SERVICE BULLETIN No. 300-3-93

Compliance mandatory

Subject:	Upper Longeron Cutout-Bridge	
Models affected:	EA-300	EA-300/S
Serial numbers affected:	V1,01 through 50	01 through 17

Purpose: Life-cycle testing revealed potential cracks. Similar damages are not known from in-service conditions until now. The provisions of this SB are precautionary.

Approval: The technical content of this Service Bulletin has been approved by LBA.

Compliance: Prior to 1000 flight hours.

No further action is required if aircraft is modified according to procedure I of the instructions.
If problems are expected caused by a misalignment of the sleeves fore and aft of the cutouts, produce new bridges following the instructions of procedure II. In this case exchanging the bridges is mandatory every 1000 FH.

Make appropriate entry of compliance with this Service Bulletin in aircraft logbook.

Instructions:

Check alignment of sleeves fore and aft of the cutout. Use 1/8" diameter wire. If an offset of more than 1mm (0.04 inch) is found, follow procedure II. If not, procedure I is applicable.

Note: Alterations or repair of the airplane must be accomplished by licensed personnel only.

Procedure I:

- Disassemble and remove paint. Dye-check LH and RH upper longeron cutout-bridge (P/N PC-23102.1X). Repair any cracks (ref. Fig. 1) prior to proceeding the instructions of this SB. Any welding needs to be done in accordance with FAA AC43.13-1A manual. Use only steel grade 1.7734.4 in conjunction with the TIG welding procedure (Tungsten Inert Gas, also called WIG welding) As welding additive the respective steel wire 1.7734.2 has to be used. To minimize distortion during welding consider welding while having the cutout-bridge installed. In case cracks are found in this area Extra Flugzeugbau GmbH has to be informed and will provide the required material.
- Custom fit three steel sleeves between the original sleeves of the cutout-bridge, ref. Fig 2. The length of the sleeves needs to be trimmed for each connection. The sleeves may not be welded to the cutout-bridges. Subsequently apply surface protection by using a primer and a two component acrylic paint.
- Reinstall the cutout-bridges using new DIN912 M8 bolts instead of the old shorter bolts (for quantity and length ref. to table below). Install bolts from front to rear. The cutout-bridge and its adjacent fuselage structure are vulnerable to appreciable distortion in production due to the high concentration of welded joints. Do not force the long bolts in if this distortion results in a misalignment of the sleeves. In this case an increase of the inner diameter of the cutout-bridge sleeves to 8.5mm is acceptable to prevent excessive bolt bending.
- Use new stop nuts LN9348-08 (P/N PC-00078) and washers DIN125-M8 (P/N PC-00418) for fastening. The proper torque value for the stop nuts is 18Nm (160in.lbs.)
- Make appropriate entry of compliance with this SB in aircraft logbook.

Procedure II:

- Disassemble LH and RH longeron cutout-bridges.
- Install the sheet parts and sleeves using the bolts. Torque correctly.

Note: The threads of the bolts must be shortened by half an inch.
Trim tube to fit between the sheets.

Note: Cover the surrounding structure with wet clothes prior to welding.

- Fix all the parts by welding spot.

Note: TIG welding is required according to procedure I.

- Weld only short seams to apply not too much heat at a time to avoid distortion and misalignment.
- Weld as much as possible with the bridges installed.
- Remove the new bridges and finalize welding of the lower seams.
- Apply surface protection according to procedure I.
- Re-install the longeron cutout-bridges. The applicable torque value is 18 Nm (160 in.lbs.).
- Make appropriate entry of compliance in the aircraft logbook

Required material:

For procedure I:	EA-300	EA-300/S
steel sleeves	6	6
outer diameter 14mm		
inner diameter 8.5mm		
raw length 37mm (to be trimmed for each connection)		
material 1.7734.4		
bolts DIN912 M8x180	4	6
bolts DIN912 M8x190	2	-
stop nuts LN9348-08	6	6
washers DIN125-M8	6	6

Primer and acrylic paint

Material may be ordered at EXTRA Flugzeugbau GmbH, 46569 Hünxe, Germany, specifing this SB and procedure I.

