

Service Bulletin

Subject

Wing Strut and Strut Fitting Inspection and Replacement

Applicability

This Service Bulletin is applicable to the serial numbers listed for the part numbers identified in Table 1. Critical part serial numbers can have five (5) or six (6) digits, with a prefix of either '00' or '000'. Note Table 1 only lists the last three (3) or four (4) relevant numbers.

Table 1 – Applicability

PART NUMBER	PART SERIAL NUMBERS
GA8-570026-035 Strut	<i>Struts delivered on new aircraft:</i> 350 thru 361, 363 thru 398, 402 thru 406, 409 thru 440, 442 thru 449, 451, 452, 459, 461, 462, 465, 466 thru 483, 486 thru 497, 500 thru 503, 506, 507, 510 thru 515, 520 thru 523, 526 thru 533, 552 thru 554, 559, 560, 562 <i>Struts provided as replacement items:</i> 362, 399, 400, 484, 498, 499, 512, 513, 524, 525, 527, 538, 539, 542, 543, 544, 545, 546, 547
GA8-570026-029 Strut Fitting – Fuselage End	718 thru 808, 889 thru 1022
GA8-570026-031 Strut Fitting – Wing End	716 thru 806, 967 thru 1020
GA8-571022-105 Forward Strut Fitting, RH	289, 290, 296, 297, 299, 300, 301, 308 thru 320, 322, 323, 325 thru 347
GA8-571022-106 Forward Strut Fitting, LH	288, 289, 290, 292, 295, 298, 303, 306 thru 314, 316 thru 319, 321 thru 326, 329 thru 333, 335 thru 345
GA8-571022-107 Aft Strut Fitting, LH	307 thru 346
GA8-571022-108 Aft Strut Fitting, RH	308 thru 347

GippsAero records show the aircraft serial numbers listed in Table 2 are affected, however all Operators must check the individual serial numbers identified in Table 1 as the following list may be incomplete.

Table 2 – Known Affected Aircraft

AIRCRAFT	AIRCRAFT SERIAL NUMBERS
GA8 and GA8-TC 320	Aircraft 139 Aircraft 158 thru 239 inclusive

Amendments

Issue 1: Initial Issue, released 26-Feb-2018

Issue 2: Amends requirement for strut removal for inspections to be a one-off only, inspection Part C1 and C2 are combined. Recurring on-wing inspections introduced for Wing and Strut Fittings; outlined in Part C3. Table 3 updated to include Part C3. References to Service Letter SL-GA8-2018-37 included where relevant. Rework of interfacing fuselage lug. Other minor changes highlighted by vertical change bars.

Background

GippsAero has recently identified that some P/N GA8-570026-035 Struts, P/N GA8-570026-029 Strut Fitting – Fuselage End, P/N GA8-570026-031, Strut Fitting – Wing End, and P/N GA8571022-105,-106,-107 and -108 Strut Fittings cannot be assured as meeting their material specification requirements. This Service Bulletin introduces inspection requirements and replacement instructions for identified Wing Struts and Fittings. Safe flight with the identified Wing Strut Assemblies and Strut Fittings can continue as their certified strength is unaffected, however there may be a reduction in the Strut and Strut Fitting fatigue lives. As a precaution GippsAero is mandating replacement of Struts and Strut Fittings as detailed in this Service Bulletin.

Compliance

This Service Bulletin requires an initial general visual inspection by 31st August 2018; recurring general visual inspections are required at intervals not exceeding 110 hours. This Service Bulletin requires a one-off detailed visual inspection, that involves the strut removal, by 31st August 2018; then recurring on-wing visual inspections are required at 1000 hours intervals. This Service Bulletin also introduces new mandatory replacement times for affected parts. More detail is provided under Continuing Airworthiness on Page 4.

Weight and Balance

The inspections outlined herein do not impact the aircraft's weight and balance.

A single replacement Strut Assembly, P/N GA8-570016-041, adds 1.4 lbs to the aircraft 52" aft of the datum.

Approval

The airframe inspection described in this Service Bulletin and part replacement intervals have been approved pursuant to Australian Civil Aviation Safety Regulation 21.098 (1998). GippsAero Reference GAE11#2215.

Labour

- 2 man hours should be allocated for completing the work detailed in Part B of this Service Bulletin.
- 3 man hours should be allocated for completing the work detailed in Part C1 and C2 of this Service Bulletin.
- 3 man hours should be allocated for completing the work detailed in Part C3 of this Service Bulletin.
- 5 man hours should be allocated for completing the work detailed in Part D of this Service Bulletin.
- 5 man hours should be allocated for completing the work detailed in Part E of this Service Bulletin.

These estimates do not include time required to do normal maintenance preparation or set up equipment.

Spare Parts and Warranty

Replacement Wing Strut Assemblies and Wing Strut Fittings can be obtained by contacting GippsAero Customer Service:

Tel: +61 (0)3 5172 1200

Fax: +61 (0)3 5172 1201

Email: aircraft.parts@mahindraaerospace.com

Aircraft covered by warranty may claim the direct cost of incorporating the requirements of this Service Bulletin by contacting GippsAero Customer Service:

Tel: +61 (0)3 5172 1200

Fax: +61 (0)3 5172 1201

Email: aircraft.warranty@mahindraaerospace.com

Part Identification

The parts affected by this Service Bulletin are identified in Figure 1.

