



Piper Aircraft, Inc.
2926 Piper Drive
Vero Beach, FL, U.S.A. 32960

SERVICE NO. 1375A BULLETIN

PIPER CONSIDERS COMPLIANCE MANDATORY

Date: November 29, 2022

(S)

Service Bulletin (SB) 1375A supersedes SB 1375 in its entirety. Aircraft that were previously made compliant with SB 1375 are in compliance with SB 1375A.

SUBJECT:

**PERIODIC REPLACEMENT OF MAIN LANDING GEAR
ATTACHMENT HARDWARE**

REASON FOR REVISION:

SB 1375A adds a bolt hole inspection.

MODELS AFFECTED:

PA-28-140 Cherokee Cruiser

PA-28-150 Cherokee

PA-28-160 Cherokee

PA-28-180 Cherokee

PA-28-235 Cherokee Pathfinder

PA-28-236 Dakota

PA-28-151 Warrior

PA-28-161 Cadet

PA-28-161 Warrior II

PA-28-161 Warrior III

PA-28-180 Archer

PA-28-181 Archer II

PA-28-181 Archer III

PA-28-181 Piper Pilot 100i

PA-28-201T Turbo Dakota

PA-32-260 Cherokee Six

PA-32-300 Cherokee Six

SERIAL NUMBERS AFFECTED:

28-20001 through 28-26946; 28-7125001 through
28-7725290

28-03; 28-1 through 28-4377, and 28-1760A

28-03; 28-1 through 28-4377, and 28-1760A

28-03; 28-671 through 28-5859;

28-7105001 through 28-7205318

28-10001 through 28-11378; 28-7110001 through
28-7710089; 28E-11

28-7911001 through 28-8611008; 2811001 through
2811050

28-7415001 through 28-7715314

2841001 through 2841365

28-7716001 through 28-8616057; 2816001 through
2816109

2816110 through 2816119; 2842001 and up

28-E13; 28-7305001 through 28-7505260

28-7690001 through 28-8690056; 28-8690061;

28-8690062; 2890001 through 2890205

2890206 through 2890231; 2843001 through 2843999;
2881001 and up

28020001 and up

28-7921001 through 28-7921095

32-03; 32-04; 32-1 through 32-1297; 32-7100001
through 32-7800008

32-15; 32-21; 32-40000 through 32-40974; 32-7140001
through 32-7940290

ATA/JASC: 3210

(OVER)

PA-32-301 Saratoga	32-8006002 through 32-8606023; 3206001 through 3206019; 3206042 through 3206044; 3206047; 3206050 through 3206055; 3206060
PA-32-301T Turbo Saratoga	32-8024001 through 32-8424002
PA-32-301FT Piper 6X	3232001 through 3232074
PA-32-301XTC Piper 6XT	3255001 through 3255051

COMPLIANCE TIME:

For affected aircraft which have accrued 2,000 hours time in service (TIS) or seven (7) calendar years TIS, initial compliance is to coincide with the next regularly scheduled maintenance event, but not to exceed the next 100 hours TIS.

Thereafter, compliance shall be at a recurring interval of 2,000 operating hours TIS or 7 calendar years TIS, whichever occurs first.

APPROVAL:

The engineering aspects of this service document have been shown to comply with the applicable Federal Aviation Regulations and are FAA approved.

PURPOSE:

A review of service history reveals that for the affected aircraft, the landing gear mounting hardware is subject to metal fatigue and corrosion. Failure of this hardware could result in a landing gear collapse.

This service bulletin provides instructions for the recurring replacement of this hardware.

INSTRUCTIONS:**NOTES:**

- Temporary removal of some interior components and/or access panels may be required in order to accomplish the instructions described in this service letter.
- Prior to inspection, wipe surfaces clean using a soft cloth dampened with isopropyl alcohol, mineral spirits, naphtha, or other suitable cleaning agent compatible with cured paints and primers.
- Refer to the appropriate section of the applicable Airplane Maintenance Manual or Service Manual for the procedures to jack the airplane and for model-specific instructions for the removal and installation of the main landing gear.
- These instructions apply to both the left and right sides of the aircraft.

The main landing gear (MLG) are attached to the aircraft with threaded fasteners that pass through mounting flanges on the strut cylinder and the upper and lower flanges of the main wing spar, as depicted in the illustration below. On some of the affected aircraft, additional threaded fasteners pass through the web of the main wing spar.

Replace the MLG mounting hardware as described below.

1. Place the aircraft on jacks.
2. Remove the fairing from around the strut cylinder housing and the access plate located on the bottom of the wing and to the rear of the housing by removing attaching screws.
3. Remove and discard all of the threaded fastener stack ups (which includes screws and bolts, as well as nuts and washers) that attach the MLG to the main wing spar. (See "Figure 1" on page 5.)

4. Bolt Hole Inspection

NOTE: Unless stated otherwise, all dimensions are in inches.

