Fuel Pump Replacement
2000 Jaguar XK8 Convertable
March 2010

Problem: Would not start after 3 month winter shut down. Engine cranked ok but no attempt to start.

Analyzing Problem:
Checked for spark by removing a coil and using clip leads to look for a spark. Got spark.
Checked for fuel pressure. Bought a fuel gage kit (gage + set of fittings) at Harbour Freight for $16. Put gage on Schrader valve on fuel header on top of engine (It looks like a tire stem fitting). No fuel pressure.

Checked fuel pump relay operation. The relay and its fuse is in the trunk fuse/relay box behind the battery. The relay contact applies +12 volt power through a 20 amp fuse to the fuel pump. Note that when turning ignition on to start, the relay will only activate for a short time (maybe 5 seconds or so). The power was getting through the 20 amp fuse so the fuel pump must be bad. Now on to replacing fuel pump.

Removing Fuel Tank:

Step 1 - Removed all carpet from trunk. Disconnected and removed battery. Photo 1 shows trunk before tire and battery removed. Note fuse/relay box behind battery. Drain the tank using a siphon hose.

Photo 1

Step 2 - Removed fuel tank rear cover. Three screws on top and two on bottom. Photo 2 shows tank cover plate.

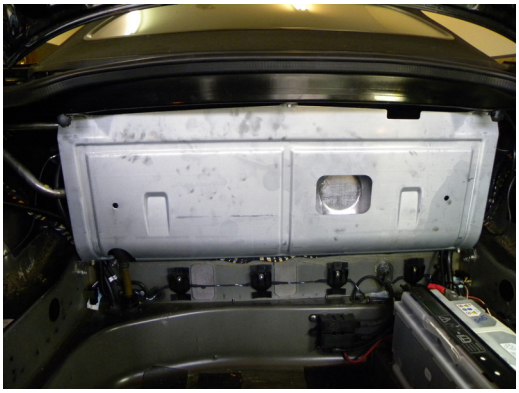


Photo 2

Step 3 - Removing fuel tank. This was the most difficult, time consuming and frustrating part of the project. The issue here is getting at the two fuel lines entering the bottom rear of the tank from the bottom of the car. I kept looking where the fuel lines from the fuel filter went under the heat shield thinking that is the location where the lines entered the tank. Wrong! I finally figured out that the access to the two lines entering the tank was from in front of the differential. You must lay on your back looking over the top of the differential. You need to reach over the differential and feel the two lines entering the tank. With a light you can see the two lines. You can also get a hand on each side of the differential to access the lines. I don't have small hands and I could get at the right side (lookin toward the rear of the car) better than the left. Photos 3 and 4 shows the two access views. It was very hard to get a good photo showing the actual two fuel lines but you can see where they are. In Photo 3 the area of the fuel lines is light, which is the plastic bags covering the lines (about the center of the photo).

