

Rockwell service letter

No. SL-AG-70

International

P.O. BOX 3090 ALBANY, GEORGIA 31706-3090 PHONE 229/883-1440 FAX 229/439-9790

Service Letter No. SL-AG-70
February 27, 1975

REPLACEMENT OF BRAKE ASSEMBLY O-RINGS

- EFFECTIVITY:** MODEL S-2R, SERIAL NO'S 1825R, AND 1939R THRU 2051R WITH P/N 50151-1 BRAKE ASSEMBLY INSTALLED
- REASON FOR PUBLICATION:** To assure proper O-rings are installed in brake assemblies and provide brake overhaul instructions.
- RECOMMENDED COMPLIANCE:** At next brake overhaul or next annual inspection, whichever occurs first.
- APPROVAL:** FAA DER Approved
- INSTRUCTION:**
- a. Release parking brake.
 - b. Jack aircraft.
 - c. Check brake lining wear as follows:
 1. When any of the three adjusting pins recede into the adjusting nut 1/32 inch, linings should be replaced.
 2. With brakes applied, attempt to insert 3/16 inch feeler gauge between the face of the brake disc and the flat surface of the housing that parallels the disc. If the 3/16 inch feeler gauge can be inserted, the brake linings are worn too far for continued safe use and should be replaced.
 - d. Remove wheels from landing gear.
 - e. Disconnect and cap brake hydraulic line at brake housing.
 - f. Remove bolts attaching brake assembly to axle torque flange and remove brake from aircraft.

- g. Disassemble brakes as follows:

NOTE

See Figure 1. for part nomenclature.

1. Remove brake disc and brake lining from brake housing.
2. Remove adjusting nut.
3. Use cylinder head adapter or spanner wrench and unscrew cylinder head, releasing adjusting pin grip and washer.
4. Remove and discard O-ring seals from cylinder head.
5. Push piston assembly from cylinder housing and remove and discard O-rings.

CAUTION

Care should be taken so as not to damage adjusting pin.

NOTE

It is not necessary to disassemble piston unless parts are to be replaced.

6. If piston requires disassembly, proceed as follows:
 - a. Unscrew and remove spring retainer plate.
 - b. Remove two (2) brake release springs from piston.
 7. Remove round head bleeder screw, bleeder washer, bleeder valve, bleeder adapter and inlet gasket.
 8. Remove two bleeder screws and washers completing the assembly.
- h. Clean and inspect brakes as follows:
1. Wash all metal parts in dry cleaning fluid or other suitable solvent.
 2. Thoroughly inspect all parts and discard those which are damaged or excessively worn.
 - a. Brake discs which have dished in excess of 1/16 inch should be replaced.
 - b. Brake discs which have the keyways worn in excess of 1.188 inch should be replaced.

- c. Brake linings should be replaced at each overhaul or as outlined in proceeding step c.
 - d. Inspect cylinder walls and polish out any small nicks with fine sandpaper (400 grit).
 - e. Inspect adjusting pins and polish out any small burrs or nicks.
- i. Reassemble brakes as follows:
1. If piston has been disassembled, reassemble as follows:
 - a. Place adjusting pin, two (2) return springs, and spring retainer plate into piston.
 - b. Screw threaded spring retainer plate into piston until it bottoms.
 - c. Secure by staking threads (1/32 inch deep) in two (2) places with a prick punch.
 2. Lubricate cylinder walls of brake housing and contacting surfaces of piston and threads of cylinder head with a thin coat of MIL-L 7711 grease.
 3. Lubricate 2-010-E603-70 O-rings and 2-224-E602-70 O-rings with a thin coat of MIL-L-7711 grease and install in grooves provided in cylinder head.
 4. Lubricate 2-326-E603-70 O-rings with a thin coat of MIL-L-7711 grease and install on piston.
 5. Install piston into position in brake housing.
 6. Place cylinder head over end of the adjusting pin and screw into position in brake housing until cylinder head is flush with face of brake ± 0.015 inch.
 7. Place washer and adjusting pin grip. Tapered end out, on adjusting pin.

NOTE

Dip adjusting pin grip in clean hydraulic fluid before installing.

8. Force piston against cylinder head and install adjusting nut, hold cylinder head with adapter 43193 and torque adjusting nut to 15 foot-pounds.

NOTE

Loosen and retorque adjusting nut several times to assure proper mating of parts.

CAUTION

It is essential that the adjusting nuts be torqued accurately to obtain correct functioning of the automatic adjustment mechanism.