For procedure II:	EA-300	EA-300/S
steel sleeves	12	12
outer diameter 14mm; inner diameter 8.5mm, raw length 37mm , material 1.7734.4		
bolts DIN912 M8x90	12	12
stop nuts LN9348-08	12	12
washers DIN125-M8	12	12
Sheet, EA-26102.1-10	4	4
Tube 30mm x 1.5mm, length 90mm	2	2

Primer and acrylic paint

Material may be ordered at EXTRA Flugzeugbau GmbH, 46569 Hünxe, Germany, specifing this SB and procedure II.

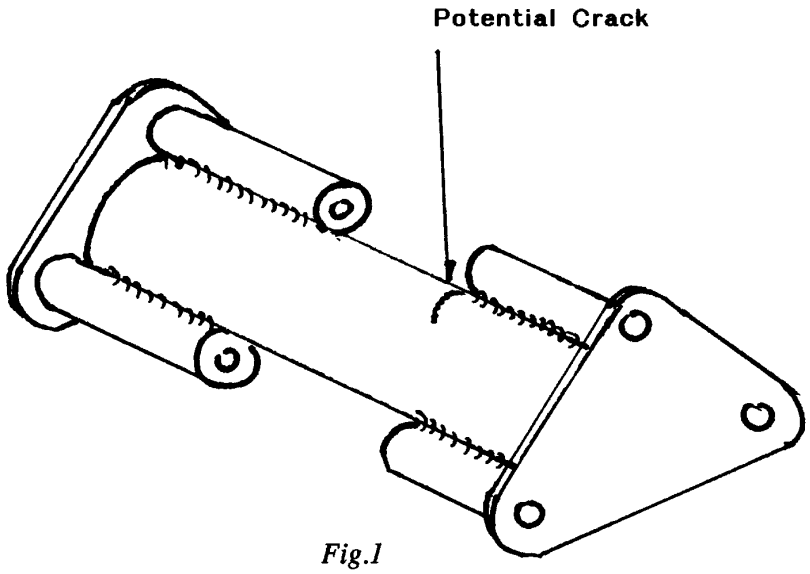
Potential Crack

Fig.1

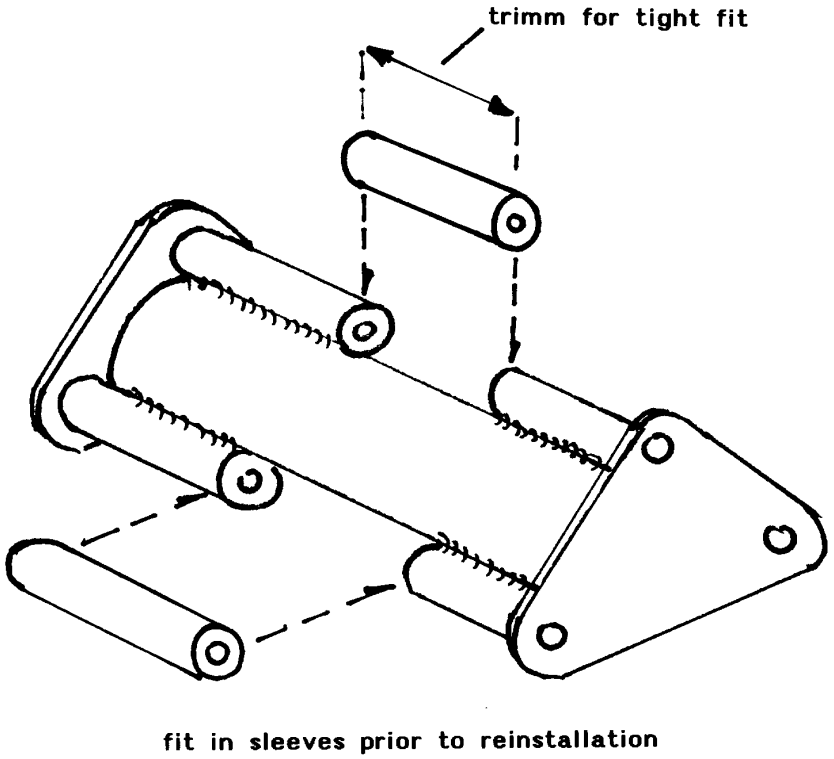
trimm for tight fit
fit in sleeves prior to reinstallation

Fig. 2