ENGINE CONTROLS - INSPECTION/CHECK

1. General

A. This section has the inspections and checks necessary to keep the engine controls in a serviceable condition.

TASK 76-10-00-720

2. Engine Controls Functional Check

A. General

(1) This task gives the procedures to do a functional check of the engine controls.

B. Special Tools

(1) MIL-L-7870 lubricant, or equivalent.

C. Access

(1) None

D. Do a Engine Power Lever Detailed Inspection (Refer to, Figure 601).

(1) Examine the power control cable from the power lever to the cam box input lever for security of installation, wear, corrosion, routing, evidence of damage, and deterioration.

(a) Examine the cable for security at the firewall jam nut.

(b) Examine all cable attach brackets for condition and security.

(2) Examine the rubber seals at the end of the flex cable for condition, security, and deterioration.

(3) Disconnect the rod end from the lever arm. Refer to Quadrant Assembly and Controls - Maintenance Practices.

(a) Wipe the rod end clean using a clean lint-free cloth.

(b) Examine the rod end bearing for condition, corrosion, pitting, security, and freedom of movement.

(c) Lubricate the rod end ball with MIL-L-7870 oil or an equivalent.

(4) Examine the lever arm for condition and security.

(5) Connect the rod end to the lever arm. Refer to Quadrant Assembly and Controls - Maintenance Practices.

(6) Examine the rod end clevis at the engine power control lever for condition, security, and freedom of movement.

(7) Adjust the friction lock to ON.

(a) Examine the control for positive locking action.

(8) Adjust the friction lock OFF.

(a) Move the control from the IDLE position to the FULL POWER position.

(b) Make sure that there is freedom of operation.

E. Do a Fuel Condition Control Lever Detailed Inspection. For illustrations of the fuel condition control lever (Refer to Figure 601).

(1) Examine the control cable from the cockpit lever to the governor lever for security of installation, wear, corrosion, routing, evidence of damage, and deterioration.

(a) Examine the cable for security at the firewall jam nut.

(b) Examine all cable attach brackets for condition and security.

(2) Examine the rubber seals at the end of the flex cable for condition, security, and deterioration.

(3) Disconnect the rod end from the lever arm. Refer to Quadrant Assembly and Controls - Maintenance Practices.

(a) Wipe the rod end clean using a clean lint-free cloth.

(b) Examine the rod end bearing for condition, corrosion, pitting, security, and freedom of movement.

(c) Lubricate the rod end ball with MIL-L-7870 oil or an equivalent.

(4) Examine the lever arm for condition and security.

(5) Connect the rod end to the lever arm. Refer to Quadrant Assembly and Controls - Maintenance Practices.

(6) Examine the rod end clevis at the fuel condition control lever for condition, security, and freedom of movement.

(7) Adjust the friction lock to ON.

(a) Examine the control for positive locking action.

(8) Adjust the friction lock OFF.
   (a) Move the control from the CUTOFF position to the HIGH IDLE position.
   (b) Make sure that there is freedom of operation.
   (c) Make sure that the lever on the fuel control contacts the HIGH IDLE stop.

F. Propeller Speed Control Lever Detailed Inspection. (Refer to, Figure 601).
   (1) Examine the propeller speed control cable from the cockpit lever to the governor lever for security of installation, wear, corrosion, routing, evidence of damage, and deterioration.
      (a) Examine the cable for security at the firewall jam nut.
      (b) Examine all cable attach brackets for condition and security.
   (2) Examine the rubber seals at the end of the flex cable for condition, security, and deterioration.
   (3) Disconnect the rod end from the lever arm. Refer to Quadrant Assembly and Controls - Maintenance Practices.
      (a) Wipe the rod end clean using a clean lint-free cloth.
      (b) Examine the rod end bearing for condition, corrosion, pitting, security, and freedom of movement.
      (c) Lubricate the rod end ball with MIL-L-7870 oil or an equivalent.
   (4) Connect the rod end to the lever arm. Refer to Quadrant Assembly and Controls - Maintenance Practices.
   (5) Examine the rod end clevis at the cable connection to the propeller speed control lever for condition, security, and freedom of movement.
   (6) Adjust the friction lock to ON.
      (a) Examine the control for positive locking action.
   (7) Adjust the friction lock OFF.
      (a) Move the control from the FEATHER position to the HIGH RPM position.
      (b) Make sure that there is freedom of operation.
      (c) Make sure that the lever arm contacts the HIGH RPM stop.

