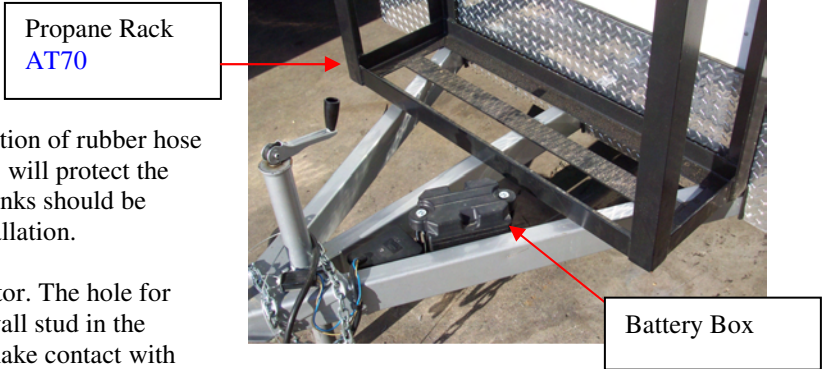


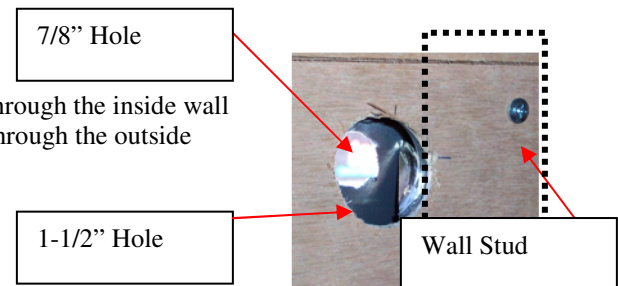
Install Propane Tanks and Regulator

- 1) Place propane tank rack (**AT70**) on trailer tongue. Center rack on tongue. Move close to trailer wall but keep a 1/2" to 1" space between the wall and the rack. Secure rack to tongue by welding or bolting. Use 4 grade 8 bolts through the rack and tongue, secured with nuts, flat washers and lock washers. (Self tapping bolts are not acceptable.) Unbolt and relocate battery box if needed to make room for the propane rack. Wires may need to be extended to relocate battery box.

