

ERA25FA020

BUILD DOCUMENT EXCERPTS

M. Primary fuel supply line to firewall / engine

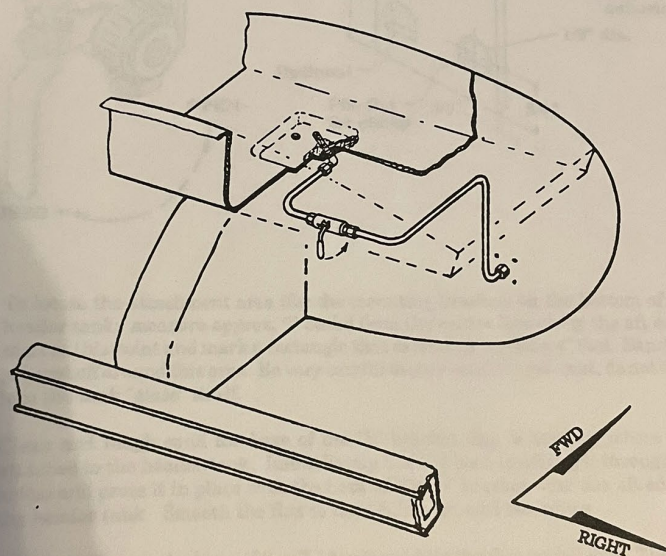
The fuel supply to the engine will originate from the Main Fuel Pickup Port located on the right side of the header tank sump. The 3/8 NPT fitting block has already been installed into position for this use.

The fuel line (3/8" 5052-0 aluminum tubing) is routed from this fitting, aft, making a "U" shape under the header tank where it passes through a Main Shut-Off Valve and then fwd to the firewall and down to the point where it passes through to the engine, see figure 11-16. The purpose is to locate the Main Shut-Off Valve where you can reach it from the pilots seat (the fuel system fwd of the firewall is covered in chapter 21). Place pipe thread sealer around the threads on all fittings.

Primary fuel supply

(cut away view)

Figure 11-16



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11-35

Chapter 11

REV.

0 / 11-1-91

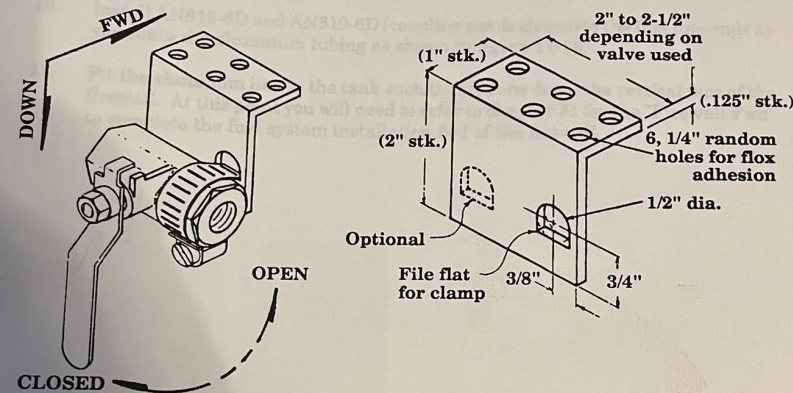
FUEL SYSTEM

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1. Remove the fwd deck/header tank from the fslg.
2. Per figure 11-17, use aluminum angle stock (1" x 2" x .125" thick) to make the mount bracket for the Main Shut-Off Valve attachment onto the base of the header tank.

Main Shut-Off Valve Mount Bracket

Figure 11-17



3. To locate the attachment area (for the mounting bracket) on the bottom of the header tank: measure approx. 7" outbd from the center line along the aft edge, start at this point and mark a rectangle that extends 6" outbd x 4" fwd. Sand the gel-coat off around this area. Be very careful to only sand the gel-coat, do not sand into the tank "glass" itself.
4. Clean and rough sand the base of the "L" bracket (top & bottom) where it is attached to the header tank. Immediately floc the base (pushing it through the holes) and press it in place with the back of the "L" bracket near the aft edge of the header tank. Smooth the floc to form fillets around the edges.
5. Apply 4 BID over the base of the "L" bracket while the floc is still wet. The BID shall extend 1-1/2" all around. Allow to cure completely.

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11-36

Chapter 11 REV. 0 / 11-1-91

FUEL SYSTEM

B. Gear free-fall valve installation

The Free-Fall valve must be located in a position that affords relative ease of reach. The ability of free falling the gear should be checked regularly in flight, the proper test procedure will be detailed at the end of this chapter.

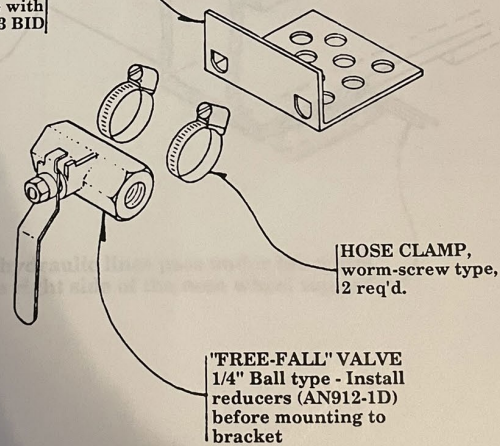
1. See figure 14-5 for a method of securing the valve in position. This valve should be located at a position that can be reached with relative ease by the pilot. It is generally positioned just fwd of the instrument panel center console area and up on top of the nose gear tunnel.
2. Generally, the Free-Fall valve is desired at a position that flushes with the left side of the nose gear tunnel, to avoid interference with the pilots right leg, see figure 14-6. The valve can then be positioned behind an upholstery panel which has a hole nicely cut in it for access. This makes for a good looking finished detail.

NOTE that the Free-fall valve has the two AN912-1D reducers installed into it so that it can attach to the AN825-4D fittings spliced into the lines.

Gear Free-fall valve mount bracket & assembly

Figure 14-5

MOUNT BRACKET
1" x 2" AL. angle, .090
thick. Width is deter-
mined by the valve
used (2" - 3" average)
Bond in place with
flox and 3 BID



Gear Free-fall valve placement

Figure 14-6

Be sure that the valve handle has free movement, that the upholstery will not interfere, and that the valve is easily accessible by the pilot!

HIGH PRESSURE line enters the nose wheel tunnel on the right.

LOW PRESSURE line enters the nose wheel tunnel on the left.

"FREE-FALL VALVE"
1/4" ball type
Install reducers
(AN912-1D) before
mounting to brckt

Both hydraulic lines pass under the main spar on the right side of the nose wheel tunnel

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14-13

Chapter 14

REV. 0 / 11-1-91

LANDING GEAR