

Subject: Installation of maintenance-free fuel lines

Concerning: G 115/G 115A all S/N

Urgency: optional

Procedure: The fuel hoses, which are installed as standard items in the G 115/ G 115A are subject to a life limit (5 years). Now the installation of maintenance-free fuel lines is offered, to prevent this periodic replacement.

Actions:

1. Replacement of the fuel lines
2. Replacement of the fuel cock (only for S/N 8008-8088) and the removal of the fuel cock from the floor of the fuselage to the center console.
3. Removal of the fuel filter (Part-No. 0014771701) in front of the electrical fuel pump

Due to the extensive modifications and the installation equipment required, this modification (actions 1 - 3) must be carried out only by the manufacturer or in arrangement with him.

4. The correction, respectively the completion of the concerned Chapters of the Maintenance Manual will be performed within the next revision.

Material: The material is supplied by the manufacturer.

Weight and Balance: negligible

Remarks:

1. The replacement has to be certified in the aircraft logbook by an authorized inspector.
2. If you have sold your aircraft in the meantime, would you kindly pass this information to the new owner and forward his name, address and aircraft s/n to us.

Mattsies, 02 Dec.1991

LBA approved

The German original version of this Service Bulletin has been approved by the LBA on the .. 26th of Feb 1992. The translation has been accomplished to the best of our knowledge and judgement. In case of doubt, the German original version is authoritative.



Dipl.Ing. J. Altmann
(Airworthiness engineer
Certification staff)

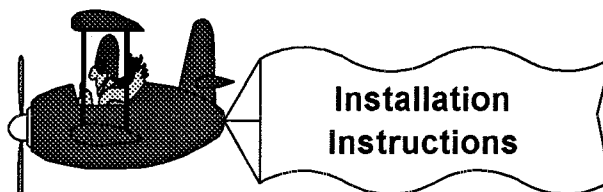
The Installation Instructions No. 1078-21 are part of Service Bulletin TM 1078-21 and cover the installation of maintenance-free fuel lines.

I. Material

1	Fuel cock	115-6249 (if not already installed)
1	Fuel line	115-6440
1	Fuel line	115-6441 (for G 115B: 115B-6448)
1	Fuel line	115-6442 (for G 115B: 115B-6446 and 115B-6447 or 115B-6447/1)
1	Fuel line	115-6443
1	Fuel line	115-6444
1	Fuel line	115-6445
1	Adapter	115-6470
1	Bleed strainer	115-6231
2	Sealings	14x20x1,5
1	Fitting	115-6233
2	Union-flared tubes	AN 815-6D, (MS 24392) (qty. 3 for G 115 B)
1	Union-flared tube	AN 832-6D, (MS 24393)
1	Elbow	AN 776-6D
1	Safety tube	Type 831, dia. 9,5 mm/ 1 m long
1	Nut-flared tube	AN 924-6D
1	Washer-flat	AN 960-916L
2	Gaskets	AN 901-6A, (size 14x22x1,5)
1	Bolt universal fitting	AN 775
1	Fitting	MS 20823-6D
10	Cable clamps	
1	Gasket with cap screw	15.163-6-6, Aeroquip company
1	Strap	115-2800.25/1
1	Screw	MS 35206-246
6	Screws	DIN 965-M4x12
6	Washers	DIN 1440-4,2
6	Nuts	LN 9348-M4
2	Screws	DIN 965-M3x8
2	Screws	MS 24693C50
1	Spiral pin	DIN 7344, 2x12

II. Tool/ Documents

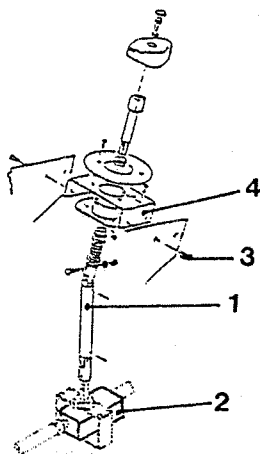
- Standard set of tool
- additional drawings can be obtained, if required



Note: It is recommended, to make sketches and notes before and during the strip down, to make the reassembly easier!

