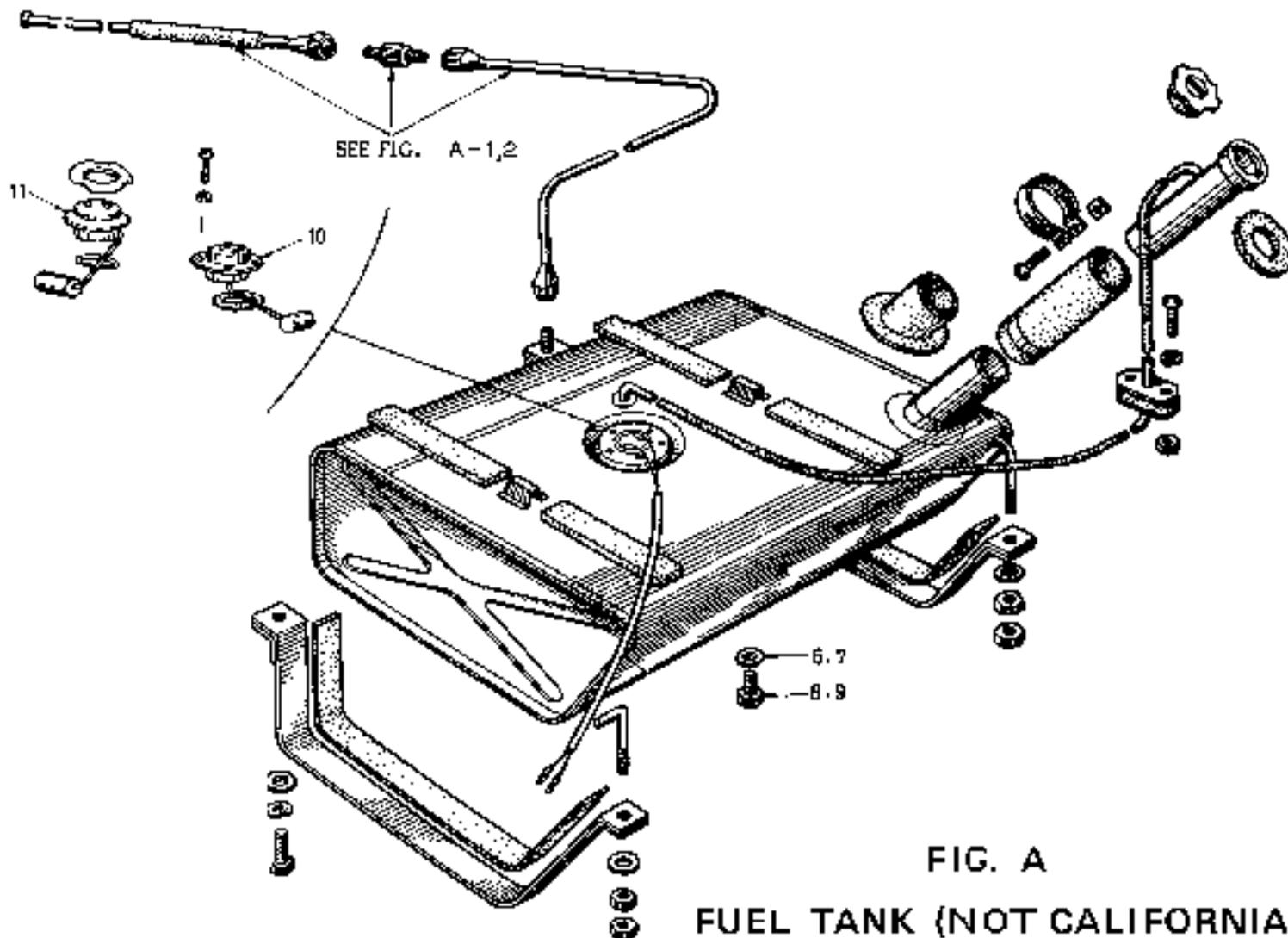


## Fuel System

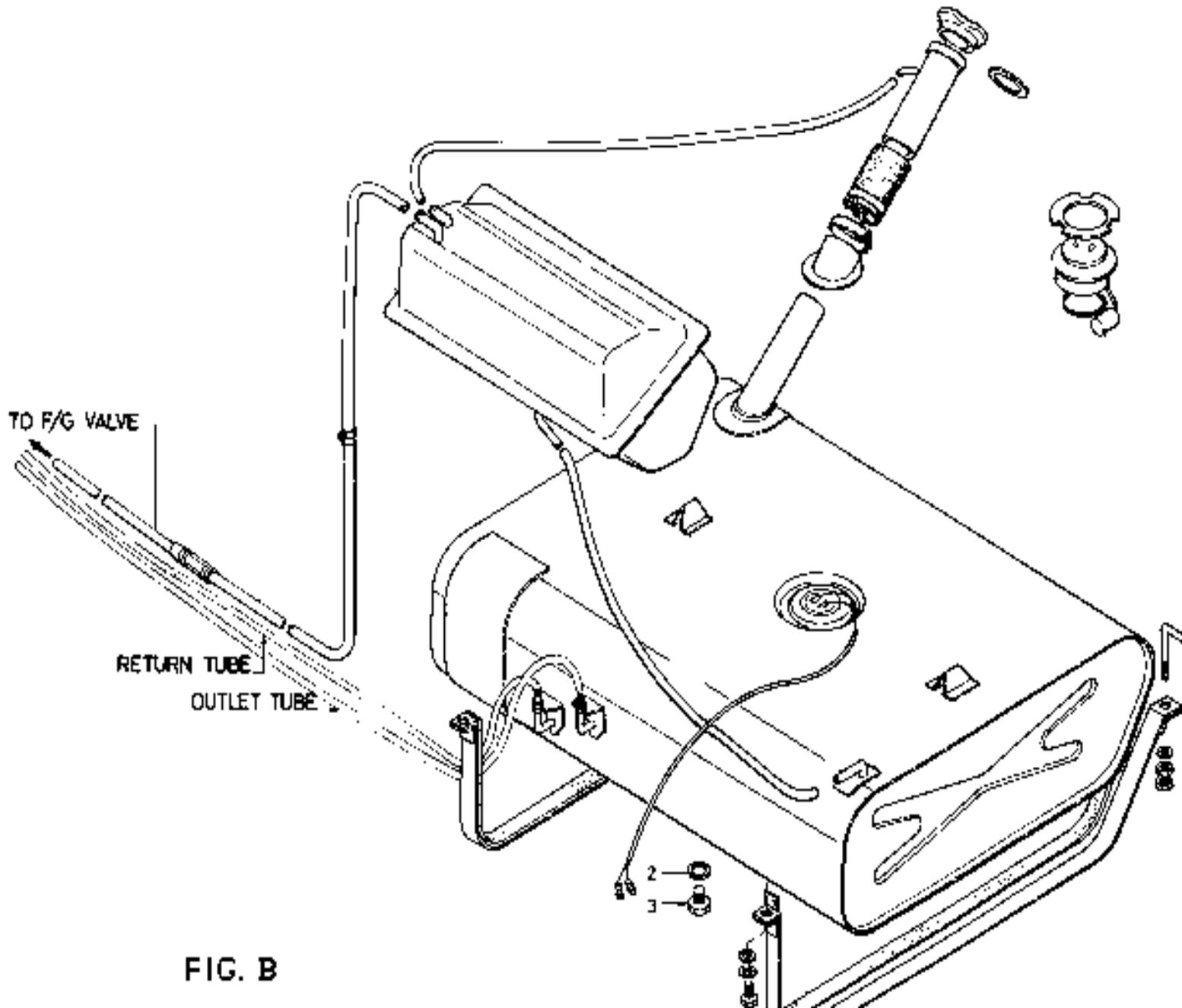
The fuel system in cars can create a lot of havoc and grief when neglected or left unattended for too long. Gasoline has a shelf life of 90 days. This means that if left for more than two years chances are that the fuel will go stale and will cause problems if fuel jells or gums up inside carburetors.



Moisture is another problem with cars that sit for extended periods; condensation inside your fuel tank will cause deterioration of the sending unit, the tank, and performance. There are fuel additives that envelope moisture and enable the moisture to be burnt; methyl hydrate is the most common and is used in cold weather places to prevent fuel from freezing.

There are also fuel conditioners that prevent fuel breakdown *and* control moisture and condensation build up.

To see whether or not your tank needs to be cleaned, check the fuel filter; is it continually getting clogged? The reason for this might be that you are running the tank low and the fuel pickup is sucking in all the sediment and accumulated garbage that has found its way into the tank. Open the trunk, remove the mat and find the gas sending unit plate; loosen at least three of the four philips head screws and you will expose the top of the tank where the sending unit sits.



