

Service Bulletin No: 76-002

Ref No: 242

Modification No: EC-09-0541

ATA Chapter: 76

**ENGINE CONTROLS - POWER CONTROL
CHECK THE POWER CONTROL LEVER REVERSE THRUST LATCH FOR STICKING****1. Planning Information****A. Effectivity**

PC-12/47E Aircraft, MSN 1001, 1003 to 1140.

B. Concurrent Requirements

None.

C. Reason

Field reports have been received that, if the Power Control friction wheel is tightened, the reverse thrust latch may stick and allow the Power Control Lever to be inadvertently retarded aft of the Idle detent.

D. Description

This Service Bulletin gives the instructions and data necessary to:

- Part 1 - check the Power Control Lever (PCL) reverse thrust latch for sticking. If the reverse thrust latch is found to be affected, insert the Temporary Revision No. 12 into the Aircraft Flight Manual (AFM). Record the requirement to accomplish modification of the PCL within one year of the release date of this Service Bulletin.
- Part 2 - modify the Power Control Lever assembly and then to remove the Temporary Revision No. 12 from the Aircraft Flight Manual.

Revision 1 to this Service Bulletin corrects Figure 2 to show the correct installation of the washer in the Power Control Lever. It also adds a copyright paragraph. Customers who have already incorporated Part 2 of this Service Bulletin at initial issue must make sure that the washer is correctly installed in the Power Control Lever. This can be confirmed either by a visual inspection, or by carrying out Paragraph 3.A Part 1 again.

E. Compliance

Part 1: Mandatory. Compliance - one month from the issue date of this Service Bulletin to check if the reverse thrust latch is sticking.

Part 2 (if affected): Mandatory. Compliance - one year from the issue date of this Service Bulletin to modify affected aircraft.

F. Approval

The technical content of this document is approved under the authority of DOA No. EASA. 21J. 357.

PILATUS advises Operators/Owners to check with their local Airworthiness Authorities for any changes, local regulations or sanctions that may affect the embodiment of this Service Bulletin.

G. Copyright

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H. Manpower

	Check for Affected A/C	Modify Affected A/C
Part 1 - Check	15 mins	-
Part 2 - Modification	-	5.5 hours
Close up	-	3.0 hours
TOTAL MAN-HOURS	15 mins	8 hours 30

NOTE: Man-hours figures do not include the time required to cure sealants, paints and adhesives.

I. Weight and Balance**(1) Weight Change**

None.

(2) Moment Change

None.

J. Electrical Load Data

Not changed.

K. Software

Not changed.

L. References

Aircraft Maintenance Manual (AMM), 12-B-20-31-00-00A-070A-A, 12-B-24-00-00-00A-901A-A, 12-B-25-10-03-00A-920A-A, 12-B-71-00-00-00A-903M-A, 12-B-71-00-00-00A-903O-A, 12-B-71-00-00-00A-903P-A, 12-B-71-00-00-00A-903R-A.

M. Publications Affected

Aircraft Flight Manual (AFM) Temporary Revision No. 12.

N. Interchangeability of Parts

Not applicable.

2. Material Information**A. Material - Price and Availability**

None.

Operators who require further information about this Service Bulletin should contact:

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B. Warranty

Credit for labor will be issued for all affected aircraft on approval of a warranty claim, provided the work is accomplished by an authorized Service Center within 12 months of the issue date of this Service Bulletin.

If it is necessary to relocate the washer as a result of Revision 1 to this Service Bulletin, an additional credit for 8.5 manhours labor will be issued, provided the work is accomplished by an authorized Service Center within 12 months of the issue date of Revision 1 of this Service Bulletin.

C. Material Necessary for Each Aircraft**(1) Material to be Procured**

None.

(2) Operator Supplied Materials (Ref. AMM, 12-B-20-31-00-00A-070A-A)

NOTE: Aircraft Flight Manual Temporary Revision No. 12 is also needed. This will be issued by the normal Publications service. An advance copy is attached to this Service Bulletin.

