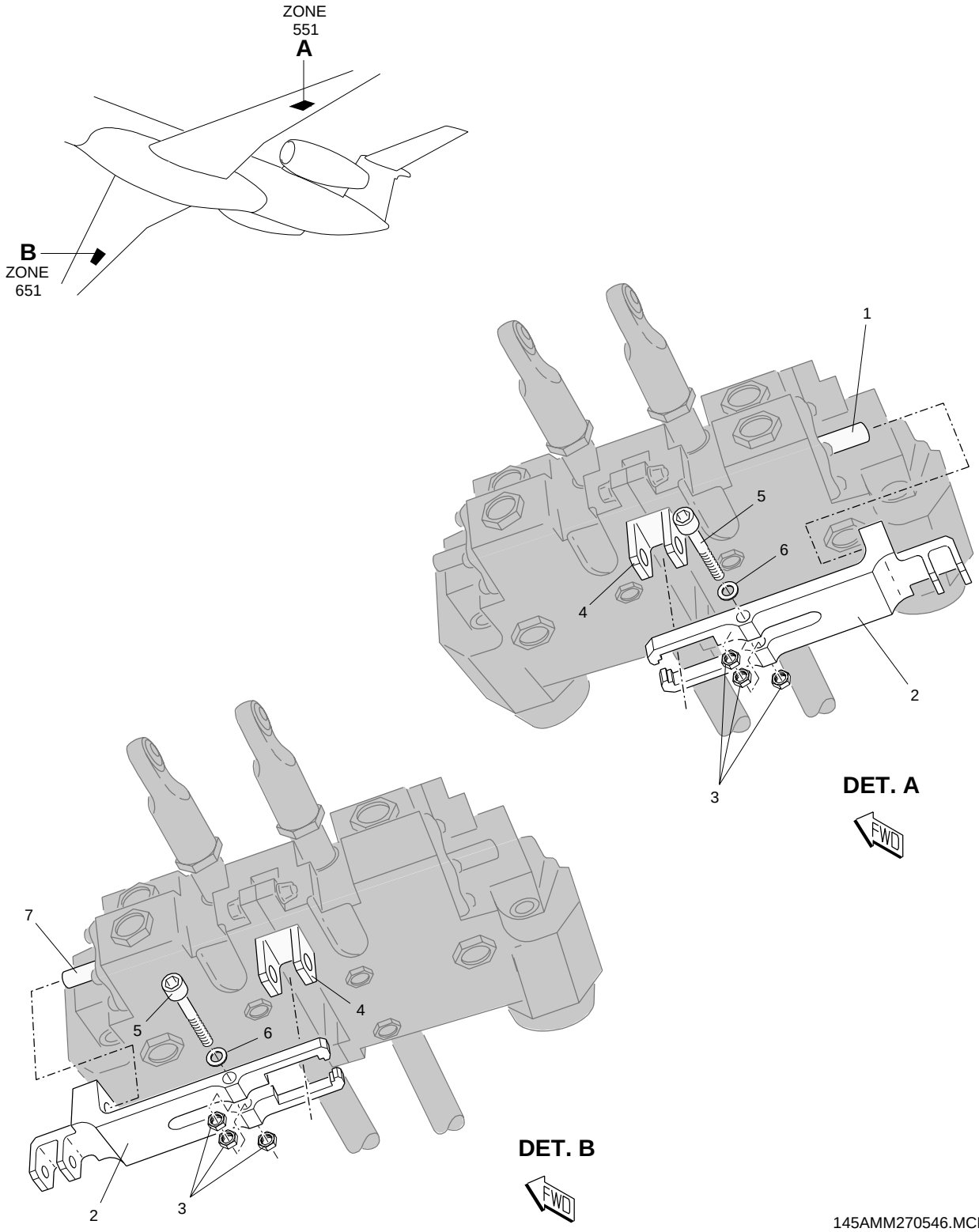
145AMM270434.MCE A

EFFECTIVITY: ALL
Input Rod - Adjustment
Figure 403



EFFECTIVITY: ALL

Power-Control Actuator (PCA) - Adjustment
Figure 404



TASK 27-12-01-400-801-A
EFFECTIVITY: ALL

3. AILERON POWER-CONTROL ACTUATOR (PCA) - INSTALLATION

A. General

(1) This task gives the procedures to install the aileron power-control actuator (PCA).