- a. Measure the bolt holes common to the main wing spar and the landing gear cylinder (four holes through the lower spar flange and two through the spar web). Compare measured holes sizes against the acceptable maximum hole sizes shown in Table 1.
- If all bolt holes do not exceed the values shown in Table 1, then no modification is required. Proceed to Step 5.
 - If one or more bolt holes exceed the values shown in Table 1, it may be possible to replace the factory original hardware with a 1/64 or 1/32 oversize repair bolt. provided the minimum dimensional requirements as out-lined in 4 b. 1) and / or 4 b. 2) are complied with Proceed to Step 4. b.

NOTE: If bolts have signs of damage, they must be replaced and an eddy current inspection by a qualified NDT level III inspector is required to ensure the spar does not have crack indications.

TABLE 1
MAXIMUM BOLT HOLE SIZES
FACTORY SUPPLIED, CLOSE TOLERANCE BOLTS OR SCREWS

Nominal Bolt Size	Maximum Allowable Bolt Hole
1/4	0.2505
3/8	0.3130

- b. For replacement of factory original hardware with oversize repair bolts/screws (where applicable), refer to Table 2 for part numbers and hole sizes. Procure oversize repair bolts/screws locally. If the bolt/screw hole cannot be cleaned up within the tolerances specified in Table 1, some other repair is required.

NOTE: Where specified below, the thickness of the spar web and the width and thickness of the spar flange shall be measured with tools capable of accuracy to +/- 0.0005 inches. Temporarily remove paint to achieve an accurate measurement. Remove paint using chemical processes only.

TABLE 2
PART NUMBERS AND HOLE SIZES OVERSIZE REPAIR BOLTS OR SCREWS

Nominal Bolt Size	Repair Bolt Size	Repair Bolt Code (Through Web)	Repair Screw Code (Through Flange)	Minimum Bolt Hole Size	Maximum Bolt Hole Size
1/4	1/64 oversize shank	NAS6204-*X	NAS7404-*X	0.2654	0.2664
	1/32 oversize shank	NAS6204-*Y	NAS7404-*Y	0.2810	0.2820
3/8	1/64 oversize shank	NAS6205-*X		0.3279	0.3289
	1/32 oversize shank	NAS6205-*Y		0.3435	0.3445

* Grip dash number in 0.625 inch increments.

- 1) For oversize holes in the spar web, measure the local thickness of the spar web near the affected bolt hole.
 - If the web thickness measures at least 0.0907, a 1/64 oversize bolt is permissible.
 - If the web thickness measures at least 0.0908, a 1/32 oversize bolt is permissible.
- 2) For oversize holes in the spar flange, measure the local thickness of the spar flange near the affected screw hole.

- If the flange thickness measures at least 0.2694, a 1/64 oversize repair screw is permissible.
- If the flange thickness measures at least 0.2713, a 1/32 oversize repair screw is permissible.

If the spar flange thickness measures less than 0.2694, it may still be possible to address the discrepant condition with an oversize repair screw. The following method requires an accurate measurement of the width of the spar flange; to gain access, the temporary removal of rivets common to the spar and the lower wing skin may be required.

Use this formula:

$$D = W - (0.5942 / T)$$

D = maximum permissible reworked hole size, as calculated

W = measured width of the flange near the affected screw hole

T = measured thickness of the flange near the affected screw hole

Ex.: If W measures 2.4930 and T measures 0.2675, then:

