

SERVICE BULLETIN

No. 300-2-04

Compliance mandatory

Subject: **Inspection/Repair of Main Landing Gear Mounting Attachment**

Affected Aircraft: EA-300/200 S/N 1 through 31 and 1032 through 1034

Purpose: Cracks have been reported around the bushings of the main gear attachment fittings on the EA-300/200 fuselage. **Part I:** An initial inspection is needed to check for similar damage on all aircraft of this model. Feedback is requested. Also, recurring inspection is required followed by feedback when damage is found. The repair instructions in **Part II** need to be followed when damage is found.

Approval: The technical content of this document has been approved under the authority of DOA Nr. EASA.21J.073.

Compliance Time:

PART I: Initial visual inspection to be accomplished within next 50 FH or 3 months, whichever occurs first. Recurring visual inspection is required every 100 FH after the initial visual inspection until modification, as defined in PART II of this Service Bulletin, is incorporated.

If the previous issue of this Service Bulletin is complied with, recurring inspections have to be accomplished only.

PART II: Modification to be complied with if cracks have been detected, as defined in PART I of this Service Bulletin or per customer option.

PART I: Instructions for initial and recurring inspection

Instructions:

1. Remove engine cowling, the landing gear cuffs and the bottom covering sheet according to Chapter 51-00-01 of the Service Manual.
2. Shore the aircraft according to Chapter 07-20-01 of the Service Manual.
3. Remove the LN9348-10 stop nuts, the DIN125 M10 washers and the LN9037-10054 bolts of the top half of the mounting clamps. Refer to Figure 2 of Chapter 32-11-02 of the Service Manual.
4. The landing gear can now be brought down up to 3 inches. Make sure the vent and brake lines have enough length. If not, remove some of the straps that hold them to the fuselage frame to provide more space.
5. Inspect the bushings of the fuselage landing gear attachment fittings for damage. The circular welding connecting the bushing to the bracket is suspected to show first signs of hairline cracks. From here, cracks in the radial direction could be initiated. If necessary, remove paint at suspected areas and use dye penetrant check, refer to AC 43.13-1B, Chapter 5, Section 5. Visually check for cracks at the bracket locations indicated by dotted lines in Figure 1. Perform this on both sides of the front and rear brackets on both sides of the aircraft (i.e. 8 locations).

If there is not enough room for inspection, remove entire landing gear according to Chapter 32-11-01 of the Service Manual. Note: Brakes can be removed from the wheels without disconnecting the brake lines.

6. If no structural cracks are found, reapply surface treatment in accordance with Chapter 51-70-07 of the Service Manual, if paint was removed for detailed inspection. In case of initial inspection report results to EXTRA Flugzeugproduktions- und Vertriebs-GmbH using the form at the end of this Service Bulletin. Proceed with point 7.

If structural cracks are found report results of inspection to EXTRA Flugzeugproduktions- und Vertriebs-GmbH using the form at the end of this Service Bulletin. Repair damage according to Part II of this Service Bulletin.

7. Reinstall the main landing gear according to Chapter 32-11-01 of the Service Manual. Use new stop nuts.
8. Remove the supports, hoisting strap and the balance weight according to Chapter 07-20-01 of the Service Manual and reinstall the access panels.
9. Make appropriate entry of compliance with Part I (initial or recurring inspection) of this Service Bulletin in the aircraft logbook.