MATERIAL NO.	DESCRIPTION	QTY	REMARKS
938.77.81.012	WASHER	1	

MATERIAL NO.	DESCRIPTION	QTY	REMARKS
940.17.02.226	COTTER PIN	3	
-	MASKING TAPE	A/R	Local supply
P09-005	CABLE TIE	A/R	

D. Material Necessary for Each Spare

Not applicable.

E. Reidentified Parts

Not applicable.

F. Tooling - Cost and Availability

Not applicable.

3. Accomplishment Instructions**A. Part 1 - Check for a Sticking Reverse Thrust Latch**

- (1) Open and install a safety clip on the circuit breaker:

STARTER (ESSENTIAL BUS)
IGNITION (ESSENTIAL BUS)
PROP SYS (ESSENTIAL BUS)
FLAP WARN 1 (ESSENTIAL BUS)
FLAP WARN 2 (GENERATOR 2 BUS)

- (2) Move the PCL to the Idle detent position.
(3) Mark the position of the PCL with a strip of masking tape.

CAUTION: DO NOT USE EXCESSIVE FORCE TO TIGHTEN THE FRICTION WHEEL. YOU CAN CAUSE DAMAGE TO THE MECHANISM IF YOU OVERTIGHTEN THE FRICTION WHEEL.

- (4) Tighten the PCL friction wheel fully. Use only normal hand force to tighten the friction wheel.
(5) Pull the reverse thrust latch handle up.
(6) Release the reverse thrust latch handle and check for free movement.

CAUTION: DO NOT MOVE THE PCL AFT OF THE TAPE STRIP INSTALLED IN STEP 2. YOU CAN CAUSE DAMAGE TO THE CONTROL LINKAGE IF YOU MOVE THE PCL AFT OF THIS POSITION WITH THE ENGINE NOT RUNNING.

- (7) Try to move the PCL towards the reverse thrust position. Make sure that the idle detent is present.
(8) Move the PCL to a mid power position.
(9) Pull the reverse thrust latch handle up.
(10) Release the reverse thrust latch handle and check for free movement.

CAUTION: DO NOT MOVE THE PCL AFT OF THE TAPE STRIP INSTALLED IN STEP 2. YOU CAN CAUSE DAMAGE TO THE CONTROL LINKAGE IF YOU MOVE THE PCL AFT OF THIS POSITION WITH THE ENGINE NOT RUNNING.

- (11) Try to move the PCL towards the reverse thrust position. Make sure that the idle detent is present.
(12) Move the PCL to the fully forward position.
(13) Pull the reverse thrust latch handle up.
(14) Release the reverse thrust latch handle and check for free movement.

CAUTION: DO NOT MOVE THE PCL AFT OF THE TAPE STRIP INSTALLED IN STEP 2. YOU CAN CAUSE DAMAGE TO THE CONTROL LINKAGE IF YOU MOVE THE PCL AFT OF THIS POSITION WITH THE ENGINE NOT RUNNING.

- (15) Try to move the PCL towards the reverse thrust position. Make sure that the idle detent is present.
- (16) Remove the masking tape you installed.
- (17) Remove the safety clip and close the circuit breaker:

STARTER (ESSENTIAL BUS)
IGNITION (ESSENTIAL BUS)
PROP SYS (ESSENTIAL BUS)
FLAP WARN 1 (ESSENTIAL BUS)
FLAP WARN 2 (GENERATOR 2 BUS)
- (18) If the reverse thrust latch sticks or the idle detent is not present, the aircraft is affected. Insert Temporary Revision No. 12 into the Aircraft Flight Manual (AFM). Make sure that the flight crew are aware of the Temporary Revision No. 12.
- (19) Record in the Aircraft Logbook that Part 1 of this Service Bulletin has been accomplished, and note if the aircraft is affected or not. If the aircraft is affected note the requirement to accomplish Part 2 within one year of the release date of this Service Bulletin.