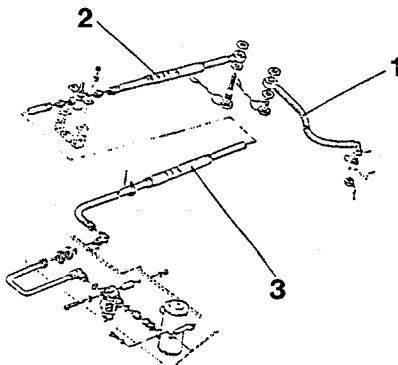
III. Procedure

1. Remove upper and lower cowling.
2. Drain tank completely, refer to MM Chapter 12-10.
3. Remove fuel tank, refer to MM Chapter 28-10.
4. Remove L/H and R/H seat, refer to MM Chapter 25-10.
5. Remove center console and L/H cabin side panel, refer to MM Chapter 25-10.
6. Remove L/H floor.
7. Remove fuel cock actuator (1) refer to MM Chapter 28-20.
8. Remove fuel cock (2) refer to MM Chapter 28-20.
(if fuel cock P/N 115-6249 (CESSNA-fuel cock) is installed, this fuel fuel cock is required for reassembly)
9. Drill out the rivets (3) at the strap 115-2800.25 (4) and remove strap.

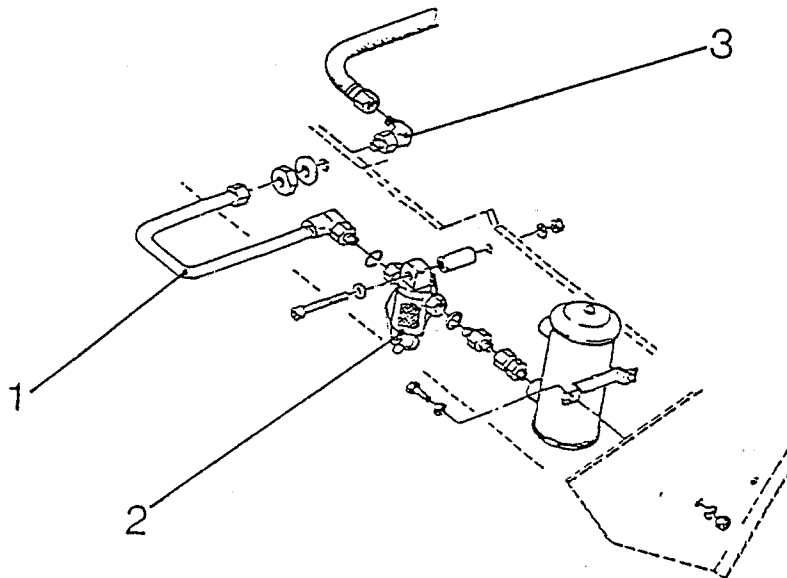


10. Remove all fuel hoses between tank and drain valve (1) and between tank and firewall (2, 3) including all connecting and attaching parts.

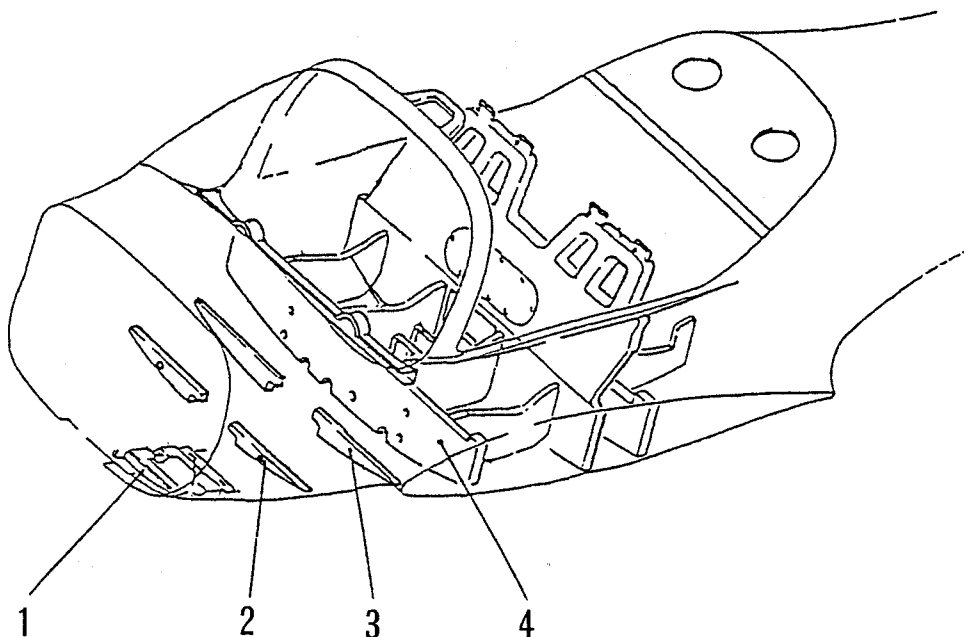
Note: The hoses can be cut open for an easier deassembly, if required (refer to MM Chapter 28-20).