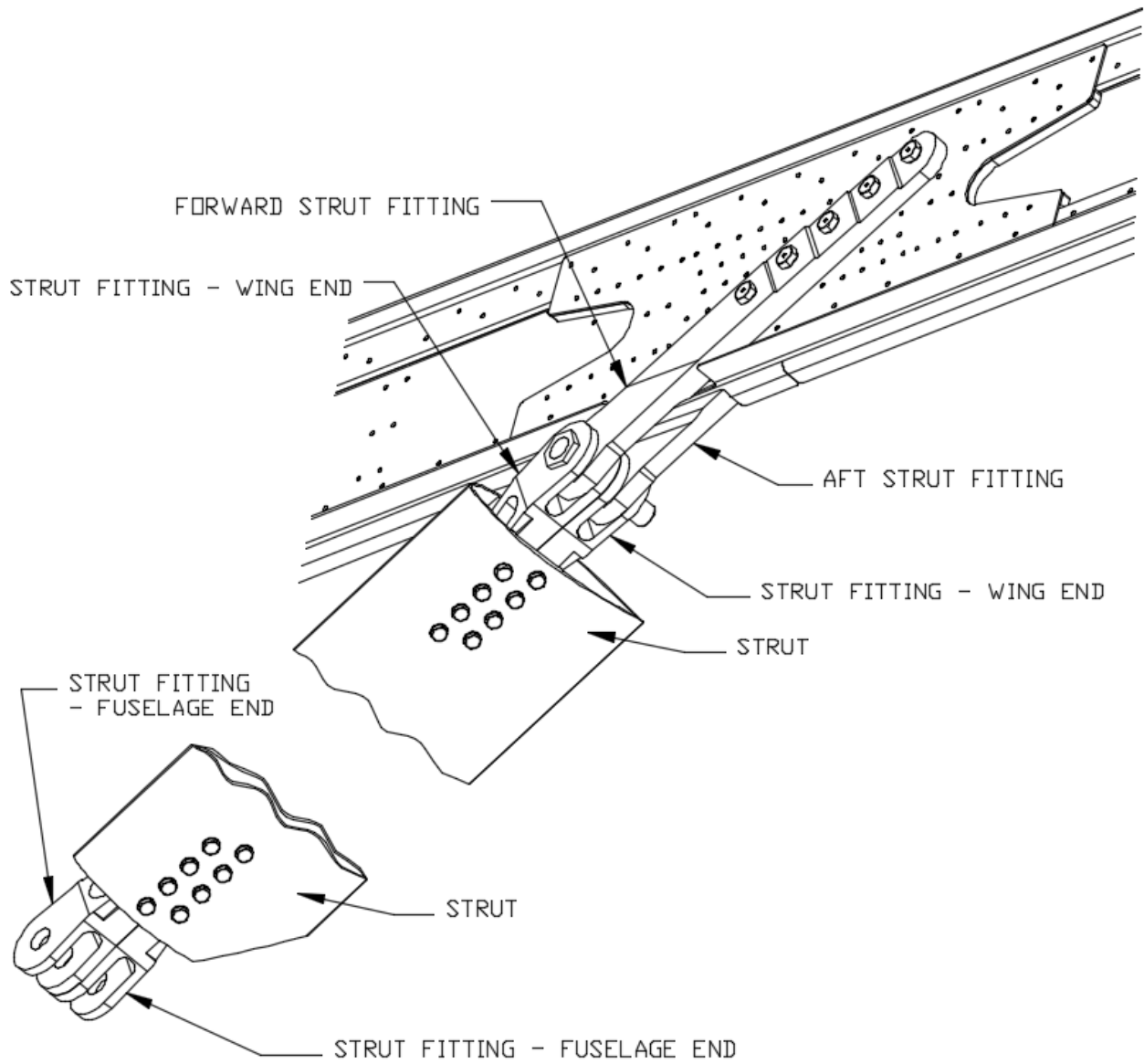


Figure 1 – Part Identification

LHS Shown, RHS Opposite

Continuing Airworthiness

The requirements of this Service Bulletin are shown in Table 3.

Table 3 – Service Bulletin Requirements

SERVICE BULLETIN	APPLICABILITY <i>See Table 1 for Serial Number effectivity</i>	ACTION and DESCRIPTION	STARTS	INTERVAL	TERMINATES
PART A	All	Identification of affected parts	-	-	-
PART B	All	General visual inspection	by 31 st August 2018	100 +/-10 hours	when parts replaced by Part D or Part E
PART C1 and PART C2	GA8-571022-105 Forward Strut Fitting, RH	One-off detailed non-destructive inspection	by 31 st August 2018	N/A	when inspection performed
	GA8-571022-106 Forward Strut Fitting, LH				
	GA8-571022-107 Aft Strut Fitting, LH				
	GA8-571022-108 Aft Strut Fitting, RH				
	GA8-570026-029 Strut Fitting – Fuselage End				
	GA8-570026-031 Strut Fitting – Wing End				
PART C3	GA8-571022-105 Forward Strut Fitting, RH	Detailed non-destructive inspection	by 31 st August 2018	1000 +/- 10 hours	when parts replaced by Part D
	GA8-571022-106 Forward Strut Fitting, LH				
	GA8-571022-107 Aft Strut Fitting, LH				
	GA8-571022-108 Aft Strut Fitting, RH	Detailed non-destructive inspection	by 31 st August 2018	1000 +/- 10 hours	when parts replaced by Part E
	GA8-570026-029 Strut Fitting – Fuselage End				
	GA8-570026-031 Strut Fitting – Wing End				
PART D	GA8-570026-035 Strut	Replacement	Not exceeding 9,000 part hours in service OR within 5 calendar years of date of issue of this Service Bulletin whichever occurs first		
	GA8-570026-029 Strut Fitting – Fuselage End	Replacement	Not exceeding 6,000 part hours in service nOR within 3 calendar years of date of issue of this Service Bulletin whichever occurs first		
	GA8-570026-031 Strut Fitting – Wing End				
PART E	GA8-571022-105 Forward Strut Fitting, RH	Replacement	Not exceeding 6,000 part hours in service OR within 3 calendar years of date of issue of this Service Bulletin whichever occurs first		
	GA8-571022-106 Forward Strut Fitting, LH				
	GA8-571022-107 Aft Strut Fitting, LH				
	GA8-571022-108 Aft Strut Fitting, RH				

Table 4 shows the non-destructive inspection requirements for a typical block of 1000 flight hours after the date of issue of this Service Bulletin.

Table 4 – Inspection requirements

Aircraft Hours in Service	Inspection Type		
	General Visual (Part B)	One-Off Detailed Visual (Part C1 and C2)	On Wing Detailed Visual (Part C3)
<i>By 31st August 2018</i>	✓	✓	
+100	✓		
+200	✓		
+300	✓		
+400	✓		
+500	✓		
+600	✓		
+700	✓		
+800	✓		
+900	✓		
+1000	✓		✓

Part B and Part C3 inspections must continue until any of the parts identified in Table 1 reach the replacement times shown in Table 3.

Parts

The spare parts that may be required to do Parts C1 and C2 or C3 for one Strut Assembly are listed in Table 5.

Table 5 – Parts C1 and C2 or C3 (KIT SB-GA8-2017-174-1)

ITEM	PART NUMBER	DESCRIPTION	QTY	ALTERNATE
1	NAS6610-38	BOLT, HEX HEAD, CLOSE TOLERANCE	2	-
2	AN960-1016	WASHER, PLAIN	2	NAS1149G1063P NAS1149F1063P
3	MS21245L10	NUT, SELF LOCKING, HEXAGON	2	MS21083N10
4	AN316-10R	NUT, JAM	2	NASM316-10R

The spare parts required to do Part D for one Strut Assembly are listed in Table 6.

Table 6 – Part D (KIT SB-GA8-2017-174-2)

ITEM	PART NUMBER	DESCRIPTION	QTY	ALTERNATE
5	NAS6610-38	BOLT, HEX HEAD, CLOSE TOLERANCE	2	-
6	AN960-1016	WASHER, PLAIN	2	NAS1149G1063P NAS1149F1063P
7	MS21245L10	NUT, SELF LOCKING, HEXAGON	2	MS21083N10
8	AN316-10R	NUT, JAM	2	NASM316-10R
9	GA8-570016-041	STRUT ASSEMBLY	1	-

The spare parts required to do Part E for one wing are listed in Table 7.

Table 7 – Part E (KIT SB-GA8-2017-174-3 and -4)

ITEM	PART NUMBER	DESCRIPTION	QTY – LH WING (-3)	QTY – RH WING (-4)	ALTERNATE
10	GA8-571022-106	FORWARD STRUT FITTING, LH	1	-	-
11	GA8-571022-107	AFT STRUT FITTING, LH	1	-	-
12	GA8-571022-105	FORWARD STRUT FITTING, RH	-	1	-
13	GA8-571022-108	AFT STRUT FITTING, RH	-	1	-
14	AN5-15A	BOLT, MACHINE, AIRCRAFT	1	1	-
15	AN5-16A	BOLT, MACHINE, AIRCRAFT	1	1	-
16	AN5-17A	BOLT, MACHINE, AIRCRAFT	1	1	-
17	AN5-20A	BOLT, MACHINE, AIRCRAFT	2	2	-
18	AN960-516	WASHER, PLAIN	9	9	NAS1149G0563P NAS1149F0563P
19	MS21042-5	NUT, SELF LOCKING	5	5	-
20	NAS6610-38	BOLT, HEX HEAD, CLOSE TOLERANCE	2	2	-
21	AN960-1016	WASHER, PLAIN	2	2	NAS1149G1063P NAS1149F1063P
22	MS21245L10	NUT, SELF LOCKING, HEXAGON	2	2	-
23	AN316-10R	NUT, JAM	2	2	NASM316-10R

Approved Non-Destructive Inspections

Parts C1, C2 and C3 of this Service Bulletin require mandatory visual inspections of primary aircraft structure. These visual inspections assess the condition of the parts and their paint or primer coatings. They also look for corrosion, scratches, scoring, dents or cracks in machined parts and the wing strut.