G. Do a Functional Check of the Engine Power Control Lever.
   (1) Start the engine. Refer to the Model 208 Pilot's Operating Handbook and Approved Airplane Flight Manual.
   (2) Operate the engine at IDLE for five minutes to let the temperatures stabilize.
   (3) Put the propeller speed control lever to the MAX forward position.
   (4) Move the power control lever from IDLE, then slowly aft to the REVERSE position.
   (5) Make sure that the propeller RPM increases to peak, then decreases 10 RPM to 50 RPM before the gas generator (Ng) begins to increase from idle.
   (6) Complete the following adjustment if necessary:
      (a) If necessary, do the Power Control Lever Reverse Gas Generator (Ng) Pickup Adjustment. Refer to Engine Control Rigging - Adjustment/Test.
      (b) If necessary, do the Propeller Speed Control Lever Adjustment. Refer to Engine Control Rigging - Adjustment/Test.

H. Do a Functional Check of the Fuel Condition Control Lever.
   (1) Make sure that the engine temperature is stabilized.
   (2) Make sure that the power control lever is at IDLE.
   (3) Make sure that the fuel condition control lever is at LOW IDLE.
   (4) Put the generator switch to the ON position.
      (a) Adjust the electrical load to 40 Amperes.
   (5) Put the BLEED AIR HEAT switch to the ON position.
   (6) Turn the CABIN HEAT TEMP control knob to the full HOT position.
   (7) Make sure that the Ng is from 52 percent to 55 percent.
      (a) If the Ng is not at the specified range, do the Fuel Control Lower Idle Adjustment. Refer to Engine Control

Rigging - Adjustment/Test.

(8) Put the fuel condition control lever to the HIGH IDLE position.

(9) Make sure that the Ng is from 64 percent to 66 percent.

(a) If the Ng is not at the specified range, do the Fuel Control High Idle Adjustment. Refer to Engine Control Rigging - Adjustment/Test.

(10) Move the fuel condition control lever to the LOW IDLE position.

(11) Move the power lever to the IDLE position.

(12) Move the propeller speed control lever to the MIN RPM position.

(13) Shut down the engine. Refer to the Model 208 Pilot's Operating Handbook and Approved Flight Manual.