B. Part 2 - Modification

(1) Remove the Engine Console Assembly.

Refer to Figure 1.

- (a) Open and install a safety clip on the circuit breaker:

STARTER (ESSENTIAL BUS)
IGNITION (ESSENTIAL BUS)
PROP SYS (ESSENTIAL BUS)
FLAP WARN 1 (ESSENTIAL BUS)
FLAP WARN 2 (GENERATOR 2 BUS)
- (b) Remove the center console access panels 21 GZ and 21 JZ (refer to AMM 12-B-25-10-03-00A-920A-A).
- (c) Move the Manual Override (MOR) lever forward to the MAX position.
- (d) Remove and discard the cotter pin (16, Fig 1).
- (e) Remove the nut (17, Fig 1), washer (14, Fig 1) and bolt (13, Fig 1).
- (f) Disconnect the MOR control cable (15, Fig 1) from the lever.
- (g) Move the PCL forward to the MAX position.
- (h) Remove and discard the cotter pin (11, Fig 1).
- (i) Remove the nut (12, Fig 1), washers (9, Fig 1) and bolt (10, Fig 1).

- (j) Disconnect the PCL control cable (8, Fig 1) from the lever.
- (k) Move the Condition Lever (CL) forward to the FLIGHT IDLE position.
- (l) Remove and discard the cotter pin (11, Fig 1).
- (m) Remove the nut (12, Fig 1), washers (9, Fig 1) and bolt (10, Fig 1).
- (n) Disconnect the CL control cable (8, Fig 1) from the lever.
- (o) Disconnect the electrical connector PNL-134P1 (18, Fig 1) at the right side of the center console.
- (p) Disconnect the electrical connector PNL-134P3 (19, Fig 1) at the right side of the center console.
- (q) Remove cable ties as needed.
- (r) Remove the four screws (5, Fig 1) from the left and right sides of the Engine Console Assembly.
- (s) Remove the four screws (6, Fig 1) from the top of the Engine Console Assembly.
- (t) Remove the four screws (1, Fig 1) from the forward center console panel.
- (u) Remove the four screws (7, Fig 1) from the rear center console panel.
- (v) Lift the forward and rear center console panels out of the center console as far as possible. Do not disconnect the electrical connectors from the forward and rear center console panels.
- (w) Remove the two nuts (4, Fig 1), washers (3, Fig 1) and the screws (2, Fig 1) from the left side frame of the center console.
- (x) Make a note of the position, then remove the cable ties that hold the black electrical loom to the hydraulic pipe at the left side of the center console.
- (y) Carefully but firmly pull on the left side frame of the center console and carefully remove the Engine Console Assembly. Make sure that the friction wheel shaft does not scratch the inside of the center console side frame.

(2) Modify the Engine Console Assembly

Refer to Figure 2.

- (a) Move the PCL to the full REVERSE position.
- (b) Make a note of the position and remove the cable tie that holds the electrical loom to the PCL.
- (c) Loosen the bolt and nut (7, Fig 2) two to three turns.
- (d) Remove the nut (5, Fig 2) and washer (6, Fig 2).
- (e) Move the bolt (1, Fig 2) out of the PCL to give access to install the washer in the next step.