(2) The approved Corrosion-Inhibiting Compound for the aileron power-control actuator (PCA) is:

- Compound COR-BAN 27L

B. References

REFERENCE	*DESIGNATION*
AMM MPP 06-44-00/100	- COMPONENT LOCATION
AMM TASK 20-40-01-860-801-A/200	ENERGIZATION OF THE AIRCRAFT WITH AN EXTERNAL POWER SOURCE
AMM TASK 27-12-00-700-803-A/500	-
AMM TASK 27-12-01-700-802-A/500	AILERON ACTUATOR FORCE FIGHT - FUNCTIONAL CHECK
AMM TASK 29-10-00-860-801-A/200	HYDRAULIC SYSTEM - PRESSURIZATION WITH HTS
AMM TASK 29-10-00-860-803-A/200	HYDRAULIC SYSTEM - BLEED OF AIR
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 (Refer to Figure 401)	To apply the torques	

E. Auxiliary Items

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

(1) Remove the storage fluid from the PCA (3). For this, remove the caps from the PCA (3) and drain the storage fluid. Refer to Figure 401, Sheet 1.

(2) Make sure that the NRU rod end (13) is not installed on the PCA (3). Refer Figure 401, Sheet 2, DET. C

CAUTION: MAKE SURE THAT THE LEVER ASSEMBLY OF THE AILERON NEUTRAL RECOVERY UNIT (NRU) IS INSTALLED AT THE AILERON POWER-CONTROL ACTUATOR (PCA) ON THE WING OUTBOARD SIDE.

(3) To change the PCA from the inboard to the outboard side, do as follows (Figure 404):

(a) Look to see the direction of the safety wire (to obey it during installation) and cut it.

(b) Loosen the screw (5) and outer nut (3) on the lever assembly (2).

(c) Use the two inner nuts (3) to move the fingers of the lever assembly apart as sufficient to put it over the pilot input lever (4).

(d) Install the lever assembly (2) on the opposite gland (7).

(e) Loosen the two inner nuts (3).

(f) Torque the screw (5) and outer nut (3) to 1.69 - 2.26 N.m (15 - 20 lb.in).

(g) Torque the two inner nuts (3) to 1.69 - 2.26 N.m (15 - 20 lb.in) against each finger of the lever assembly (2).

(h) Install the safety wire as it was installed initially.

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.

(4) Apply corrosion-inhibiting compound COR-BAN 27L to the bolts (18), (19), and (27), and bushings (16), (25), (26), (29) and (33). Use gloves and a brush for it. Refer Figure 401, Sheet 2.

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.

(5) Apply corrosion-inhibiting compound COR-BAN 27L to the bolts (39) and (45), and bushings (36), (38) and (44). Use gloves and a brush for it. Refer Figure 401, Sheet 3.

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

SUBTASK 420-002-A

WARNING:
- **WHEN YOU INSTALL THE AILERON PCA, MAKE SURE THAT THE HYDRAULIC HOSES ARE CORRECTLY INSTALLED.**
- **THE HYDRAULIC SYSTEM CONTAINS PHOSPHATE-ESTER HYDRAULIC FLUID. THE FLUID CAN CAUSE IRRITATION IN YOUR SKIN OR INJURY TO YOUR EYES. USE THE APPLICABLE RUBBER GOGGLES AND 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.**
- **MAKE SURE THAT THE HYDRAULIC SYSTEM IS NOT PRESSURIZED.**

(1) Connect the hydraulic hoses (1), (2), (4) and (5) to the PCA (3). Refer to Figure 401, Sheet 1.

NOTE: Apply torque 10.7 to 11.8 N.m (95 to 105 lb.in).

(2) Attach the rod end (21) to the wing support shown in Figure 401, Sheet 2, DET. D. Use the nut (24), bolt (19), washers (20) and (22), and bushings (25) and (26).

NOTE: If you find corrosion on a rod end, use Scotchbrite to quickly remove it.

(3) Do not safety the bolt (19) with the cotter pin (23) in this step. Refer to Figure 401, Sheet 2, DET. D.

(4) Attach the rod end (37) to the wing support shown in Figure 401, Sheet 3, DET. F. Use the nut (42), bolt (39), washers (40) and (41), and bushings (36) and (38).

(5) Do not safety the bolt (39) with the cotter pin (35) in this step. Refer to Figure 401, Sheet 3, DET. F.

CAUTION: MAKE SURE THAT YOU CAN MANUALLY MOVE THE BOLT BACK AND FORWARD WITH NO INTERFERENCE.

(6) Attach the rod end (47) to the aileron surface shown in Figure 401, Sheet 3, DET. G only. Use the nut (49), bolt (45), washers (46) and (48), and bushing (44).

