



CLASS II

SERVICE INSTRUCTIONS

19, 23, 24

No. 0627-159
ATA Code 76-10

SUBJECT: ENGINE CONTROLS - POWER CONTROL - MODIFICATION OF ENGINE QUADRANT CONTROLS FRICTION MECHANISM.

EFFECTIVITY: BEECHCRAFT Sundowner C23, serials M-1413, M-1414, M-1416 through M-1418, M-1420 through M-1422, M-1424 through M-1438, M-1440 through M-1445, and M-1453 through M-1476;
Sport B19, serials MB-558 through MB-598;
Sierra B24R, serials MC-151, MC-152, and MC-155.

REASON: To improve the dependability of the engine quadrant controls friction mechanism.

COMPLIANCE: As soon as practical after receipt of these Service Instructions, but not later than the next 100-hour or annual inspection.

DESCRIPTION: Modification consists of reworking the quadrant controls shaft and the friction nut, changing attaching parts on the quadrant controls shaft and the friction lock handle, and readjusting the friction lock mechanism.

APPROVAL: FAA Approved - DOA CE-2.

MANPOWER: The following information is for planning purposes only:

Estimated man-hours: 3 hours.
Suggested number of men: 1 man.

MATERIAL: The AN960-616 washer, the MS9048-104 spring pin, and the two NAS1081-08B3 set screws should be obtained locally. If required, the 100951DD032YP washer may be obtained from your BEECHCRAFT Parts and Service Outlet. Suggested selling price to be advised.

SPECIAL TOOLS: None.

WEIGHT AND BALANCE: None.

REFERENCES: None.

PUBLICATIONS AFFECTED: It is recommended that a note be made in Section 3 of all Shop Manual copies to "See Service Instructions No. 0627-159."

ACCOMPLISHMENT

INSTRUCTIONS: This modification may be accomplished as described in the following procedure:

1. Remove the two covers from the quadrant controls.
2. Remove the two set screws from the friction lock handle and remove the handle from the end of the friction lock mechanism. Discard the two set screws, but retain the handle.
3. Being careful to maintain the existing "stack-up" of the

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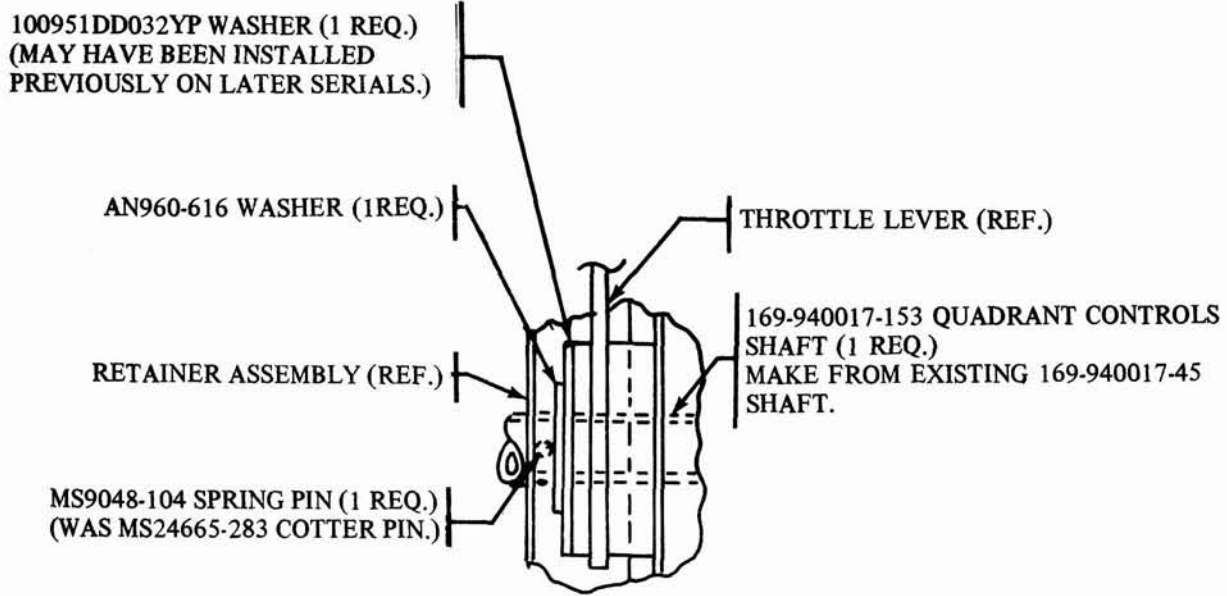
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98-34238D

Service Instructions No. 0627-159



LOOKING FORWARD NEAR LH END OF ENGINE
QUADRANT CONTROLS INSTALLATION

Figure 1.

