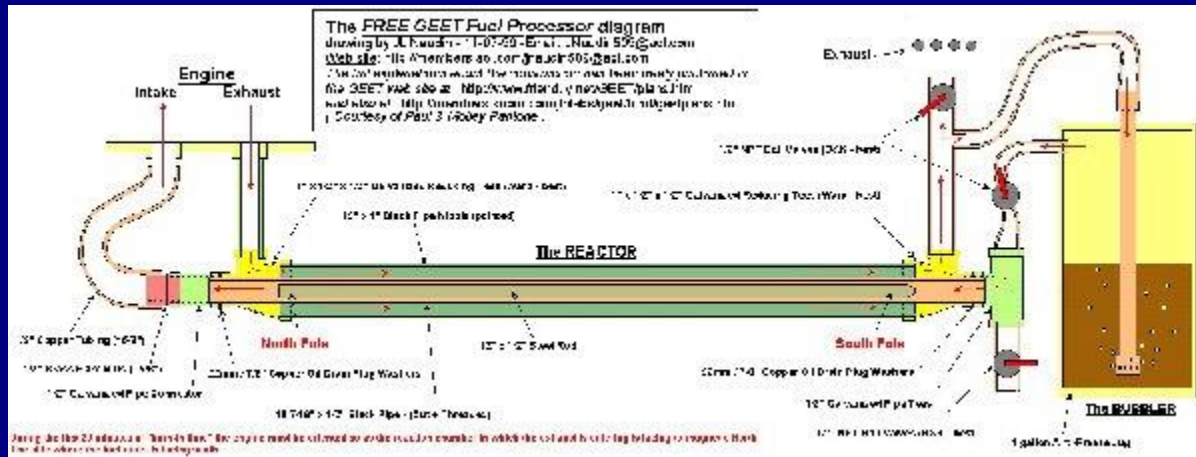


GEET Fuel Processor Plans



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This is a greatly simplified "Proof of Concept" version of the GEET Fuel Processor that just about anyone can build from parts from a local Hardware store in a weekend for very low cost. A used lawnmower engine will be used for demonstration purposes so things will be easier to see without obstructions.

The basic configuration remains the same for any retrofit conversion to engines. More advanced versions are now available from GEET that use air management valves that combine all 3 valve functions with automatic sequencing, and also carburetor or fuel injection systems to replace bubblers in moving vehicles.

5 kW electric generators and 3.5 HP demonstration engines are available now from GEET. Complete component retrofit kits will be available shortly for most cars and trucks starting at \$1,000 plus installation. Large Diesel and Turbine conversions will be available as soon as development funding is available from investors.

Parts List - Small Engine GEET Conversion

(Some Engines Only - 1/2" Steel Adapter Plate with 4 - 3/4" Allen Screws and 12" steel disk)

Fuel Processor

- 1 - 16 7/16" x 1/2" Black Pipe - (Cut + Threaded)
- 1 - 12" x 1" Black Pipe Nipple (painted)
- 1 - 12" x 1/2" Steel Rod
- 2 - 1" x 1/2" x 1/2" Galvanized Reducing Tees (Ward - best)
- 2 - 22mm / 7/8" Copper Oil Drain Plug Washers
- 1 - 2" x 1/2" Galvanized Pipe Nipple
- 1 - 1/2" Galvanized Pipe Connector
- 1 - 1" Galvanized Pipe Hangar with Bolt & Nuts
- 3 - 1 1/2" x 1/2" Galvanized Pipe Nipples

Bubbler

- 1 - 1 gallon Anti-Freeze Jug
- 4 - 1/2" Galvanized Hose Clamps
- 6' - 1/2" ID Clear Vinyl Hose - (cut in half)
- 2 - 3" x 1/4" Galvanized Pipe Nipples - (cut in half)
- 4 - 9/16" Galvanized Bushing Washers - (1/8" thick)
- 1 - 1/4" Galvanized Pipe Elbow
- 2 - 3/4" x 1/4" Galvanized Pipe Nipples
- 1 - 1/4" Galvanized Pipe Connector
- 1 - 10 3/4" x 1/2" Copper Water Pipe