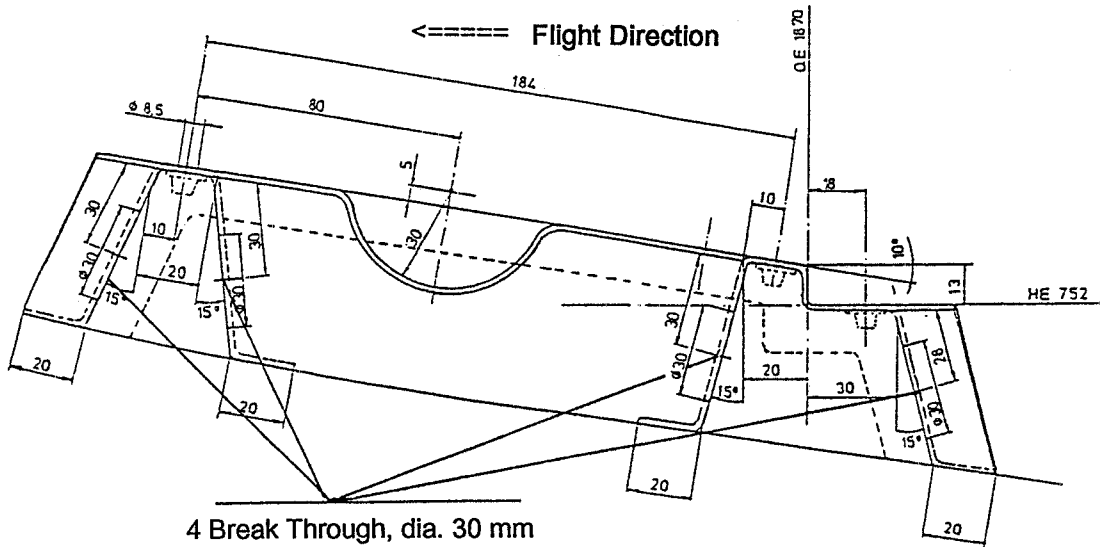
11. Remove fuel line P/N 115-6275 (1) at the firewall (refer also to Service Bulletin TM 1078-16).
12. Remove fuel filter P/N 0014771701 (2).
13. Remove firewall connection (bulkhead elbow union) (3).
Note: The parts (1) to (3) are not required for reassembly!



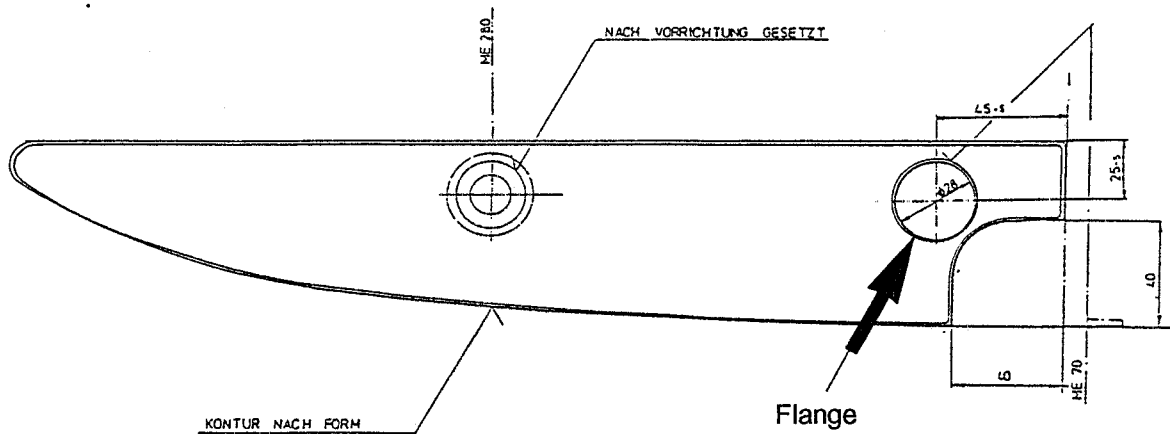
14. Install break-throughs into the pedal support L/H (1), front floor frame L/H (2), floor frame L/H (3) and front main frame (4) (refer to pages 4 and 5).
Close break-throughs in (2) to (4) with flanges.
Flange: 1 layer 8.4551.60 (92125), resin/ hardener L20/ VE 2896



