



Piper Aircraft Corporation
Vero Beach, Florida, U.S.A.

SERVICE *No. 779B* BULLETIN

* **PIPER CONSIDERS** *
* **COMPLIANCE MANDATORY** *

Date **October 12, 1987** **M**

(Service Bulletin No. 779B supersedes and voids Service Bulletin No. 779A, dated July 16, 1984.)

(This Service Bulletin is divided into TWO (2) PARTS. Check each PART for specific Subject, Compliance Time, Instructions and Aircraft affected.)

APPROVAL: The technical contents and modification to the affected aircraft described in this publication have been approved by the F.A.A.

REASON FOR REVISION: To add PART II, correct Material Required, and Revise Sketch.

PART I

SUBJECT: Landing Gear Upper Bearing
Retaining Pin Replacement and Strut
Assembly Inspection.

MODELS AFFECTED:

PA-31/PA-31-300 Navajo
and PA-31-325 Navajo C/R
PA-31-350 Chieftain
PA-31-350 T-1020
PA-31P Pressurized Navajo
PA-31T Cheyenne/Cheyenne II
PA-31T1 Cheyenne I/IA

PA-31T2 Cheyenne IIXL

PA-31T3 T-1040
PA-42 Cheyenne III

SERIAL NUMBERS AFFECTED:

31-2 through 31-8312014
31-5001 through 31-8352042
31-8153001 through 31-8353007
31P-1 through 31P-7730012
31T-7400002 through 31T-8120104
31T-7804001 through 31T-8304003
and 31T-1104004 through 31T-1104006
31T-8166001 through 31T-8166071,
31T-8166073, and 31T-8166076
31T-8275001 through 31T-8375003
42-7800001 through 42-8001106

COMPLIANCE TIME: Within the next one hundred (100) hours of operation or at the next scheduled maintenance event, whichever occurs first.

PURPOSE: Field reports have been received of distorted, distressed or sheared landing gear upper bearing retaining pins. Failure of these pins could allow the bearing to separate from the piston tube, resulting in unrestricted extension of the tube and possible loss of the wheel and piston tube.

(Over)
ATA: 3200

Additionally, some aircraft may have landing gear upper bearings with rough surfaces or ridges which could score strut housing walls, generate aluminum dust, and cause premature wear of strut components. This could result in leakage, loss of strut pressure, and loss of shock-absorbing.

PART I of this Service Bulletin provides instructions for the inspection of the landing gear struts and for the replacement of upper retaining pins on all affected aircraft, and for the inspection and replacement, if required, of the upper bearing on some of the affected aircraft.

INSTRUCTIONS:

NOTE: All PA-31/31T/31P series aircraft which have complied with Service Bulletin No. 779A are in compliance with Service Bulletin No. 779B.

1. Remove each piston tube assembly from its strut housing in accordance with instructions in the appropriate Maintenance Manual.
2. Inspect the interior walls of each strut housing for abnormal wear or damage (gouges, scoring, ridges, non-concentric wear). Replace housing assembly, if necessary.
3. Remove the retaining pins connecting the upper bearing to the piston tube. The bearing and piston tube are drilled to allow slip fit, and the pins should come out easily. Seizing or deformation of pins is an indication of the damage described in Instruction 4, below.

NOTE for the following aircraft:

PA-31P, Serial Nos. 31P-1 through 31P-7730012
PA-31T, Serial Nos. 31T-7400002 through 31T-8020088
PA-31T1, Serial Nos. 31T-7804001 through 31T-8004055
PA-31T2, Serial Nos. 31T-8166001 through 31T-8166013
PA-31, PA-31-300, PA-31-325, PA-31-350, PA-42 all aircraft listed in
Serial Numbers Affected, above.

Remove the upper bearing and inspect the area shown in Sketch A.
If ridges are found in the designated inspection area, replace the bearing.
Any replacement bearing should also be inspected per Sketch A prior to installation.

4. Inspect the pin holes in the piston tube.
 - a. If holes are found to be elongated, deformed, or chamfered (holes should be concentric with nominal dimension of .250 - .251), install oversize pins in accordance with Piper Kit 764 417 or Piper Kit 764 418 (Refer to Material Required, below).
 - b. If holes are not elongated or deformed, replace pins with new retaining pins, Piper Part Number 01821-06 or Piper Part Number 01821-07 (Refer to Material Required, below). If replacement pins cannot be pressed easily into holes, install oversize pins per Instruction 4.a., above.
5. Replace all changeable seals, rings and wipers with new parts in accordance with appropriate Parts Catalog.

