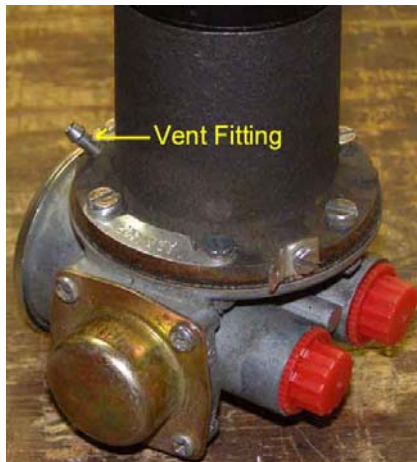


SU Fuel Pump Vents by David DuBois

(or, what is this 1/8" tubing going into the trunk of our MGB, with a 'T' fitting on it and what should it be connected to?)

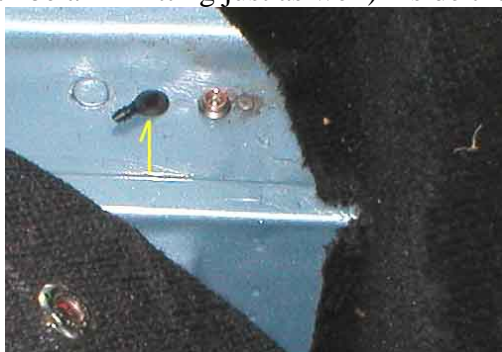
Judging from the number of times I have seen this question posed on various bulletin boards and forums, I think that it is time that someone writes an article shedding some light on the venting of the AUF 300/AZX 1300 series of SU fuel pumps and the double ended pumps, AUF 400/AZX 1400 and AUF 500/AZX 1500 series. These pumps can be identified (if not by an aluminum tag with the model number on it) by the short vent line spigot located at the bottom of the coil housing. There may also be a vent located on the end cover of these pumps, but don't be concerned if there isn't one or if there is no spigot to attach a vent line to. I will cover this later in this article.



Vent at bottom of coil housing

The purpose of these vents is to relieve the pressure built up behind the diaphragm each time the coil is energized, pulling the diaphragm up. Without these vents, the air trapped behind the diaphragm would act as a stiff spring that that would resist the movement of it. If at any time both of these vents were to become clogged (very seldom) the pump will become unstable in its operation. The main vent is the one at the bottom of the coil housing and it allows air to move both in and out. The vent on the end cover (if it has one), has a check valve in it that only allows air to move out, but not be drawn back in.

A piece of 1/8" tubing should be attached to the vent line fitting at the base of the coil housing and terminated with a 'T' fitting (can be a 'L' fitting just as well) inside the trunk.



Vent termination in trunk

This tubing can be just about any material as it is only carrying air into and out of the space behind the fuel pump diaphragm where there are no fumes present (I used 1/8" drip irrigation tubing on our MGB). The termination inside the trunk is to provide relatively dry termination of the vent line and to keep road debris and water out of the vent line and moisture out of the out of the pump. In no case should the vent line be cut short and left to dangle under the car as I have seen cases where water splashed under the car has been drawn into the coil housing through a short vent line that was left dangling, causing severe rusting inside the pump - to the point where it wouldn't run. If you don't feel comfortable with the vent in the trunk, it can be run to a high spot under the car (outside, top of the battery box comes to mind) and attached there. There should be no gas fumes coming from this vent line in the trunk, as it is venting the area of the pump above the diaphragm and unless the diaphragm is leaking (highly unlikely), no fumes are present in this area.

The vent on the end cover of the pump is not there to cool the electrics, as has been stated from some sources, it is just an additional vent for any pressure caused by the upward travel of the diaphragm to be expelled from.



End covers with, 1) no vent, 2) Vent with jiggle cap and 3) vent with vent line fitting

There is no vent line to a dry spot attached to the vent on the end cover (if one exists) as there is a check valve inside the vent that prevents any air being drawn in at this point. If your pump has an end cover without this vent, don't be concerned as some pumps come without it and they function perfectly well without it.



Check valve in end cover

Note: Although this written to the MGB and the single ended AUF 300/AZX1300 series of pumps, it is applicable to the same pumps installed in any vehicle where the pump is mounted under the vehicle. It also applies to the AUA 161, AUF 214, AUF 400/AZX 1400 or AUF 500/AZX 1500 series pumps that have the vent fitting at the base of the coil housing and are mounted under the vehicle.

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