
062-04700 PISTON – INSPECT AND REPLACE

1. PLANNING INFORMATION

A. APPLICABILITY

This Service Bulletin is applicable to the Parker Hannifin P/Ns given below shipped with MFG Date codes 05/07 through 12/08 installed on Rockwell Commander aircraft identified under STC SA497GL:

Model 560F, 680F, 680FL, 680FLP, 680T, 680V, 680W, 681, 685, 690, 690A, 690B, 690C, 690D, 695, 695A, and 695B

The following Parker Hannifin, Aircraft Wheel and Brake units shipped as follows:

- 062-04700 pistons shipped from 05/07 through 12/08. Used on brake assemblies: 30-107, 30-107A, 30-107B, 30-107C, 30-107D, 30-107E
- 092-04500 piston assembly. Used on: 30-107, 30-107B, 30-107C, 30-107E
- 092-04800 piston assembly. Used on: 30-107A, 30-107D
- 091-16600 cylinder assembly. Used on: 30-107C
- 091-22000 cylinder assembly-leading. Used on: 30-107E
- 091-22001 cylinder assembly-trailing. Used on: 30-107E
- 30-107C brake assembly
- 30-107E brake assembly
- 199-80 kit. Contains 30-107E brake assembly

B. REASON

Parker Hannifin has identified a non-conforming condition that exists on PN 062-04700 piston affecting the assemblies listed above due to a cross hole drilled in the piston stem. It has been determined through testing that a potential exists for partial loss of parking pressure as a result of minor leakage encountered.

C. DESCRIPTION

This Service Bulletin provides instruction to visually examine the brake assemblies for the condition as defined in paragraph 2 and to replace non-conforming 062-04700 pistons.

D. COMPLIANCE

A condition exists as defined in paragraph 2. Accomplishment Instructions.

Perform recommended test at or before next annual inspection.



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E. APPROVAL

The contents of this Service Bulletin are FAA DER approved.

F. MANPOWER

Approximately 1.25 hours are required to disassemble the brake to the level required to replace non-conforming pistons and reassemble the brake.

G. MATERIAL

Refer to paragraph 3. Material Information.

H. TOOLING

Tools normally found in a mechanics toolbox. No additional special tooling is required.

I. WEIGHT AND BALANCE

Not affected.

J. OTHER PUBLICATIONS AFFECTED

This Service Bulletin will be listed in Parker Hannifin component maintenance manual MM40-107/30-107.

This Service Bulletin will be incorporated into Parker Hannifin publication AWBCMM0001, Service Bulletin section at the next scheduled revision.

K. PREVIOUS MODIFICATIONS

Not affected.

2. ACCOMPLISHMENT INSTRUCTIONS

A. TEST FOR LEAKAGE

- (1) Clean the external surfaces of the brake surrounding the brake retracts.
- (2) Perform a low pressure hold test by applying the parking brake per the aircraft POH (Pilot Operating Handbook). Park the aircraft for 12 hours minimum. Place leak collection paper or other suitable device under the brake assembly. This will aid in confirming a leakage condition and also to capture any hydraulic fluid.
- (3) Visually inspect the piston area for leakage indications as shown as examples in Figures 1 and Figure 2.

NOTE: Testing was accomplished using a 091-22000 cylinder assembly. Other brake configurations will show leakage indications in the area of the retract mechanisms and the top of the cylinder piston areas.

