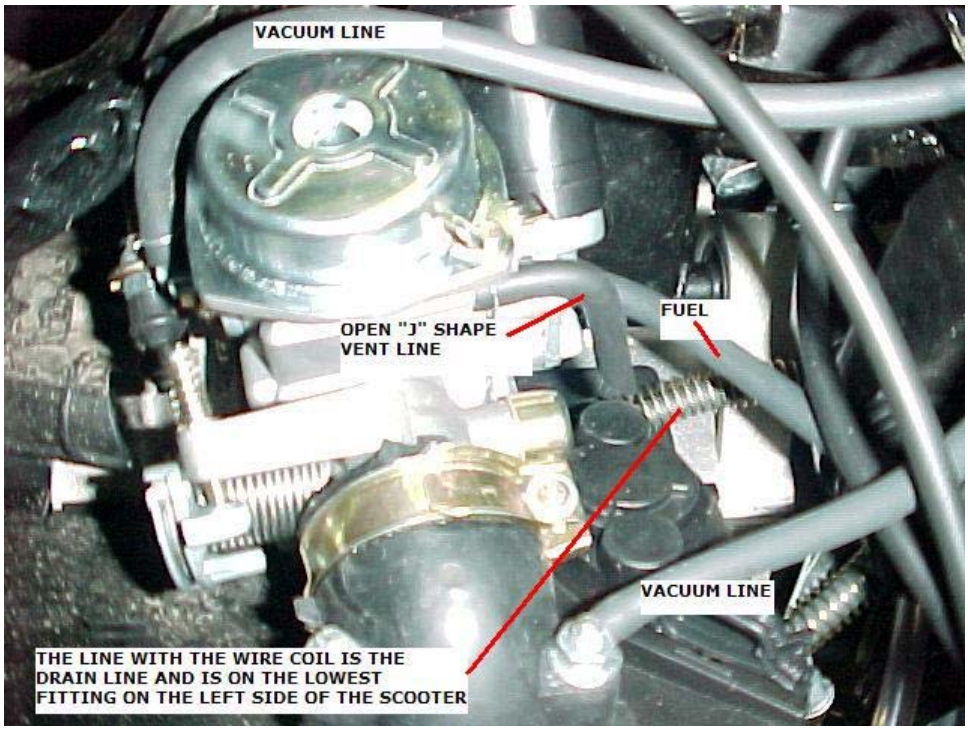
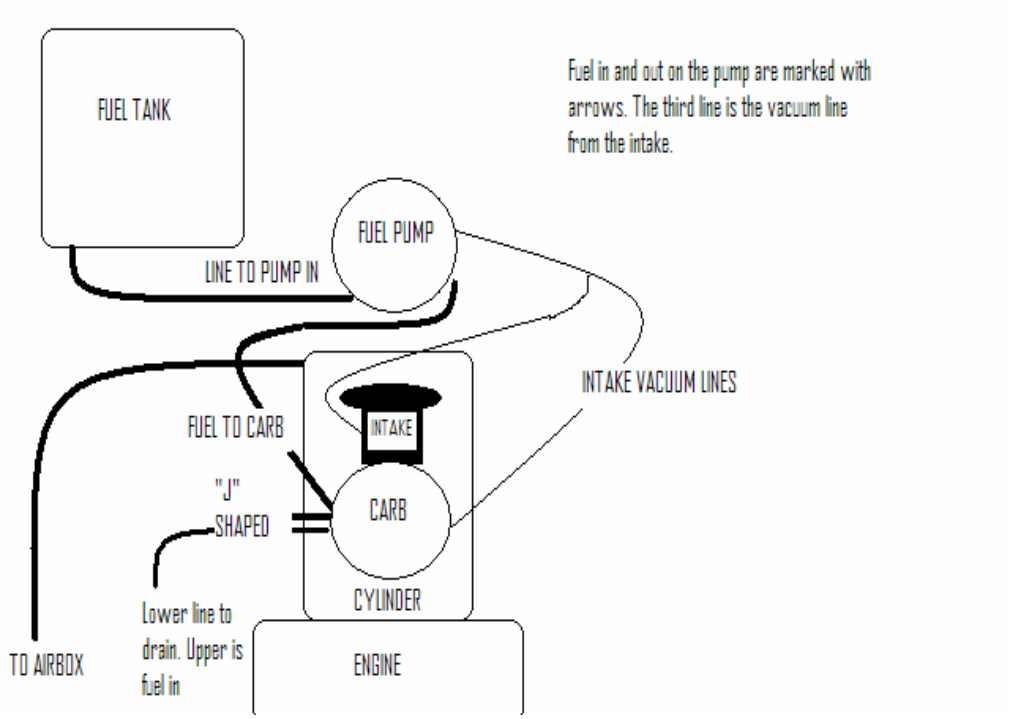
Fuel System

