SERVICE BULLETIN NO. MSB1078-110/2

I. TECHNICAL DETAILS

1.1 Category:

Mandatory

1.2 Aircraft affected:

G 115E, all S/N
G 115EG S/N 82200-82263, standard equipment as of S/N 82264

1.3 Time of Compliance:

next 100 hrs inspection after receipt of material

1.4 Subject:

ATA-Code: 28-10 Fuel Storage System
28-20 Fuel Distribution System

1.5 Reason:

Routine operation of the aircraft has shown, that there is a tendency of the R/H wing tank to feed the collector tank at a reduced rate compared to the L/H wing tank (Fuel Selector Valve set to "Both"). Following extended periods of inverted flight (Fuel Low Warning Light illuminated), and Fuel Selector Valve set to "Right" the R/H tank may fail to completely refill the collector tank. As a result balancing the fuel contents of both tanks may not be possible and the Fuel Low Warning Light may be illuminated for extended periods of time.

Investigation revealed, that fuel trapped in the lowest position of the R/H fuel balance pipe may degrade ventilation of the collector tank to R/H wing tank, which in turn may reduce the fuel feed rate from the R/H tank to the collector tank.

In order to improve the tank ventilation and to avoid fuel traps in the R/H fuel balancing pipe, the fuel balancing pipes were redesigned. This includes pipes of a wider diameter and constant gradient, fittings of wider diameter and an improved collector tank vent valve.

1.6 Concurrent documents:

N/A

1.7 Approval Note:

These information or instructions relate to change no. MÄM 1078-025 which has been approved under the authority of JAA Design Organisation Approval No. LBA.NJA.008.

The technical information contained in this document has been approved under the authority of JAA Design Organisation Approval No. LBA.NJA.008.

1.8 Accomplishment/ Instructions

The following steps are to be taken

1.8.1 Completely defuel aircraft. (Refer to MM 115E chapter 12-10, or 1TG115EG-2-12JG-00-1)
1.8.2 Remove Pilot's Seat. (Refer to MM chapter 25-10, or 1TG115EG-2-00GS-00-1)
1.8.3 Removal of the old fuel balancing pipes.

Note: Fig. 1 and 2 show pre-mod state fuel balancing lines off the collector tank

- remove left and right fuel balancing lines and protective covers, fittings and collector tank vent valve in sequence as indicated by numbers

