

Volvo Plastic Fuel Tank Repair

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Emergency Plastic Fuel Tank Repair

[Will Dallas] In the event of a punctured polypropylene fuel tank like is found on the 700/900 series Volvos, I have come up with a way to effectively and permanently patch the hole with a few simple tools. The tank that I am using for demonstration is one that had holes cut into it purposely so the vehicle could be scrapped. It is out of an 88 780 Bertone and will be reinstalled after a leak check.



Before touching your tank, BE SAFE ! Make certain that the gas tank is empty before removing it from the car, and fill it with water before starting any heat related project on or around the gas tank, either in or out of the vehicle.



Plastic welding is generally done with either a controlled hot air stream with temperatures around 500 degrees F or with an electric iron device that works in the same manner as a solder gun. Both are fairly expensive at around \$120.00 to over \$200.00 for the commercially available models. Welding rod is also a necessity and can be obtained from most plastics suppliers. For our purpose, this being a polypropylene tank, I am using poly tubing from Home Depot

Use a heat gun from Ace Hardware with a small aluminum funnel clamped over the discharge nozzle to concentrate the air stream.



Since I have big holes to fill, a blue polypropylene drum is a suitable candidate for patching material.



The actual welding is very similar to welding with a torch (brazing) or TIG welding with a fill rod. The hot air is directed at the surface of the plastic in a small circular motion until the plastic starts to look wet. With polypropylene this is around 375 to 400 degrees F. The fill material is then fed into the hot air stream and flowed into the area to be welded together. If you are using white poly airline tubing, it will change from opaque to clear just as it melts.



The area to be welded should be cleaned thoroughly and roughed up with either a rasp (pictured) or a sander. The polypropylene can be sanded when it is cold so any rough spots or screw ups can be easily corrected.



With a little practice the weld is easily worked into beads as the welds on this photo show:



The finished tank repair will be ground down and smoothed after the bulk of the welding is finished. This is a good time to look for porosity in the seams and correct them with another treatment of heat and plastic fill.



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