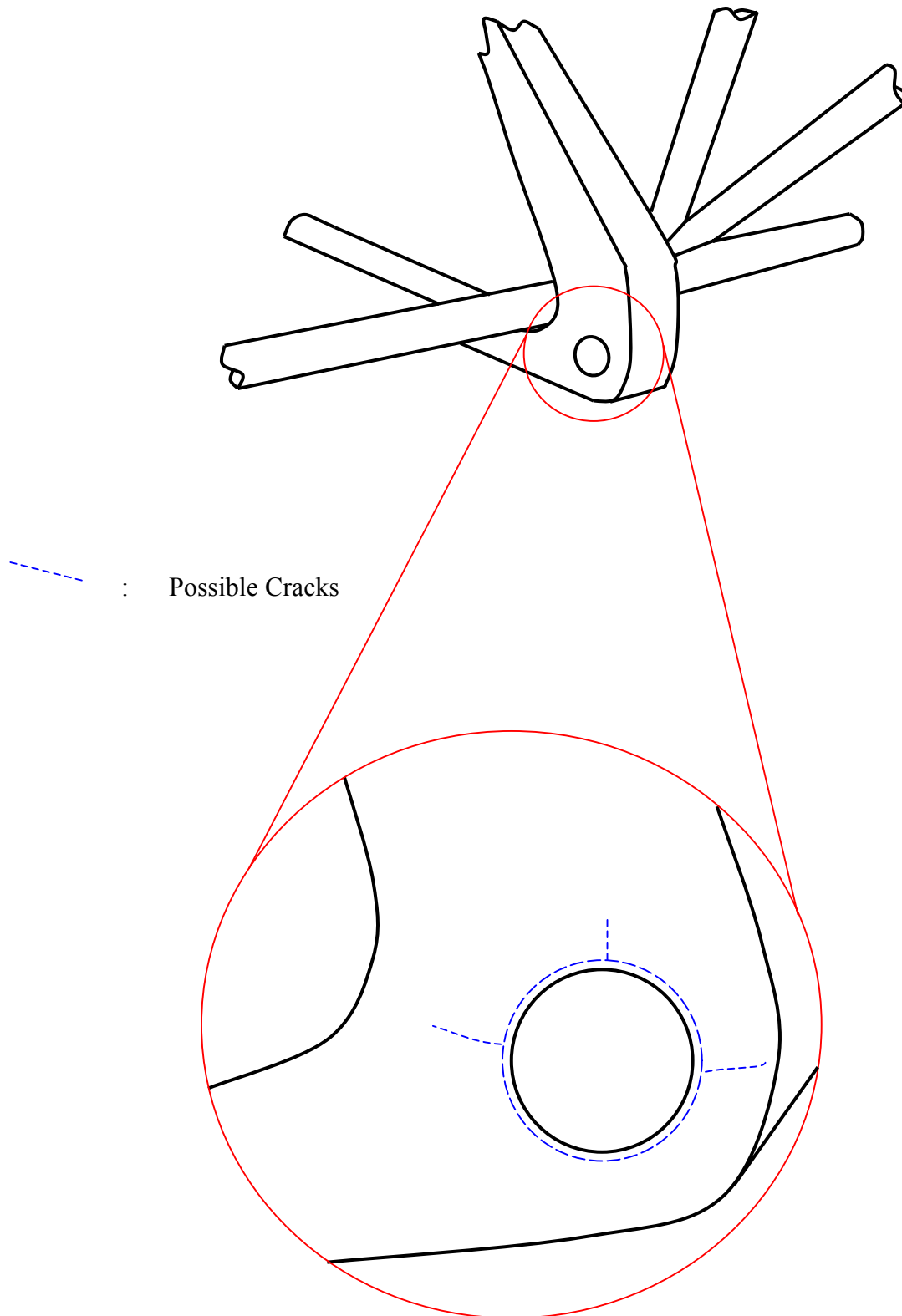


Figure 1: Possible crack locations at the main landing gear mounting brackets

(LH front main landing gear mounting bracket shown only)

PART II: Instructions for technical modifications to the fuselage main landing gear attachments.

REPAIR INSTRUCTION:

Note Repair of the aircraft must be accomplished by licensed personal only. AC 43.13-1B has to be considered. TIG welding required, use appropriate welding rod.

1. Remove the wing according Chapter 57-05-01 of the Service Manual.
2. Shore the aircraft according Chapter 07-20-01 of the Service Manual.
3. Remove the main landing gear and the top half of the mounting clamp; see Chapter 32-11-01 & -02 of the Service Manual.
4. Cut off both front main landing gear attachment brackets at their welding to the steel tube structure.
5. Cut off both aft main landing gear attachment brackets at their welding to the steel tube structure up to the section where the contour starts to form the front wing main spar mounting (refer to Figure 3).
6. Carefully grind down remaining welds of the main landing gear attachment brackets at steel tube structure by filing or similar means. Exercise care to prevent damage of steel tubes.
7. Remove all existing finish at joint area from the surrounding tubes where necessary.
8. Separate the needed section for the rear mounting brackets from parts EA-27102.301-01 & -02. Trim these steel gussets so that they fit to the remaining rear mounting. The initial position of the mounting must be regained (refer to Figure 2).
9. Bend the front gussets as shown on drawing in Figure 2 to fit close to the related adjacent steel tubes.
10. Weld the bushing EA-57101.311-01 and the additional reinforcement washers to respective fore and aft gussets (uniform weld around, refer to Figure 3).
11. Tack-weld the pre-assembled gussets (including bushing) to the steel tube structure. Pay particular attention to the proper fit and alignment. Use the top half of the mounting clamp as a template. Consider additional space for surface treatment applied later on.
12. Form the sheet metal stripes EA-27101.301-11 (width 23mm) to fit close to the contour of the brackets and tack-weld them. Cut stripes as needed.
13. After all plates are tack-welded in place, weld all the plate (gussets & stripes) edges. Apply sufficient pre-heat to the surrounding structure for TIG-welding (avoid unnecessary heating). No subsequent special heat treatment is required.

