



# Tri Fuel Conversion Manual

- **WARNING**

- Never use a generator inside homes, garages, crawlspaces, or other partly enclosed areas. Deadly levels of carbon monoxide can build up in these areas. Using a fan or opening windows and doors does NOT supply enough fresh air.
- ONLY use a generator outdoors and far away from open windows, doors, and vents. Make sure to direct the generator's exhaust away from these openings because they can pull in generator exhaust.
- The generator *must* be at least 20 ft away from your home.
- Before making any connections make sure you identify and eliminate all sources of ignition where natural gas may be vented, recognizing that natural gas is lighter than air and will rise. Sources of ignition include:
  - Standing pilots
  - Open flames
  - Cigarettes and other smoking products
  - Electric light switches and appliances
  - Motorized equipment and vehicles
  - Temperatures above 1,100 degrees Fahrenheit
  - Anything that may cause a spark
- Use natural gas detection equipment during all natural gas or propane connection operations to prevent natural gas from accumulating and creating a combustible or hazardous atmosphere. **DO NOT rely on your sense of smell alone to be alerted the presence of natural gas.**

# Bill of Materials

## ITEMS FROM AMAZON:



DozyAnt 12 Feet Natural Gas and Propane Gas Hose Assembly for Low Pressure Appliance -3/8" Female Pipe Thread x 3/8" Male Flare Quick Connect Disconnect

★★★★★ 55 customer reviews | 23 answered questions

Price: **\$29.99** ✓prime

Your cost could be \$19.99. Eligible customers get a \$10 bonus when reloading \$100.

1% off item with purchase of 1 items 1 Applicable Promotion



DozyAnt Propane / Natural Gas Quick Connect Kit 3/8 inch Male Pipe Thread x 3/8 inch Female Pipe Thread-100% Solid Brass Fitting

★★★★★ 55 customer reviews | 23 answered questions

Price: **\$13.99** ✓prime

100% off item with purchase of 1 items 1 Applicable Promotion

YOU WILL NEED 2 OF THESE (1 FOR THE NATURAL GAS AND 1 PROPANE)

5feet/60inch  
Parallel



SHINESTAR

SHINESTAR Propane LP Regulator and 60inch Hose for Type1 Gas Tank, BBQ Grill Replacement with 3/8" Female Flare Fitting for Most Appliance- Grill, Heater, Fire Pit and Generator, Low Pressure, CSA

★★★★★ 79 customer reviews | 11 answered questions

Price: **\$14.99** ✓prime

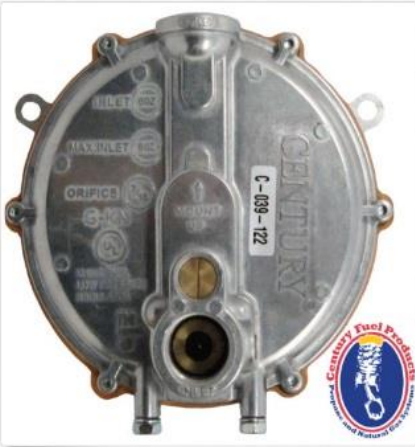
FREE One-Day Pickup. Details

Get \$70 off instantly: Pay \$0.00 upon approval for the Amazon Prime Rewards Visa Card.

2% off item with purchase of 1 items 1 Applicable Promotion

REGULATOR FOR PROPANE TANK MUST BE LOW PRESSURE  
RATED AT 11" OF WATER COLUMN (1/2 PSI)

ITEMS FROM EBAY:



C-039-122 Low Pressure Regulator (Replaces Impco Garretson 039-122)

★★★★★ 11 product ratings

Item condition: **New**

Quantity:

More than 10 available  
440 sold / See feedback



Price: **US \$49.00**

**Buy It Now**

**Add to cart**

212 watching

[Add to watch list](#)

[Add to collection](#)

100% buyer satisfaction	440 sold	More than 68% sold
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## ITEMS FROM HARDWARE STORE – GENERATOR FITTINGS:



REDUCER:

$\frac{3}{4}$ " npt OD X  $\frac{1}{2}$ " npt ID



ELBOW:

$\frac{1}{2}$ " npt



REDUCER:

$\frac{1}{2}$ " npt OD X  $\frac{3}{8}$ " npt ID



NIPPLE:

$\frac{3}{8}$ " npt





$\frac{1}{4}$ " x  $\frac{1}{4}$ " x  $\frac{1}{4}$ " T FITTING



$\frac{1}{4}$ "npt x  $\frac{3}{8}$  BARB



$\frac{3}{8}$ " X  $\frac{1}{4}$ " REDUCER



$\frac{1}{2}$ -13 X 1.5" SET  
SCREW



$\frac{1}{2}$ -13 JAM NUT



$\frac{1}{4}$ " x 1.75" machine screws (x1)

$\frac{1}{4}$ " x .5" machine screws (x8)

$\frac{1}{4}$ " X 1" machine screws (x2)

$\frac{1}{4}$ " nylon lock nuts (x4)



$\frac{1}{4}$ " npt NIPPLE

ITEMS FROM HARDWARE STORE – NATURAL GAS SUPPLY:



STEEL T – ½"



STEEL NIPPLE (QTY – 2)  
½"



FLAMABLE GAS RATED  
SAFETY VALVE – ½"



STEEL REDUCER  
½" OD X 3/8" ID





STEEL NIPPLE:  
3/8"



GAS RATED TEFLON  
TAPE

ITEMS FROM HARDWARE STORE – PROPANE SUPPLY:



FLARE FITTING:  
3/8" FLARE X 3/8" npt

## 3D PRINTED PARTS



MOUNTING BRACKET



PURGE LEVER



PURGE LEVER SPACER



MOUNTING BRACKET  
FEET



CARBURATOR GAS  
ADAPTER

# Assembly



Remove side cover from generator.