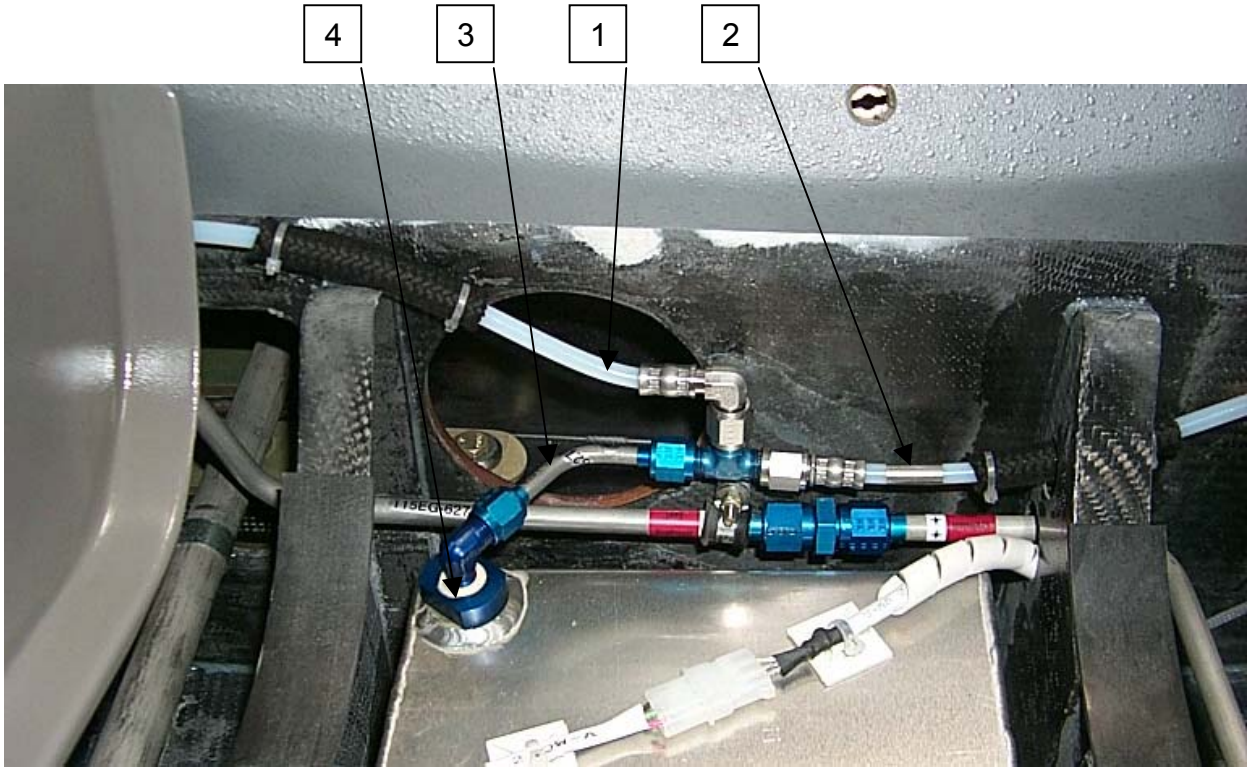

Fig.1

Right fuel balancing line continued.

Fig. 2

- after removal of nos. 1-4, protect collector tank vent valve opening and fittings in wing root rib with adhesive tape, to avoid contamination of fuel vent system with debris from subsequent work steps.

- Cut off bolt at step 5 and sand until smooth.

1.8.4 Addition of CRP cut outs to the seat frames (P/N 115E-2203 through 115E-2206)

- add cut out to the seat frames according to figure 3. Use 6mm diameter 90° cutter or equally suitable equipment. Grind off any sharp edges

(all dimensions in millimeter)