All mandatory visual inspections require the use of at least 10x magnification and a strong supplementary source of light. A borescope (or Videoscope) is required for the On-Wing inspection in Part C3.

This Service Bulletin also identifies Eddy Current Inspection (ECI) or fluorescent Liquid Penetrant Inspection (LPI) as approved alternate procedures for the inspections. Where a non-destructive inspection is required by this Service Bulletin, GippsAero will identify general industry standards for either ECI or LPI if used as approved alternatives to the mandatory visual inspection. These industry standards can be used by any local non-destructive testing provider to develop inspection techniques specific to the relevant parts.

Names of Features on Strut Fittings

Examples of the names of geometric features and locations on the Strut Fittings are shown in Figure 2. When doing the visual inspections required by this Service Bulletin, all of these features and locations must be examined and these names should be used when communicating the results of any inspections to GippsAero.

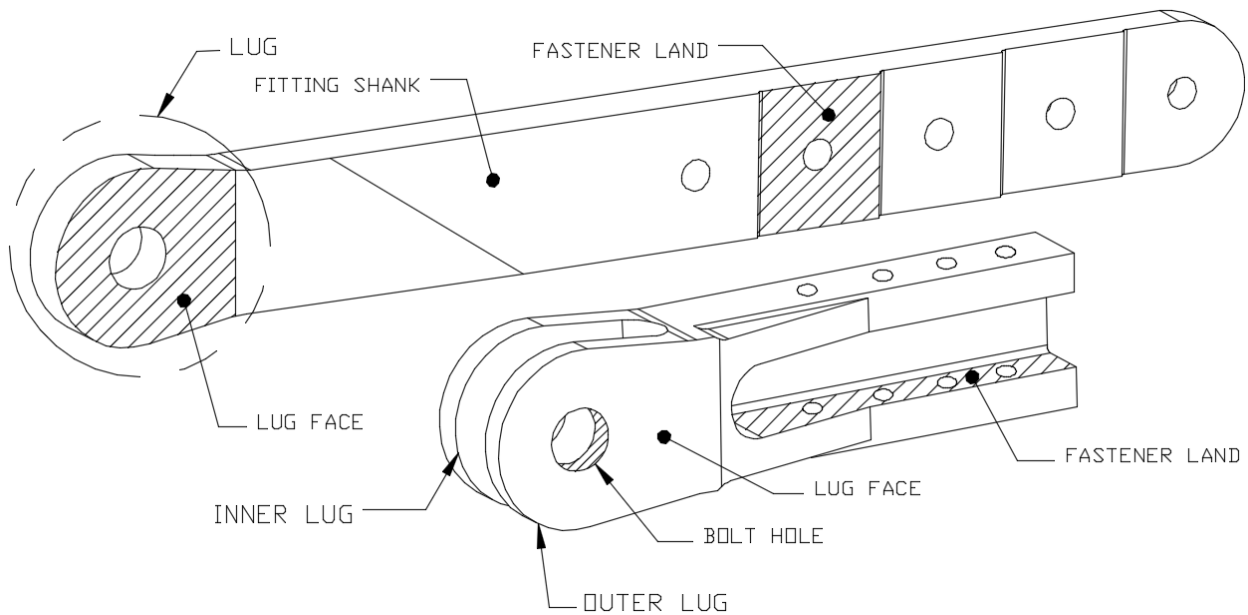


Figure 2 – Strut Fitting Feature Names

Accomplishment Instructions

All of the following accomplishment instructions are applicable to either the Left Hand Side (LHS) or the Right Hand Side (RHS) of the aircraft, unless noted otherwise.

WARNING:

IT IS THE RESPONSIBILITY OF ALL PERSONNEL TO ENSURE WORK HEALTH AND SAFETY REQUIREMENTS ARE MET AT ALL TIMES. ALL PERSONNEL MUST COMPLY WITH ALL WORK HEALTH AND SAFETY REQUIREMENTS AS DEFINED OR RECOMMENDED BY:

- AIRCRAFT MAINTENANCE AND OPERATION MANUALS;
- RELEVANT NAA REGULATIONS AND ADVISORY DOCUMENTATION;
- ORGANISATION MANUALS, INCLUDING NAA ENDORSED OPERATIONAL AND MAINTENANCE MANUALS; AND
- RELEVANT LOCAL, STATE AND FEDERAL GOVERNMENT REQUIREMENTS.

WARNING:

READ THE APPLICABLE MATERIAL SAFETY DATA SHEET (MSDS) FOR ANY CONSUMABLE USED DURING THE ACCOMPLISHMENT OF THIS SERVICE BULLETIN AND EMPLOY ANY RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT (PPE) CONTAINED THEREIN.

NOTE:

Unless otherwise specified, reference to the GA8 or GA8-TC 320 Service Manual and FAA Advisory Circular (AC) 43.13-1B & -2B should be made when carrying out the procedures prescribed in this Service Bulletin. In case of a discrepancy between the Service Manual and the AC, the Service Manual takes precedence.

Part A – Preparation

1. Put the aircraft on a stable, level surface such as inside a maintenance hangar.
2. Make the aircraft safe for maintenance by at least electrically isolating the aircraft by disconnecting the aircraft battery.
3. Apply the aircraft park brake or otherwise chock at least the main landing gear wheels.
4. Remove Strut to Fuselage and Strut to Wing fairings. Retain fasteners if serviceable.
5. Slide fairing(s) away from Strut attachment joint(s).

CAUTION:

CROSS CHECK PHYSICAL PART IDENTIFICATION AND AIRCRAFT LOG BOOK CAREFULLY IF STRUT ASSEMBLIES HAVE BEEN PREVIOUSLY REPLACED DURING AIRCRAFT SERVICE.

IF PHYSICAL PART IDENTIFICATION IS NOT POSSIBLE, OR A DISCREPANCY EXISTS BETWEEN PHYSICAL PART AND AIRCRAFT LOGBOOK, CONTACT GIPPSAERO

6. Identify and record the Wing Strut part number and serial number. Verify the aircraft's log book contains the correct information.
7. Identify and record the Strut Fitting – Wing End and Strut Fitting – Fuselage End part numbers and serial numbers. Verify the aircraft's log book contains the correct information.
8. Identify and record the Forward and Aft Strut Fitting part numbers and serial numbers. Verify the aircraft's log book contains the correct information.

Part B – Directed Detailed Visual Inspection

All of the following accomplishment instructions are applicable to either the Left Hand Side (LHS) or the Right Hand Side (RHS) of the aircraft, unless noted otherwise.

CAUTION:

THIS SECTION OF THE SERVICE BULLETIN DOES NOT AUTHORISE ANY REWORK. IF YOU THINK REWORK MAY BE REQUIRED, CONTACT GIPPSAERO

NOTE:

Removal of the Wing Strut Assembly from the aircraft will not be required

1. Clean the inspection areas identified in Figure 3 using a cleaning solvent or airframe cleaning compound.
2. Do a detailed visual inspection, using at least 10x magnification and a strong light source of the areas of the Strut, Strut Fittings (Wing End and Fuselage End) and Strut Fittings (Forward and Aft) in Figure 3. Look for cracked or damaged surface protection (primer and paint), corrosion or other damage.