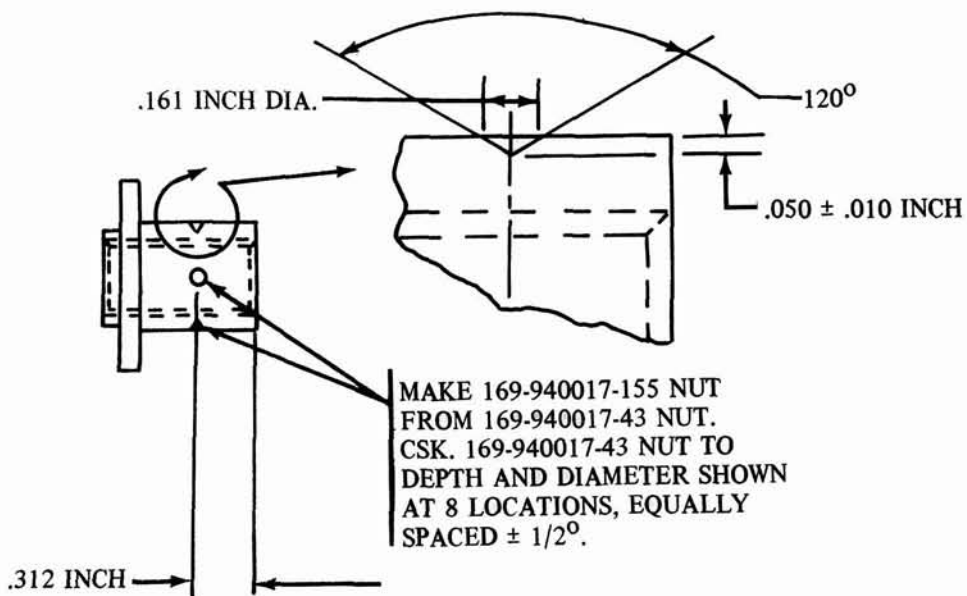


Figure 2.

friction lock mechanism, remove the 169-940017-43 nut from the right hand end of the 169-940017-45 quadrant controls shaft (Figure 1).

NOTE

The nut and the shaft have left hand threads.

4. Remove the MS24665-283 cotter pin (Figure 1) located approximately 3/8 inch from the left hand end of the 169-940017-45 shaft. Remove the shaft from the friction lock mechanism by pulling out the shaft from the right hand side. Discard the MS24665-283 cotter pin.

5. Rework the 169-940017-45 shaft into a 169-940017-153 shaft by drilling out the existing cotter pin hole to .125 to .129 inch diameter.

NOTE

It is permissible for the hole to break through the slot in the end of the shaft.

6. Place the 169-940017-153 quadrant controls shaft in the friction lock mechanism. Make certain that the proper washers will be installed on the shaft as follows:

a. If a 100951DD032YP washer is not now installed at the location shown in Figure 1, remove the existing washer at that location and replace it with a 100951DD032YP washer.

b. Install an AN960-616 washer at the location shown in Figure 1. Remove the existing washer at that location (if installed) and discard.

7. Install an MS9048-104 spring pin in the 169-940017-153 shaft.

8. Rework the 169-940017-43 nut into a 169-940017-155 nut by drilling eight countersunk holes in the nut as shown in Figure 2.

9. Install the 169-940017-155 nut on the right hand end of the 169-940017-153 quadrant controls shaft. Tighten the nut only until it is snug.

10. Reinstall the two quadrant control covers removed in Step 1.

11. Reinstall the friction lock handle on the right hand end of the friction lock mechanism with two NAS1081-08B3 set screws.

12. Adjust the friction lock mechanism by tightening or loosening the 169-940017-155 nut.

a. With the friction lock handle in the full forward position, the engine controls must be preloaded so that a force of 3-5 lbs. is required at center line of knobs to move controls forward or aft.

b. With the friction lock handle moved aft approximately 30 degrees (locked position), movement of the engine controls must be impeded by friction.

c. With the friction lock handle in the locked position, a force of no more than 16 lbs. shall be required to move controls forward or aft when applied at center line of knobs.

RECORD COMPLIANCE:

Upon completion of these Service Instructions, make an appropriate maintenance record entry.