

Cleveland

Wheels & Brakes

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Aircraft Wheel & Brake

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PRODUCT REFERENCE MEMO

INSTALLATION OF SELF ADJUSTING RETRACT MECHANISM ON 30-159 BRAKE ASSEMBLY, TO BECOME BRAKE MODEL 30-159B

1. Chock main and nose wheel tires.
2. Set Parking Brake and apply a slight amount of pressure to brakes.
3. (WHILE WEARING SAFETY GLASSES) carefully loosen the bolt which retains the existing retract springs to the back of the Hydraulic Pistons. (Typically 8 places.) Remove and discard all parts.
4. Release Parking Brake.
5. Remove Hydraulic feed line to Brake Assembly and cap.
6. Remove the 24 bolts which attach the back plates to the Brake Cylinders and remove brakes from aircraft.
7. Screw one of the Back Plate attachment bolts into each piston in succession and, with hand pressure, push each piston out of the Brake Cylinders. (MARK EACH PISTON AND BORE TO ENABLE CORRECT REASSEMBLY).
8. Remove O-rings from pistons and discard.
9. Thoroughly clean cylinders and pistons using available solvent applicable to aluminum.
10. Special attention should be given to the piston bores and pistons.
 - A. Piston bores and "o" ring grooves should have foreign material loosened and flushed from all surfaces.
 - B. The small diameter of the piston bore may be polished with steel wool or fine emery, but the finished diameter shall not exceed .565 min.
 - C. The large diameter of this piston bore may be polished to remove shallow wear scratches and/or nicks. The final diameter, however, must be a maximum 2.001.
 - D. The piston may be polished to remove shallow wear scratches and/or nicks. The final piston diameter (large section), however, must be a minimum of 1.993.
 - E. Any rework to the above mentioned components, which places them outside of the dimensional limits defined, requires replacement of those components.
11. Following cleaning and inspection of the cylinders and pistons, install the new O-ring supplied in the Kit.
12. Lubricate the piston bores, O-rings and pistons with hydraulic fluid compatible with the aircraft system.



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13. Lay the cylinder on a firm surface and insert piston into bore until "o" rings prohibit further insertion. While applying pressure with your thumbs, rotate the piston in a clockwise direction. After "o" ring squeeze is overcome, the piston will slide freely into the bore. Push piston flush to cylinder face. (Repeat 8 places.)
 14. Install pressure plates on cylinders and reinstall cylinders on aircraft.
 15. Install washers and cylinder tie bolts into cylinders. (Typically 24 places.)
 16. Install one (1) insulator shim onto brake cylinder.
 17. Install back plates and tighten (24 each) cylinder tie bolts. (FINAL TORQUE 85-90 IN-LB.)
 18. Reattach hydraulic feed line and bleed brakes.
 19. With Parking Brake off, install new retract mechanism into the back of each piston. Screw in by hand, making sure that the stud bottoms on the piston tail surface. (FINAL TORQUE 30-40 IN-LB.)
- (REFER TO ENCLOSED DRAWING FOR CORRECT PARTS SEQUENCING.)
20. Safety wire studs.
 21. Reidentify each brake as model 30-159B by scribing a "B" after Model No. 30-159 on each decal.
 22. Make a log book entry, referencing this activity, and return aircraft to service.