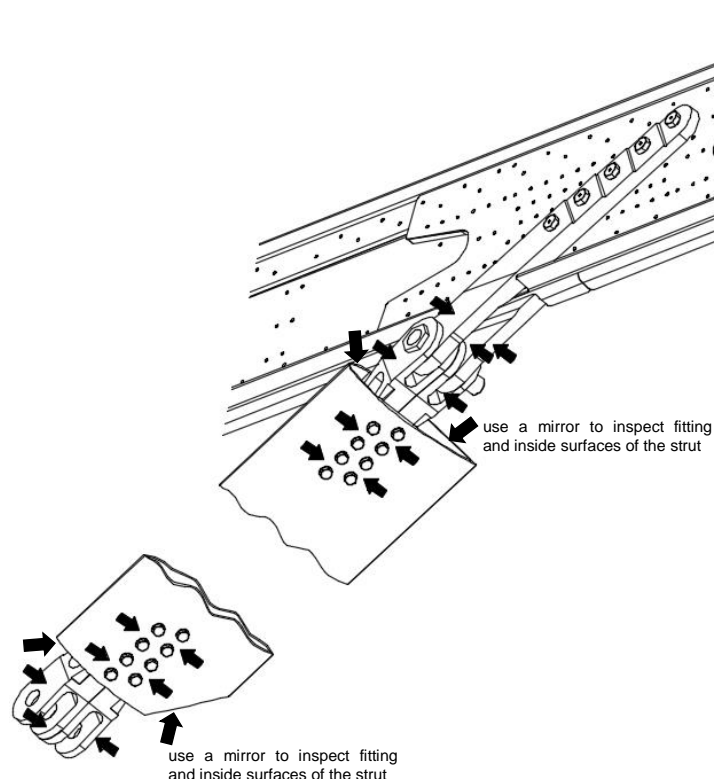


Figure 3 – Directed Detailed Visual Inspection Areas

3. If any indications of cracking or corrosion are found, remove paint from the inspection area and do another detailed visual inspection.
4. If any indications of cracking or corrosion are found, replace all affected parts in accordance with Part D or Part E of this Service Bulletin. Contact GippsAero for assistance if required.
5. If no cracks or corrosion are found, do a torque check of all the fasteners connecting the Strut Fittings to the Strut using values from Chapter 20 of the GA8/GA8-TC 320 Service Manual. If any fasteners are found loose, contact GippsAero for assistance. Otherwise, continue.
6. If any areas of paint are removed for inspection, or found to be damaged, restore the surface protection. Apply a chemical conversion coating, Type 1, Class 1A per MIL-DTL-5541. Apply a coat of primer that conforms to MIL-PRF-23377 or FED-SPEC-TT-P-1757. Apply a topcoat of paint that conforms to MIL-PRF-85285 and matches the surrounding colour.

NOTE:

Surface protection is very important and helps prevent corrosion. Make sure to restore any removed or damaged surface protection.

7. Install Strut to Fuselage and Strut to Wing fairings, inspection is complete.

Part C – Detailed Non-Destructive Inspection

All of the following accomplishment instructions are applicable to either the Left Hand Side (LHS) or the Right Hand Side (RHS) of the aircraft, unless noted otherwise.

The inspections required by this section of the Service Bulletin are:

- one-off inspection that removes the Strut and performs detailed visual inspections of Part C1 and C2
- recurring On-Wing detailed visual inspections in Part C3 that removes the Strut bolts at 1000 hour intervals

CAUTION:

THIS SECTION OF THE SERVICE BULLETIN AUTHORISES LIMITED REWORK. IF ADDITIONAL REWORK IS REQUIRED, CONTACT GIPPSAERO

Part C1 and Part C2 – Preparation

1. Shore aircraft wing by placing on trestles or similar supporting device in accordance with Chapter 7-20-00 of the GA8/GA8-TC 320 Service Manual. Service Letter SL-GA8-2018-37 also provides additional guidance on how to shore the wing, remove the bolts and remove the Strut.
2. Remove upper and lower Strut bolts, nuts and washers.
3. Remove Wing Strut from aircraft.
4. Clean bolts, nuts and washers using a cleaning solvent. Inspect the bolts, nuts and washers for serviceability.

Look for corrosion, scores, scratches or any other damage. Look for damaged surface protection (Cadmium plating). Check that the locknut has a minimum prevailing torque of 18 in-lbs.

Bolt hole diameter standard value: 0.623” – 0.624”

If corrosion is evident or Cadmium plating is compromised, or if the hardware is not within above limits, replace the affected hardware with new parts as listed in Table 5.

Part C1 – Forward and Aft Strut Fittings (Wing) Inspection

1. Clean wing Forward and Aft Strut Fittings attached to the wing identified in Figure 4 using a cleaning solvent or airframe cleaning compound.
2. Do a detailed visual inspection using at least 10x magnification and a strong light source of the lug faces, inner surfaces of the Strut Fitting bolt holes, fastener lands and Fitting shank.

Look for corrosion, cracks, scores, scratches or any other damage. Look for cracked or damaged surface protection (primer and paint). Check lug bolt holes for any evidence of elongation, damage or corrosion.

Bolt hole diameter standard value: 0.6245” – 0.6255”

If corrosion or cracks are found, or if the bolt hole is not within the standard value, replace all affected parts in accordance with Part E of this Service Bulletin. Contact GippsAero for assistance if required.

Otherwise, continue.

NOTE:

Doing an Eddy Current Inspection of the bolt holes in accordance with SAE-ARP-4402 is an approved alternative method of inspection for these parts

Doing a fluorescent liquid penetrant inspection in accordance with ASTM E-1417 is an approved alternative method of inspection for these parts

3. If any areas of paint are removed for inspection, or found to be damaged, restore the surface protection. Apply a chemical conversion coating, Type 1, Class 1A per MIL-DTL-5541. Apply a coat of primer that conforms to MIL-PRF-23377 or FED-SPEC-TT-P-1757. Where required, apply a topcoat of paint that conforms to MIL-PRF-85285 and matches the surrounding colour.

NOTE:

Surface protection is very important and helps prevent corrosion. Make sure to restore any removed or damaged surface protection.

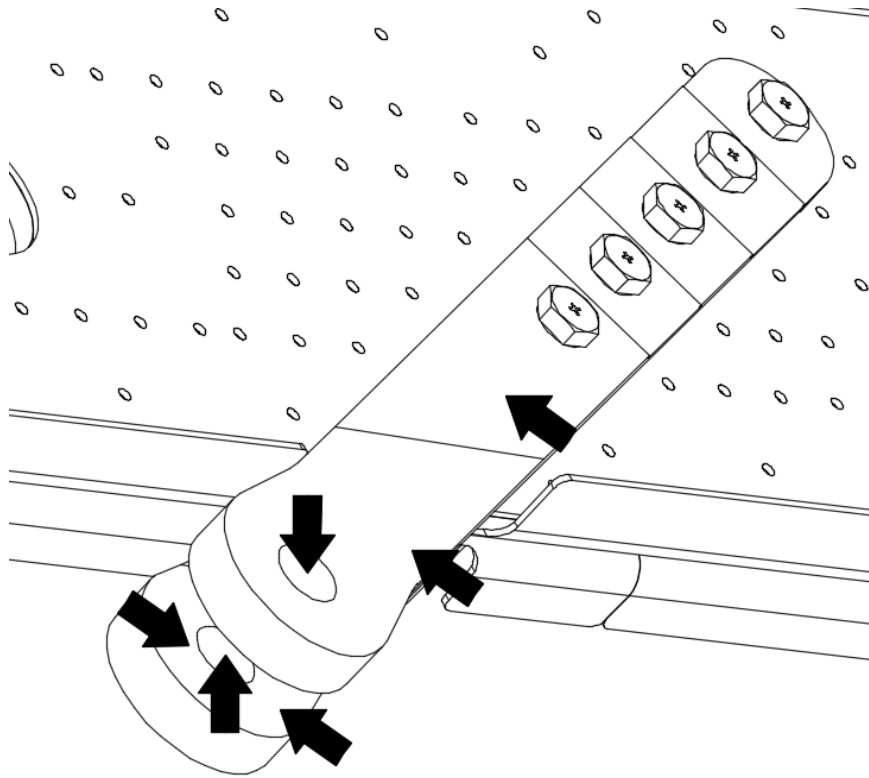


Figure 4 – Inspection areas in Strut Fittings (Forward and Aft)

