



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

SERVICE NO. 1161B BULLETIN

PIPER CONSIDERS COMPLIANCE MANDATORY

Date: February 21, 2020

(S) (M)

Service Bulletin (SB) 1161B supersedes SB 1161A in its entirety. Aircraft that were previously made compliant with SB 1161A are in compliance with SB 1161B. However, aircraft that were previously made compliant with only SB 1161 must be made compliant with SB 1161B.

SUBJECT:

**RIB ASSEMBLY INSPECTION AND MODIFICATION –
AFT WING, WS 49.25**

REASON FOR REVISION:

SB 1161B provides changes that reflect design improvements implemented into rib assemblies that are available as replacement parts. Rib Assembly, Piper part number 78475-010 or higher, includes the design improvement that was previously only available for service by the installation of a kit.

MODELS AFFECTED:

Group A:

PA-28R-180 Arrow

PA-28R-200 Arrow

PA-28R-200 Arrow II

PA-28R-201 Arrow III

PA-28R-201T Turbo Arrow III

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-301T Turbo Saratoga SP

PA-32R-301 Saratoga II HP

PA-32R-301T Saratoga II TC

PA-34-200 Seneca

PA-34-200T Seneca II

SERIAL NUMBERS AFFECTED:

28R-30002 thru 28R-31270;

28R-7130001 thru 28R-7130013

28R-35001 thru 28R-35820;

28R-7135001 thru 28R-7135229

28R-7235001 thru 28R-7635545

28R-7737002 thru 28R-7837317; 2837001 thru 2837061;

2844001 thru 2844171

28R-7703001 thru 28R-7803374; 2803001 thru 2803012

28R-7918001 thru 28R-7918267;

28R-8018001 thru 28R-8218026

28R-7931001 thru 28R-8631005; 2831001 thru 2831038

32R-7680001 thru 32R-7880068

32R-7885002 thru 32R-7985106

32R-7787001; 32R-7887002 thru 32R-7987126

32R-8013001 thru 32R-8613006; 3213001 thru 3213028;

3213030 thru 3213041

32R-8029001 thru 32R-8629008; 3229001 thru 3229003

3213029; 3213042 thru 3213103; 3246001 thru 3246244

3257001 thru 3257407; 3257409 thru 3257493

34-7250001 thru 34-7450220

34-7570001 thru 34-8170092

ATA/JASC: 5712

(OVER)

PA-34-220T Seneca III	34-8133001 thru 34-8633031;3433001 thru 3433172; 3448001 thru 3448037
PA-34-220T Seneca IV	3448038 thru 3448079; 3447001 thru 3447029
PA-34-220T Seneca V	3449001 thru 3449508
PA-44-180 Seminole	44-7995001 thru 44-8195026; 4495001 thru 4495013; 4496001 thru 4496409
PA-44-180T Seminole	44-8107001 thru 44-8207020

Group B:

PA-28R-201 Arrow III	2844172 and up
PA-32R-301T Saratoga II TC	3257494 and up
PA-34-220T Seneca V	3449509 and up
PA-44-180 Seminole	4496410 and up

COMPLIANCE TIME:

Part I. Detailed Inspection

Group A:

Initial compliance with Part I is to coincide with the next regularly scheduled maintenance event, but not to exceed the next 50 hours time in service. After the initial inspection, recurring inspections in compliance with Part I shall be performed at 500-hour intervals.

Performing the structural modifications described in the repair kit instructions will eliminate the repetitive detailed inspection requirements of this service bulletin, if the kit instructions are marked as **drawing number (Dwg. No.) 88373, revision “J”** (or later).

At owner/operator discretion, installation of Kit P/N 767-397 or 767-398, as applicable, with kit instructions marked Dwg No. 88373, revision J (or later), may be accomplished prior to the discovery of a crack, in order to eliminate the recurring inspection requirements of this service bulletin.

NOTE: Installation of Kit P/N 767-397 or 767-398, as applicable, with kit instructions marked **Dwg. No. 88373, revision prior to “J,” does not relieve the recurring inspection** requirements.

Group B:

Compliance is at the discretion of the owner/operator, upon discovery of cracks or other damage in the aft wing rib assembly at wing station 49.25.

Part II. Standard Inspection

Groups A & B:

Compliance with Part II is to coincide with the existing 100 hour maintenance requirements

APPROVAL:

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

PURPOSE:**Group A:**

It has been determined that, under certain conditions, the rib assembly on the aft side of the main wing spar at wing station (WS) 49.25 may develop a crack, located vertically along the bend radius of the flange common to the main wing spar and the side brace attach fitting.