(7) If necessary, to prevent interference, adjust the rod end (37) that connect the PCA (3) to the wing support. Use the rod end and nut to adjust the length of the PCA piston. Refer to Figure 401, Sheet 3, DET. J.

(8) Do not safety the bolt (45) with the cotter pin (43) in this step. Refer to Figure 401, Sheet 3, DET. G.

(9) Adjust the rod end (21) (Figure 401, Sheet 2, DET. D) to the same length as the rod end (37) (Figure 401, Sheet 3, DET. F).

CAUTION: MAKE SURE THAT YOU CAN MANUALLY MOVE THE BOLT BACK AND FORWARD WITH NO INTERFERENCE.

(10) Attach the rod end (34) to the aileron surface as shown in Figure 401, Sheet 2, DET. E. Use the nut (32), bolt (27), washers (28) and (30), and bushings (29) and (33).

(11) If necessary, do this step to prevent interference. Refer to Figure 401, Sheet 3, DET. H.

WARNING: USE EYE PROTECTION WHEN YOU REMOVE OR INSTALL LOCKWIRE OR SAFETY CABLE. IF YOU DO NOT USE EYE PROTECTION, CUT PIECES OF WIRE CAN HIT YOUR EYES AND CAUSE INJURY.

CAUTION: DO NOT LET PIECES OF DISCARDED LOCKWIRE STAY IN THE WORK AREA. IF NECESSARY, USE A VACUUM CLEANER TO RE-MOVE THEM.

(a) Remove the lockwire from the nuts (50) and (52), coupler (51), and check washer (53).

(b) Release the nuts (50) and (52).

(c) Move the washers (53) apart from each other.

(d) Turn the coupler (51) clockwise to shorten the rod end (34) or counterclockwise to increase its length, as necessary to make it possible to install the bolt without interference.

NOTE: One turn (360 degrees) of the coupler (37) changes the rod length in approximately 0.17 mm.

(e) Tighten the nuts (50) and (52) and make sure that the bolt can be installed without interference.

(f) Do steps (a) thru (e) again and again until you can install the bolt without interference.

(g) Safety the check washer (53), nuts (50) and (52), and coupler (51).

(12) Do not safety the bolt (27) with the cotter pin (31) in this step. Refer to Figure 401, Sheet 2, DET. E.

(13) Do a check of the aileron deflection as follows. Refer to (Figure 402).

(a) Manually put the aileron in the neutral position.

NOTE: The neutral position of the aileron is identified by the alignment of the aileron with the wing trailing edge, at the aileron root.

(b) Install the digital protractor on the aileron. Use double-coated adhesive tape.

(c) Set the digital protractor to zero.

(d) Move the aileron manually up and down until the actuator stops and measure its deflection at the fully up and fully down positions. Refer to Table 401 to make sure that the deflection is correct.

Table 401 - AILERON DEFLECTIONS

AILERON DEFLECTIONS[1]	
FULLY UP	**FULLY DOWN**
27 degrees ± 1 degree	17.3 degrees ± 1 degree

[1] These deflections are applicable only to Aileron Systems 1 and 2 not pressurized.

(14) If you do not get the deflections of Table 401, adjust the rod ends (21) and (37) that connect the PCA (3) to the wing support. Use the rod ends (21) and (37) and nuts (55) to adjust the length of the PCA pistons. Refer to Figure 401, Sheet 3, DET. J.

NOTE: Do this step again and again until you get the deflection given in Table 401.

(15) Attach the rod ends (21) and (37) to the wing support. Use the nut (42), bolt (39), washers (40) and (41), and bushings (36) and (38) (Figure 401, Sheet 3, DET. F) and nut (24), bolt (19), washers (20) and (22), and bushings (25) and (26) (Figure 401, Sheet 2, DET. D).

(16) Do a check of the aileron deflection as given in step (13).

(17) If necessary, do step (14) again.

(18) Apply torque to 10.7 to 12.4 N.m (95 to 110 lb.in) and safety the nuts (24), (32), (42), and (49) with new cotter pin (23), (31), (35), and (43). Refer to Figure 401, Sheet 3, DET. F and DET. G.

(19) Apply torque to 32.7 to 36.1 N.m (290 to 320 lb.in) to the nuts (50) and (55). Refer to Figure 401, Sheet 3, DET. J and DET. H.

(20) Apply torque to 38.4 to 41.8 N.m (340 to 370 lb.in) to the nut (52). Refer to Figure 401, Sheet 3, DET. H.

(21) If applicable to aircraft configuration, install the nut (56), washer (57) and (60), and bolt (61) to attach the bonding jumper (58). Refer to Figure 401, Sheet 3, DET. J.