14. For protection of the interior of the mounting bracket inject a corrosion preventive compound like ACF-50 or equivalent. Drill a small hole to each mounting bracket for that purpose. Fill the small holes with welding rod afterwards.
15. Check free angular rotation of top half of the mounting clamp after all welding is done.
16. Reapply surface treatment to the repaired fuselage structure; refer to Chapter 51-70-07 of the Service Manual.
17. Apply anti-corrosion wax to the corner weldings at the attachment brackets.
18. Install the top half of the mounting clamp and the main landing gear; see Chapter 32-11-01 & -02 of the Service Manual.
19. Install the wing according Chapter 57-05-01 of the Service Manual.
20. Remove the supports, hoisting strap and the balance weight according to Chapter 07-20-01 of the Service Manual and reinstall the access panels.
21. Make appropriate entry of compliance with Part II of this Service Bulletin in the aircraft logbook.

MATERIAL:

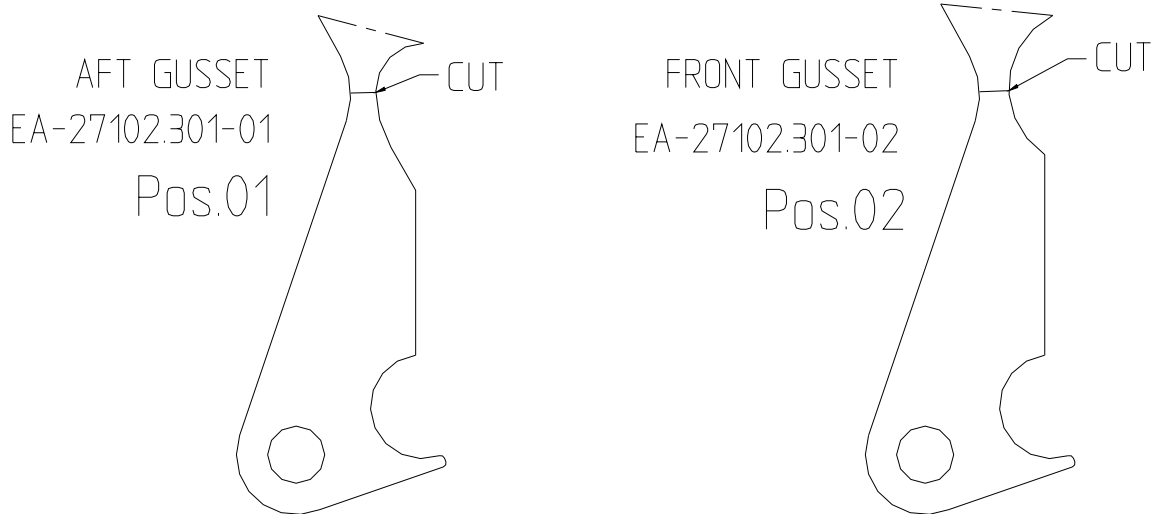
<u>Part N°</u>	<u>Qty</u>	
EA-27102.301-01	2ea	
EA-27102.301-02	2ea	
EA-27102.301-05	4ea	
EA-27101.301-11	4ea	(sheet metal stripes, width 23mm)
EA-57101.311-01	2ea	
Reinforcement washer	8ea	(washers, 14.3mm ID; 24mm OD; 0.04" thick material: AISI 4130 Cond. N)

The material required for the repair needs to be ordered from:

EXTRA Flugzeugproduktions-
und Vertriebs-GmbH
Schwarze Heide 21
46569 Hünxe / Germany