I. Restore Access

(1) None

END OF TASK

Figure 601 : Sheet 1 : PT6A-114/PT6A-114A Engine Cable Installation

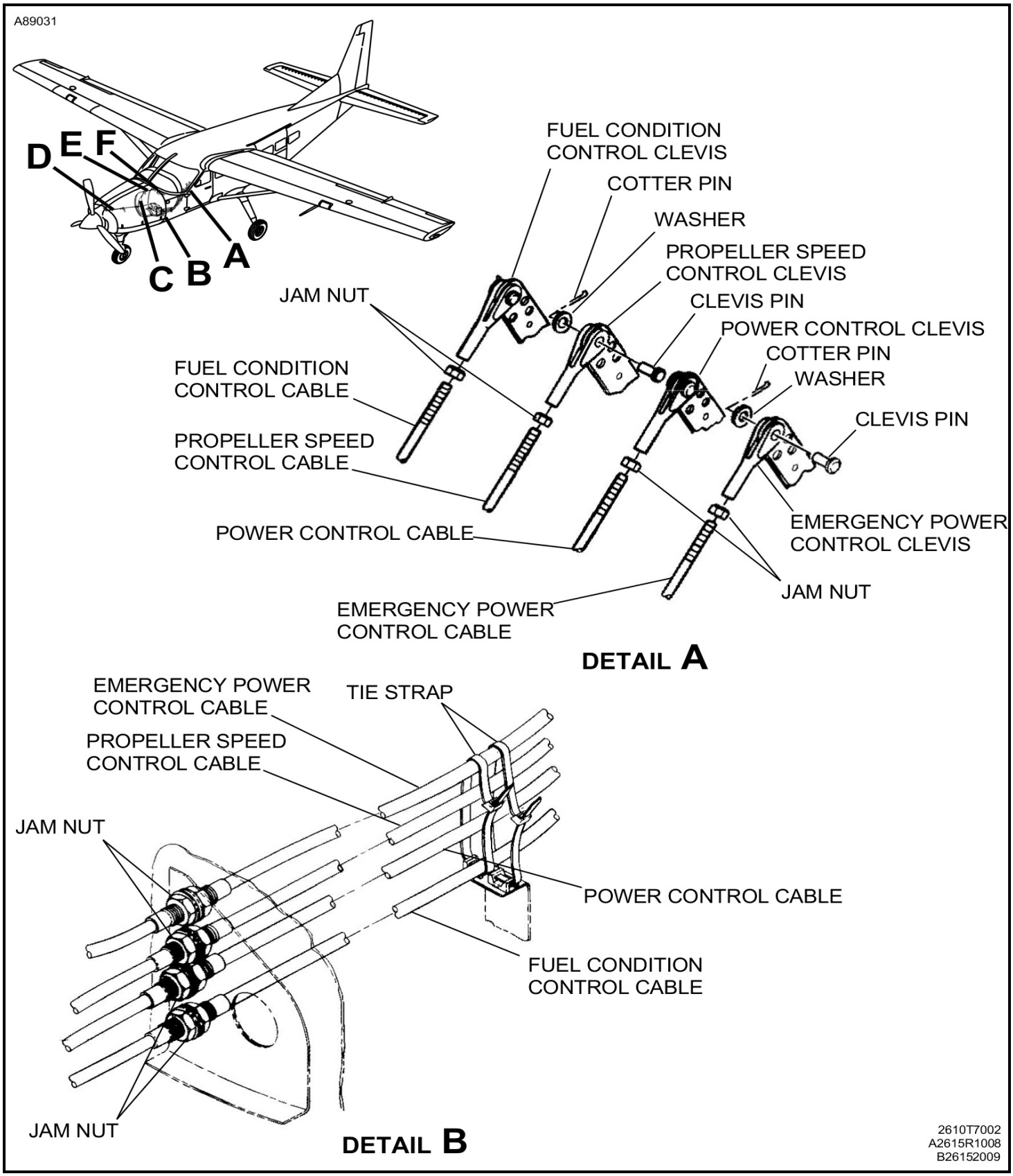


Figure 601 : Sheet 2 : PT6A-114/PT6A-114A