



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

# SERVICE *No.* 841A BULLETIN

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\* PIPER CONSIDERS \*  
\* COMPLIANCE MANDATORY \*  
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Date October 8, 1987 M

(Service Bulletin No. 841A supersedes and voids Service Bulletin No. 841 dated July 16, 1986)

This Service Bulletin is divided into two (2) PARTS. Check each PART for specific instructions, Serial Numbers Affected and Compliance Time.

SUBJECT:

Main Landing Gear Forward Side  
Brace Inspection/Replacement

REASON FOR REVISION:

Add PART II, Revise Material  
Required, Revise Models Affected,  
Revise Serial Numbers Affected, and  
Revise Sketch

APPROVAL:

The modification to the affected aircraft  
described in this publication has been approved by the F.A.A.

PART I

MODELS AFFECTED:

PA-31T3 T-1040  
PA-42 Cheyenne III  
PA-42-720R Cheyenne  
  
PA-42-720 Cheyenne IIIA

SERIAL NUMBERS AFFECTED:

31T-8275001 through 31T-5575001  
42-7800001 through 42-8001106  
42-5501024, 42-5501028, 42-5501032,  
42-5501034 through 42-5501038  
42-8301001, 42-8301002, 42-5501003  
through 42-5501023, 42-5501025  
through 42-5501027, 42-5501029  
through 42-5501031, 42-5501033,  
42-5501039, 42-5501041, and  
42-5501042

COMPLIANCE TIME:

Inspect and/or replace left and right main landing  
gear forward side braces in accordance with Inspection/Replacement times below,  
based on time in service of affected part(s).

<u>Model</u>	<u>Initial Inspection</u>	<u>Repetitive Inspection</u>	<u>Replacement</u>
PA-31T3	500 Hrs. T.T.	Each 50 Hrs.	At 800 Hrs. T.T.
PA-42	500 Hrs. T.T.	Each 50 Hrs.	At 800 Hrs. T.T.
PA-42-720R	500 Hrs. T.T.	Each 50 Hrs.	At 800 Hrs. T.T.
PA-42-720	500 Hrs. T.T.	Each 50 Hrs.	At 800 Hrs. T.T.
			(Over)
			ATA: 3218

**NOTE:** This inspection is also required whenever the landing gear is operated at speeds above maximum landing gear operating speed ( $V_{LO}$ ) as indicated in the applicable P.O.H./A.F.M.

**PURPOSE:** Field reports have been received of main landing gear forward side braces cracking during the landing gear cycle. A failed side brace link would prevent landing gear retraction and could cause landing gear collapse under high side load conditions. It has also been determined that any operation of the landing gear above maximum landing gear operating speed ( $V_{LO}$ ) greatly increases stress and could cause side brace failure.

**CAUTION:** Maximum Gear Operating Speed outlined in the appropriate section of the Pilot's Operating Handbook or Aircraft Flight Manual should never be exceeded.

PART I of this Service Bulletin provides an illustration and instructions for the inspection of the main landing gear forward side braces.

**INSTRUCTIONS:**

1. Remove paint in area indicated in Sketch "A" on both Main Landing Gear Forward Side Braces, Piper Part Number 57448-02 left and 57448-03 right for PA-42, PA-42-720R and PA-42-720; Piper Part Number 40279-16 left and 40279-17 right for PA-31T3.

**NOTE:** If alodine is undamaged, repainting will not be necessary between repetitive inspection intervals.

2. Inspect area for cracks using dye penetrant or zygo procedures, paying particular attention to the top surface of the affected parts.
3. If cracking is indicated, replace the affected part prior to further flight, per the appropriate aircraft Maintenance Manual.
4. Make the appropriate logbook entry of compliance with PART I of this Service Bulletin.

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PART II

**MODELS AFFECTED:**

PA-31T3 T-1040  
PA-42 Cheyenne III  
PA-42-720R Cheyenne  
PA-42-720 Cheyenne IIIA

**SERIAL NUMBERS AFFECTED:**

31T-8275001 through 31T-5575001  
42-7800001 through 42-8001106  
42-5501024, 42-5501028, 42-5501032,  
42-5501034 through 42-5501038  
42-8301001, 42-8301002, 42-5501003  
through 42-5501023, 42-5501025  
through 42-5501027, 42-5501029  
through 42-5501031, 42-5501033,  
42-5501039, 42-5501041, and  
42-5501042

COMPLIANCE TIME: At the next scheduled maintenance event, but not to exceed the next one-hundred (100) hours of operation.

PURPOSE: PART II of this Service Bulletin announces the availability of new Improved main landing gear forward side braces which, when installed, will relieve the repetitive fifty (50) hour inspection and replacement at 800 hours T.T. required by PART I of this Service Bulletin.

INSTRUCTIONS:

1. Refer to the appropriate Maintenance Manual for specific instructions.
2. Remove main landing gear forward side brace on left and right main landing gear.
3. Install new Main Landing Gear Forward Side Braces, Piper Part Number 85165-02 left and 85165-03 right.

NOTE: Installation of new Improved main landing gear forward sidebraces will require the use of longer bolts at the main gear retraction arm to sidebrace attach points, see Material Required. Refer to Sketch 'A'.

4. Inspect the main landing gear attach points and bracketry for security and integrity, particularly the actuator reinforcement brackets.
5. Perform a gear retraction check.
6. Make a logbook entry of compliance with PART II of this Service Bulletin.

MATERIAL REQUIRED: One (1) each Main Landing Gear Forward Side Brace, Piper Part Number 85165-02 left and 85165-03 right, per aircraft and Four (4) each AN6-16 bolts, Piper Part Number 400-211, per aircraft.

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 Cheyenne 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)

SKETCH "A"