6. Reassemble and reinstall landing gear in accordance with appropriate Maintenance Manual.
7. Make logbook entry of compliance with PART I this Service Bulletin.

MATERIAL REQUIRED:

1. PA-31, PA-31-300 Navajo and PA-31-325 Navajo C/R
 - a. If required by Instruction 4.a.:
Up to three (3) per aircraft, Landing Gear Upper Bearing Retaining Pin Replacement Kit, Piper Part No. 764 417 (Use on both Main and Nose)
 - b. If required by Instruction 4.b.:
Up to four (4) each per landing gear, Retaining Pin, Piper Part No. 01821-06 (Use on both Main and Nose)
 2. PA-31-350 Chieftain or T-1020, PA-31P Pressurized Navajo, PA-31T/31T1/ 31T2 Cheyennes, PA-31T3 T-1040, and PA-42 Cheyenne III
 - a. If required by Instruction 4.a.:
One (1) each per aircraft, Landing Gear Upper Bearing Retaining Pin Replacement Kit, Piper Part No. 764 417 (Use on Nose only).
Up to two (2) per aircraft, Main Gear Upper Bearing Retaining Pin Replacement Kit, Piper Part No. 764 418 (Use on Mains only).
 - b. If required by Instruction 4.b.:
Up to four (4) each per aircraft, Retaining Pin, Piper Part No. 01821-06 (Use on Nose only).
Up to eight (8) each per aircraft, Retaining Pin, Piper Part No. 01821-07 (Use on Mains only).
- NOTE:** Reusable Pin Installation Tool Kit 764 925 facilitates installation of Kits 764 417 and 764 418.
3. If required per Instruction 3.:
For all PA-31/31T/31P series aircraft.
One (1) each per Nose Gear, Upper Bearing, Piper Part No. 31779-00
One (1) each per Main Gear, Upper Bearing, Piper Part No. 40247-00
For PA-42 Cheyenne III aircraft.
One (1) each per Nose Gear, Upper Bearing, Piper Part No. 31779-02
One (1) each per Main Gear, Upper Bearing, Piper Part No. 57470-02
 4. a. For PA-31T/T1/T2/T3, PA-31P, One (1) each Nose Gear Lower Bearing Seal Replacement Kit 764 419. Two (2) each Main Gear Lower Bearing Seal Replacement Kit 764 420.
b. For PA-31, PA-31-300, PA-31-325, PA-350/T-1020 and PA-42, refer to Parts Catalog for specific aircraft model for seals, rings, wipers, etc.

PART II**SUBJECT:**Landing Gear Upper Bearing and
Strut Assembly Inspection**MODELS AFFECTED:**

PA-42 Cheyenne III

SERIAL NUMBERS AFFECTED:

42-7800001 through 42-8001106

(Over)

COMPLIANCE TIME: Within the next one-hundred (100) hours of operation or at the next scheduled maintenance event, whichever occurs first.

PURPOSE: It has been determined that the part numbers given in the material required section of Service Bulletin No. 779A for the PA-42 landing gear upper bearing were incorrect. Installation and use of these bearings will cause scoring of the strut housing walls, generate metal particles and premature wear of strut components. This could result in leakage, loss of strut pressure and loss of shock-absorbing.

PART II of this Service Bulletin provides instructions for inspection of the landing gear struts and for replacement of landing gear upper bearings and strut housings if required.

INSTRUCTIONS:

NOTE: Only PA-42 Cheyenne III aircraft which have complied with Service Bulletin No. 779A by installation of chrome plated steel landing gear upper bearings, Piper Part Number 40247-00 and/or 31779-00 are affected by PART II of this Service Bulletin.

PA-42 Cheyenne III aircraft which have complied with Service Bulletin No. 779A by installation of new retaining pins and/or inspection only are in compliance with Service Bulletin No. 779B.