tel:+49 (0)2858 9137 0
fax:+49 (0)2858 9137 30
einkauf@extraflugzeugbau.com

REAR BRACKETS



FRONT BRACKETS
Pos.05
EA-27102.301-05

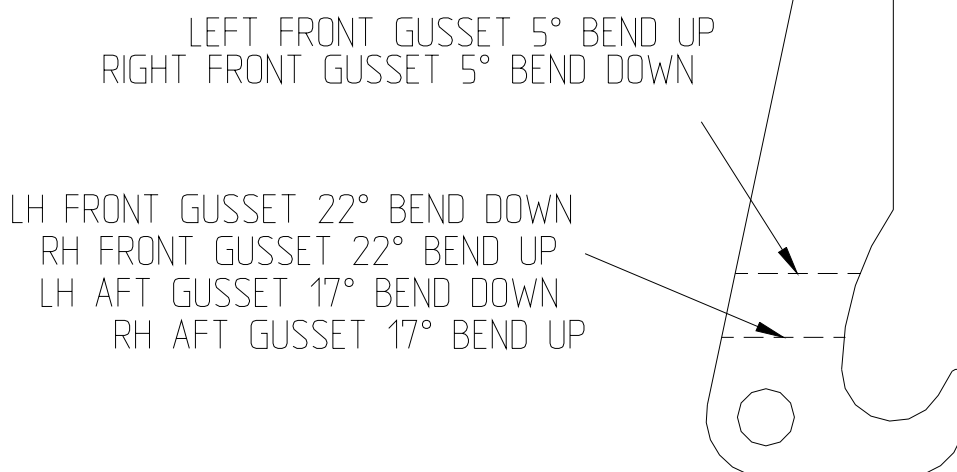


Figure 2: Replacement gussets of brackets

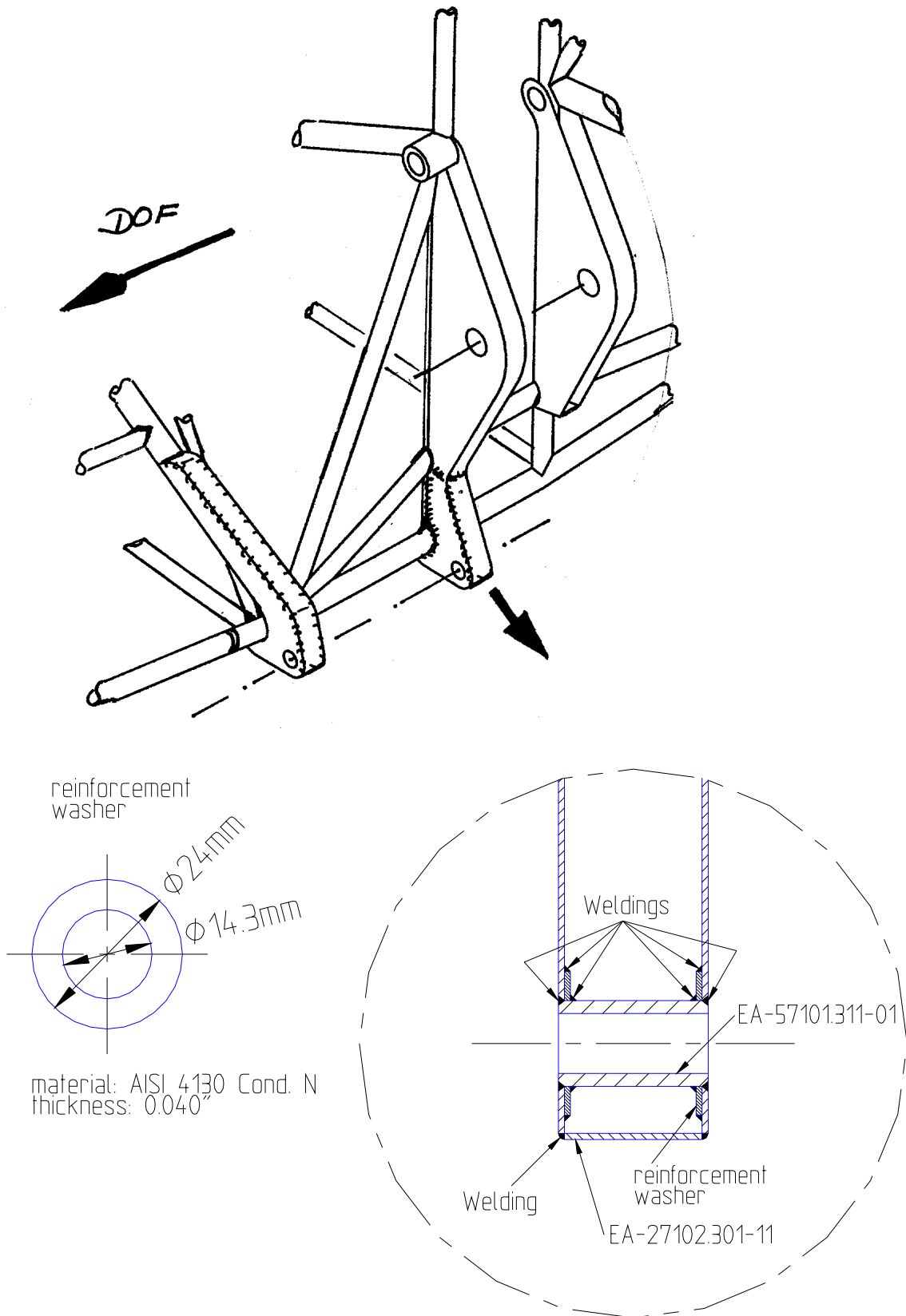


Figure 3: Welding instructions