Part C2 - Wing Strut Fittings and Fuselage Attachment Inspection

1. Clean the inspection areas of the Strut and all Strut Fittings identified in Figure 5 and interfacing parts on the fuselage using a cleaning solvent or airframe cleaning compound.
2. Do a detailed visual inspection using at least 10x magnification and a strong light source of the lug faces, inner surfaces of the Strut Fitting bolt holes, lug clevis and fastener lands and interfacing parts on the fuselage.

Look for corrosion, cracks, scores, scratches or any other damage. Look for cracked or damaged surface protection (primer and paint). Check lug bolt holes for any evidence of elongation, damage or corrosion.

Bolt hole diameter standard value: 0.625” – 0.627”

If corrosion or cracks are found, or if the Strut Fitting bolt hole/s is/are not within the standard value, replace the Strut Assembly in accordance with Part D of this Service Bulletin. Contact GippsAero for assistance if required.

NOTE:

Doing an Eddy Current Inspection of the bolt holes in accordance with SAE-ARP-4402 is an approved alternative method of inspection for these parts

Doing a fluorescent liquid penetrant inspection in accordance with ASTM E-1417 is an approved alternative method of inspection for these parts

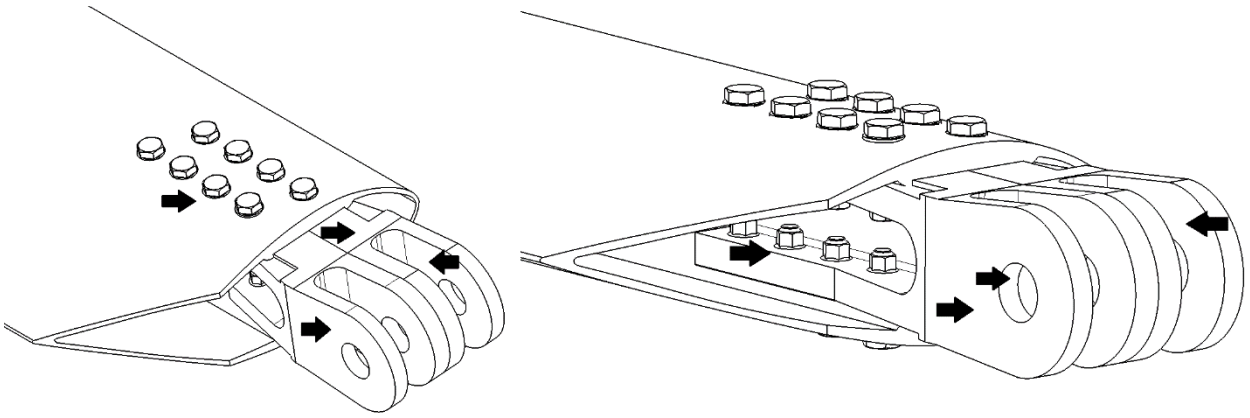
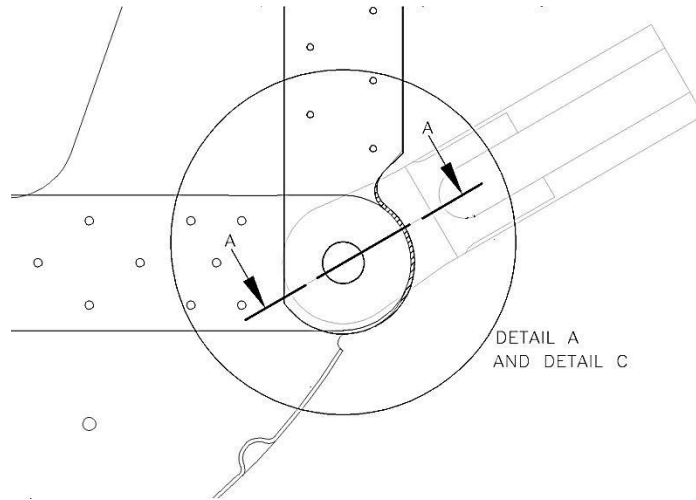


Figure 5 – Wing Strut and Strut Fittings inspection areas

3. If there is evidence of foul on the strut fitting lug inner face and fuselage lug outer faces, remove material from the fuselage lug by blending as shown in Figure 6.



Note:

Finish the blended edges with an abrasive pad or similar to achieve a maximum surface roughness of 63 Ra