Engine Cable Installation

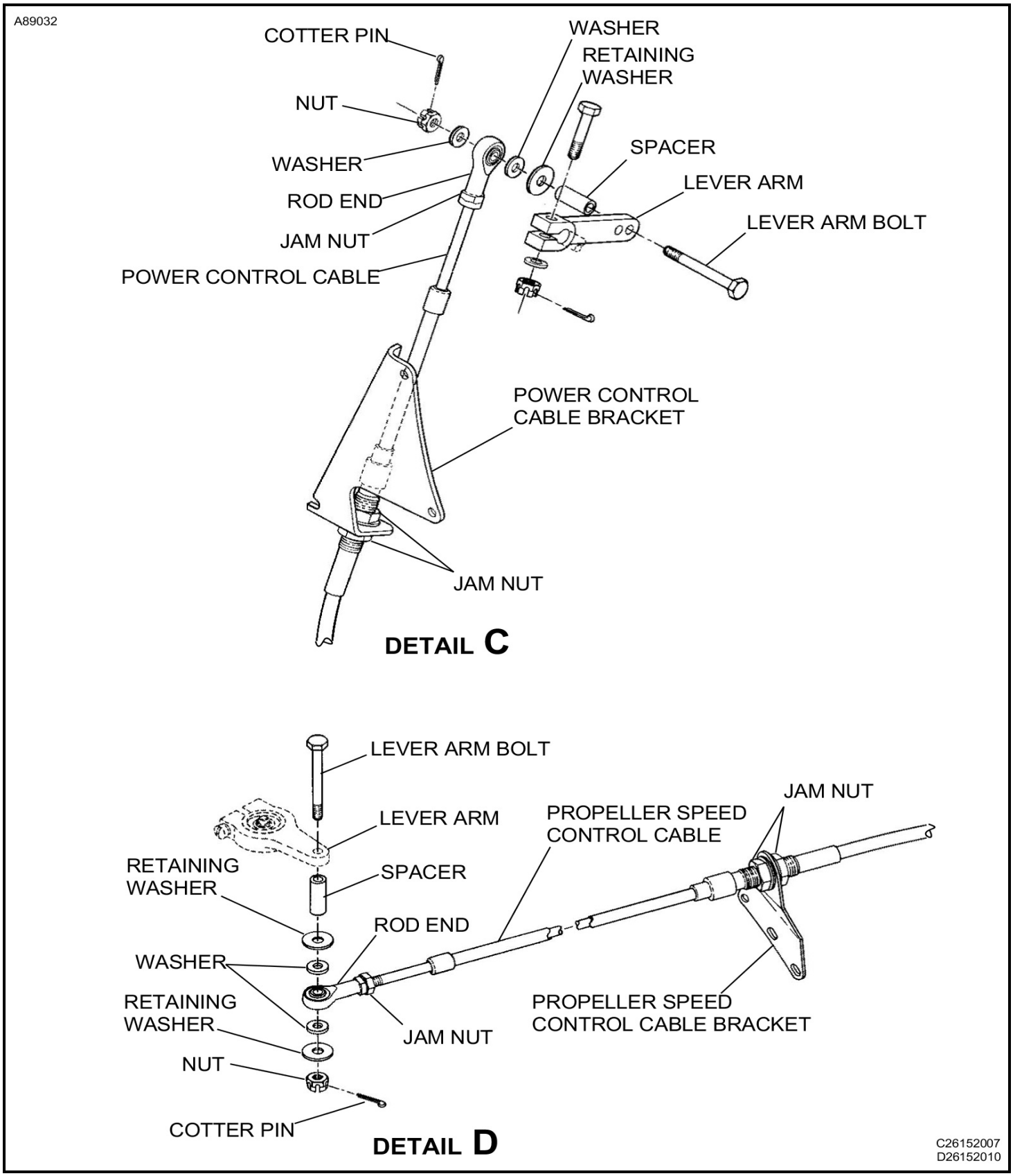


Figure 601 : Sheet 3 : PT6A-114/PT6A-114A Engine Cable Installation

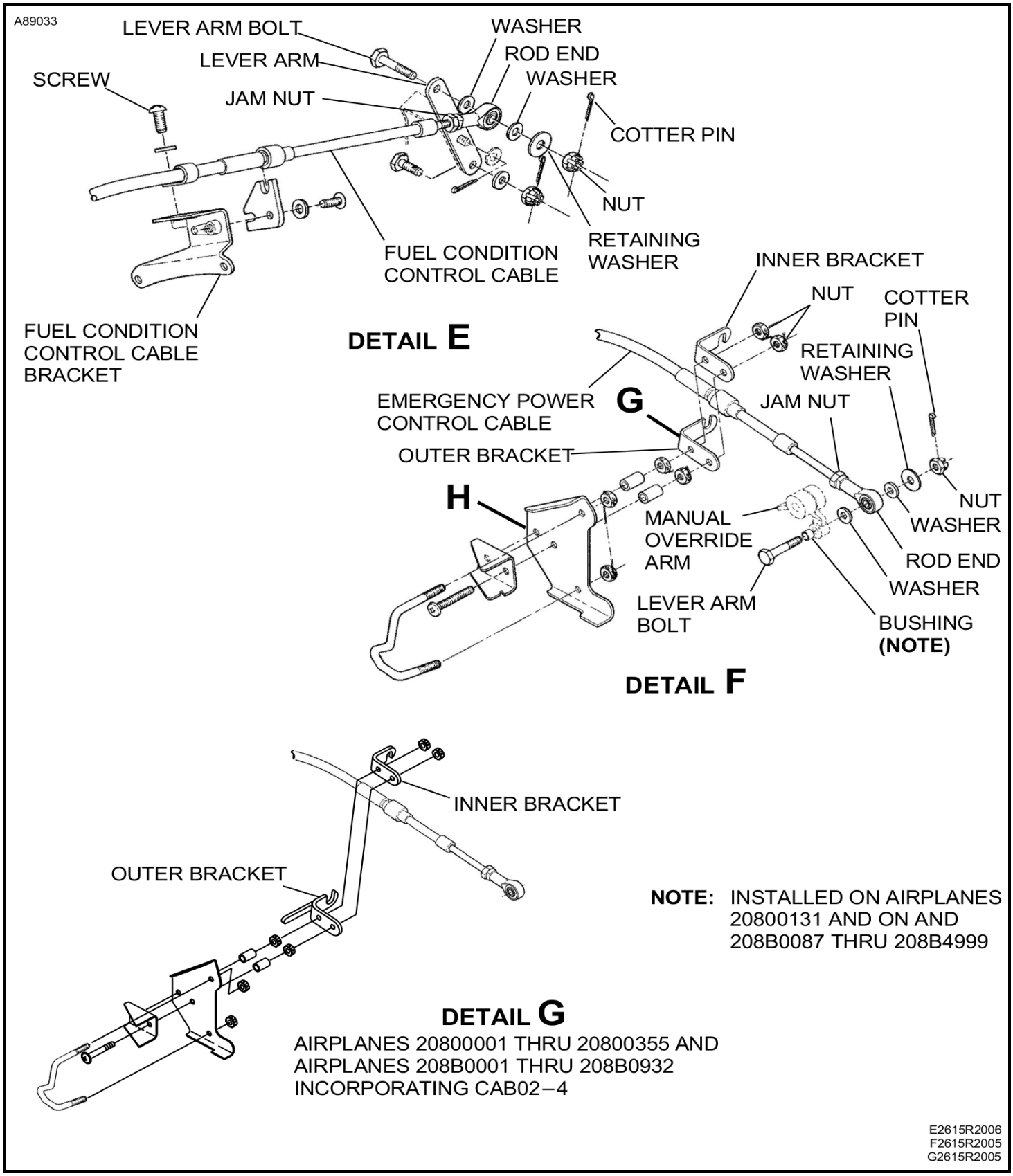