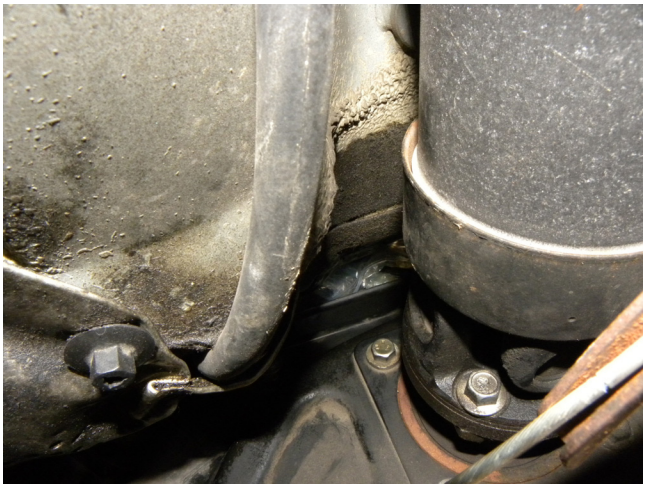


Photo 3

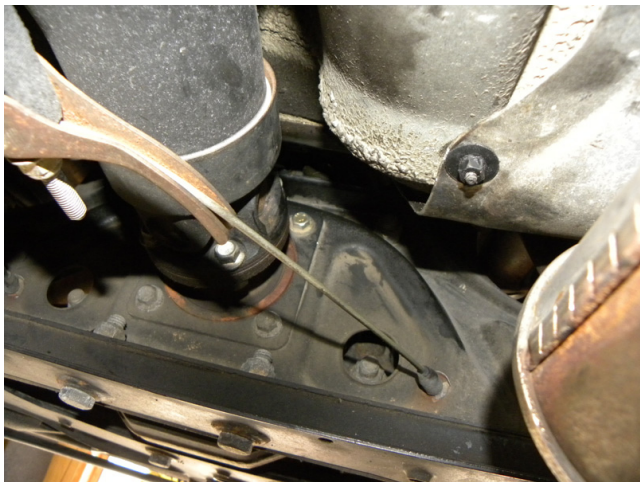


Photo 4

Removing the two fuel lines entering the tank.

Now that you have access to the two fuel lines entering the tank you must disconnect the lines using the Fuel Line Quick Disconnect Tool. I used the light blue tool in this set (Auto Zone - About $10). You must slip the split side of the tool over the line with the small end facing the fuel tank. Then push on the large end of the tool toward the tank to release the spring. The line will then pull out of the tank. I managed to get a long screwdriver on the tool to help push on the tool. With the lines disconnected you can now remove the tank fron the trunk.

Photo 5

Remove Fuel Tank From the Trunk.

Disconnect all fittings and hoses from the fuel tank. Place protective covers over the wire harnesses on each side of the fuel tank. **Note that on the tank sides the metal edges are very sharp! Take care not to cut your self or cut into the wire harnesses!** Next pull out the tank taking care to get the filler neck out first. This will take some jockeying but it will come out, neck first. Then put the tank on a good working surface.

Special Note - When I had so much trouble trying to remove the two fuel lines from the bottom of the car I tried to get at the fuel pump from the top access assembly without removing the tank completely, and not removing the two fuel lines. I just could not get the top access assembly out. I read posts saying this could be done but not on my car. Some cars have fuel sensor access panels on the rear side of the fuel tank and they may have a lower profile top assembly. I just know that this would not work and I feared damaging the two fuel lines by forcing the tank.

Step 4 - Removing the Fuel Pump.

Next remove the three hoses from the top assembly and remove the wire harness. Take care not to damage the connectors. See Photo 6. Remove the hold down plate by using a large screwdriver, tapping it with a hammer. The assembly can now be removed BUT take care to disconnect the wire harness in the tank where it enters the top assembly.

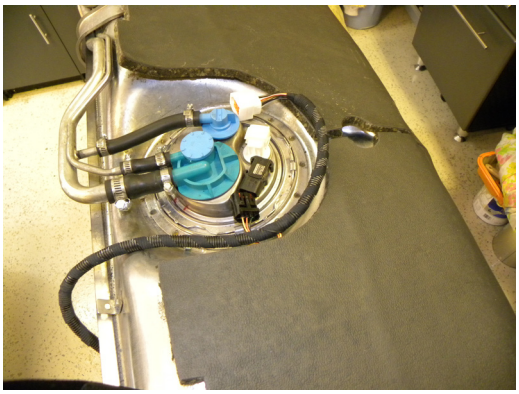


Photo 6

After the top assembly is removed you can see into the tank where the fuel pump and fuel gage sensor is located. Remove the fuel pump and remove the fuel line to the pump. The fuel pump is held in place by one screw. Note that there is a filter on the bottom of the pump. As the sensor and fuel pump are connected with the same wire harness you need to remove the sensor along with the pump. It slips out of its mounting bracket easily. See Photos 7 and 8. The fuel pump has been removed in these two photos. The fuel pump bracket is held in place by one screw (tapped hole is shown in photos).