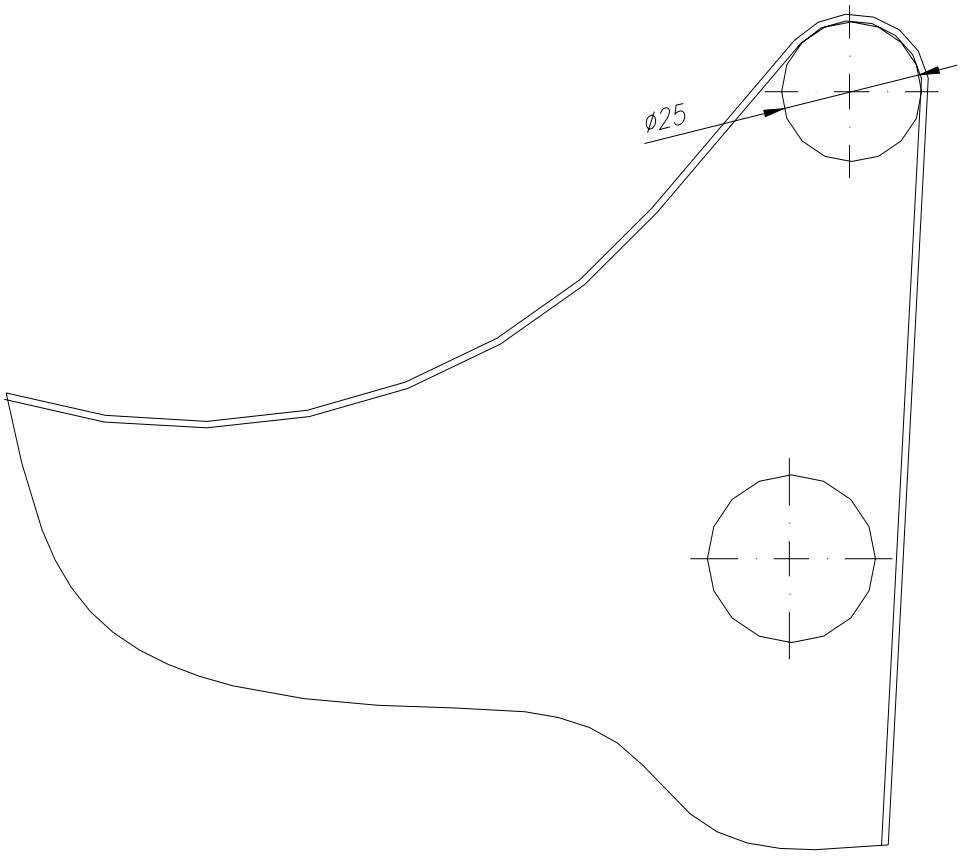

Fig. 3

1.8.5 Addition of CRP Cut-out to L/H seat support (115E-2259)

- cut out L/H seat support according to fig. 4.
- Use existing fitting in root rib as guide, cut out to have 15 mm clearance off the fitting bore line.

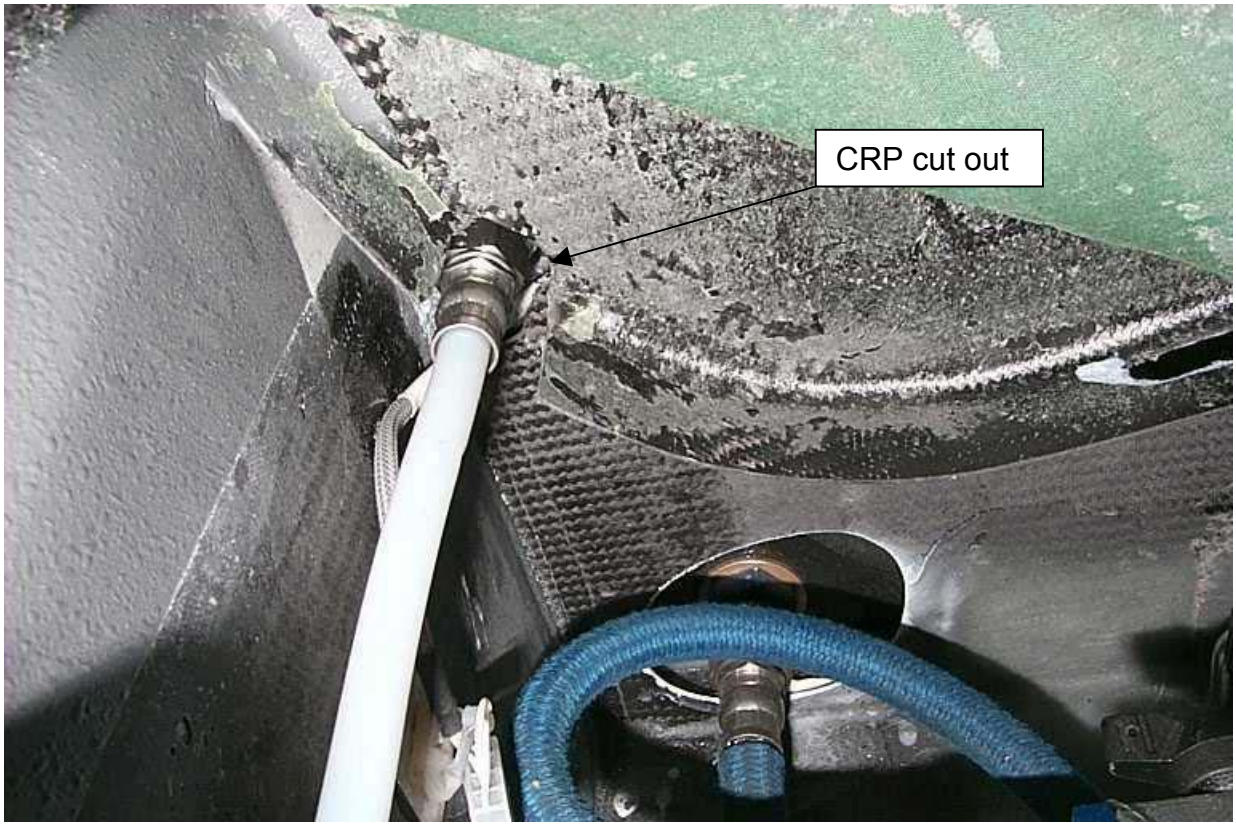

Fig. 4

1.8.6 Installation of the new fuel balancing pipes, modification to the vent line at the outer NACA duct

the new fuel balancing pipes are to be installed in the following sequence. Please note, that the numbers in brackets indicate the relevant part of the materials list. (Item 2.1)