Carburetor Plumbing



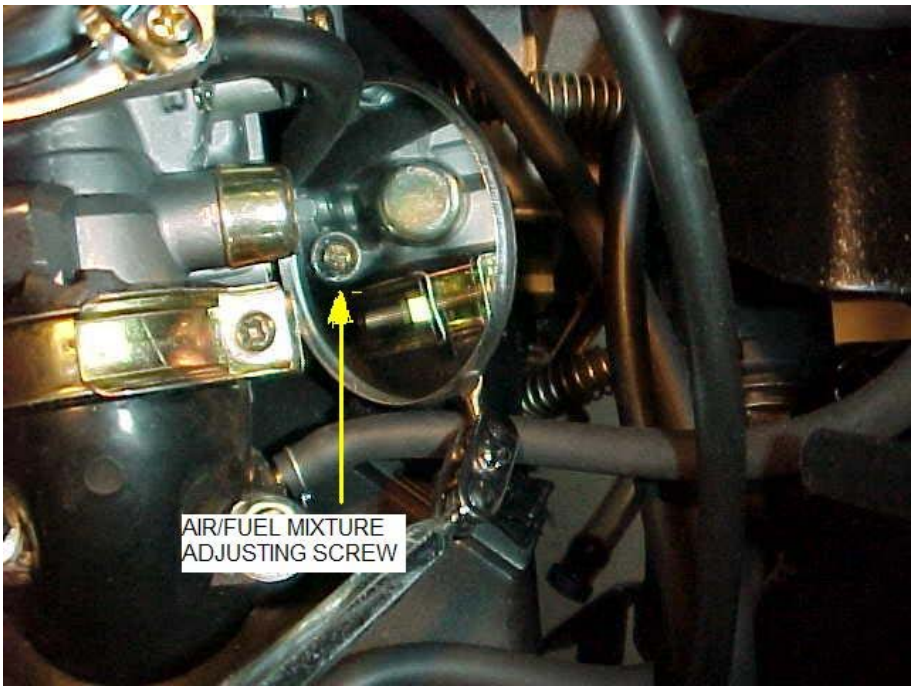
The Plumbing Lines



http://www.oregonvintage.com/Scooters.html

Air/Fuel Mixture Adjustment

To adjust the air/fuel mixture, you first need to find the adjusting needle. Not an easy task in the limited space, but with the aid of a mirror, you can spot it with some hunting. Look at the photo below, and you can see the screw in the mirror. The mixture screw controls the mixture (in conjunction with the pilot jet) to around the first 25% of the throttle. So, check your spark plug after running at no more than that throttle setting for about 5 minutes. White is too lean, black is too rich and medium to light brown is just right. Turn the screw out to richen (counter clockwise) and in to lean (clockwise). Repeat the plug check after each ¼-½ turn of the screw (run engine for 5 minutes) until you get the color you want.



Jetting

Stock Main Jet measured .107mm and the pilot jet size is .035mm. I did find a Keihin Jet size chart that will help identify each jet type. Most often, adjusting the mixture screw based on the spark plug color and throttle response is all you'll need to do. If you add a performance exhaust or low restriction air cleaner, you may need to do some jetting to get the best performance. See the Carburetor article for jet changes.