- (f) Use a small plastic wedge to separate the PCL halves (2, Fig 2) and (3, Fig 2) enough to slide the new washer (4, Fig 2) (P/N 938.77.81.012) into position between the two PCL halves to engage on the bolt (1, Fig 2).
- (g) Remove the plastic wedge.
- (h) Install the bolt (1, Fig 2), washer (6, Fig 2) and nut (5, Fig 2).
- (i) Tighten the bolt and nut (7, Fig 2).
- (j) Install a cable tie (Material P09-005) to hold the electrical loom on the PCL as noted in step (b).
- (k) Temporarily install the friction wheel with the screw, spring washer and washer.
- (l) Move the PCL to the Idle detent position.
- (m) Fully tighten the PCL friction wheel. Use only normal hand force to tighten the friction wheel.
- (n) Pull the reverse thrust latch handle up.
- (o) Release the reverse thrust latch handle and check for free movement.
- (p) Try to move the PCL towards the reverse thrust position. Make sure that the idle detent is present.
- (q) Move the PCL to a mid power position.
- (r) Pull the reverse thrust latch handle up.
- (s) Release the reverse thrust latch handle and check for free movement.
- (t) Try to move the PCL towards the reverse thrust position. Make sure that the idle detent is present.
- (u) Move the PCL to the fully forward position.
- (v) Pull the reverse thrust latch handle up.
- (w) Release the reverse thrust latch handle and check for free movement.
- (x) Try to move the PCL towards the reverse thrust position. Make sure that the idle detent is present.

(3) Install the Engine Console Assembly

Refer to Figure 1.

- (a) Remove the screw, spring washer and washer. Remove the friction wheel.
- (b) Carefully but firmly pull on the left side frame of the center console and carefully install the Engine Console Assembly. Make sure that the friction wheel shaft does not scratch the inside of the center console side frame.

- (c) Install the two screws (2, Fig 1), washers (3, Fig 1) and nuts (4, Fig 1) in the left side frame of the center console.
- (d) Lower the forward and rear center console panels into position in the center console.
- (e) Install the four screws (1, Fig 1) in the forward center console panel.
- (f) Install the four screws (7, Fig 1) in the rear center console panel.
- (g) Install the four screws (5, Fig 1) in the left and right sides of the Engine Console Assembly.
- (h) Install the four screws (6, Fig 1) in the top of the Engine Console Assembly.
- (i) Connect the electrical connector PNL-134P3 (19, Fig 1) at the right side of the center console.
- (j) Install cable ties (Material P09-005) to hold the electrical loom in position.
- (k) Connect the electrical connector PNL-134P1 (18, Fig 1) at the right side of the center console.
- (l) Move the CL forward to the FLIGHT IDLE position.
- (m) Connect the CL cable (8, Fig 1) to the lever with the bolt (10, Fig 1), washers (9, Fig 1) and nut (12, Fig 1).
- (n) Install a new cotter pin (P/N 940.17.02.226) (11, Fig 1).
- (o) Move the PCL forward to the MAX position.
- (p) Connect the PCL cable (8, Fig 1) to the lever with the bolt (10, Fig 1), washers (9, Fig 1) and nut (12, Fig 1).
- (q) Install a new cotter pin (P/N 940.17.02.226) (11, Fig 1).
- (r) Move the MOR lever forward to the MAX position.
- (s) Connect the MOR cable (15, Fig 1) to the lever with the bolt (13, Fig 1), washer (14, Fig 1) and nut (17, Fig 1).
- (t) Install a new cotter pin (P/N 940.17.02.226) (16, Fig 1).
- (u) At the center console left side, install cable ties (Material P09-005) to hold the black cable loom to the hydraulic pipe as noted in the Removal procedure.
- (v) Temporarily install the friction wheel with the screw, spring washer and washer.
- (w) Remove the safety clip and close the circuit breaker:

STARTER (ESSENTIAL BUS)
PROP SYS (ESSENTIAL BUS)
FLAP WARN 1 (ESSENTIAL BUS)
FLAP WARN 2 (GENERATOR 2 BUS)

- (x) Open and install a safety clip on the circuit breaker:
 - IGNITION (ESSENTIAL BUS)
 - LH FUEL PUMP (ESSENTIAL BUS)
 - RH FUEL PUMP (ESSENTIAL BUS)
- (y) Energize the aircraft electrical system, AMM 12-B-24-00-00-00A-901A-A.
- (z) Set the flap position selector to 15 degrees.
- (aa) Make sure that the flaps move and the flap position is shown correctly on the Multi Function Display (MFD).
- (ab) Set the flap position selector to 0 degrees.
- (ac) Make sure that the flaps move and the flap position is shown correctly on the Multi Function Display (MFD).
- (ad) Move the MOR lever and CL through the full travel. Make sure that the lever movement is free and smooth.