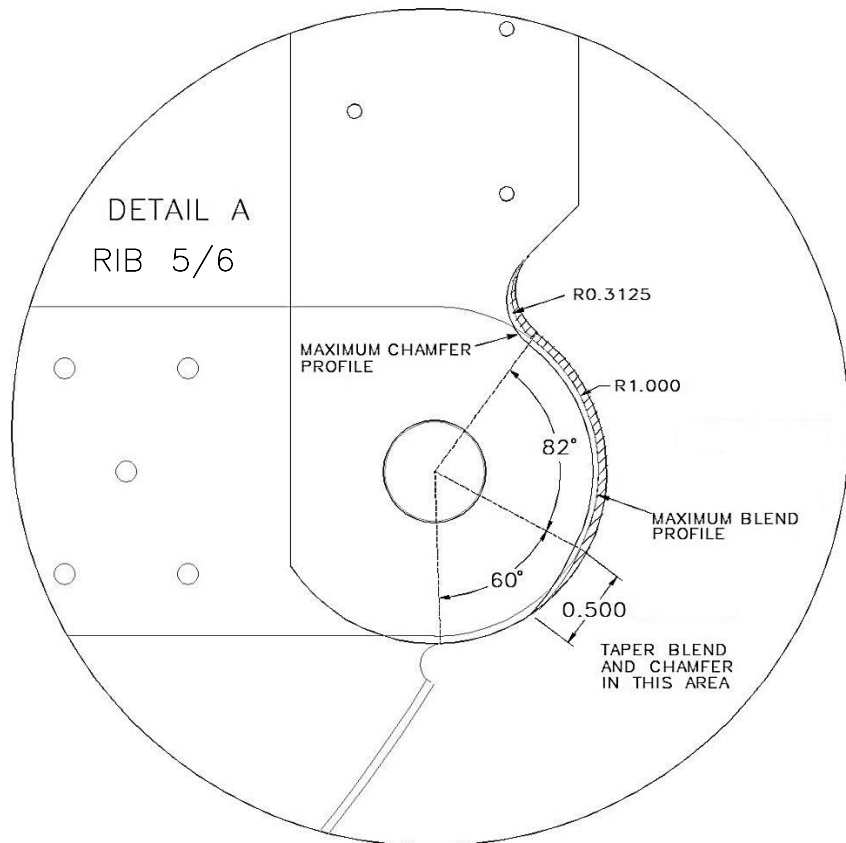
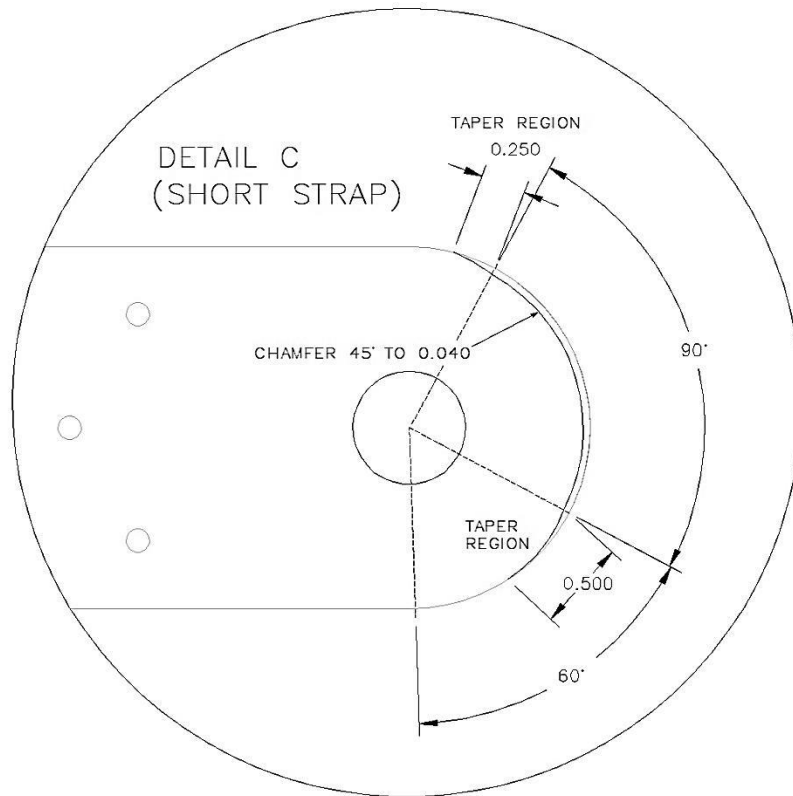
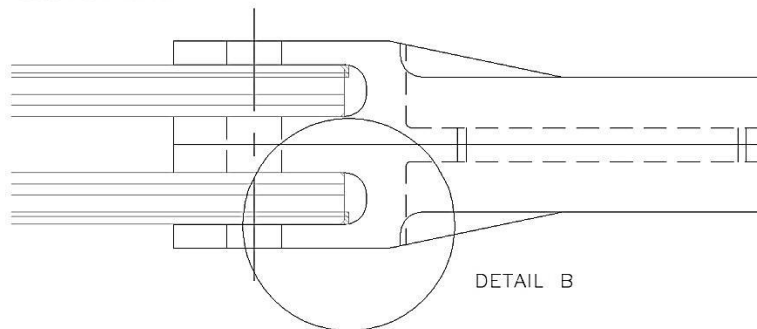


Figure 6 – Allowable Rework to Fuselage Lug

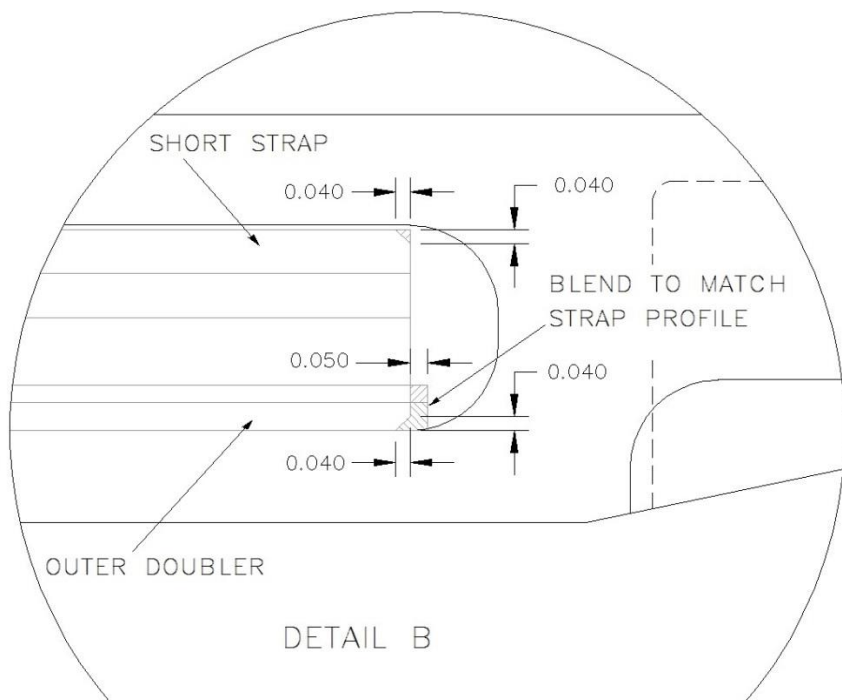


SECTION A-A



DETAIL B

Note:
Finish the blended edges with an abrasive pad or similar to achieve a maximum surface roughness of 63 Ra



DETAIL B

Figure 6 – Allowable Rework to Fuselage Lug - Continued

4. Restore the surface protection of any areas of paint are removed for inspection/rework, or found to be damaged. Apply a chemical conversion coating, Type 1, Class 1A per MIL-DTL-5541. Apply a coat of primer that conforms to MIL-PRF-23377 or FED-SPEC-TT-P-1757. Where required, apply a topcoat of paint that conforms to MIL-PRF-85285 and matches the surrounding colour.
5. Apply a thin coat of general purpose airframe grease to the mating surfaces of the Strut Fittings. Install removed Wing Strut using serviceable bolts, nuts and washers Items 1, 2, 3 and 4. Remove any excess grease from the threads of the Bolt and torque the AN316 nut to between 55 and 65 lb.ft.

Part C3 – On-Wing Forward and Aft Strut Fittings (Wing), Strut and Strut Fitting Inspection

These inspections require a borescope/videoscope inspection of the Strut Fitting lug bolt holes that can be done without removing the Strut Assembly.

1. Shore aircraft wing by placing on trestles or similar supporting device in accordance with Chapter 7-20-00 of the GA8/GA8-TC 320 Service Manual. Service Letter SL-GA8-2018-37 also provides additional guidance on how to shore the wing, remove the bolts and remove the Strut.
2. Remove upper Strut bolt, nuts and washers. Inspect the removed hardware for serviceability as described in Part C1 and Part C2 – Preparation Step 4.

NOTE:

Remove one bolt at a time.

CAUTION:

MAKE SURE WING AND STRUT WILL NOT MOVE BEFORE INSERTING ANY OBJECT INTO THE LUG BOLT HOLES

3. Clean the inspection areas of the Strut, visible external areas of Strut Fittings and the Strut Fitting lug bolt holes using a cleaning solvent or airframe cleaning compound. Work carefully in the lug bolt holes and remove all foreign objects.
4. Do a detailed visual inspection using at least 10x magnification and a strong light source of the visible external surfaces of the Strut Fittings.

Do a detailed visual inspection of the inside of the lug bolt holes using a borescope/videoscope.

Look for corrosion, cracks, scores, scratches or any other damage. Look for cracked or damaged surface protection (primer and paint). Check lug bolt holes for any evidence of elongation, damage or corrosion.