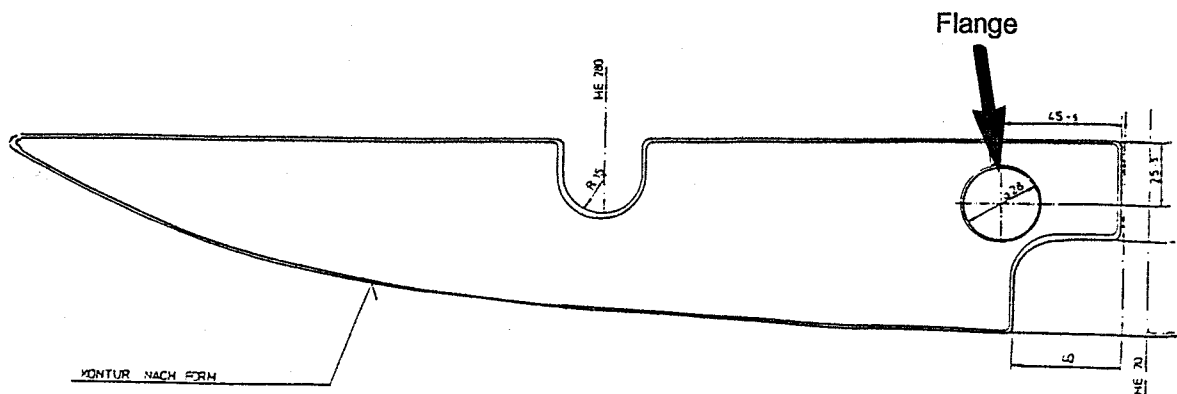
Pedal support L/H 115-2025:



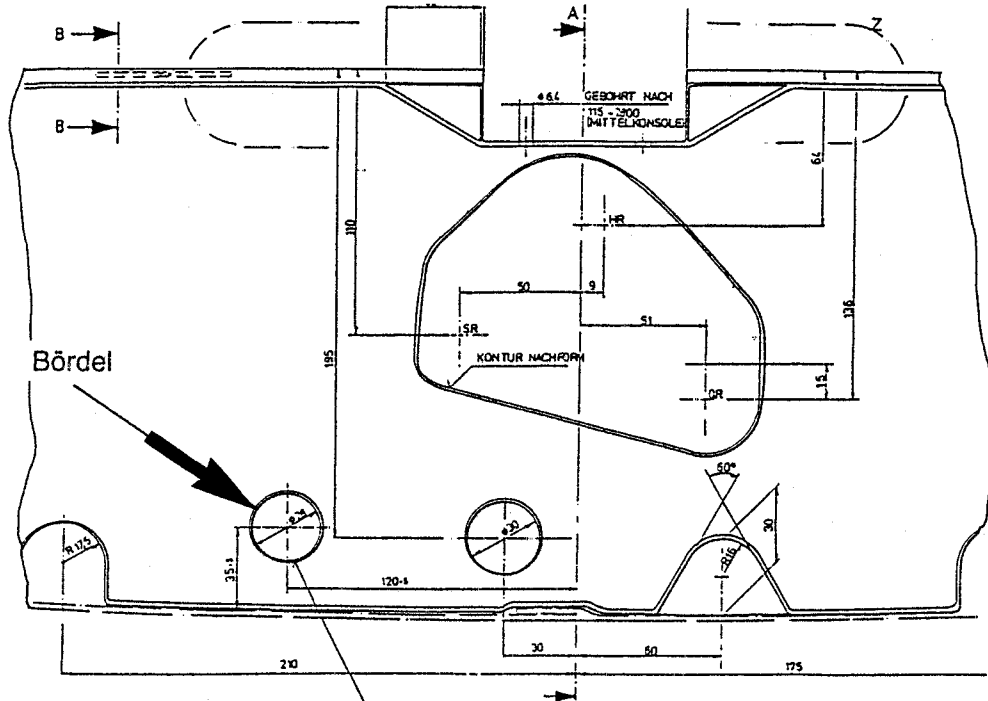
Front floor frame L/H 115-2033:



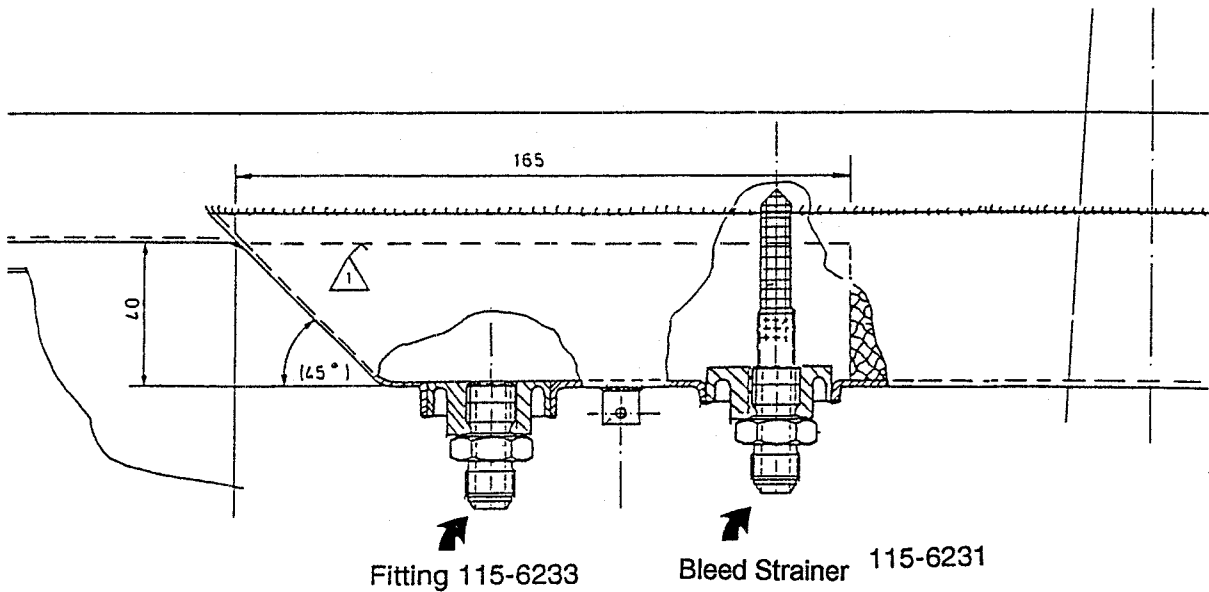
Floor frame L/H 115-2017:



Front main frame 115-2020:



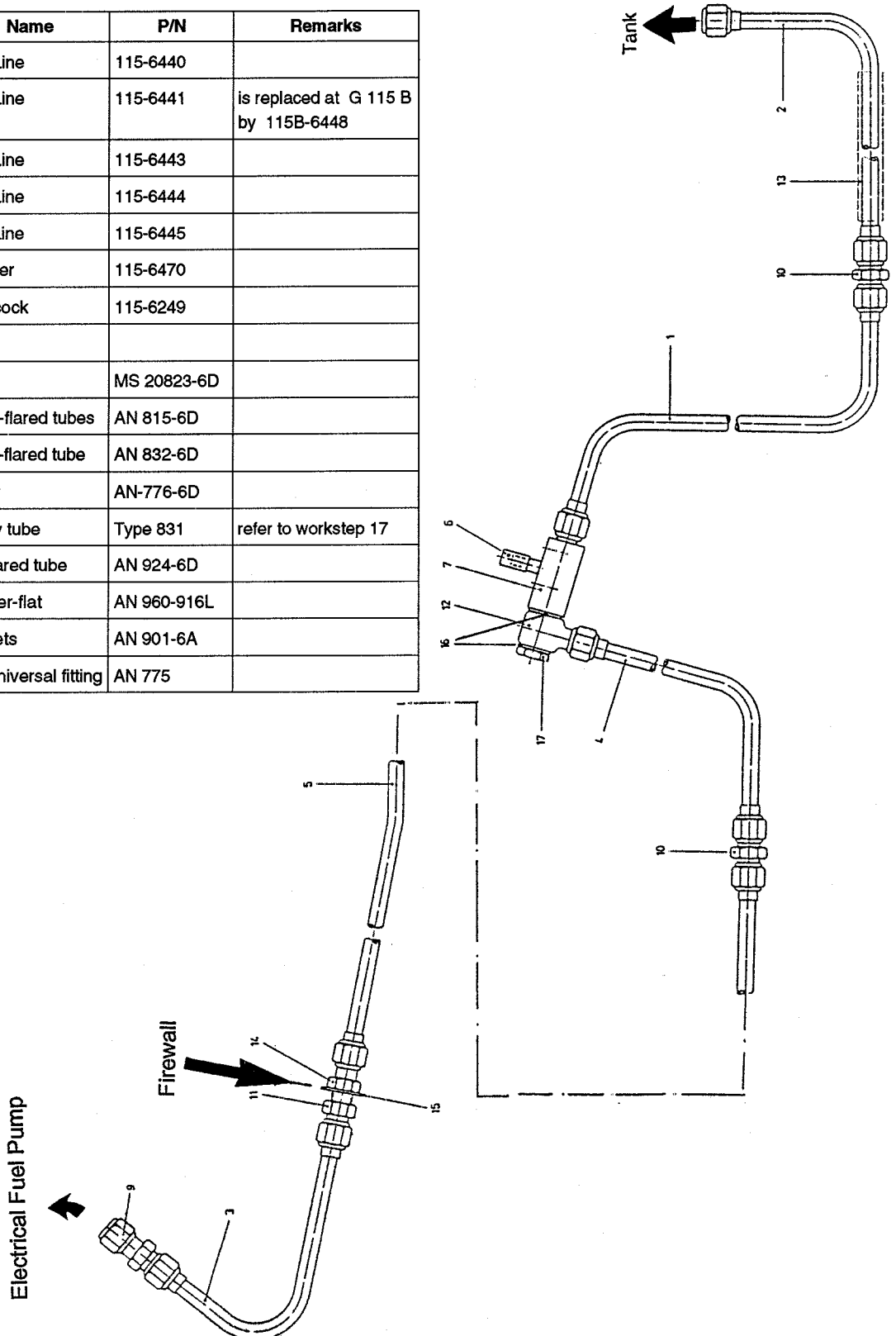
15. Install new bleed strainer P/N 115-6231 and fitting P/N 115-6233 with sealings, size 14x20x1,5, into fuel tank.