- clean and degrease clamps (13)
- install new collector tank vent valve (3) and O-ring (10)
- bond fitting (8) with sealant (B) to a 45° position off either edge of the collector tank (as shown in Fig. 5)
- install hose (7) to the collector tank valve/fitting (8)
- install T-piece fitting (9) to hose (7)
- install reduction fittings (4) and O-ring (11) in R/H and L/H root ribs as indicated in Fig.7

- preposition R/H fuel balance hose (5) as indicated in Fig. (5 and 6) with protective covers (1 and 2) also pre-positioned.
- Install R/H fuel balance (5) hose to R/H reduction fitting (4)
- preposition L/H fuel balance hose (6) as indicated in Fig. 5 with protective cover (1) also pre-positioned.
- Install L/H fuel balance (6) hose to L/H reduction fitting (4)
- Install both fuel balance hoses (5) and (6) to T-piece fitting (9)
- Preposition clamps (13) as indicated in Fig.5 and Fig.6.
- Ensure that both fuel balance hoses (5) and (6) are adjusted to a smooth, constant gradient from the root rib fitting (4) to the T-piece fitting (9). Possible fuel traps must be avoided.
- Bond clamps (13) to final position with adhesive (A). Let dry according to manufacturers specification.
- Secure fuel balancing hoses (5) and (6) on clamps (13) with Ty Raps (12)