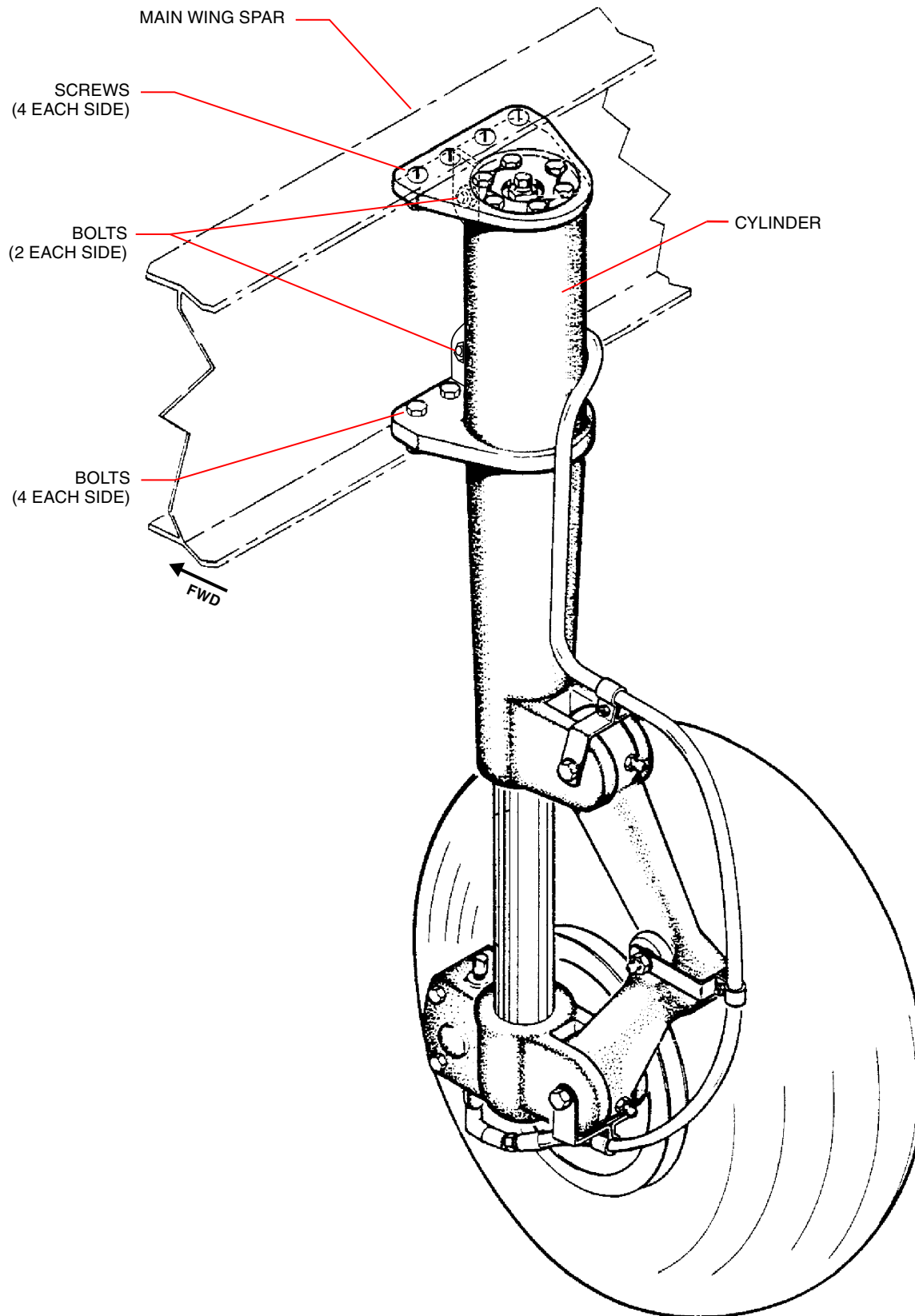
$$\begin{aligned} D &= 2.4930 - (0.5942 / 0.2675) \\ &= 2.4930 - 2.2213 \\ &= 0.2717 \end{aligned}$$

Using this formula,

- if D does not exceed 0.2664, a 1/64 oversize repair screw is permissible;
- if D does not exceed 0.2820, a 1/32 oversize repair screw is permissible.

In the example above, D = 0.2717 Since D exceeds 0.2664, a 1/64 oversize repair screw is not permissible; but, since D does not exceed 0.2820, a 1/32 oversize repair screw is permissible.

5. Order and install new mounting hardware, as specified in the applicable Piper Airplane Parts Catalog (IPC).
6. Apply primer/corrosion protection to reworked areas.
7. Reinstall the access plate onto the bottom of the wing and the fairing that surrounds the strut cylinder housing.
8. Remove the airplane from jacks.
9. Make a logbook entry documenting compliance with this service bulletin.



MAIN LANDING GEAR (TYPICAL)
RIGHT SIDE SHOWN (LEFT SIDE OPPOSITE)

Figure 1
Main Landing Gear – Mounting Hardware

MATERIAL REQUIRED:

Per aircraft:

- Eight (8) Screws and 12 Bolts each, as described in the Instructions, per the applicable Piper IPC.
- Quantity as required, Washers and Nuts, as described in the Instructions, per the applicable Piper IPC.

AVAILABILITY OF PARTS:

Your Piper Approved Service Center

EFFECTIVITY DATE:

This service bulletin is effective upon receipt.

SUMMARY:

Please contact your Piper Approved Service Center to make arrangements for compliance with this service bulletin in accordance with the compliance time indicated.

NOTE: Please notify the factory of any address/ownership corrections. Changes should include aircraft model, serial number, and current owner's name and address.

Corrections and/or changes should be directed to:

PIPER AIRCRAFT, INC.

Attn: Customer Service

2926 Piper Drive

Vero Beach, FL 32960

or:

CustomerService@piper.com

Please include in subject line: "Aircraft ownership update"

BULLETIN SUPPLEMENT - PROCEDURAL OPERATING INFORMATION

MATERIAL ALLOWANCE: N/A

LABOR ALLOWANCE: N/A

DISPOSITION OF PARTS IN STOCK: N/A

DISPOSITION OF PARTS REPLACED: N/A