

SNOW ENGINEERING CO. WICHITA FALLS, TEXAS		ENGINEERING REPORT ORDER		NUMBER # 178A
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3. Measure the distance the fuel tank vent line protrudes below the lower wing skin and adjust to make each side equal. Check the vent system by blowing into it to see that it is clear.

4. Adjust the position of the rudder boost tab until the pilot assures that the airplane is in good directional trim at the normal spraying speed.

5. Assure that the wiring is correct from the L/H sender to the L/H receiver or R/H sender to the R/H receiver. This can be done by observing the receiver during fueling or defueling one side.

Pilot Briefing:

1. Have all pilots review Service Letter #178.

2. Communicate to the pilots that when one tank reaches the "E" mark on the fuel receiver the engine can flame out even if substantial fuel is shown in the other tank.

3. Advise the pilots to report any consistent fuel imbalance such as the R/H tank always having more fuel than the L/H so that the cause can be investigated and steps taken to prevent this condition.

4. Advise the pilots to correct any fuel imbalance when either tank is below 1/4 Full by turning in the opposite direction or by deliberately skidding the airplane. With wings level applying left rudder will transfer fuel to the right hand tank, and vice-versa. Due to fuel sender location on the inboard part of the tank, the application of left rudder will show the opposite effect on the fuel receiver, since the fuel will migrate to the outboard tank wall in the right tank, showing less fuel on that side. Remember that the fuel will go in the direction of the ball in the slip indicator.

5. The factory should be contacted at any time progress reaches a standstill in trying to remedy a continued fuel imbalance problem.

Modifications available from the factory:

1. Placard kit and flight manual additions warning of uncoordinated turns.

2. Dual fuel receivers to replace the single receiver with selector switch to provide instant reference to the amount of fuel remaining in each tank.

3. Low-fuel warning light system.

4. Larger header tank with lowered fuel outlet for AT-401/402/502 series to allow longer periods of uncoordinated flight. Later 802's have the same size tank but have a lowered outlet fitting.

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5. For AT-602 and AT-802 aircraft and for smaller engines that have an FCU air purge line a kit is being developed that will route fuel that is passed by the FCU air purge line to both tanks instead of just the right tank or to the right side of the header tank. At the present time a restrictor fitting on the firewall greatly limits the amount of fuel from the FCU back to the tank, but splitting this discharge into both tanks will minimize any fuel imbalance from this source, however small.