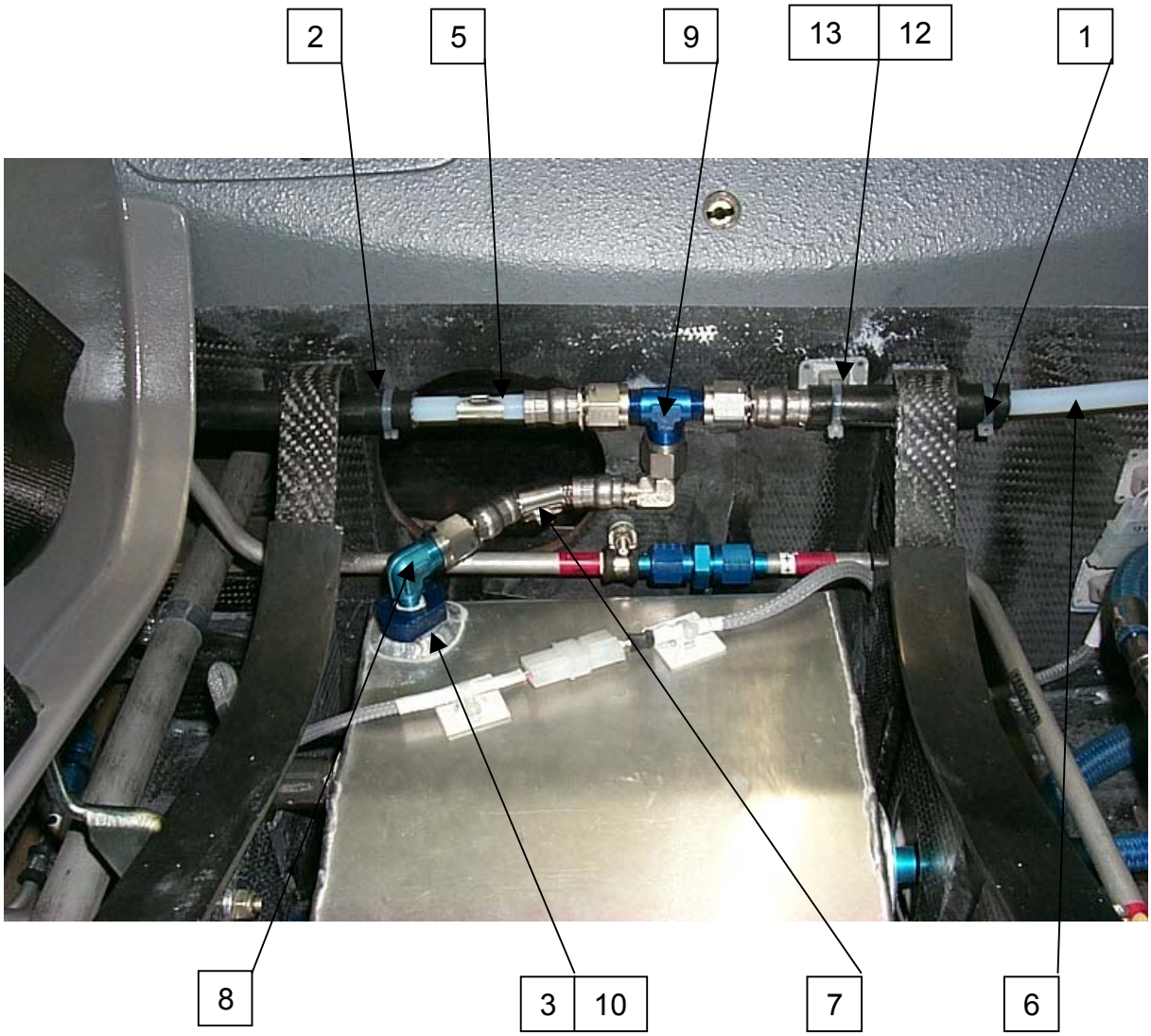

Fig. 5

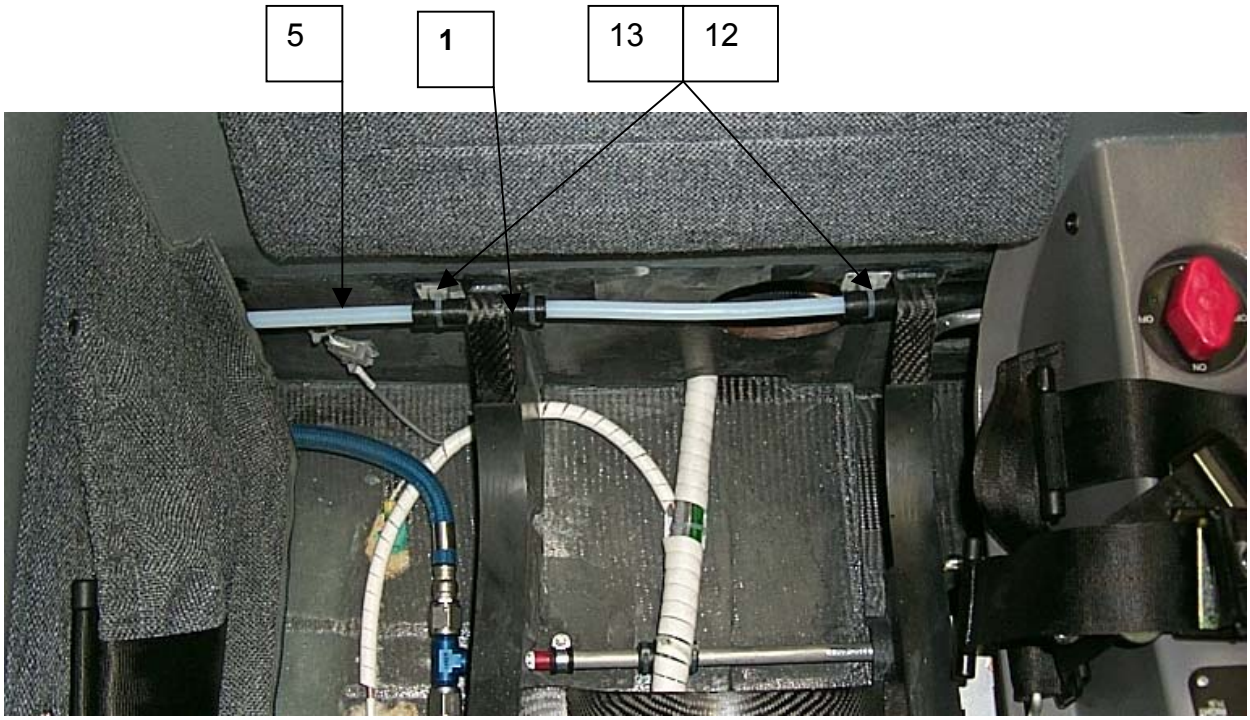

Fig 6

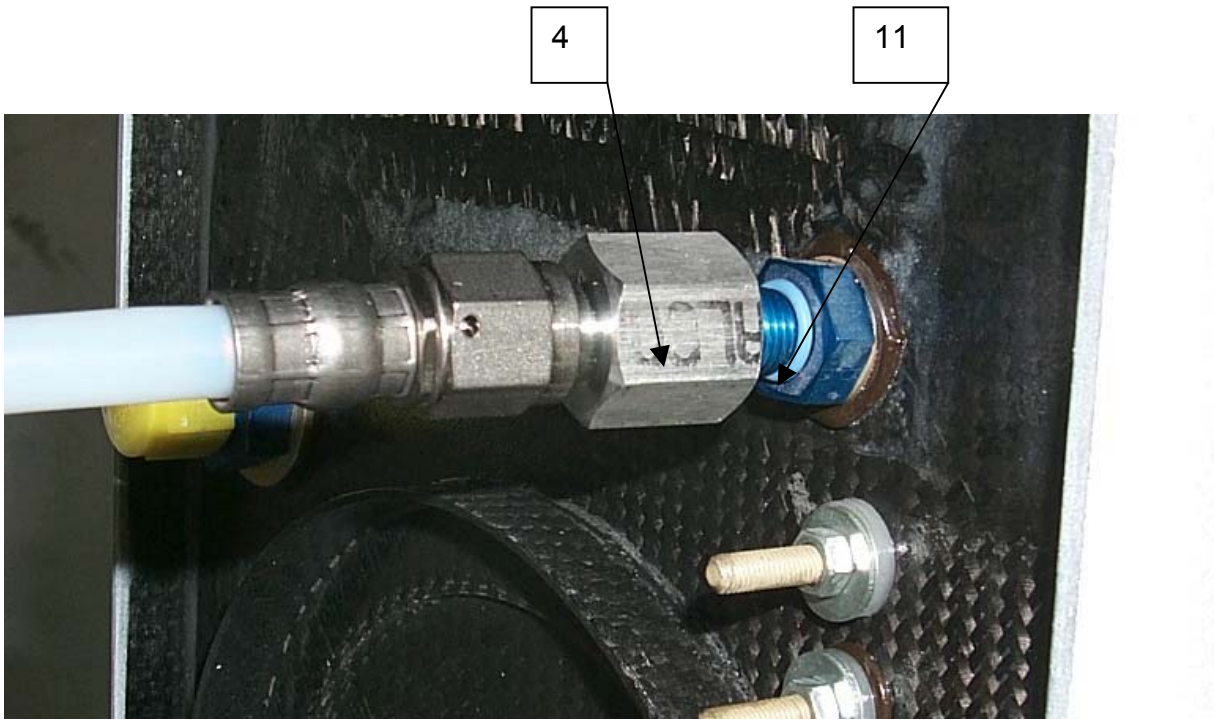

Fig. 7

- Adjust the vent line at the outer NACA duct to the position indicated in the drawing below. If the tube has been moved a lot, the silicone (C) inside has to be renewed.
- Remove the tie down rings during flight (the threaded hole may stay open)