16. Install new fuel lines, fuel cock P/N 115-6249 and modified fuel cock actuator. The fuel cock is moved from the fuselage floor to the center console.

Fuel lines from fuel tank to the electrical fuel pump

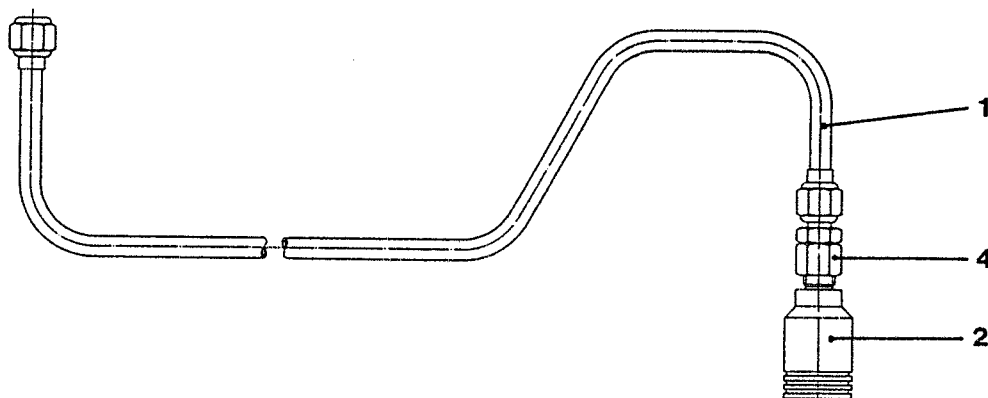
Item	Qty	Name	P/N	Remarks
1	1	Fuel Line	115-6440	
2	1	Fuel Line	115-6441	is replaced at G 115 B by 115B-6448
3	1	Fuel Line	115-6443	
4	1	Fuel Line	115-6444	
5	1	Fuel Line	115-6445	
6	1	Adapter	115-6470	
7	1	Fuel cock	115-6249	
8				
9	1	Fitting	MS 20823-6D	
10	2	Union-flared tubes	AN 815-6D	
11	1	Union-flared tube	AN 832-6D	
12	1	Elbow	AN-776-6D	
13	1	Safety tube	Type 831	refer to workstep 17
14	1	Nut-flared tube	AN 924-6D	
15	1	Washer-flat	AN 960-916L	
16	2	Gaskets	AN 901-6A	
17	1	Bolt universal fitting	AN 775	



