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DIRECTIONS FOR REPLACING THE HEADER TANK VENT LINE  
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We have found that there can be problems with any translucent plastic line we have used over the years as the header tank vent line. The earlier clear lines would eventually get hard and stiff (and then they could kink or even crack when folding the wings). We switched to the Tygon F4040A yellow plastic line which is made specifically for use with U.S. auto fuel -- but we have found in some cases this line will "shrink". The Tygon F4040A line also is quite soft and so it can somewhat easily kink and collapse near where the line attaches to the wing root fitting, and always required some special efforts to prevent this.

We are now using some rather traditional fuel line as our header tank vent line -- but we have found a 1/4" ID fuel line that is more flexible and better for our purposes than any other fuel lines we have found. This is a 1/4" ID (7/16" OD) Gates H175 fuel line.

We keep this fuel line in stock and sell a 36" length, with 36" should always being enough (though upon installation it may be preferred to shorten slightly to about 35").

The parts needed are...

3' - Gates H175 1/4" OD fuel line.....	\$ 6.00
1 - 14.0mm Oetiker clamp.....	1.00
1 - 13.3mm Oetiker clamp.....	1.00
misc. plastic cables ties.....	(the mechanic should have these on hand)
total.....	\$ 8.00

BEFORE starting this work, shut-off both wing tank fuel valves, and drain the header tank at least halfway down (otherwise, you can spill gasoline and that's an obvious hazard and any gasoline that gets on the clear polycarbonate panels will instantly damage them).

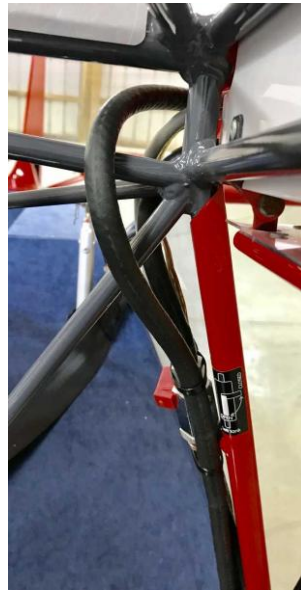
The work can be done after removing the turtledeck and removing the fiberglass seat base out of the cockpit.

It is critically important to have proper "routing" of the header tank vent line. See the photos below to see the proper routing and that shows approximately how much slack there needs to be in the vent line (above and to the rear of the pilot's head).

It is best to start the installation at the top, attaching the line to the wing root fitting first. It is necessary to provide proper slack so that the fuel line radius is not too tight and cause the fuel line to pinch shut near the left wing tank root fitting. Then, properly route the line all the way down to the T-fitting behind the left seat. A 13.8mm or 14.0mm Oetiker clamp needed to secure this header tank vent line to the wing root fitting, and a 13.3mm Oetiker clamp works ideally to secure this vent line to the T-fitting near the header tank.

It is necessary to take great care when routing the Gates H175 line through the opening behind the pilot's left shoulder down to behind the seat, because this can be a tight fit. Take great care to avoid routing where there will be chaffing and wear.

See the photos below to see the steps involved in installing the new header tank vent line...



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