Bolt hole diameter standard value: 0.625” – 0.627”

If corrosion or cracks are found, perform Part C1 / C2 inspection. If the bolt hole/s is/are not within the standard value, replace the unserviceable part(s) in accordance with Part D (for the Strut Assembly) or Part E (for the Wing Strut Fittings) of this Service Bulletin as required. Contact GippsAero for assistance if required.

Otherwise, continue.

5. Apply a thin coat of a general purpose airframe grease to the mating surfaces of the Strut Fittings. Install serviceable or new bolt, nuts and washers (Items 1, 2, 3 and 4 of Table 5). Remove any excess grease from the threads of the Bolt and torque the AN316 nut to between 55 and 65 lb.ft.
6. Remove lower Strut bolt, nuts and washers. Inspect the removed hardware for serviceability as described in Part C1 and Part C2 – Preparation Step 4
7. Perform Part C3 steps 3 through 4 on the lower Strut fitting.
8. Apply a thin coat of general purpose airframe grease to the mating surfaces of the Strut Fittings. Install serviceable or new bolt, nuts and washers (Items 1, 2, 3 and 4 of Table 5). Remove any excess grease from the threads of the Bolt and torque the AN316 nut to between 55 and 65 lb.ft.

Part D – Strut Assembly Replacement

Table 1 identifies Struts, Strut Fittings – Wing End and Strut Fittings – Fuselage End that require replacement as outlined in Continuing Airworthiness on Page 4.

If any Strut Assembly has any of affected parts listed in Table 1, replace the entire Strut Assembly.

NOTE:

If the Wing Strut Fittings also require replacement, do Part E at the same time as Part D.

If Wing Strut Fittings do not require replacement, or do require replacement but are not being replaced at this time, do Part C1 at the same time as Part D.

1. Remove Strut to Fuselage and Strut to Wing fairings. Retain fasteners if serviceable.
2. Slide fairing(s) away from Strut attachment joint(s).
3. Shore aircraft wing by placing on trestles or similar supporting device in accordance with Chapter 7-20-00 of the GA8/GA8-TC 320 Service Manual. Service Letter SL-GA8-2018-37 also provides additional guidance on how to shore the wing, remove the bolts and remove the Strut.
4. Remove and discard all upper and lower Strut bolts, nuts and washers.
5. Remove Strut Assembly from aircraft.
6. Remove Strut to Fuselage and Strut to Wing fairings from Strut Assembly and retain if serviceable.
7. If inspection has found corrosion or other forms of damage, contact GippsAero to determine if the removed Strut Fittings must be returned to GippsAero for further assessment.
8. Put Strut to Fuselage and Strut to Wing fairings on new Strut Assembly.

NOTE:

Take care when installing Fairings. Do not damage the Strut Assembly.

9. Apply a thin coat of general purpose airframe grease to the mating surfaces of the Strut Fittings. Install new Strut Assembly, Item 9, in reverse order using Items 5, 6, 7 and 8. Remove any excess grease from the threads of the Bolt and torque the AN316 nut to between 55 and 65 lb.ft.
10. If required, do a Wing Rigging check in accordance with Chapter 57-10-10 of the GA8/GA8-TC 320 Service Manual.

Part E – Wing Strut Fitting Replacement

Table 1 identifies wing Strut Fittings that require replacement as outlined in Continuing Airworthiness on Page 4.

1. Shore aircraft wing by placing on trestles or similar supporting device in accordance with Chapter 7-20-00 of the GA8/GA8-TC 320 Service Manual. Service Letter SL-GA8-2018-37 also provides additional guidance on how to shore the wing, remove the bolts and remove the Strut.
2. Remove and discard all upper and lower Strut bolts, nuts and washers.
3. Remove Wing Strut from aircraft.
4. Remove wing access panels as shown in Figure 7 to access wing Strut Fittings.

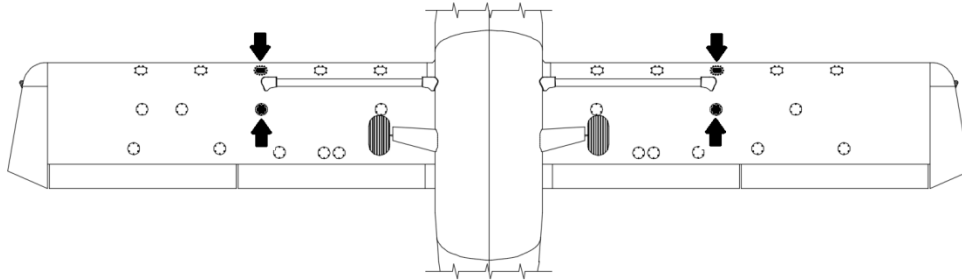


Figure 7 – Wing Access Panels

5. Remove and discard all wing Strut Fittings bolts, nuts and washers.
6. Remove wing Strut Fittings. If inspection has found corrosion or other forms of damage, contact GippsAero to determine if the removed Strut Fittings must be returned to GippsAero for further assessment.
7. Do a detailed visual inspection using at least 10x magnification and a strong light source of the Front Spar under the Strut Fittings.

Look for corrosion, cracks, scores, scratches or any other damage. Look for cracked or damaged surface protection (primer and paint). Check the fastener holes for any evidence of elongation, corrosion or damage.

Wing Front Spar bolt hole diameter standard value: 0.3125” – 0.3130”

If damage is found on the Front Spar, or the bolt holes are outside the standard value, contact GippsAero for assistance. Otherwise, continue.

8. If any areas of paint are removed for inspection, or found to be damaged, restore the surface protection. Apply a chemical conversion coating, Type 1, Class 1A per MIL-DTL-5541. Apply a coat of primer that conforms to MIL-PRF-23377 or FED-SPEC-TT-P-1757. If applicable apply a topcoat of paint that conforms to MIL-PRF-85285 and matches the surrounding colour.

NOTE:

Surface protection is very important and helps prevent corrosion. Make sure to restore any removed or damaged surface protection.

- Use a strut bolt to align the Strut Fitting 'big end' lug bolt holes. Temporarily locate the Strut Fittings and check that fastener holes in the Fitting and the Front Spar are aligned.

NOTE:

The Strut Fitting and Front Spar fastener holes are aligned if the bolts can be installed with light pressure.

Check that there is clearance between the Forward and Aft Strut Fittings and the Front Spar flanges on the forward and aft sides of the Spar in the area shown in Figure 8.