- 1 - 3" x 1/2" Galvanized Pipe Nipple
- 3 - 1/2" NPT Ball Valves (B&K - best)
- 1 - 1/2" Galvanized NPT Muffler
- 2 - 1/2" Galvanized Pipe Tees
- 2 - 1/2" x 1/4" Galvanized Pipe Reducing Bushings
- 1 - Can Hi-Temp Grill Paint
- 27" - 1/2" Copper Tubing (* 5/8")
- 2 - 1/2" NPT / 1/2 3/4" Brass Male Flare Fitting (* 5/8")
- 2 - 1/2" Brass Flare Nuts (* 5/8")

- 1 - 1/2" Copper Pipe Cap
- 2 - 1/2" x 1/4" NPT Copper Pipe Adapters

Step 1 - Tools needed - pipe wrench, crescent wrench, spring tube benders, pipe cutter, pipe flaring tool, allen wrench, soldering equipment, file, and screw driver. Obtain all your parts and tools needed for the conversion ahead of time.

Most professional plumbing supply stores stock higher quality parts compared to large home centers cheap plumbing parts. The savings aren't that much on a small project like this. The most crucial quality part is on the inner pipe, problems arise from inconsistent wall thickness, out of roundness, thick weld seams, etc on low quality pipe.



(1) Tools Needed

Step 2 - Strip down the engine removing the gas tank, muffler, and carburetor. Remove the mower blade and replace with a 12" diameter steel disk flywheel of the same thickness as the blade for safety.



(2) Stripped Engine

Step 3 - Take the 1"x1/2"x1/2" reducing tees and mount them on a 1" nipple (short pipe), and then using a lathe, machine the end smooth and fly cut (bore out) the hole in the end 27/32" (21mm) so that the 1/2" inner pipe will slide inside. This procedure can also be done by using a drill press to drill a 27/32" or 7/8" hole in the end of the tee and then use a file to smooth the roughness off.

The 1/2" pipe connector and 1/2" tee will each need to have one end smoothed off as well to receive the copper washers as a tight seal. If anyone has a machine shop that would like to do this for others, contact GEET. We might also offer a complete kit that has all the parts ready to be assembled in minutes if there's enough interest.



(3) Tee & Connector

Step 4 - Have a plumber or plumbing center cut your inner reactor 1/2" pipe to 16 + 7/16" and thread both ends. Use Black Pipe here because galvanized pipe gives off toxic fumes if heated too much. File the 12" x 1/2" multi-fuel steel rod to a bullet point on one end only. (7 + 3/8" x 1/2" for gasoline only) This will keep you out of trouble later if you can't remember which way the rod points. The engine will not run if the rod is put in backwards after it has a magnetic signature.



(4) Plumbing Pipes & Rod

Assemble the parts in order as in the above picture using the 7/8" / 22mm copper washers used in oil drain plugs for cars. (2 - 1" x 1/2" x 1/2" machined reducing tees joined by the 12" long 1" nipple, slide the 16 + 7/16" long 1/2" reactor pipe inside, add a copper washer on each end and then add the 1/2" connector and 1/2" tee.)

Step 5 - Assemble the other valve component subassemblies above. The 1/2" thick steel intake / exhaust adapter plate above is used only on some engines like "Tecumseh" and Overhead Valve Engines (picture 9).

Some "Briggs and Stratton" engines, etc usually already have the exhaust threaded for 1/2" pipe, but the intake is on the other side of the engine causing longer hose runs. Also a compression pipe connector or a piece of rubber hose with clamps will need to be connected from the engine intake to the Bubbler pipe.



(5) Valve Components

(1/2" valve (Air Mixture Valve), 1 1/2" x 1/2" nipple, 1/2" tee, 1 1/2" x 1/2" nipple, 1/2"

valve (Throttle Valve), 1/2" to 1/4" pipe reducer bushing, half of 3" x 1/4" nipple.) and (Muffler, 1/2" ball valve (Optional - Back pressure valve), 3" x 1/2" nipple, 1/2" tee, 1/2" to 1/4" pipe reducer bushing, half of 3" x 1/4" nipple, 1 1/2" nipple.)