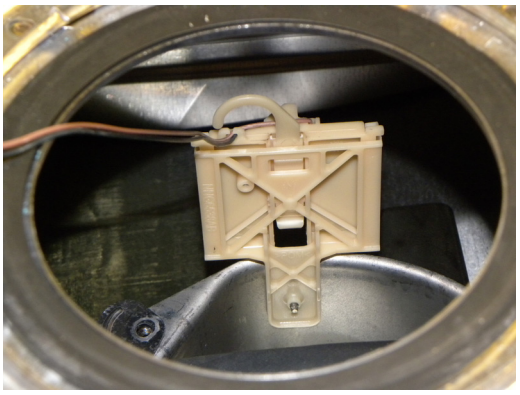


Photo 7

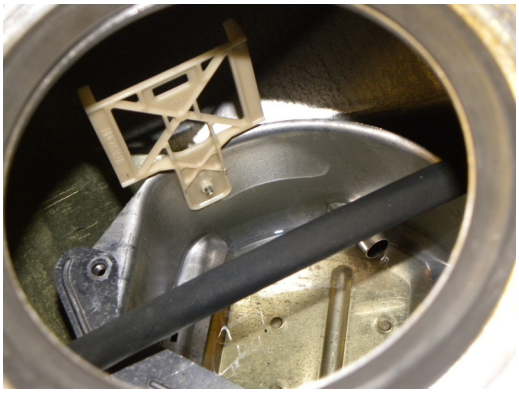


Photo 8

The new pump I purchased was a universal type and did not include the mounting bracket. I had to remove the bracket from the old pump and fit it on the new one. A bit of a pain but not a big deal. Also, the bottom filter of the fuel pump was a separate purchased item. It just pressed on the pump fitting.

I tested the old pump by applying power from the battery. It did not run but sparked when removing power. So I think the problem may be a mechanical bind. I may try to disassemble it later to see the failure mode. I also tested the new pump and it worked fine.

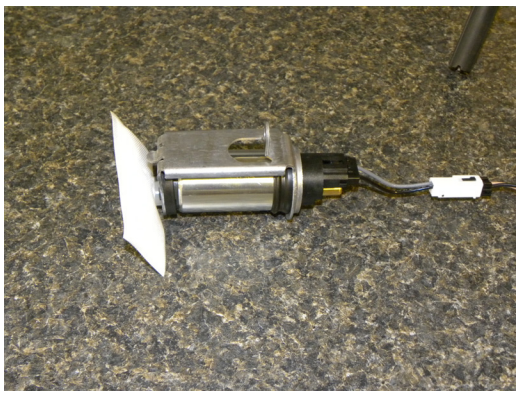
Next install the new fuel pump and the top assembly. Then install the tank in the car. **Be very careful not to cut the wire harnesses with the sharp edges on the sides of the tank.**

Installing the two fuel lines in the bottom of the tank was a challange (no surprise). I positioned the tank and pushed one fuel line in to seat it. Then did the other line. In the process I pushed the tank back a bit and had to reposition it to get both lines installed. When pushing the lines back on I did not have a good feeleing that they were fully seated. But I moved them around and I couldn't remove them so I felt they were properly seated.

Next complete the installation of the tank, cover, battery, etc. No problems here. At this point I replaced the fuel filter. No problem here, just take care as the gas will drain out.

The following are various photos you might find useful.

Good luck. Chuck Bennett



New fuel pump with filter and harness.

New fuel pump, level sensor and harness.

Fuel tank top assembly.

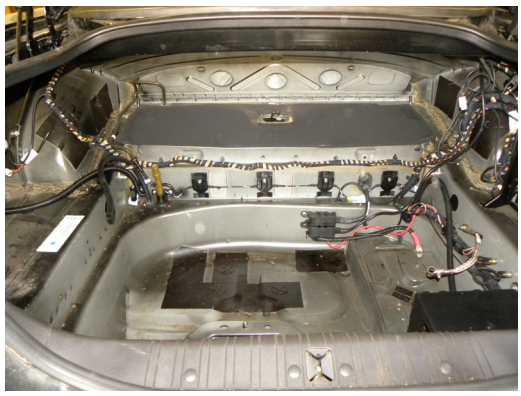
Fuel tank with fuel pump & sensor ready to install in tank.

View into tank showing two fuel lines coming into tank.

View of front side of tank (shows connection point of the two fuel lines).

Trunk, tank removed, passenger side.

Trunk, tank removed, driver's side.



Trunk, tank removed, center view. Note entrance location for the two fuel lines.

Close up showing the two fuel lines entering trunk. One has removal tool on it.

Close up of front side of fuel tank (connection point for two fuel lines).

Old fuel pump, bracket removed.