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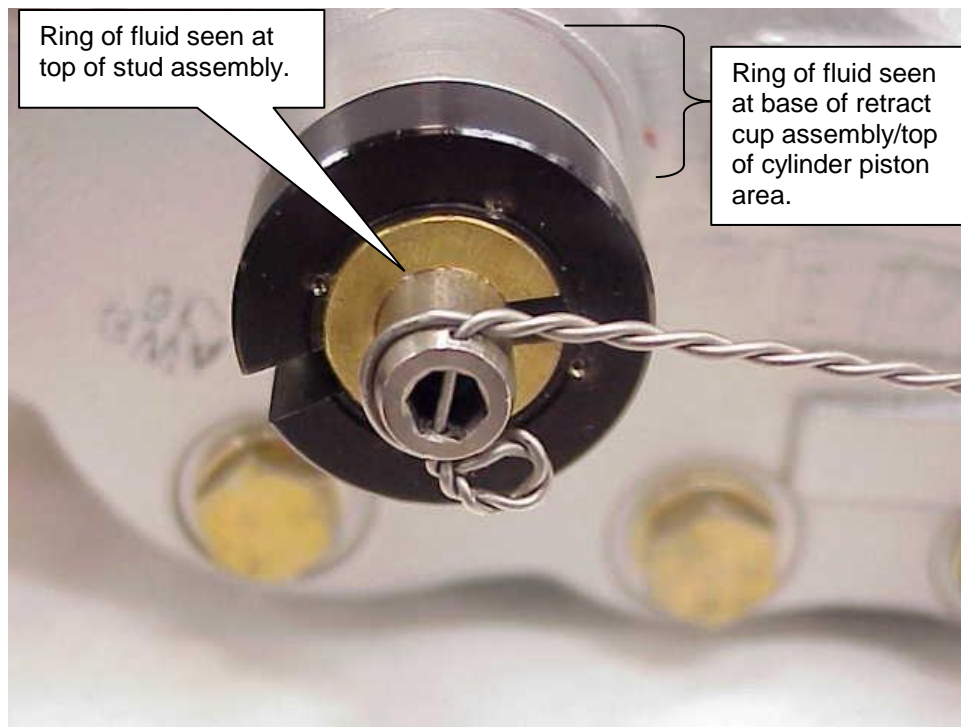


Figure 1 Leakage Indication – Example 1 (091-22000 shown)

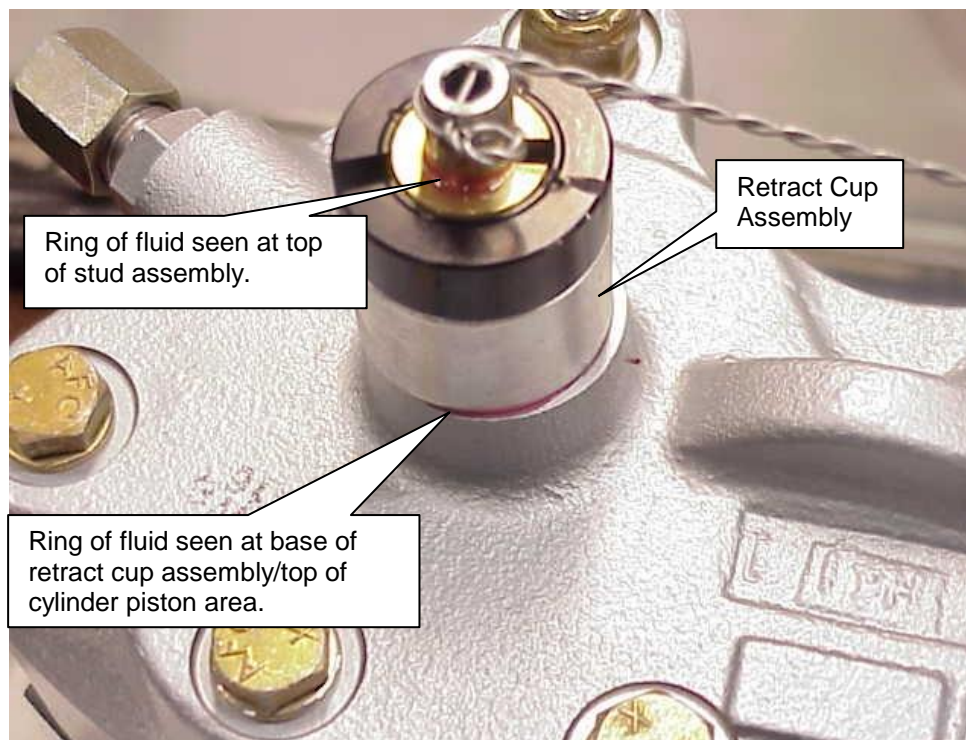


Figure 2 Leakage Indication – Example 2 (091-22000 shown)

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- (4) If no leakage indication is observed, no further action is required. Note compliance in aircraft logbook and return aircraft to service.
- (5) If the leakage indication is observed, replace the pistons by following the procedures in paragraph 2.B. Always replace the O-rings when the pistons are removed.

NOTE: A leakage condition could also be associated with a compromised piston stem O-ring on a compliant piston.