1. On suspect landing gear(s) remove piston tube assembly from strut housing in accordance with instructions in the PA-42 Cheyenne III Maintenance Manual.
2. Remove the retaining pins connecting the upper bearing to the piston tube and remove upper bearing.
3. Inspect the upper bearing to determine composition of bearing.
 - a. Correct bearing is bronze alloy and may be reinstalled.
 - b. Incorrect bearing is steel and must be replaced.
4. If bronze bearings are installed, reassemble and reinstall landing gear in accordance with the PA-42 Cheyenne III Maintenance Manual using new seals, rings and wipers.
5. If steel bearings are installed, discard bearings and replace with appropriate Part Number bronze alloy bearing, inspect the interior walls of affected strut housing for abnormal wear or damage (gouges, scoring, ridges, non-concentric wear). Replace housing assembly, if necessary. Refer to the PA-42 Cheyenne III Maintenance Manual.
6. Make appropriate logbook entry of compliance with PART II of this Service Bulletin.

AVAILABILITY OF PARTS: Your Piper Field Service Facility.

EFFECTIVITY DATE: This Service Bulletin is effective upon receipt.

SUMMARY: Any applicable Factory Participation will remain in effect for a period of time not to exceed 180 days from the date of this Service Bulletin.

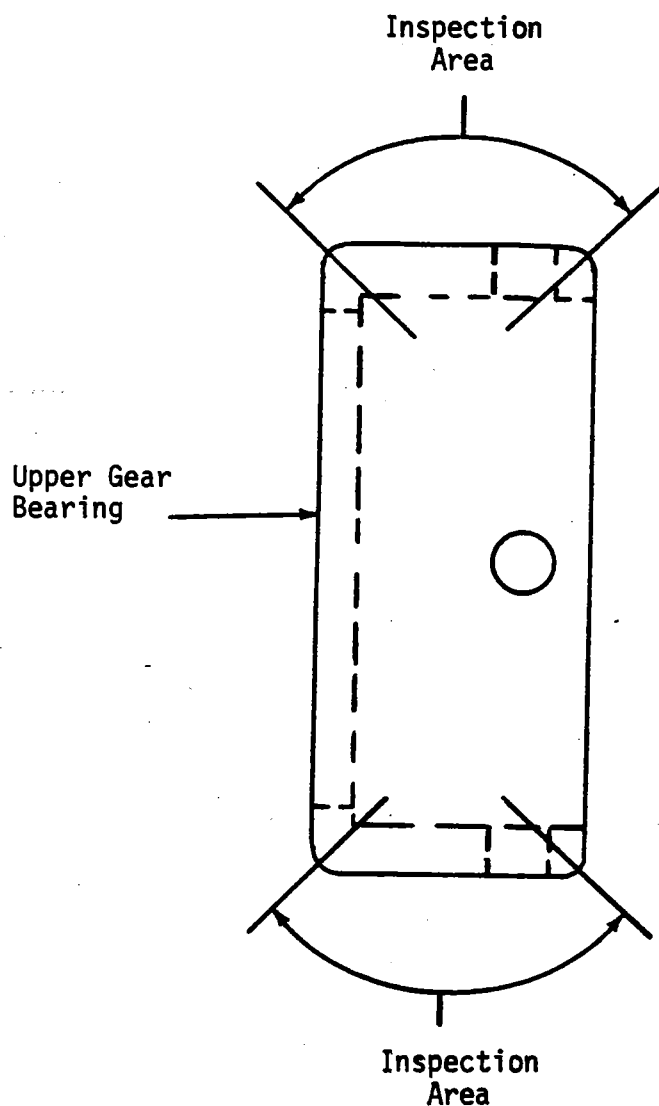
Please contact your Factory Authorized Piper Field Service Facility to make arrangements for compliance with this Service Bulletin, in accordance with the Compliance Time Indicated, and to obtain information concerning any applicable Factory Participation.

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:

Piper Aircraft Corporation
Attn: Product Support
P.O. Box 1328
Vero Beach, FL 32961-1328

(Over)



Note: For All PA-31/31T/31P Series Aircraft, Upper Main Gear Bearing, Piper Part Number 40247-00 and/or Upper Nose Gear Bearing, Piper Part Number 31779-00. Inspection Area Must Be Chrome Plated And Have a Smooth Surface (No Ridges Allowed) Between Indicated Points on Entire Outside Surface.

For All PA-42 Cheyenne III Aircraft, Upper Main Gear Bearing, Piper Part Number 57470-02 and/or Upper Nose Gear Bearing, Piper Part Number 31779-02 are Manufactured of Bronze Alloy And Are Not Plated. Inspection Area Should Have a Smooth Surface (No Ridges Allowed) Between Indicated Points on Entire Outside Surface.

SKETCH "A"