Air Filter

I suggest removing the restrictor(s) if you retain the original air box. I chose to remove it altogether, and install a low restriction UNI foam filter. The problem with doing this is that the TT150 doesn't have an inner fender, so the tire will fling water straight at the filter if it's installed directly onto the carburetor. To overcome this problem, I went to the local auto store and looked through the preformed radiator hoses to find one with a

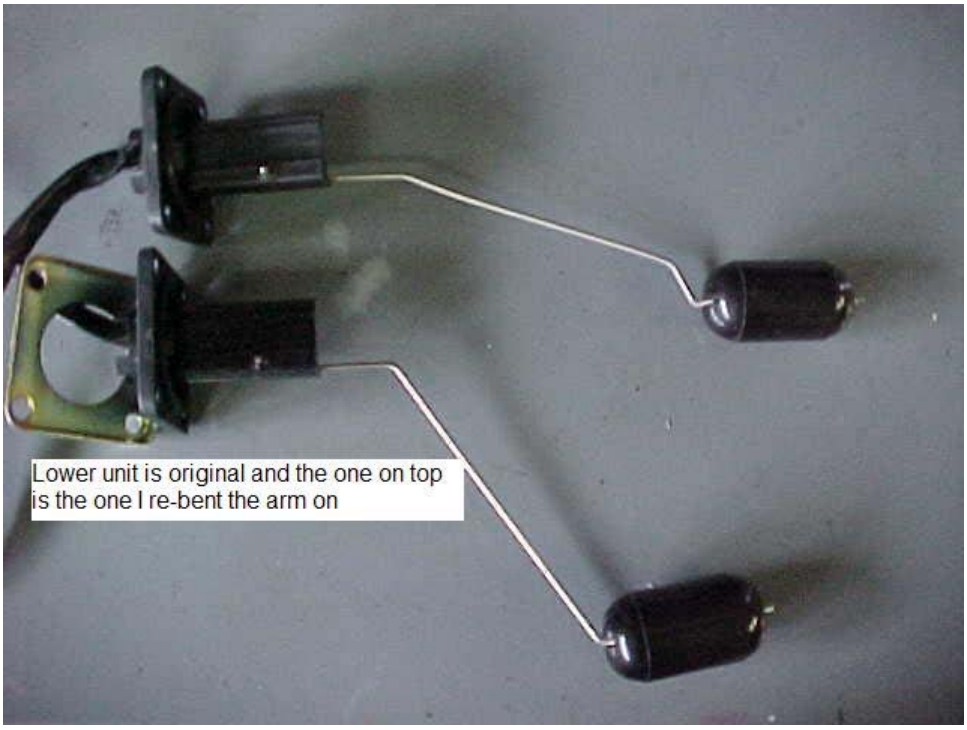
90 degree bend and an inside diameter of 1-5/8” and 2 more clamps. I cut the elbow off the hose and clamped it onto the carb intake. Then I clamped a piece of metal tube about 3” long into the open end, and then the filter over the tube. This caused the filter to be situated away from the tire spray, and removal can be done by removing only one clamp. Total cost for this was about $12 for the hose and $15 for the UNI filter.

Fuel Octane Rating

90 Octane is what the engine is designed for and it’s what you should be running for peak performance. Lower octane fuel is less stable in terms of the burn time and flash point. You will probably experience pinging on the lower octane fuels, and possibly lower performance.

Fuel Gauge

I ordered a replacement sending unit so I could experiment without fear of damaging the unit and being stuck without one. I found that the factory bends didn’t allow full coverage of the fuel levels the tank could manage. I did a little re-bending, and it looks like it’s going to work so the gauge will read with a little better accuracy. I won’t really know if this works better until I have a chance to run a few gallons of fuel through the scooter to see where the gauge reads at various fuel levels. I’ll add to this as I see results.



Fuel Lines

I don't like the flimsy fuel lines that foreign scooters use, so I decided to replace them with reinforced ¼" lines and a better fuel filter. The stock lines don't have enough slack to be able to view or replace the filter easily, so they had to go. There have also been several reports of leaking filters, so at least replace that, even if you keep the original lines. Removing the hump cover (2 screws on each side and 2 more in the fuel fill compartment) will get the access you need to get to the filter, but not to replace the line from the tank to the filter, so I had to remove the lower left body panel. This will give you almost enough space, but not quite enough to get a tool on the new clamp. The fuel exits the tank at the bottom front of the fuel tank. So, I drilled a small ½" hole in the plastic skid plate so I could get a nut driver to the clamp. I routed and wire tied the new lines in place, leaving slack to be able to get to the filter for replacement, and then added a line from the filter to the pump, along with screw clamps at all connections. I didn't replace the line from the pump to the carb yet, because I'll do that when I remove the carb for some jetting experiments. I feel much better now about the filter and line flow, and I'm certain I won't have any fuel starvation problems down the road.