CAUTION: DO NOT MOVE THE PCL AFT OF THE FLIGHT IDLE POSITION. YOU CAN CAUSE DAMAGE TO THE CONTROL LINKAGE IF YOU MOVE THE PCL AFT OF THIS POSITION WITH THE ENGINE NOT RUNNING.

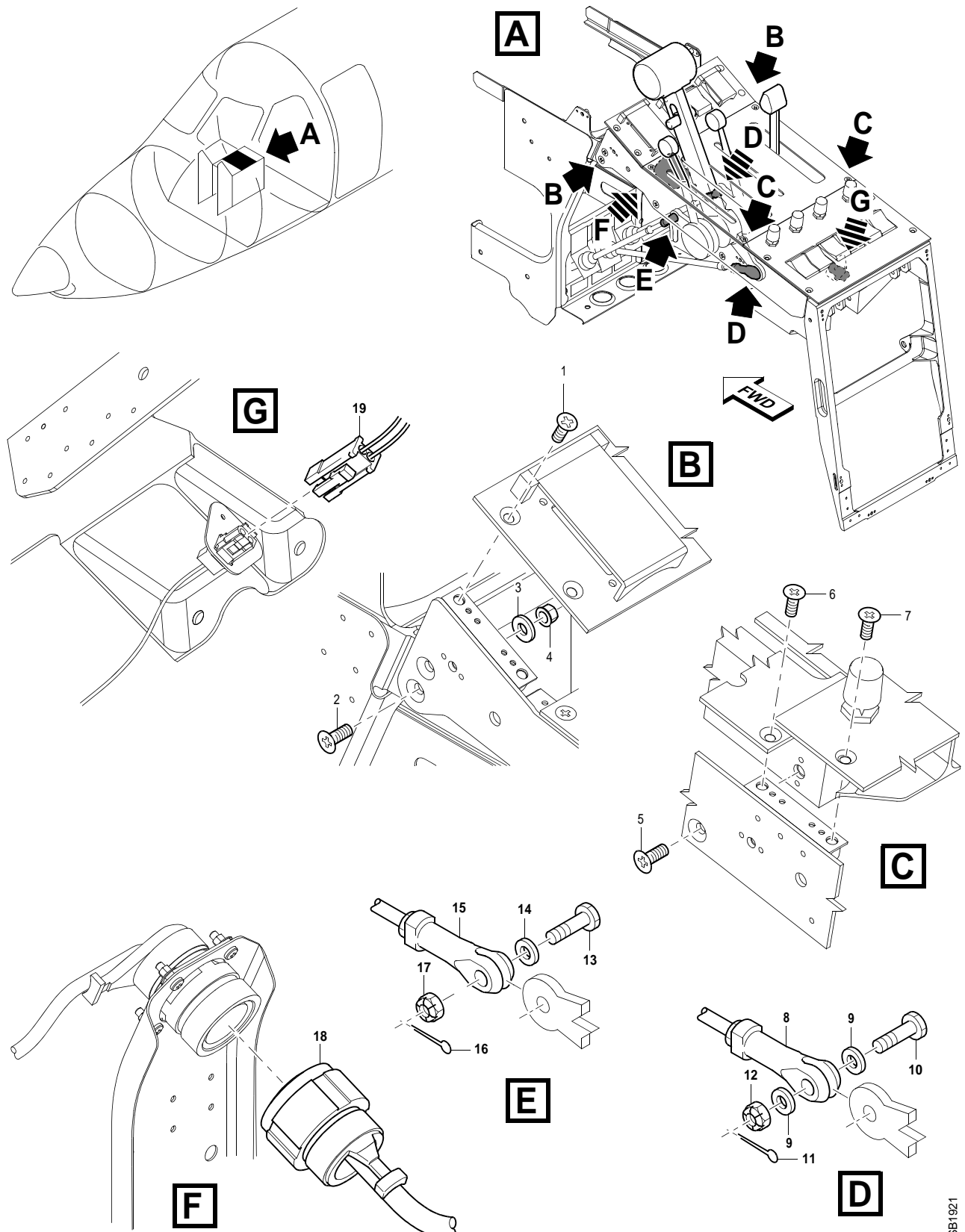
- (ae) Move the PCL from MAX to FLIGHT IDLE. Make sure that the PCL movement is free and smooth.
- (af) Make sure that the PCL is set at the Idle detent, the MOR is at OFF and the Condition lever is at Cut Off/Feather.
- (ag) Remove the safety clip and close the circuit breaker:
 - IGNITION (ESSENTIAL BUS)
 - LH FUEL PUMP (ESSENTIAL BUS)
 - RH FUEL PUMP (ESSENTIAL BUS)
- (ah) Do these engine ground run tests:
 - Test 12 FCU Dead Band, AMM 12-B-71-00-00-00A-903M-A
 - Test 14 Ground Idle Speed, AMM 12-B-71-00-00-00A-903O-A
 - Test 15 Flight Idle Speed, AMM 12-B- 71-00-00-00A-903P-A
 - Test 17 Reverse Power, AMM 12-B- 71-00-00-00A-903R-A.