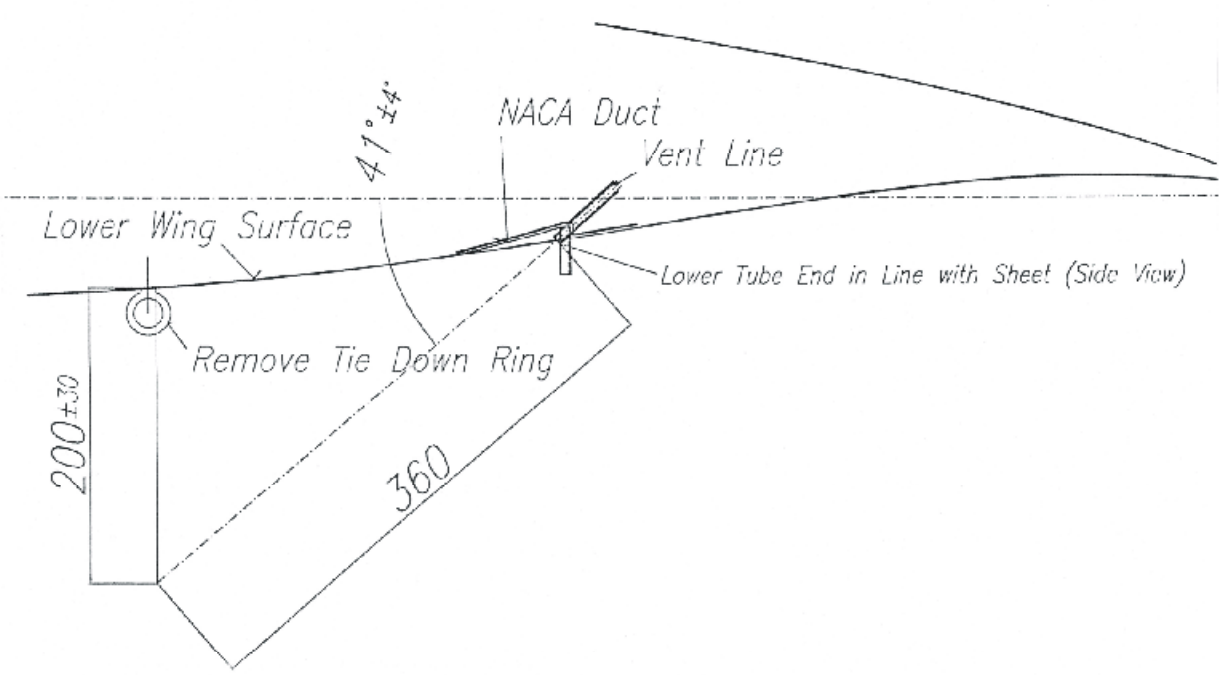

Fig. 8

- Thoroughly clean affected area
- Visually inspect all pipes, fittings
- Refuel aircraft
- Check for fuel leaks
- Install pilot's seats (Refer to MM chapter 25-10)
- Complete engine ground run/test flight
- Visually check all newly installed pipes and fittings again
- Remove the 2 blue pages S2-11 ("Temporary Special Limitations") and S4-14 ("Temporary Special Procedure For Low Fuel Warning") from the Flight Manual G 115E

1.9 Repetitive Actions

N/A

1.10 Mass (Weight) and CG:

negligible

II. PLANNING INFORMATION

2.1 Material & Availability:

The mod kit includes the following parts

Item	St/F	Benennung	Description	Part number
1	2	Schlauch	Hose	115E-6245.02
2	1	Schlauch	Hose	115E-6245.03
3	1	Ventil	Valve	115E-6238
4	2	Reduzierstück	Reduction fitting	115E-6245.01
5	1	Schlauch	Hose	AE710506-6
6	1	Schlauch	Hose	AE710506-7
7	1	Schlauch	Hose	AE3660120G0037
8	1	Fitting	Fitting	AN822-6-2D
9	1	Fitting	Fitting	AN824-6D
10	1	O-Ring	O-Ring	MS9967-113
11	2	O-Ring	O-Ring	MS9966-04
12	6	Ty-Rap	Ty-Rap	TY242M
13	3	Klebeschellen	adhesive Clamp	ASMT-A-T

NOTE: For bonding and sealing use:

Item	St/F	Benennung	Description	Part number
A	AR	Kleber	Adhesive	Araldite 2012
B	AR	Dichtmittel	Sealant	Loctite 592
C	AR	Silikon weiß	Silicone white	Henkel F 109

2.2 Special Tools:

N/A

2.3 Labour costs:

Modification: 6,0 hours

2.4 Reference documents:

G 115E Maintenance Manual Chap. 28-10, 28-20
G 115E Illustrated Parts Catalogue Chap. 28-10, 28-20
1TG115EG-2-00GS-00-1 General Systems Manual
1TG115EG-2-12JG-00-1 Servicing
1TG115EG-2-28JG-00-1 Fuel System

2.5 Credit:

The parts as per list 2.1 (except items A, B and C, used for bonding and sealing) will be supplied by Grob free of charge.

III. REMARKS

3.1 The installation may be performed by a qualified tradesman and has to be certified in the logbook by an authorised inspector.

3.2 If you have sold your aircraft in the meantime, would you kindly pass this information on to the new owner and forward his address and aircraft S/N to us.

3.3 For questions and assistance please contact:

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