9. Install inlet gasket, bleeder adapter, bleeder valve, bleeder washer and bleeder screw.
 10. Install bleeder screws and washers.
 11. Place brake linings in pistons and anvil.
 12. Install brake disc between brake linings.
- j. Reinstall brake assembly on axle torque flange and secure.
- k. Reconnect hydraulic line.
- l. Reinstall wheel assembly as follows:
1. Lubricate contacting surfaces of existing nuts and washers with MIL-L-3545 grease.
 2. Install existing nuts and washers on axle and while rotating wheel, torque nut to 80 inch-pounds.
 3. While rotating wheel, back nut off to zero (0) inch-pounds.
 4. While rotating wheel, finger tighten nut not to exceed 40 inch-pounds.
 5. If nut is not in locking position, advance nut to next position (not to exceed 30° and/or 40 inch-pounds) while wheel is rotating.
 6. Install existing cotter pin.
- m. Bleed brakes and apply pressure several times to set automatic adjustment mechanism.
- n. Assure that wheel turns freely when brakes are released.
- o. Functional test brakes to assure proper operation.
- p. Remove jacks from aircraft.

SUPPLY LIST: The following O-rings required to comply with this Service Letter may be purchased through your nearest Thrush Commander Distributor.

QTY	PART NO.	DESCRIPTION
6 ea.	2-010-E603-70	O-Rings
6 ea.	2-224-E603-70	O-Rings
6 ea.	2-326-E603-70	O-Rings
1 ea.	No. SL-AG-70	Service Letter

NOTE

Cylinder head adapter tool P/N 43193 may be purchased from R.F. Cook Mfg. Co., Stow, Ohio 44224

ELECTRICAL LOAD: Not Applicable

WEIGHT AND BALANCE: Not Applicable

RECORD COMPLIANCE: Make appropriate entry in airplane maintenance records as follows:

Service Letter NO. SL-AG-70 dated February 27, 1975, entitled "Replacement of Brake Assembly O-Rings", accomplished
(date) _____.

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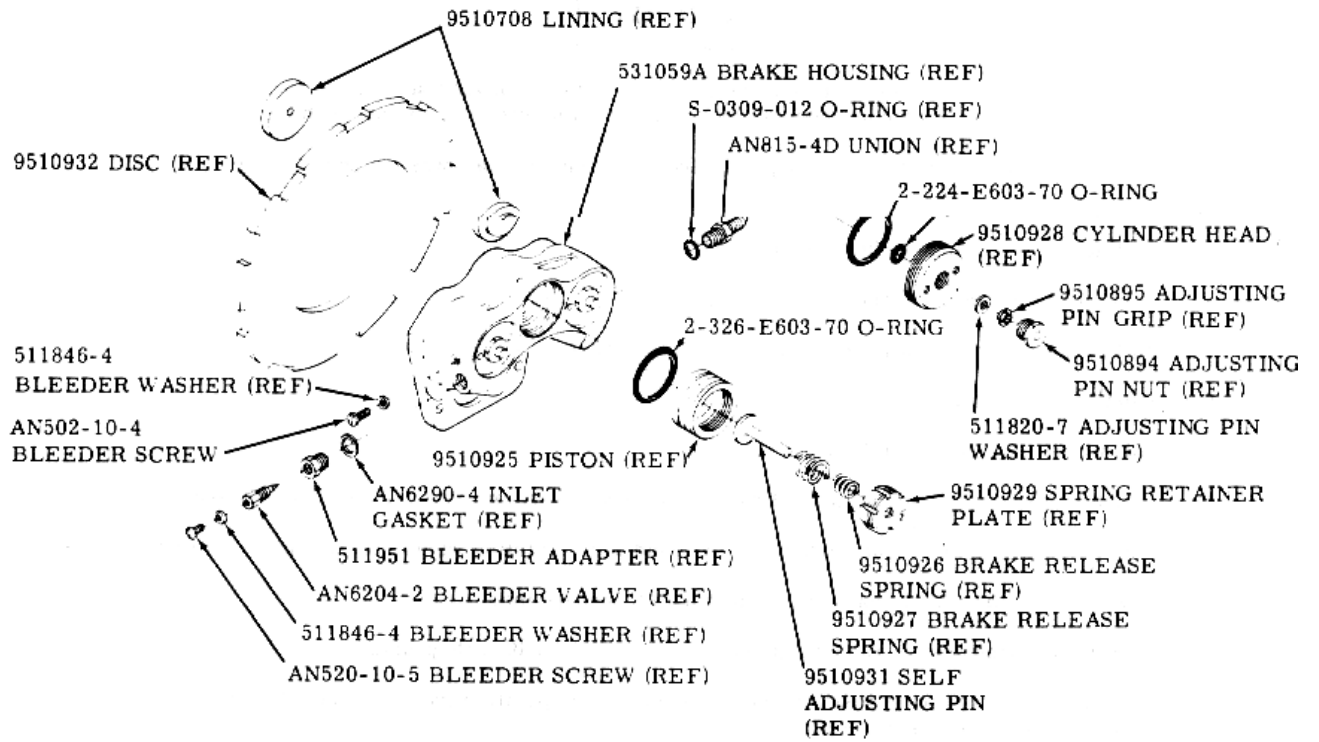


Figure 1.