



**The New Piper Aircraft, Inc.**  
2926 Piper Drive  
Vero Beach, Florida, U.S.A. 32960

# SERVICE *No.* 1023 BULLETIN

## PIPER CONSIDERS COMPLIANCE MANDATORY

DATE: October 8, 1998 (S/M)

**SUBJECT:**

**Inspection of Landing Gear Cylinders and  
Distribution of Parker Hannifin Service  
Bulletin SB7063**

**MODELS AFFECTED:**

PA-28R-180 Arrow  
PA-28R-200 Arrow/Arrow II  
PA-28R-201 Arrow III  
PA-28R-201 Arrow  
  
PA-28R-201T Turbo Arrow III  
PA-28R-201T Turbo Arrow  
PA-28RT-201 Arrow IV  
PA-28RT-201T Turbo Arrow IV  
  
PA-32R-300 Lance  
PA-32RT-300 Lance II  
PA-32RT-300T Turbo Lance II  
PA-32R-301 Saratoga SP  
  
PA-32R-301 Saratoga II HP  
  
PA-32R-301T Turbo Saratoga SP  
  
PA-32R-301T Saratoga II TC  
PA-34-200 Seneca  
PA-34-200T Seneca II  
PA-34-220T Seneca III  
  
PA-34-220T Seneca III (28V)  
PA-34-220T Seneca IV  
  
PA-34-220T Seneca V  
PA-44-180 Seminole  
  
PA-44-180T Seminole

**SERIAL NUMBERS AFFECTED:**

28R-30002 through 28R-7130013  
28R-35001 through 28R-7635473  
28R-7737001 through 28R-7837319,  
2837001 through 2837061,  
2844001 through 2844013  
28R-7703001 through 28R-7803374 and  
2803001 through 2803012  
28R-7918001 through 28R-8218026,  
28R-7931001 through 28R-8631005  
2831001 through 2831038  
32R-7680001 through 32R-7880068  
32R-7885001 through 32R-7985105  
32R-7887001 through 32R-7987126  
32R-8013001 through 32R-8613006  
3213001 through 3213041  
3213029, 3213042 through 3213103,  
3246001 and 3246115  
32R-8029001 through 32R-8629006,  
3229001, 3229002 and 3229003  
3257001 through 3257046  
34-7250001 through 34-7450220,  
34-7570001 through 34-8170092,  
34-8133001 through 34-8633031  
3433001 through 3433178  
3448001 through 3448035  
3448038 through 3448079 and  
3447001 through 3447029  
3449002 through 3449063 and 3449066  
44-7995001 through 44-8195026, 4495001  
through 4495013, 4496001 through 4496019  
44-8107001 through 44-8207020

**COMPLIANCE TIME:**

At the next regularly scheduled inspection event, but not to exceed the next one-hundred (100) hours time in service.

**APPROVAL:**

The technical contents of this Service Bulletin have been approved by the F.A.A.

(OVER)  
ATA: 2902

**PURPOSE:** Field reports indicate that a condition may exist where internal hydraulic leakage may occur in the main and/or nose landing gear cylinders. This condition may be identified by audible bypass of the hydraulic fluid within the cylinder and/or continuous hydraulic pump operation. This is caused by premature o-ring wear, resulting from a rough cylinder bore surface condition introduced during cylinder manufacture. As a result, Parker Hannifin has issued Service Bulletin SB 7063 "Landing Gear-Retract Cylinder Inspect/Replace", which is being distributed as part of this Service Bulletin. Left uncorrected, one or more of the landing gear may not function properly, necessitating an emergency landing gear extension.

This Service Bulletin provides for the distribution of Parker Hannifin Service Bulletin SB 7063 "Landing Gear-Retract Cylinder Inspect/Replace" and coordinates the supply of parts through The New Piper Aircraft, Inc.

**INSTRUCTIONS:**

1. Read Parker Hannifin Service Bulletin SB 7063 prior to starting these instructions. (The Parker Hannifin publication is included with this Service Bulletin, see Attachment "A".)
2. This service bulletin affects aircraft which have defective cylinders installed as original equipment and aircraft which may have defective cylinders installed as service spares. Check aircraft applicability per the Model and Serial Number Affected section above.
3. Gain access to the main and nose hydraulic landing gear cylinders and locate the data tag. A date of manufacture is stamped or printed on the tag. (See Fig. 1.)
4. Referring to the Parker Hannifin Service Bulletin for identification, the cylinders to be replaced will have date stamps **12-96** through **6-98**. Cylinders with date stamps before or after are not affected.
5. If removing any of the landing gear cylinders, refer to the appropriate Section or Chapter of the Maintenance Manual for detailed instruction on removing, replacing and rigging the landing gear.
6. Once the cylinders have been changed, fill and check the hydraulic fluid level and perform a complete gear cycle check per the appropriate Section or Chapter of the applicable Maintenance Manual.
7. Upon compliance with the Parker Hannifin Service Bulletin and completion of these instructions, make an appropriate airframe logbook entry of compliance with this Service Bulletin.

**MATERIAL REQUIRED:** As required by inspection, up to three (3) each, Cylinder, Landing Gear, Piper Part Number 96860-02, per aircraft.

**AVAILABILITY OF PARTS:** Your Piper Field Service Facility.

**EFFECTIVITY DATE:** This Service Bulletin is effective upon receipt.

**SUMMARY:** Factory Participation is limited to **New Aircraft** in warranty and **New Piper Parts** in warranty. This participation will remain in effect for a period of time **not to exceed 180 days** from the date of this Service Bulletin.

