American General Aircraft Corporation

Rt. 1 AB 306 ● P.O. Box 5757 ● Greenville, MS 38704

CRITICAL SERVICE BULLETIN

CATEGORY 2

Contains information pertaining to a threat to the continued safe operation of an aircraft or to the safety of persons or property on the ground unless some specific action is taken by the aircraft owner

SB No. 183

DATE: JUNE 29, 1993

SUBJECT: PARKER HANNIFIN WHEEL AND BRAKE " MASTER CYLINDERS"

MODEL / SERIALS AFFECTED: AG-5B 99998, 10000 through 10151

TIME OF COMPLIANCE: Within the next 50 hours of operation or at the next scheduled inspection, which ever occurs first and at each 50 hours thereafter until compliance with part (B) of this Service Bulletin

GENERAL:

We have received reports of loss of directional control during ground taxiing on some of the above mentioned aircraft due to a locked or partially locked brake cylinder. This can occur if the guide bushing in the cover plate of the Parker Hannifin Wheel and Brake master cylinder (P/N 10-35) becomes loose and drops below the cover plate when the brake is actuated. The guide bushing may become wedged between the cover plate and the piston which can prevent the piston from returning to the up position when the brake is released. This condition can cause the aircraft to turn in the direction of the malfunctioning brake.

NOTE

Parker Hannifin has incorporated the addition of a retaining ring part number 155-06900 on the current 10-35 master cylinder assembly to prevent the guide bushing from dropping below the cover plate should the bushing become loose.

A. INSPECTION:

1. Prepare the aircraft for safe maintenance.
2. Remove the right and left master cylinders in accordance with the AA-5 series Maintenance Manual and the AG-5B Supplement Chapter 32-4-2.
3. Inspect the piston shaft guide bushing in the cover plate for security and wear. (Reference FIGURE 1)
4. If the inspection above reveals that the clearance between the guide bushing and the piston shaft is in excess of .015 inch, or the guide bushing can be rotated in the cover plate, the cover plate assembly must be replaced.

5. If the guide bushing is found to be within the specified limits and cannot be rotated in the cover plate, the master cylinder may be reinstalled in the aircraft in accordance with the AA-5 Series Maintenance Manual and the AG-5B Supplement Chapter 32-4-2 and the aircraft returned to service or you may continue with part (B) of this Service Bulletin.

B. ACTION:

In order to prevent loss of directional control while taxing due to a locked or partially locked brake, install the 155-06900 retaining ring as follows:

NOTE: REFERENCE FIGURE 1

1. Remove the clevis and clevis lock nut form the piston shaft. Note the location of the clevis for reinstallation.

2. Install the retaining ring P/N 155-06900 by sliding the retaining ring (with the inner beveled teeth up) over the piston shaft and simultaneously pulling on the shaft and pushing on the retaining ring to force the ring over the bushing. Make sure that it is on as far as possible. (A "C" channel installation tool would be helpful in this task)

3. Reinstall the lock nut and clevis to it's original location.

4. Reinstall the master cylinder in accordance with the AA-5 Series Maintenance Manual and the AG-5B Supplement Chapter 32-4-2.

5. Record compliance with this Service Bulletin in the aircraft log and return the aircraft to service.

6. Complete the attached compliance card and mail to:

American General Aircraft Corporation
Route 1 AB 306
Greenville, MS 38701

PARTS AND LABOR CREDIT:

The 155-06900 retaining ring may be ordered through any American General Aircraft Corporation Sales Center or Service Center.

Full parts credit and 1.5 hours labor credit will be issued for compliance of part (B) of this Service Bulletin for aircraft in warranty when accomplished by an authorized AGAC Sales Center or Service Center.

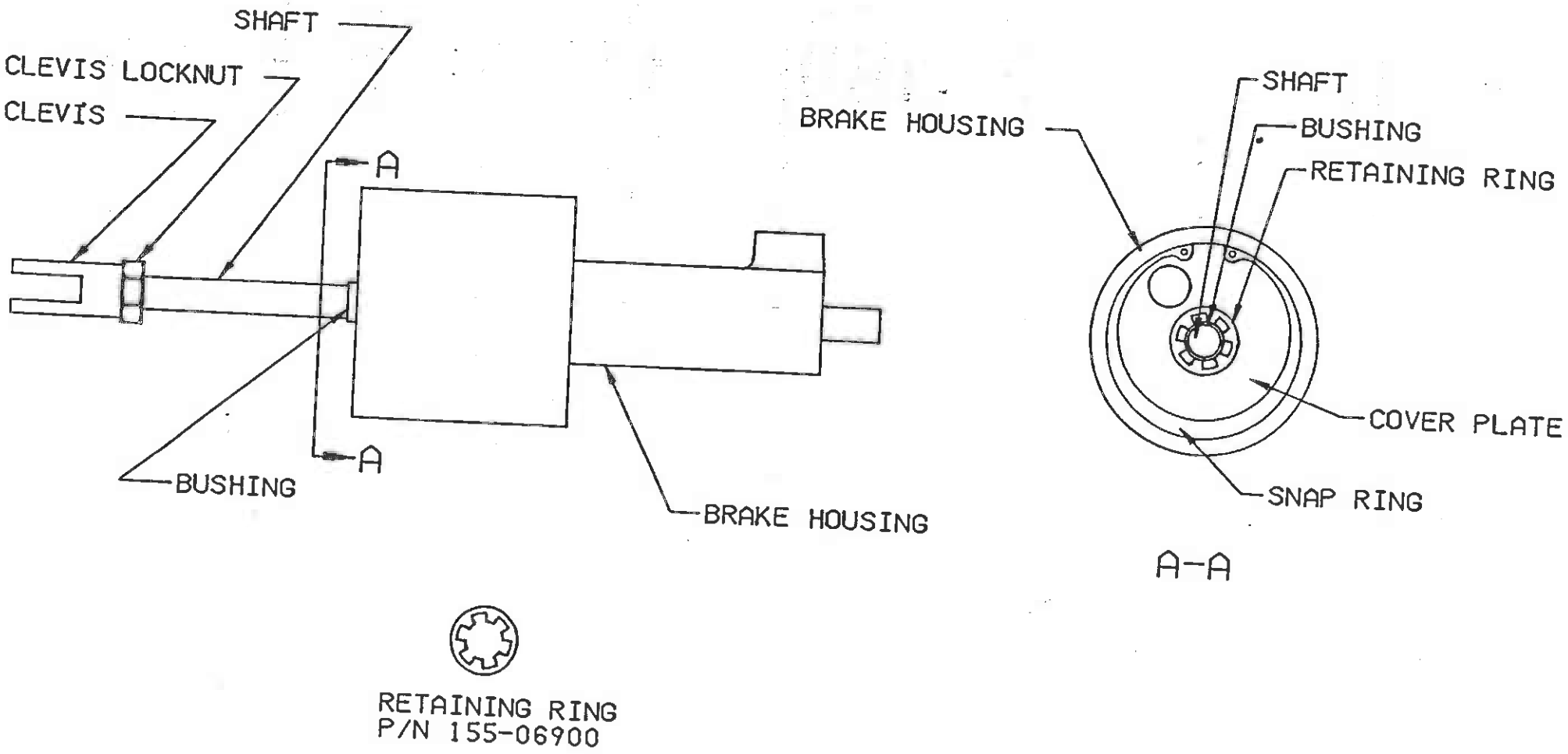

FIGURE 1