Gas Tank Restoration

Looks like the ghost of failing/rusted/rusting tanks on my 33 have not gone away. The curse of failing tanks go back in the early months of the 33 life back in 1991.

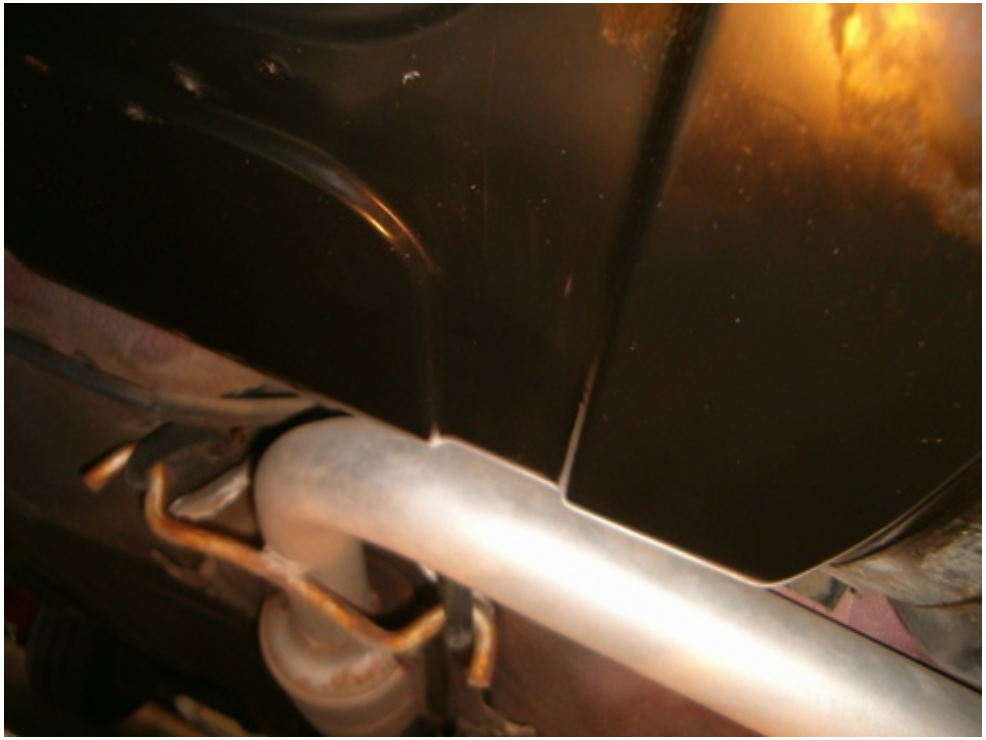
Within ~1.5 years since new, two new tanks were required to be replaced under warranty as the internal diaphragms broke and the splashing waves of petrol flowing inside could be heard while driving. So after almost a decade, problems started to arise again from the tank. One fine spring day in 2004 around 30 lt of petrol dripped on the floor of my home's garage; I decided then to have the tank repaired by a radiator shop. The shop owner patched the tank and installed a drain plug so as to be able to remove all fuel should any need arise. Being happy that I have a nicely repaired tank, I had it installed on the car and within 20 hrs the tank leaked again from another weak spot around the seams (losing again around 50 lt of petrol). Frustrated again, I decided to give it up and get a new tank; Luckily I got one of the last new tanks Alfa was able to supply as these nowdays are nearly impossible to get new. Everything went alright until spring 2008 when the tank decided to give me again trouble - leaks appeared from a spot weld and once again bad memories passed from my mind once again.

This time I decided to solve the tank issue once forever (hopefuly!). I had noticed a very good product advertised on the web and used by many car enthusiasts which claimed to seal the tank internals and fight corrosion on metal tanks. This is POR15 Fuel Tank Sealer (http:www.por15.com)

I didnt have any better alternative so I gave it a shot and restore the tank.

Tank Removal

Raise the rear of the car in order to get as much clearance as possible. I used a stand at the left jacking point and a piece of wood under the right side wheel; this way I feel safe under the car.



Not clearly seen but this is the part of the tank where the leak is located; it comes off a spot weld.

We must remove the two strap bolts which actually hold the tank in place...

... and the fuel filler neck.

There are two large hose clips that hold the curved hose in place

Then undo the clip on the fuel hose that sits just behind the spare wheel well.

Once the strap bolts are removed the tank easily drops as shown on the photos

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A couple of close ups show the fuel sender unit along with the fuel supply/return lines. Quite nasty is the earth lead that must be removed along with a fuel sender unit bolt. For sure I will find a better solution of attaching the earth lead to the chassis once I restore the tank

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Here are the two tanks demonstrated. The upper one is the temporary replacement that my friend Dennis kindly lended in order to keep the 33 running while I am rebuilding the original one.

There are a couple of differences between the two tanks as far as the fuel sender unit is concerned. The original tank has the sender unit facing forward (front of car) whereas the replacement tank has the sender unit facing backwards.

The same principle is applied to the pipe routing. As you can see in the photos above, the original tank (left photo) has the fuel return pipe facing forward (front of car) whereas the replacement tank (right photo) has the return pipe facing backward (rear of car). This is of no major concern as the return pipe will be routed using a flexible 8mm fuel line.

The replacement tank comes off a Marelli - IAW fuel injection Alfa 33 whereas mine is a L-Jetronic one. I don't think that this has to do strictly with the engine management system but it all depends what parts were available during assembly in the parts bin of the production line.

General view of the two tanks showing their differences