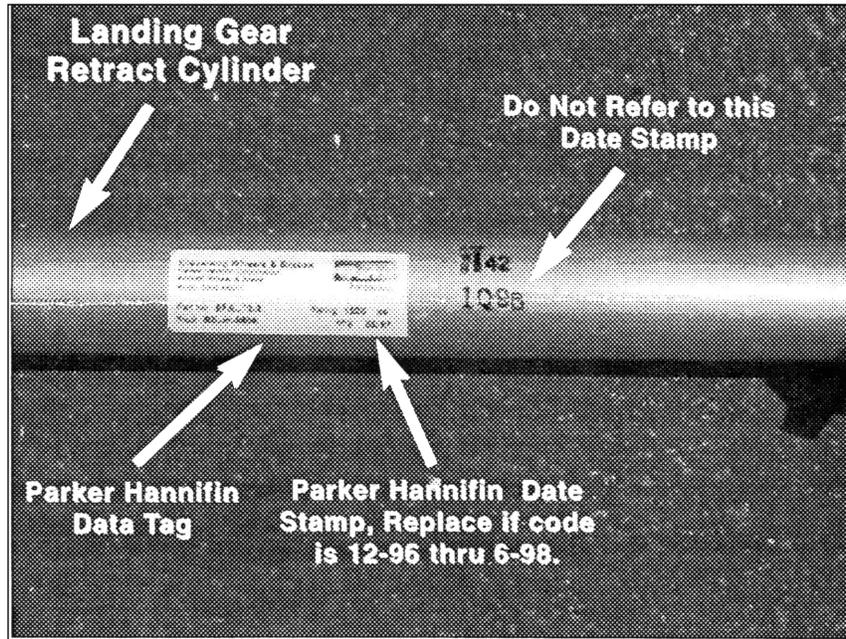
Please contact your Factory Piper Field Service Facility to make arrangements for compliance with this Service Bulletin in accordance with the compliance time indicated.

**NOTE:** If you are no longer in possession of this aircraft, please forward this information to the present owner/operator and notify the factory of address/ownership corrections. Changes should include aircraft model, serial number, current owner's name and address.

Corrections/Changes should be directed to:

The New Piper Aircraft, Inc.  
ATTN: Customer Services  
2926 Piper Drive  
Vero Beach, FL 32960

**Typical Landing Gear Cylinder  
Fig. 1**



Landing Gear Cylinder Data Tag Location  
Piper P/N 96860-02 (Parker P/N SFA232-5 or 11-5D)

**Cleveland**

Wheels &amp; Brakes

Parker Hannifin Corporation  
 Aircraft Wheel & Brake  
 1160 Center Road, P.O. Box 158  
 Avon, Ohio 44011 USA  
 1-800-BRAKING (272-5464)  
 440-937-1272 • FAX 440-937-5409

# SERVICE BULLETIN

## LANDING GEAR – RETRACT CYLINDER - INSPECT / REPLACE

- EFFECTIVITY:** Parker Hannifin, Aircraft Wheel & Brake, Landing Gear Retract Cylinder P/N SFA232-5 (The New Piper Aircraft Inc. P/N 96860-02, Code Number 455-994), manufactured and date coded 12-96 through and including 6-98.
- APPLICABILITY:** The New Piper Aircraft Inc. aircraft models PA-28R series, PA-32R series, PA-34 series, and PA-44 series, equipped with the Parker Hannifin, Aircraft Wheel & Brake, Landing Gear Retract Cylinder P/N SFA232-5. This actuator is used in the main gear and nose gear locations of the affected model aircraft.
- REASON:** Field reports have been received of internal leakage identified by an audible bypass of the hydraulic fluid within the cylinder and / or continued hydraulic pump operation. This is caused by premature o-ring wear, resulting from a rough cylinder bore surface condition introduced during cylinder manufacture.
- DESCRIPTION:** This document provides the necessary instructions to inspect, remove and replace the referenced retract cylinders.
- Parker Hannifin, Aircraft Wheel & Brake, will provide overhauled cylinders to The New Piper Aircraft Inc. at no charge, one each in exchange for each returned cylinder date coded 12-96 through and including 6-98.
- COMPLIANCE:** **Recommended** – At next annual inspection or within 100 flight hours, whichever comes first.
- WEIGHT & BALANCE:** No change
- PUBLICATIONS:** No change
- MATERIALS:** Overhauled Landing Gear Retract Cylinder P/N SFA232-5. Note: If desired, a new SFA232-5 may be used at user's expense. All parts to be ordered from The New Piper Aircraft Inc.



# SERVICE BULLETIN

## ACCOMPLISHMENT INSTRUCTIONS:

- 1) Verify that the aircraft is equipped with Retract Cylinders SFA232-5. Determine the date code on the left main, right main, and nose gear retract cylinders. The date code is stamped or printed on the Parker identification nameplate.
- 2) Refer to the Effectivity section to determine if landing gear retract cylinders are affected. Replace any retract cylinders having the affected date codes.
- 3) If the affected date codes are not found, compliance with this Service Bulletin has been achieved and no further action is required. Proceed to Instruction 6.
- 4) If retract cylinders are to be replaced, overhauled exchange units may be available. Order Piper Part Number 96860-02 as required. If exchange units are not available, retract cylinders must be returned through an Authorized Piper Distributor to facilitate factory overhaul.
- 5) If retract cylinders require replacement, jack aircraft, remove and replace retract cylinders, and perform landing gear rigging and cycle checks per the aircraft maintenance manual. Upon successful completion of gear cycle tests, remove aircraft from jacks.
- 6) Make an appropriate airframe logbook entry of compliance.