B. REPLACE THE PISTONS

Refer to Parker Hannifin component maintenance manual MM40-107/30-107 for procedures on removal and installation of the piston assemblies. The following procedures will be required:

NOTE: The level of disassembly required to accomplish this Service Bulletin will provide an opportunity to perform a recommended brake overhaul. Refer to component maintenance manual MM40-107/30-107 for overhaul procedures.

- (1) Removing the brake assembly from the aircraft.
- (2) Disassembling the brake to the level required to remove the pistons. This requires removal of the retract mechanisms.
- (3) Removing the nonconforming pistons. Refer to Figure 3 for identification of nonconforming pistons. Remove and discard the O-rings.

NOTE: The piston insulator is pressed into the piston and will also be replaced. The replacement pistons will have new insulators installed.

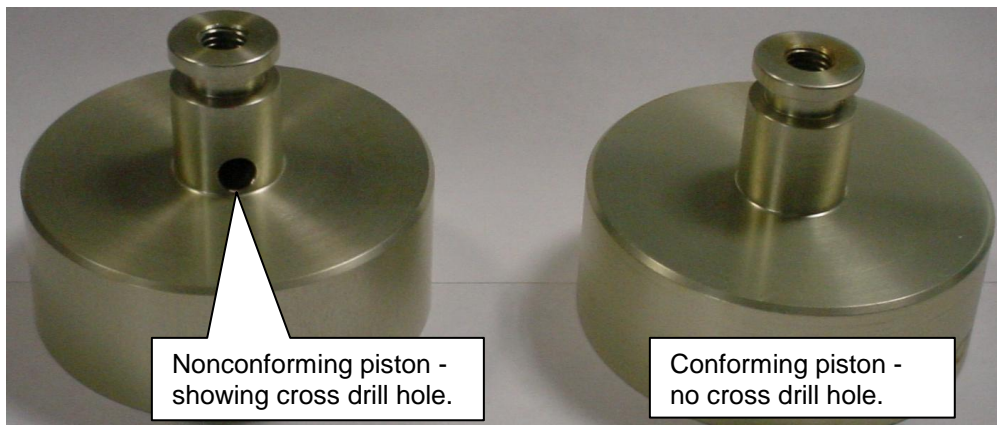


Figure 3 Comparisons of Nonconforming and Conforming Piston

- (4) Installing the replacement pistons and O-rings.
- (5) Reassembling the brake.
- (6) Installing the brake assembly onto the aircraft.
- (7) Bleeding the brakes.
- (8) Registering compliance in the aircraft log book and returning the aircraft to service.



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3. MATERIAL INFORMATION

A. MATERIAL-REQUIREMENTS

Contact Parker Hannifin for replacement piston availability.

Parker Hannifin Corporation
Aircraft Wheel & Brake Division
Technical Service Hotline: 1-800-BRAKING
Customer Support Fax: 440-937-5409
E-mail: clevelandwbhelp@parker.com

B. LIST OF COMPONENTS

Service Bulletin Kit PN SB7098-1 supports the 30-107, 30-107B, 30-107C, and 30-107E. Each Service Bulletin Kit will service one brake assembly and includes the following:

<u>Parker PN</u>	<u>Description</u>	<u>Quantity</u>
092-04500	Piston Assembly	4
062-04700	Piston	4
101-24900	Piston O-Ring (small diameter)	4
101-24200	Piston O-Ring (large diameter)	4
088-00100	Insulator	4
139-16600	Lockwire	24 inches
SB7098	Service Bulletin (This Document)	1
MM40-107/30-107	Component Maintenance Manual	1

Service Bulletin Kit PN SB7098-2 supports the 30-107A and 30-107D. Each Service Bulletin Kit will service one brake assembly and includes the following:

<u>Parker PN</u>	<u>Description</u>	<u>Quantity</u>
092-04800	Piston Assembly	4
062-04700	Piston	4
101-25000	Piston O-Ring (small diameter)	4
101-24500	Piston O-Ring (large diameter)	4
088-00100	Insulator	4
139-16600	Lockwire	24 inches
SB7098	Service Bulletin (This Document)	1
MM40-107/30-107	Component Maintenance Manual	1

C. INTERCHANGEABILITY

Not affected

D. PARTS DISPOSITION

Contact Parker Hannifin for instruction on disposition of nonconforming pistons. Refer to paragraph 3.A. for contact information.