A crack in the wing rib assembly as described, if not repaired, could compromise the ability of the rib to support the spar web and carry torsional shear loads, thereby reducing the shear buckling capability of the spar web and torsional strength of the wing.

This service bulletin provides a schedule for inspection to detect the presence of cracks, and announces the availability of service kits, which include the parts and instructions to repair the rib assemblies, if a crack is discovered. It also announces the availability of replacement rib assemblies that, where installed, will relieve the recurring inspections.

Group B:

The detailed inspection requirements applicable to airplanes in Group A do not apply to airplanes in Group B. However, should damage occur to airplanes in Group B, due to a hard landing or some other cause, this service bulletin announces the availability of a repair kit, provided that the damage is within the limits specified in the Instructions section of this service bulletin.

INSTRUCTIONS:**Part I. Detailed Inspection**

For the initial 50 hour inspection, and at each 500 hour interval thereafter:

NOTE: Perform the following instructions per the appropriate service/maintenance manual, when required.

1. Place the aircraft on jacks, and perform the following disassembly and inspection on the LH and RH wings.
2. Remove the main landing gear side brace by removing the five bolts that fasten it to the wing structure. Retain the hardware for reassembly.
3. Inspect the rib assembly (LH wing and RH wing) for evidence of cracks in the bend radius of the flange common to the main spar web (as shown in Figure 1), using dye penetrant inspection techniques.
 - If a **crack is detected**, identify the path of propagation. Determine if trimming will remove all the material affected by the crack, as illustrated in Figure 1.
 - If so, then install the appropriate kit (see Material Required section of this service bulletin). Kit installation will eliminate the recurring inspection requirements mandated by this service bulletin.
 - If not, then replacement of the rib assembly is mandated.
 - If a replacement Rib Assembly – Aft Wing – WS 49.25, P/N 78475-000 through 78475-009, is installed, this **does not relieve the recurring inspection requirements** of this service bulletin. However, the **recurring inspections are relieved** if the applicable kit P/N 767-397 or 767-398 is also installed, and if the kit instructions are marked drawing number 88373, revision J (or later).
 - If a replacement Rib Assembly – Aft Wing – WS 49.25, P/N 78475-010 or higher, as defined in Table 1, is installed, this **relieves the recurring inspection requirements** of this service bulletin. (Installation of either kit P/N 767-397 or 767-398 is not required, in this case.)
 - If a **crack is not detected**, then the recurring inspection requirements mandated by this service bulletin can be eliminated by installing the appropriate kit (see the Material Required section of this service bulletin).

NOTE: Prior to installing a kit, verify that the instructions are marked Dwg No. 88373, revision J (or later).

4. Reassemble the main landing gear side brace, using existing hardware, after initial inspection and after 500 hour inspections or when disassembly was required.
5. Verify proper functioning of the landing gear.
6. Remove the airplane from jacks.