Remove nuts from carburetor air box inlet.





Separate air box inlet from carburetor.



Lightly sand each side of adapter using fine grit sand paper on flat surface.



Use needle nose pliers to remove build structure from inside orifice and then use small jewelers files to clean up inside orifice.



Use acetone on the end of a cotton swab to finish cleaning and smooth out inside of orifice.



Apply epoxy around end of tubing.



Insert tubing into adapter as shown.





Install adapter onto carburetor as shown.



Reinstall air box inlet flange onto carburetor studs.



With the limited about of threads left exposed it may be difficult to get the nuts started – if this is the case belt sand the back of the nut as to remove any lead in material from nut so that threads start immediately at nut surface.

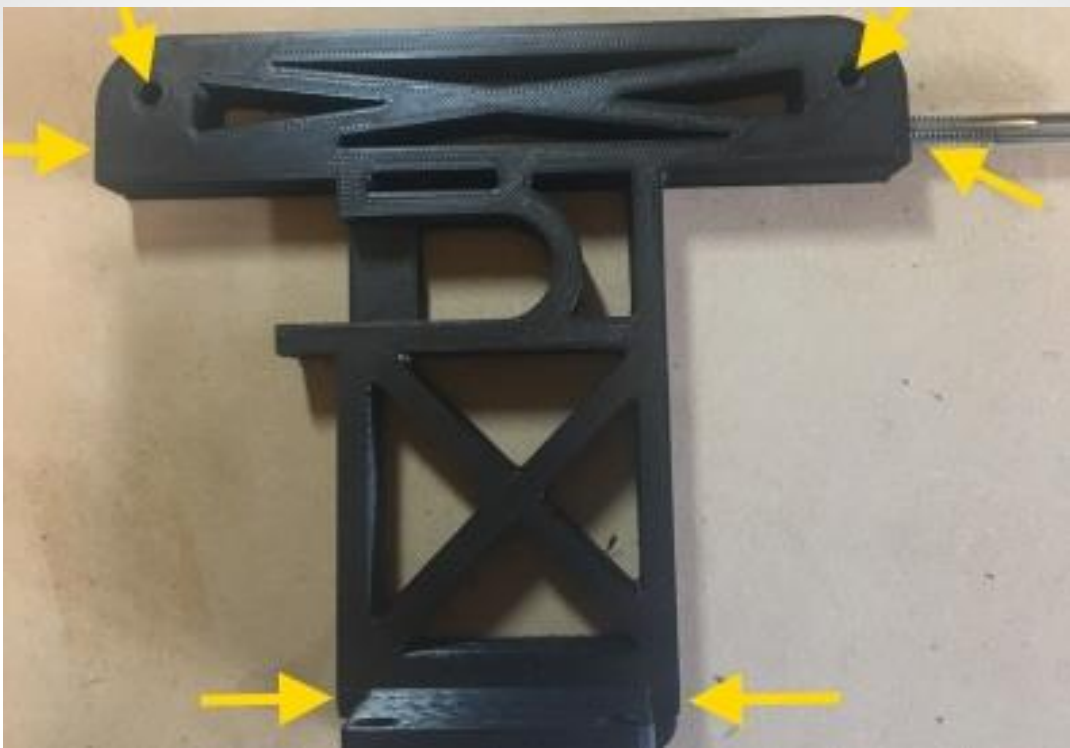


Apply Loctite to studs and reinstall nuts and tighten.





Drill  $\frac{1}{4}$ " hole in cover, run  $\frac{1}{4}$ " fuel line through the hole as shown then reinstall side cover.



Use 1/4-20 tap to thread the 6 holes indicated in mounting bracket.



Use 1/4" drill to carefully clearance the holes in lever and lever spacer.



Use belt sander to carefully grind angled flats on 4 sides of tip of the  $\frac{1}{4}$ "x1.75" long machine screw. These flats are to allow the screw to self tap or force its way into the plastic mount.



Install lever and spacer into mounting bracket with the 1.75" machine screw as shown.



Attach the 4 mounting feet to mounting bracket using  $\frac{1}{4}$ " x .5" machine screws. Hold assembly up to side of generator and individually adjust each foot so that bracket is flat to side of generator and is straight up and down.



Remove each foot one at a time, apply epoxy and then re-attach foot. Test fit assembly to side of generator to ensure each foot is correctly re-aligned – do this when epoxying each foot.



Hold bracket assembly up to generator in desired position, then mark and drill  $\frac{1}{4}$ " holes.



Use  $\frac{1}{4}$ " machine screws and nylon locknuts to secure bracket assembly to side of generator.





Use 1/2-13 bottom tap to chase threads on left side of brass T fitting. Threads will not be perfect but they will work just fine.



Make sure threads go to bottom of center port as shown.



Assemble load block valve as shown with nipple and reducer on bottom. Barb fitting on left and set screw and jam nut on top.



Install fittings and block valve as shown in photo.



Mount regulator assembly to mounting bracket as shown and connect hose to barb fitting.



Have a certified contractor install the all of the fittings from the “natural gas supply” section of the bill of materials per your local fire and building codes. (all connections must use gas approved thread sealant and be checked for leaks with soap or leak detector).

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