- (ai) De-energize the aircraft electrical system, AMM 12-B-24-00-00-00A-901A-A.
- (aj) Remove the screw, spring washer, washer and friction wheel.

(4) Close up

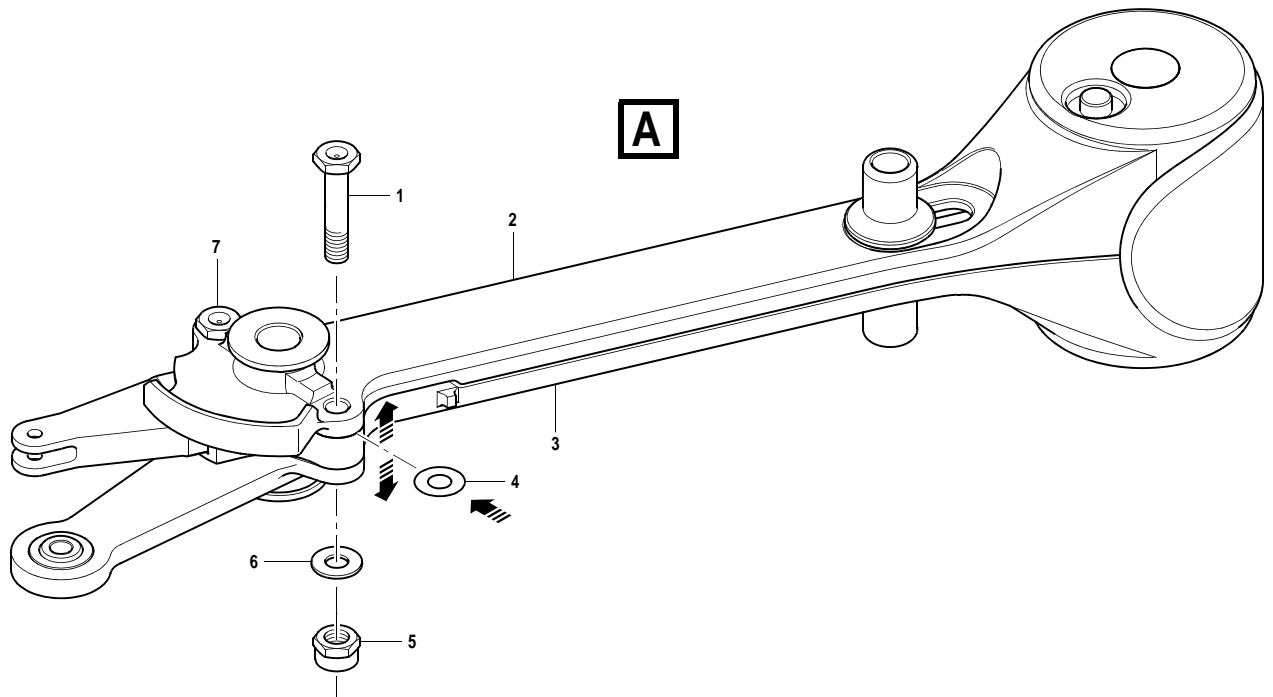
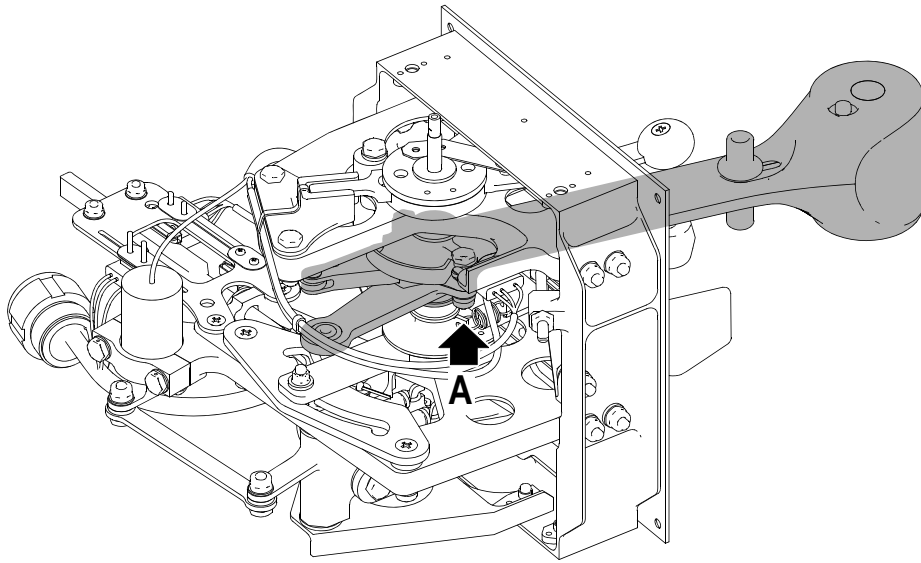
- (a) Remove all tools and materials. Make sure the work areas are clean.
- (b) Install the center console access panels 21 GZ and 21 JZ, AMM 12-B-25-10-03-00A-920A-A.

- (c) Make an entry in the Aircraft Logbook that Part 2 of this Service Bulletin has been incorporated.
- (d) When you modify the Engine Console Assembly as detailed in Part 2, remove the Temporary Revision No. 12 from the Aircraft Flight Manual.



Engine Console Assembly - Removal/Installation
Figure 1

SB1921



SB1922

Power Control Lever - Modification
Figure 2

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The purpose of this Evaluation Form is to allow you, the customer, to comment on this Service Bulletin. Your comments will be used to further improve our Service Bulletin program.

SERVICE BULLETIN EVALUATION FOR SB No. 76-002 Revision 1			
Title	ENGINE CONTROLS - POWER CONTROL - CHECK THE POWER CONTROL LEVER REVERSE THRUST LATCH FOR STICKING		
Aircraft MSN		Total Flying Hours	
Owner		Total Landings	
Operator			
Service center			
Please Tick as appropriate			
<input type="checkbox"/> We will embody/accomplish this SB	<input type="checkbox"/> Fully		
<input type="checkbox"/> We have embodied/accomplished this SB	<input type="checkbox"/> Partially		
<input type="checkbox"/> We will not embody/accomplish this SB	<input type="checkbox"/> Our experience does not justify embodiment		
<input type="checkbox"/> Decision deferred (please explain)	<input type="checkbox"/> Other (please explain)		
DATE:		SIGNATURE:	
NAME:			

Comments (procedure, kit quality, suggested improvements, etc.)

Please forward this form to:

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