Step 6 - Assemble the sub-assemblies onto the reaction chamber above making sure to install the 12" rod inside pointed away from the engine. Now it's time to start on the bubbler.



(6) Finished Reactor

Step 7 - Take 10 3/4" x 1/2" copper pipe and solder a copper 1/4" NPT - 1/2" pipe adaptor on one end and a 1/2" cap on the other. Drill a 1/16" hole through the cap, turn 90 degrees and drill through again, also one up through the bottom. Take the other 1/4" NPT - 1/2" adaptor and cut off the thinwall portion to make a pipe nut and file smooth for inside the Anti-Freeze jug.



(7) Bubbler End & Pipe Nut

Step 8 - Take a 1 gallon anti-freeze jug and drill a 1/2" hole near the top of the jug and through the cap as illustrated. Assemble the parts together in the following order. (Hose, half of 3" x 1/4" nipple, 1/4" pipe connector, short 3/4" nipple, bushing, hole in jug, bushing, and pipe nut.) and (Optional - Back Pressure Hose), half of 3" x 1/4" nipple, 1/4" pipe elbow, short 3/4" nipple, bushing, hole in jug cap, bushing, and soldered pipe.)



(8) Bubbler & Hoses

Step 9 - The port adapter was formed by cleaning the intake and exhaust ports off. Then dipping a finger in the exhaust port to get some soot to rub on wide masking tape taped over the ports. This then leaves a perfect template to then tape into a 1/2" thick piece of steel, then drill the mounting and the port holes and tap the ports with a 1/2" NPT thread tap.



(9) Exhaust & Intake

Step 10- Use 1/2" tubing for 10 HP or less (* 5/8" tubing and flare fittings for 10-20 HP) with a 1/2" tubing spring bender and form a loop, then remove the spring. Slide the flare nuts on each end, and then slide the flaring tool on so that the pipe sticks out about 3/16", make the flared ends. (Air-Conditioning supply houses carry flare fittings if you have difficulty finding them.)



(10) Tubing Loop

Step 11 - Assemble all the parts onto the engine, and then add a 1" pipe support or 1 1/4" exhaust hanger. Fill the bubbler up no more than 1/4 full till you get used to using it (up to half full later), have someone steady the jug while starting the engine so it doesn't spill into the hoses. If wet fuel gets on the reaction rod it will stop running, you'll have to dry your rod and hoses out. You can hang it from the mower handle if you like later after it's started.



(11) Finished Conversion

You must point the exhaust end of the rod due North while starting the engine the first time and let it run for 30 min to "burn in the rod". The rod will self center magnetically by itself after it's running or you can weld three bumps on each end to center the rod (file them to fit snugly).

Leave the optional back pressure valve open, open the throttle and mixture valve about halfway, and start the engine by varying the air mixture valve.

Then slowly increase the throttle wide open while adjusting the air mixture valve. Make sure to paint all external pipes and connectors with High Temperature Grill Paint or they will rust very quickly. (Except copper, brass or galvanized)

Step 12 - For an installation on a generator, you can also use 90 degree elbows to keep the pipes within the cage. Mount the GEET Fuel Processor as far away as possible from the generator magnetic field so they do not interfere with each other. Also be very careful with credit cards in your pockets or video cameras, etc from getting too close to the engine while it's running so they won't be erased.



(12) 5 kW GEET Generator

Finally - Experiment with the optional Back Pressure valve to run closed loop on heavy fuels, different materials for the inner pipe and reaction rod. Different rod lengths and also threaded rods, engine side of the reactor locations for the air mixture and/or throttle valves, exhaust heated copper tubing from the bubbler to the throttle valve, 5 gallon bubblers, double bubblers for non-soluble fuels, vacuum gages, etc, etc, and also "alternative fuels".

The beauty of this design is that it can be reconfigured in minutes. We plan to set up a 900 number shortly for technical questions, no calls or technical information will be taken at the main number.

<http://worldtracker.org/media/library/Free%20Energy/WaterCarPlans/WaterCarPlan09--GEET/GEET-Fuel-Processor-Plans.htm>