Fuel lines from fuel tank to drain valve

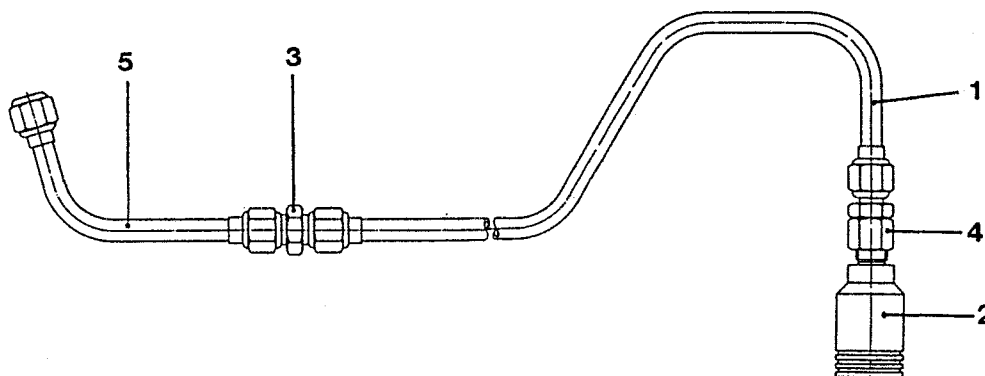
G 115/ G 115 A

Item	Qty	Name	P/N	Remarks
1	1	Fuel Line	115-6442	
2	1	Drain valve	115-2011.130	
3				
4	1	Gasket with cap screw	15.163-6-6	Aeroquip
5				



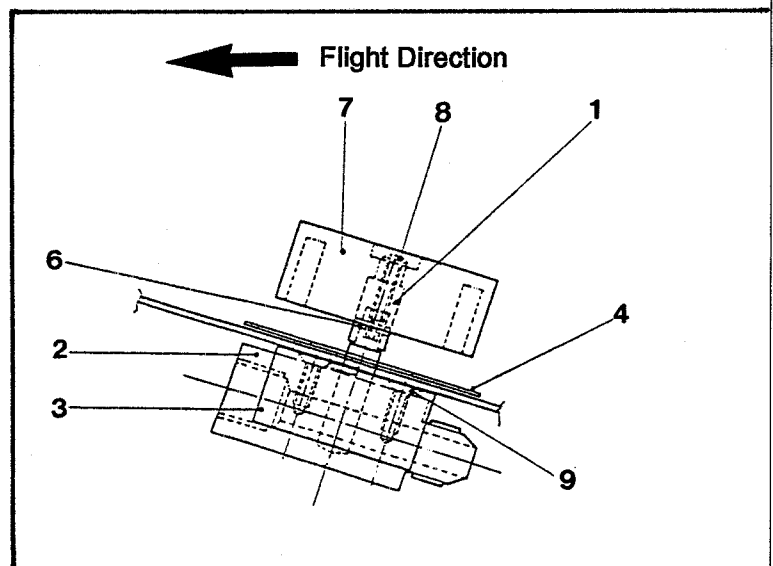
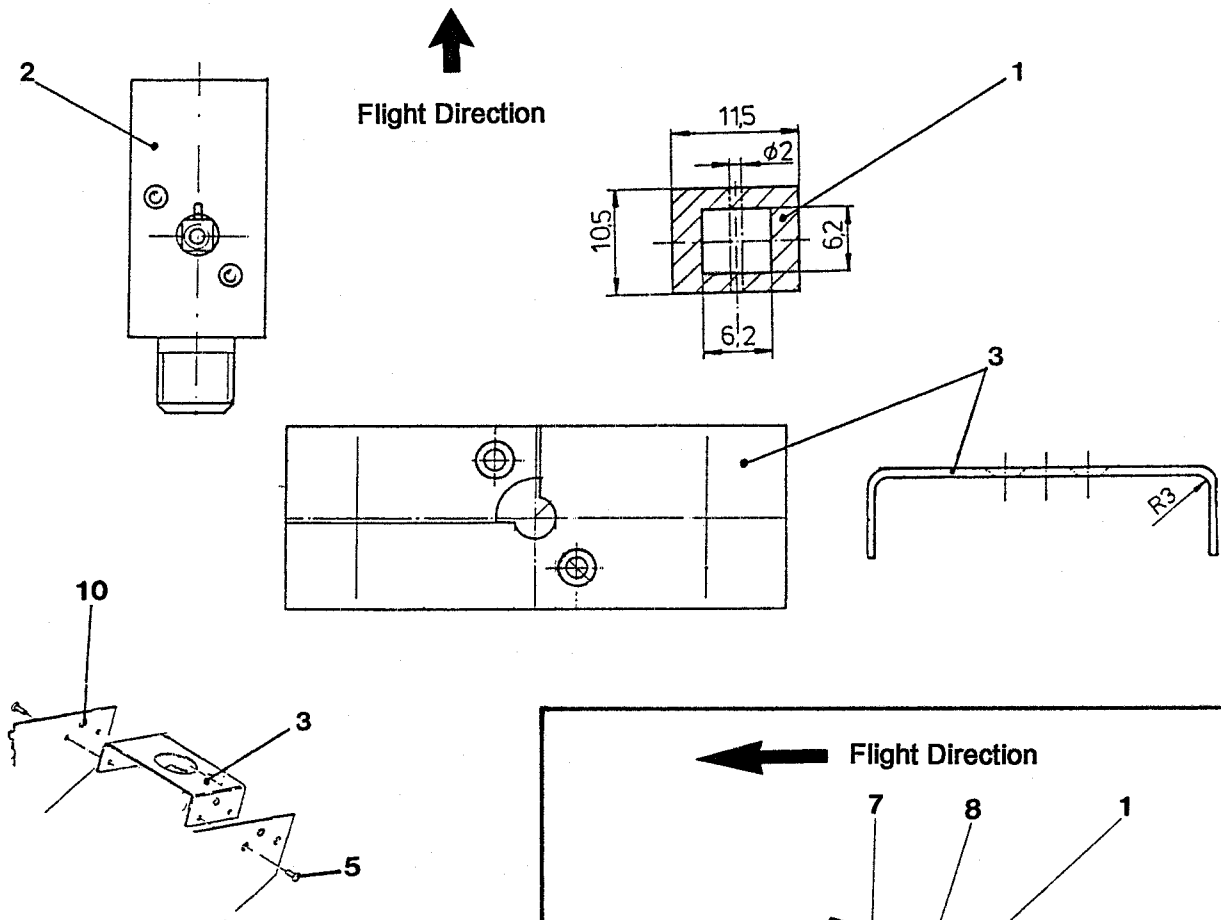
G 115 B