(22) If applicable to aircraft configuration, apply torque to 2.8 to 3.4 N.m (25 to 30 lb.in) to the bolt (61). Refer to Figure 401, Sheet 3, DET. J.

(23) Connect the input rod (6) to the PCA input lever (13). Refer to (Figure 403), DET. C. Use the bolt (15) , washers (11) and (14), bushing (12) and nut (10), but do not apply the torque.

NOTE: If the input rod end (6) has a grease nipple, make sure that the rod-end grease nipple is pointed down and there is no interference with the PCA surface (refer to (Figure 403), DET. D). If the grease nipple is pointed up, an interference with the PCA surface can occur.

(24) Remove the rig pin from the wing sector of the aileron.

(25) Energize the aircraft with the external DC-power supply (AMM TASK 20-40-01-860-801-A/200).

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

(27) Move the left control wheel fully left and fully right and then move it back to the neutral position. Do this cycle 10 times to bleed the PCA.

(28) Install the rig pin to the wing sector of the aileron.

(29) Do a check of the aileron neutral position.

NOTE: The neutral position of the aileron is identified by the alignment of the aileron with the wing trailing edge, at the aileron root.

(30) If the misalignment of the aileron and wing trailing edges is more than 2 mm, do the rough adjustment procedure (step 31) before you do the fine adjustment procedure (step 32). For misalignment of less than 2 mm, do the fine adjustment procedure directly (step 32).

WARNING: DO NOT DISCONNECT THE INPUT ROD FROM THE PCA WITH HYDRAULIC SYSTEMS 1 OR 2 ON. THE PCA MUST BE WITHOUT HYDRAULIC PRESSURE TO DISCONNECT THE INPUT ROD.

(31) If necessary, do this step to do the rough adjustment. Refer to (Figure 403).

(a) Turn off hydraulic systems 1 and 2 (AMM TASK 29-10-00-860-801-A/200).

(b) Disconnect the rod end (6) of the input rod (1) from the PCA input lever.

WARNING: USE EYE PROTECTION WHEN YOU REMOVE OR INSTALL LOCKWIRE OR SAFETY CABLE. IF YOU DO NOT USE EYE PROTECTION, CUT PIECES OF WIRE CAN HIT YOUR EYES AND CAUSE INJURY.

CAUTION: DO NOT LET PIECES OF DISCARDED LOCKWIRE STAY IN THE WORK AREA. IF NECESSARY, USE A VACUUM CLEANER TO RE-MOVE THEM.

(c) Remove the lockwire from the nuts (7) and (8), and washers (2), (3), and (5).

(d) Turn the rod end (6) to adjust the input rod (1) length to put the aileron surface in the neutral position.

(e) Connect the rod end (6) of the input rod (1) to the PCA input lever.

NOTE: If the input rod (6) end has a grease nipple, make sure that the rod end grease nipple is pointed down and there is no interference with the PCA surface (refer to (Figure 403), DET. D). If the grease nipple is pointed up, an interference with the PCA surface can occur.

(f) Turn on hydraulic systems 1 and 2 (AMM TASK 29-10-00-860-801-A/200).

(g) Do a check of the aileron neutral position.

NOTE: The neutral position of the aileron is identified by the alignment of the aileron with the wing trailing edge, at the aileron root.

(h) Turn off hydraulic systems 1 and 2 (AMM TASK 29-10-00-860-801-A/200).

(i) Do a check in the inspection holes of the input rod (1) and rod end (6) to make sure that the coupler (4) is safely installed. If necessary, adjust the position of the coupler (4). Refer to (Figure 403), DET. C.

(j) Do steps (c) thru (i) again and again until you put the aileron at the neutral position or let it stay with a misalignment of less than 2 mm.

WARNING: DO NOT DISCONNECT THE INPUT ROD FROM THE PCA WITH HYDRAULIC SYSTEMS 1 OR 2 ON. THE PCA MUST BE WITHOUT HYDRAULIC PRESSURE FOR YOU TO DISCONNECT THE INPUT ROD.

(32) If necessary, do this step to do the fine adjustment. Refer to (Figure 403).

WARNING: USE EYE PROTECTION WHEN YOU REMOVE OR INSTALL LOCKWIRE OR SAFETY CABLE. IF YOU DO NOT USE EYE PROTECTION, CUT PIECES OF WIRE CAN HIT YOUR EYES AND CAUSE INJURY.

CAUTION: DO NOT LET PIECES OF DISCARDED LOCKWIRE STAY IN THE WORK AREA. IF NECESSARY, USE A VACUUM CLEANER TO RE-MOVE THEM.