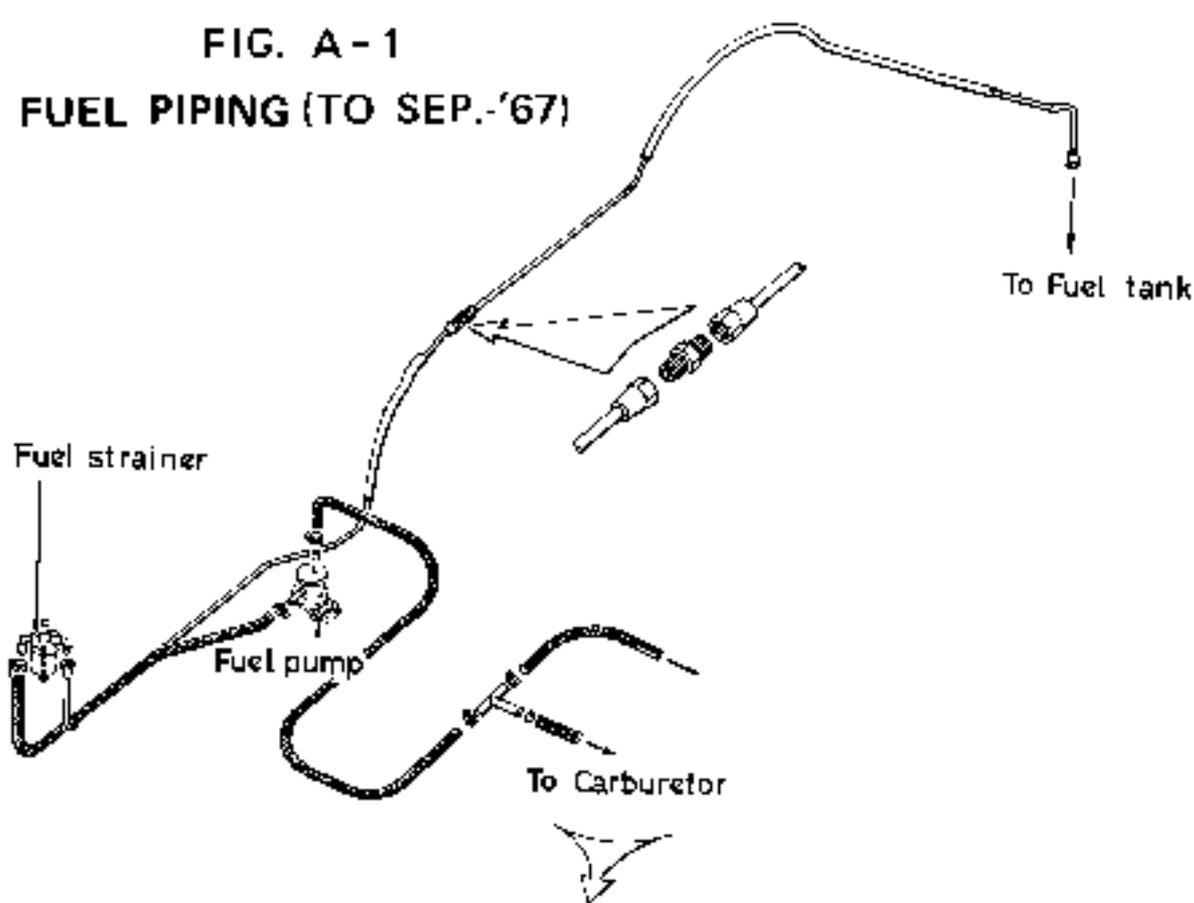
**FIG. B**

Get out the vacuum cleaner and clean as much debris as possible out of the way before attempting to extract the sending unit. There are two kinds of units in Datsun Roadsters. The early type (see Figure A part marked #10) is held in place by screws, sometimes slotted, sometimes philips. Once again, soaking in penetrating fluid will hopefully loosen them; be patient. The later style unit (see Figure A part marked #11 for Non-California cars, or Figure B for California cars) has a ring which is twisted into place and seals the unit. Remove the unit from the tank, carefully noting the way it points when coming out. Scribing a point on the top and an adjoining mark on the tank will ensure proper reinstallation.

Once removed, you have a limited but good view of the inside of your tank. Is it shiny galvanized metal or is it covered in crud and rust? This is when you either decide you can flush the tank in place or that you have to drop the tank.