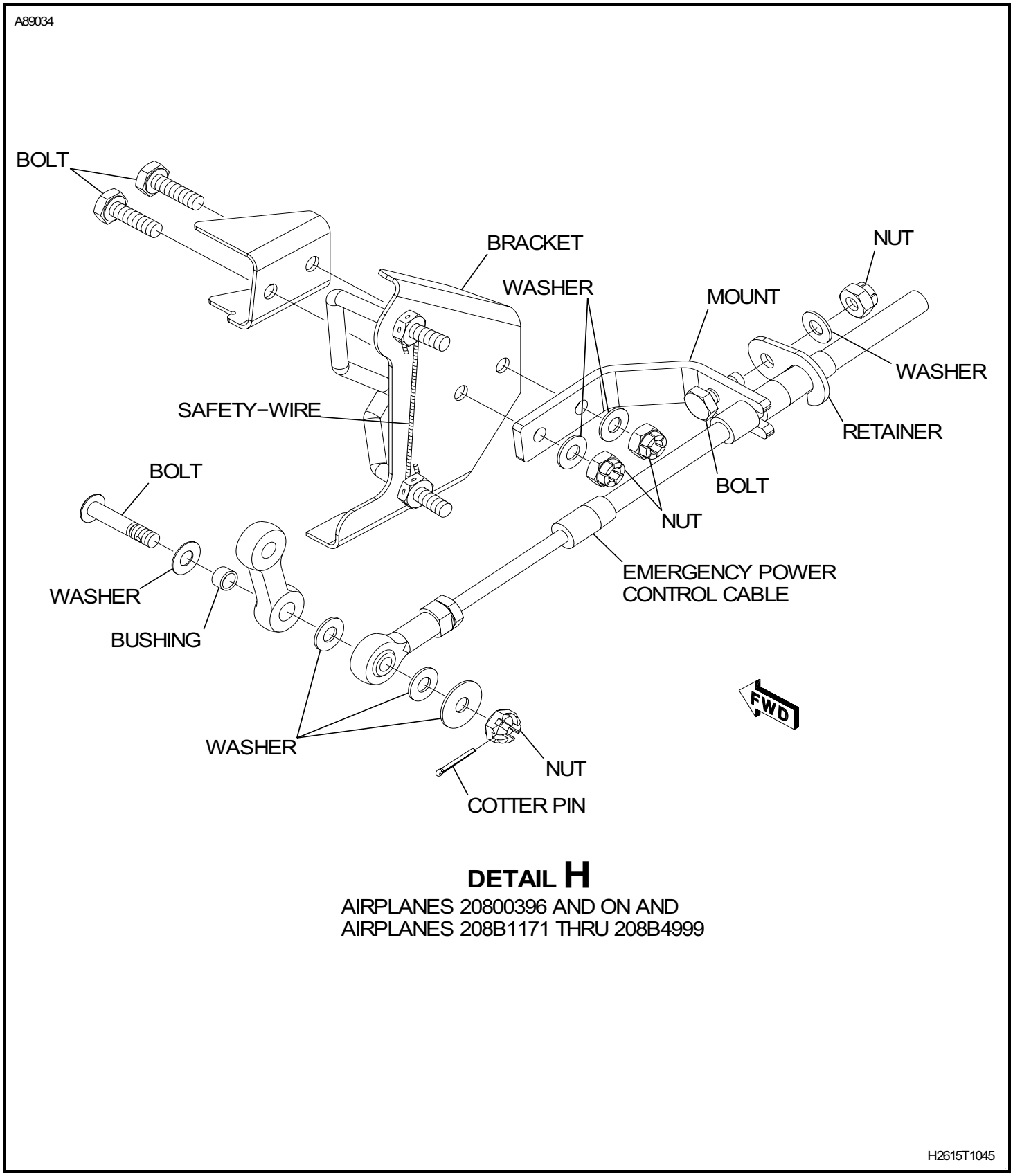


Figure 601 : Sheet 4 : PT6A-114/PT6A-114A Engine Cable Installation



DETAIL H

AIRPLANES 20800396 AND ON AND
AIRPLANES 208B1171 THRU 208B4999