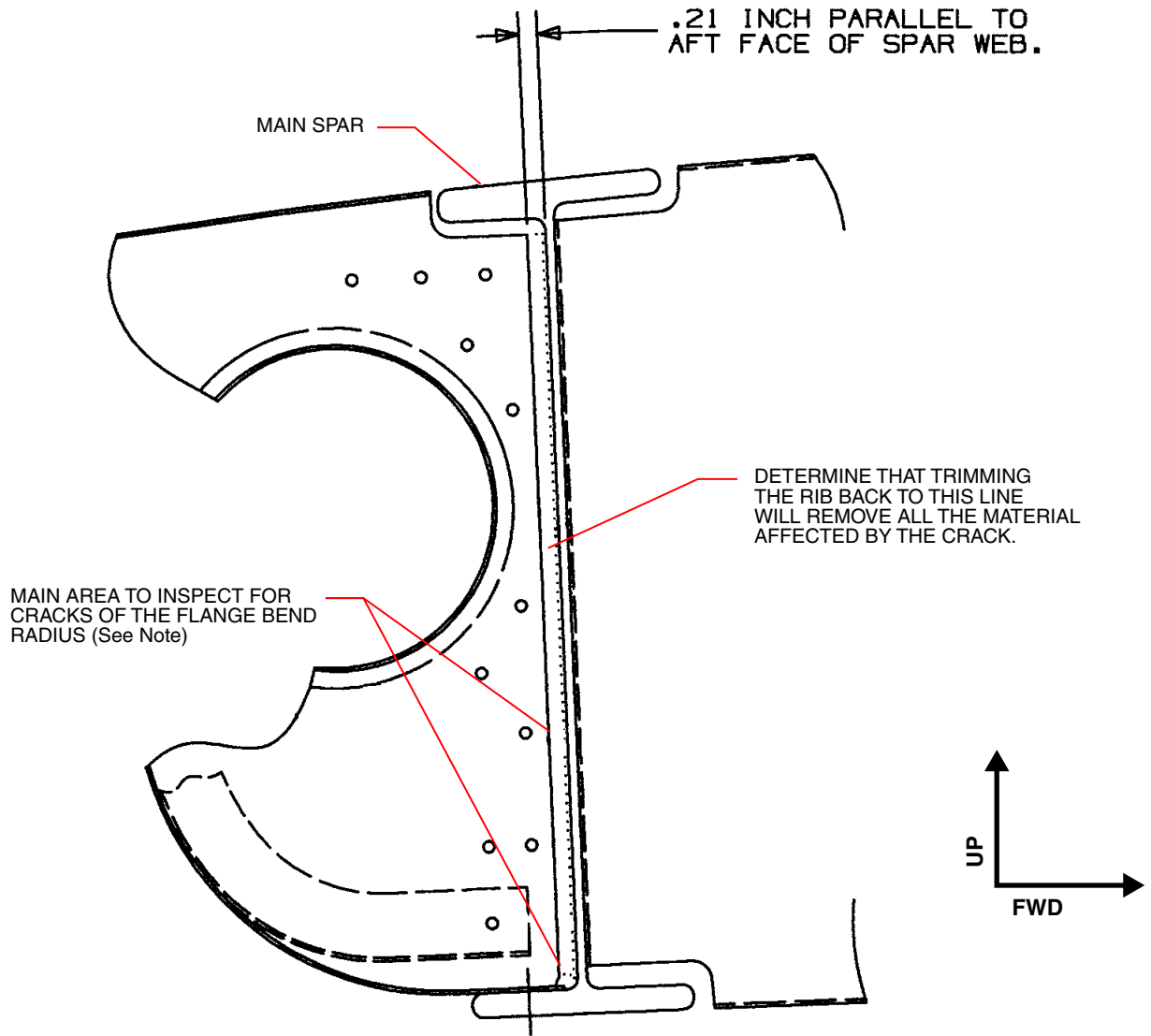
7. Make a logbook entry documenting compliance with Part I of this service bulletin, noting the accomplishment of the recurring inspection, or the structural modification of the LH and/or RH wing per kit instructions, as applicable.

TABLE 1 REPLACEMENT RIB ASSEMBLY	
IF THE ORIGINAL PART NUMBER IS:	THEN THE SERVICE PART NUMBER IS:
78475-000	78475-014
78475-001	78475-015
78475-002	78475-016
78475-003	78475-017
78475-004	78475-018
78475-005	78475-019
78475-006	78475-012
78475-007	78475-013
78475-008	78475-010
78475-009	78475-011

NOTE: Refer to the appropriate Piper Airplane Parts Catalog to determine the applicable original part number.

Part II. Standard Inspection

1. As part of the normal 100 hour recurring maintenance requirements:
Inspect the rib assembly (LH and RH) for evidence of cracks at the location described above, except the inspection shall be limited to a visual examination of the exposed (upper half) portion of the flange bend radius. Removal of the main landing gear side brace is not required at the 100 hour inspection interval.
NOTE: If evidence of a crack or cracks is detected, proceed to Part I, Detailed Inspection.
2. Make a logbook entry documenting compliance with Part II of this service bulletin.



NOTE: Applicable to the initial 50 hour inspection and 500 hour recurring inspection. Not applicable to the recurring 100 hour inspection.

LOOKING OUTBOARD AT LEFT WING
(RIGHT WING OPPOSITE)

Figure 1
Determine if trimming will remove all material affected by cracks or damage

- MATERIAL REQUIRED:** Per aircraft, on condition (refer to Part I, Step 3):
- Up to two (2) each, Rib Assembly – Aft Wing – WS 49.25, P/N 78475-010 or higher, per Table 1
 - Up to one (1) each:
 - Kit P/N 767-397, Kit – Rib Repair, LH
 - Kit P/N 767-398, Kit – Rib Repair, RH

AVAILABILITY OF PARTS: Your Piper Approved Service Center

EFFECTIVITY DATE: This service bulletin is effective upon receipt.

SUMMARY: Applicable factory participation is limited to new aircraft in warranty at the time of compliance. 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 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.
Att'n: Customer Service
2926 Piper Drive
Vero Beach, FL 32960

or:

CustomerService@piper.com

Please include in subject line: "Aircraft ownership update"