### **Flushing in Place**

**FIG. A-1**  
**FUEL PIPING (TO SEP.-'67)**

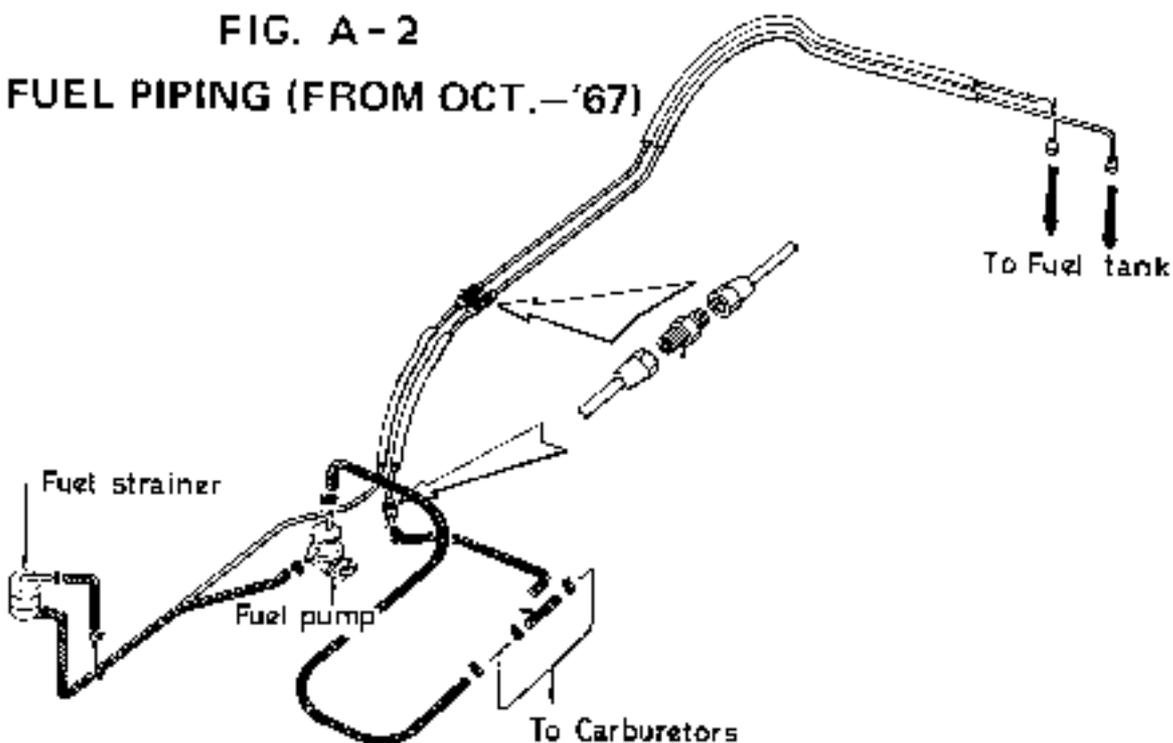


Blow all the fuel lines out with compressed air while there is still a small amount of fuel perhaps half a gallon, left in the tank. Unhook the fuel line *on the gas tank side of the fuel filter* (shown as "Fuel Strainer" in Figures A-1 and A-2) and install the line into a one gallon container with a screen. You then go to the fuel filler neck at the rear of the car; remove the gas cap, and stick an air wand into the fuel neck opening. Seal the neck with a clean rag and have an assistant monitor the flow of fuel into the reservoir at front. You will be amazed at what can come out. Do not blow back into the tank, because it is easier to get the dirt out through the line than to remove it from the tank.

### Removing the Fuel Tank

Removing the fuel tank can be easy *provided* that the tank is empty and the two strap hooks and rear nuts are soaked in penetrating fluid. You can empty the tank by removing the drain plug (shown as parts marked #8 or 9 in Figure A, and #3 in Figure B). Remove the fuel lines from the front of the tank *before* undoing the straps; By removing the front nuts and bolts you prevent damage to the straps and hooks. Be very careful not to twist the fuel lines as this will create some unwanted work; the straps have a tendency to get twisted when trying to loosen the hooks.

**FIG. A-2**  
**FUEL PIPING (FROM OCT.-'67)**



Once the tank has been removed, a good exterior and interior wash is recommended. Pressure washing and a good grease cutter have worked well in removing gummy build up and sediment. Corrosion and flaking rust can be neutralized with proper chemicals and even then can cause problems later on. We take them to the local radiator shop which boils the stripped unit and does a great

clean up. Some customers have had coatings installed on the inside of the tanks but we have found that these coatings break down, gum up fuel lines and destroy floats, especially 1600 SU floats.

## **General**

The last three customers' cars that came to the shop all suffered from hesitation and stalling. All three had clogged fuel filters and needed to have the tanks flushed and cleaned. Such cars often sit for six months a year or more.

On two we installed the glass bowl filter to monitor the flow of sediment to ensure that all the debris had been removed. The nice feature of the glass bowl is that you can clean it and reuse it. The later style filter is a one time use that once contaminated has to be disposed of.

The only drawback with the glass bowl system is that the cork gasket has a tendency to dry out and has caused many people to wonder why the fuel is not reaching the carburetors; this gasket creates an air leak that sucks in air and hence does not allow the fuel to reach the carburetors.

Cars sitting for periods of over two months should use fuel conditioners that prevent fuel breakdown and control moisture and condensation build up. Parking the car with a full tank also minimizes internal tank deterioration.

Some cars are being equipped with fuel cells which have many benefits. The plastic cells do not rust; they have foam in the bottom which eliminates fuel movement on cornering and they are much safer than galvanized tanks. These fuel cells are available in many shapes and sizes. Check your local parts house.

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