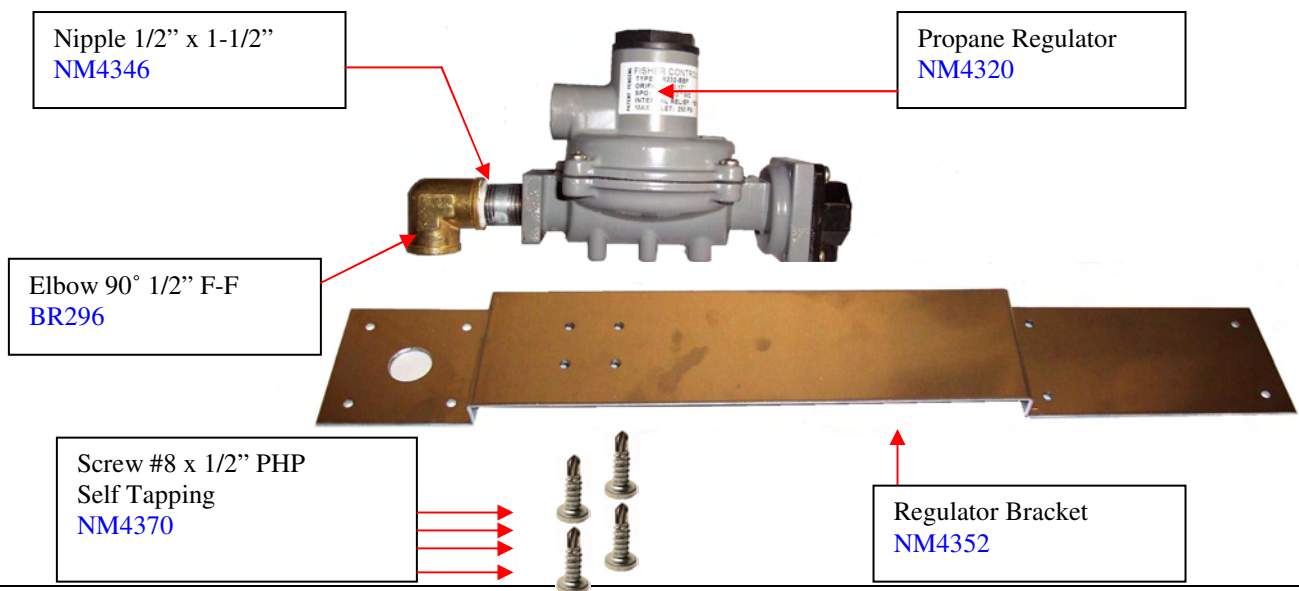


- 2) Place propane tanks into rack. Slice open a section of rubber hose and place hose over edge of retaining bar. This will protect the tanks from being scratched by the steel bar. Tanks should be filled so system can be tested to complete installation.
- 3) Select a location to mount the Propane Regulator. The hole for the bulkhead fitting must be placed next to a wall stud in the trailer wall. Make sure the regulator will not make contact with the propane tanks but is placed close enough that the tank adapter will reach and easily connect the tanks to the regulator. Inside the trailer the bulkhead adapter must be placed where it and the valve will not interfere with storage of TEX boxes, air movers or other accessories and is protected from accidental contact. Mounting bracket and regulator can be placed horizontally or vertically.

- 4) Once you have determined the proper location. Drill a 1-1/2" hole through the inside wall only. The pilot bit of the hole saw will make the center of the hole through the outside wall. Drill a 7/8" hole through the outside wall.



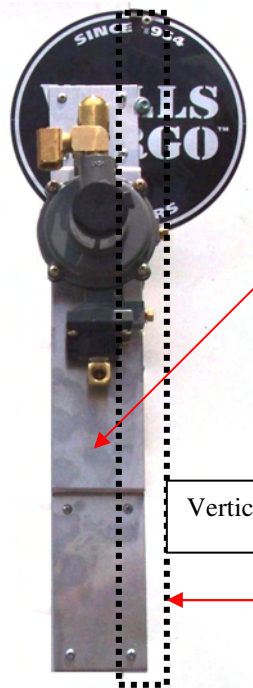
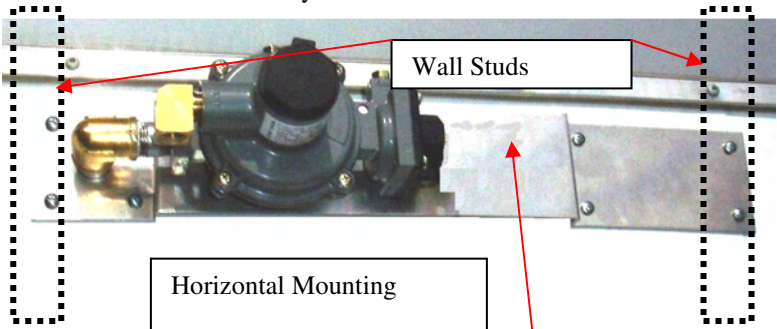
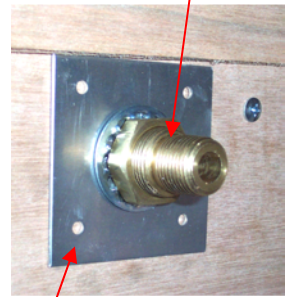
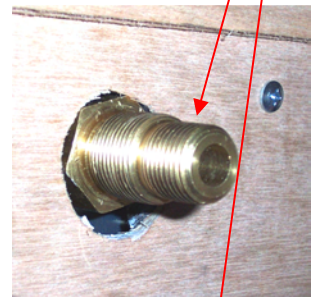
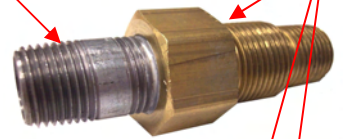
- 5) Thread a 1/2" x 1-1/2" steel nipple (**NM4346**) into the outlet of the propane regulator (**NM4320**). Connect a 90° 1/2" FPT Elbow (**BR296**) to the steel nipple. Use thread sealant on all connections. Turn elbow so it points down toward bottom of regulator.
- 6) Mount regulator to the mounting bracket (**NM4352**) with four #8 x 1/2" self tapping screws (**NM4370**). Adjust position of nipple and elbow so that opening of elbow aligns with the hole in the mounting bracket.



- 7) Thread a 1/2" x 1-1/2" steel nipple (NM4346) into the female thread end of the bulkhead fitting (NM4334). Use thread sealant on the nipple. On different trailers the wall thickness may vary and require the use of longer or shorter nipples. (1/2" x 2" – NM4348 & 1/2" x 2-1/2" – NM4350)
- 8) Align hole in mounting bracket with the 7/8" hole in the trailer wall. From the inside, through the hole in the wall, thread the steel nipple on the bulkhead fitting into the elbow on the regulator. Use thread sealant on the nipple. Tighten fitting until inside edge of bulkhead hex is flush with the inside wall. Fitting must be tightened enough to prevent leaking. Use longer or shorter nipple if needed.
- 9) Place bulkhead plate (NM4354) over bulkhead fitting, place washer on bulkhead fitting and thread nut onto bulkhead fitting. Leave nut loose for now.
- 10) Align regulator mounting bracket and secure to trailer wall with #10 x 1" self tapping screws (NM4372). Two screws on each end must be secured to wall stud. Other four screws will be into wall only.