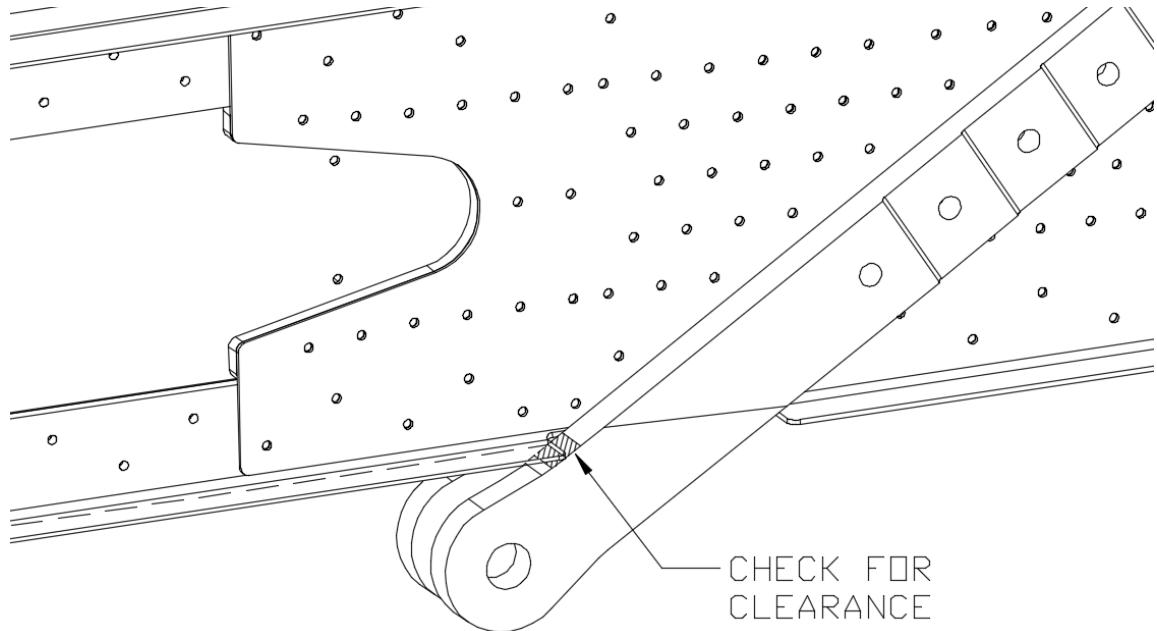


Figure 8 – Clearance check
Forward shown, aft side the same

- If there is no clearance between the Wing Strut Fitting and the Front Spar flange(s), remove material from the edge of the Front Spar flange(s) by blending as shown in Figure 9.

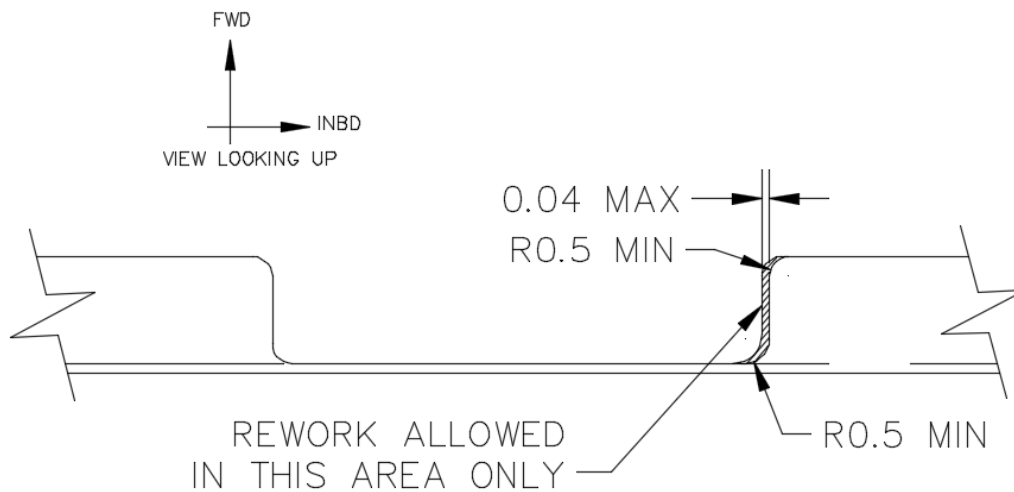


Figure 9 – Allowable rework to Front Spar flange(s) edge

Do not exceed a maximum depth of 0.040" and finish the blended edge with an abrasive pad or similar to achieve a maximum surface roughness of 63 Ra.

- Apply a chemical conversion coating, Type 1, Class 1A per MIL-DTL-5541, to any reworked area of the Front Spar. Apply a coat of primer that conforms to MIL-PRF-23377 or FED-SPEC-TT-P-1757. If applicable apply a topcoat of paint that conforms to MIL-PRF-85285 and matches the surrounding colour.

11. Install new wing Strut Fittings and fasteners as shown in Figure 10 wet with the anti-corrosive, chromated jointing compound Duralac. Torque all nuts to between 100 and 140 in-lbs.

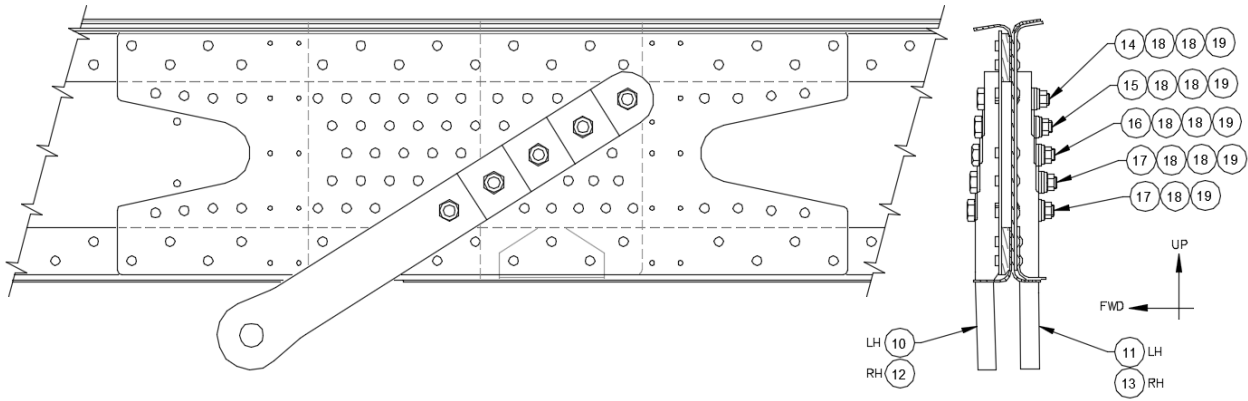


Figure 109 – Strut Fitting Installation
(Balloons show item number from Table 7)

12. Apply a thin coat of a general purpose airframe grease to the mating surfaces of the Strut Fittings. Install Strut Assembly in reverse order using Items 20, 21, 22 and 23. Remove any excess grease from the threads of the Bolt and torque the AN316 nut to between 55 and 65 lb.ft.
13. If required, do a Wing Rigging check in accordance with Chapter 57-10-10 of the GA8/GA8-TC 320 Service Manual.

Documentation

Update aircraft log book to reflect incorporation of this Service Bulletin.

Compliance Notice

Complete the Document Compliance Notice and return to GippsAero by mail, fax or email.

DOCUMENT COMPLIANCE NOTICE



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Document:

SB-GA8-2017-174

Issue 2

Aircraft Serial Number: GA8-_____

Please record any actions done to any of the part numbers listed in this Service Bulletin and return to GippsAero by mail, fax or email.

Inspection Type

Part Number	Part B	Part C1/C2	Part C3	Part Replaced	Hours in Service
GA8-570026-035					
GA8-570026-029					
GA8-570026-031					
GA8-571022-105					
GA8-571022-106					
GA8-571022-107					
GA8-571022-108					

Please note the results of any inspections (i.e. nothing found, evidence of corrosion, cracking indication):

Part Number	Inspection Result
GA8-570026-035	
GA8-570026-029	
GA8-570026-031	
GA8-571022-105	
GA8-571022-106	
GA8-571022-107	
GA8-571022-108	

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Document:

SB-GA8-2017-174

Issue 2

Service Bulletin SB-GA8-2017-174, Issue 2 has been incorporated in the above aircraft and/or Strut serial number.

Date of Incorporation: _____

Signed: _____ Print Name: _____

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GippsAero Technical Services
P.O. Box 881
Morwell Victoria 3840
Australia
Fax.: +61 03 5172 1201
Email: aircraft.techpubs@mahindraaerospace.com