Item	Qty	Name	P/N	Remarks
1	1	Fuel Line	115B-6446	
2	1	Drain valve	115-2011.130	
3	1	Union-flared tube	AN 815-6D (MS 24392)	
4	1	Gasket with cap screw	15.163-6-6	Aeroquip
5	1	Fuel Line	115B-6447	or 115B-6447/1



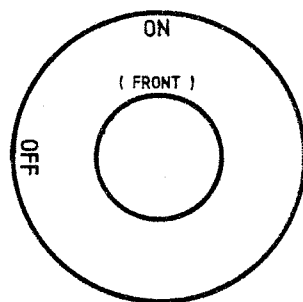
Installation of the fuel cock P/N 115-6249 (pay attention to the correct installation direction of all parts)

- install adapter P/N 115-6470 (1) so to the fuel cock (2), that the drilling shows into flight direction (shorter part to the bottom) and drill both with a dia. of 2 mm through the hole in the adapter (do not connect both parts with the spiral pin!)
 - adjust new strap (3), grip strap and drill old holes (10) of the strap at the center console (refer to sketch) and strap together to a dia. of 4.1 mm . Countersink drillings. Install new strap using 6 screws DIN 965-M4x12 (5), washers DIN 1440-4,2 and nuts LN 9348-M4.
 - install fuel cock using 2 screws MS 24693C50 (9) to the strap.
- Note:** Do not put the screws too tight, to prevent a clamping of the fuel cock!
- connect fuel cock and adapter using the spiral pin 2x12 (6).
 - **Note:** Pay attention to the correct installation direction!
 - remove swarf and other dirt



Item	Qty	Name	P/N
1	1	Adapter	115-6470
2	1	Fuel cock	115-6249
3	1	Strap	115-2800.25/1
4	1	Placard	115-7000.72
5	6	Screws	DIN965-M4x12
6	1	Spiral pin	DIN 7344, 2x12
7	1	Knob	115-2811
8	1	Screw	MS35206-246
9	2	Screws	MS24693C50

17. Install safety tube, approx. 5 cm (2 in.) wide, to these positions, where the lines pass the break-throughs. Secure safety tubes using cable clamps.
18. Install fuel tank, according to MM Chapter 28-10. Check all fuel lines and connecting parts for a tight fit.
19. Refuel aircraft with approx. 20 l and check for obvious leakage.
20. Install L/H floor.
21. Install center console and position placard "ON-OFF" correctly. Drill through both holes and into the strap with a dia. of 2,5 mm. Cut a thread for a screw M 3 into both holes of the strap. Remove center console again.



Flight Direction



22. Install center console, placard using screws DIN 965-M3x8 (qty. 2) and L/H cabin side panel, according to MM Chapter 25-10.
23. Install red knob using screw MS 35206-246.
24. Install L/H and R/H seat, according to MM Chapter 25-10.
25. Perform an engine ground run including a function test of the fuel cock, and check fuel system as far as possible for obvious leakage.
26. Install upper and lower cowling.
27. Fill up fuel tank completely.
28. Perform a test flight.

The correct execution of this Service Bulletins has to be certified in the logbook by an authorized inspector.