Nipple 1/2" x 1-1/2"
NM4346

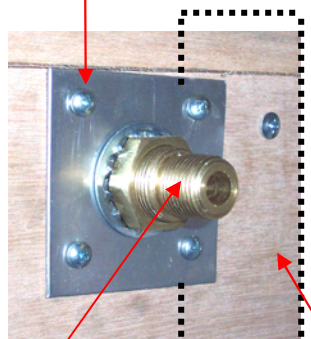
Bulkhead Fitting
NM4334



Regulator Bracket
NM4352

Bulkhead Plate
NM4354

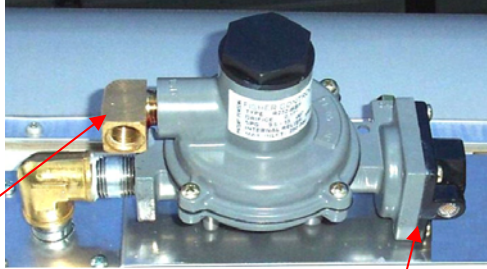
- 11) Align bulkhead plate and secure to trailer wall with #10 x 1" self tapping screws (NM4372). Two screws must be secured to wall stud. Other two screws will be into wall only.
- 12) Tighten bulkhead nut to secure bulkhead fitting to plate.



Bulkhead Fitting
NM4334

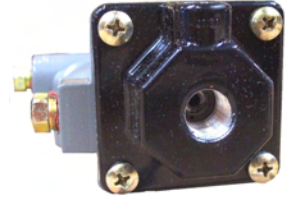
Wall Stud

- 13) Check position of vents on propane regulator. Large vent must be pointing down. If large vent is pointing up or sideways, 3/8" 90° Street Elbows (**BR284**) can be installed to direct opening down. The small vent should point down, but in a vertical mount the small vent can't be pointed down, so point it to the left side. If small vent is pointing up, against bracket or to the right, remove the four screws holding the inlet fitting on to the regulator and rotate 90° or 180° as needed to point vent down or away from bracket and replace and tighten screws.



Large vent directed down with elbow.

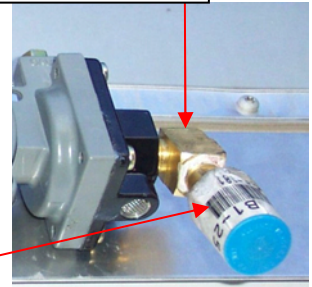
Small vent rotated to down position.



Remove four screws to rotate small vent

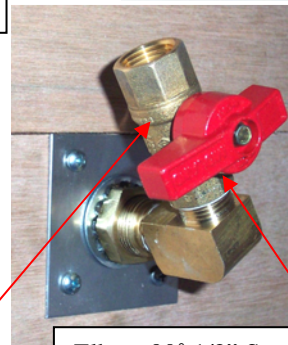
Elbow 90° 1/4" Street M-F
BR282

- 14) Thread a 90° 1/4" Street Elbow (**BR282**) or 45° 1/4" Street Elbow (**BR272**) to the inlet port of the propane regulator. Turn the elbow to point toward the propane tanks, angled as needed to best align the adapter and hose connections. Connect the Male POL connector (**PMEF-181**) to the elbow. Use thread sealant on the fittings.



Male POL Fitting
PMEF-181

- 15) Connect 90° 1/2" Street Elbow (**BR286**) to bulkhead fitting. Adjust position of elbow so that nipple of elbow points in direction which propane hose will run to TES unit. Use thread sealant on fittings.