(a) Remove the lockwire from the nuts (7) and (8) and washers (2), (3) and (5).

(b) Release the nuts (7) and (8) and washers (2), (3), and (5).

(c) Turn on hydraulic systems 1 and 2 (AMM TASK 29-10-00-860-801-A/200).

(d) With the rod end (6) of the input rod (1) connected to the PCA input lever, turn the coupler (4) clockwise to shorten the input rod length or counterclockwise to increase the input rod length, as necessary, until you let the aileron stay at the neutral position.

NOTE: One turn (360 degrees) of the coupler (4) changes the input rod length in approximately 0.21 mm.

(e) Do a check on the inspection holes of the input rod (1) and rod end (6) to make sure that the coupler (4) is safely installed. If necessary, adjust the position of the coupler (4).

(33) Safety the nuts (7) and (8) and washers (2), (3), and (5). Refer to (Figure 403).

(34) Safety the input rod (1). Refer to (Figure 403).

(35) Apply torque to 3.4 to 4.5 N.m (30 to 40 lb.in) and safety the nut (10) with a new cotter pin (9). Refer to (Figure 403).

(36) Do a check on the aileron deflection as follows:

(a) Turn on the hydraulic systems (AMM TASK 29-10-00-860-801-A/200).

(b) Remove the rig pin from the wing sector of the aileron.

(c) Use the control wheel to move the aileron from stop to stop and measure the aileron deflection at the fully up and fully down positions.

Table 402 - AILERON DEFLECTIONS

AILERON DEFLECTIONS	
FULLY UP	**FULLY DOWN**
25 degrees ± 1 degree	15 degrees ± 1 degree

CAUTION: WHEN YOU CONNECT THE NRU TO THE PCA, DO NOT COMPRESS THE SHAFT OF THE NRU. IF NECESSARY, ADJUST THE ROD END OF THE NRU AND SAFETY IT.

(37) Attach the rod end (13) of the NRU (6) to the support. Use the nut (14), bolt (18), washers (15) and (17), and bushing (16). Refer to Figure 401, Sheet 2, DET. C.

(38) Apply torque 1.3 to 1.7 N.m (12 to 15 lb.in) and safety the nut (14) with new cotter pin (7). Refer to Figure 401, Sheet 2, DET. C.

(39) Install the bolt (62), washers (63), (64) and (65) to attach the bonding jumper (10) to the Aileron Power-Control Actuator (3). Refer to Figure 401, Sheet 2, DET. C.

(40) Apply torque 2.8 - 3.4 N.m (25 - 30 lb.in) to the nut (12). Refer to Figure 401, Sheet 2, DET. C.

K. Follow-on

SUBTASK 842-002-A

(1) Bleed the air from the hydraulic system lines (AMM TASK 29-10-00-860-803-A/200).

(2) Do the procedure to measure the aileron PCA force fight (AMM TASK 27-12-01-700-802-A/500).

(3) Do a check for external leakage in the PCA (AMM TASK 27-12-00-700-803-A/500).

(4) Do a check of the hydraulic actuation with aileron system 1 off and aileron system 2 on.

(a) Push the AILERON SHUTOFF SYS 1 pushbutton, on the flight controls panel.

Result:

1 The light of the AILERON SHUTOFF SYS 1 pushbutton comes on.

2 The EICAS display shows the AIL SYS 1 INOP caution message.

(b) Move the control yoke fully left and fully right and then move it to the neutral position.

Result:

1 The aileron surfaces move freely and no heavy load is felt on the control yoke.

(5) Do a check of the hydraulic actuation with aileron system 1 on and aileron system 2 off.

(a) Push the AILERON SHUTOFF SYS 2 pushbutton, on the flight controls panel.

Result:

1 The light of the AILERON SHUTOFF SYS 2 pushbutton comes on.

2 The EICAS display shows the AIL SYS 1-2 INOP caution messages.

(b) Push the AILERON SHUTOFF SYS 1 pushbutton, on the flight controls panel.

Result:

1 The light of the AILERON SHUTOFF SYS 1 pushbutton goes off.

2 The EICAS display shows the AIL SYS 2 INOP caution message.

(c) Move the control yoke fully left and fully right and then move it to the neutral position.

Result:

1 The aileron surfaces move freely and no heavy load is felt on the control yoke.

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

(7) Install the aileron lower shroud (AMM TASK 57-56-04-400-801-A/400).

(8) Install access doors 551CB, 551FT, 651CB, and 651FT (AMM MPP 06-44-00/100).