Gas Shutoff Valve
NM4336

Elbow 90° 1/2" Street M-F
BR286

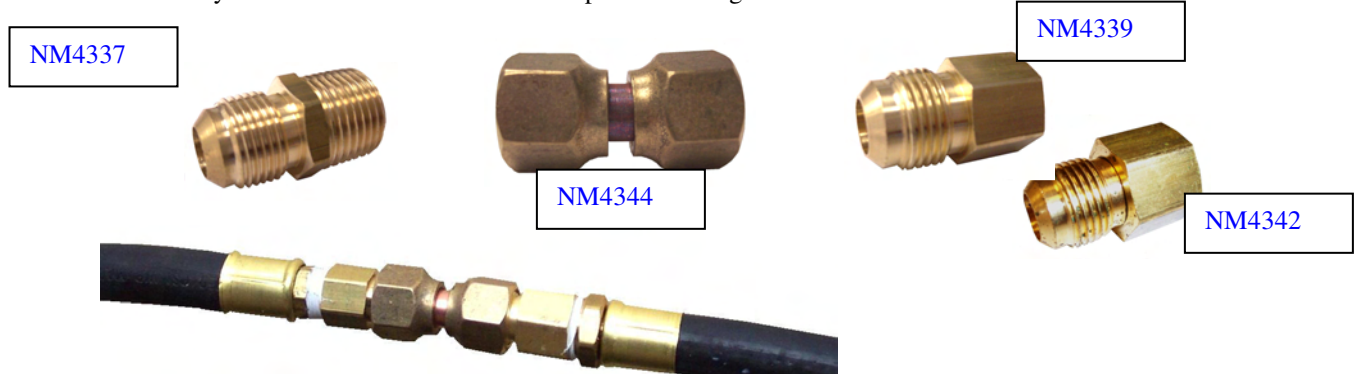
- 16) Connect gas shutoff valve (**NM4336**) to elbow. Use thread sealant on fittings.

- 17) Connect 15' propane hose (**NM4332**) to gas shutoff valve. Use thread sealant on fittings.

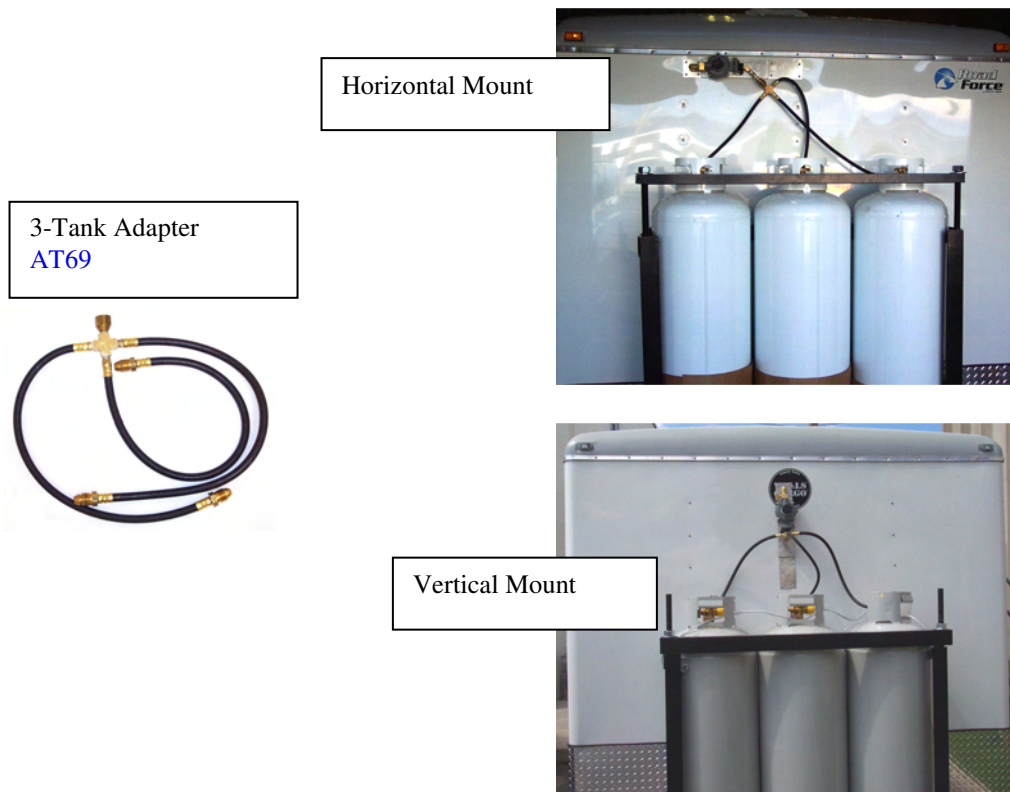
- 18) Run hose to connection point where it will be connected to 10' propane hose from TES unit. Place and secure hose in areas to protect hose from damage.



- 19) Place one 1/2" Male Flare Fitting x 3/8" FPT adapter (NM4342) onto the end of each of the propane hoses. Use thread sealant on fittings.
(If the hose has a 1/2" MPT end use a 1/2" FPT adapter NM4339.)
- 20) Connect hoses together using the 1/2" Female Flare swivel connector (NM4344). Keep hoses out of areas of traffic and at least 6" away from heater wall. Secure hose to prevent damage to hose.



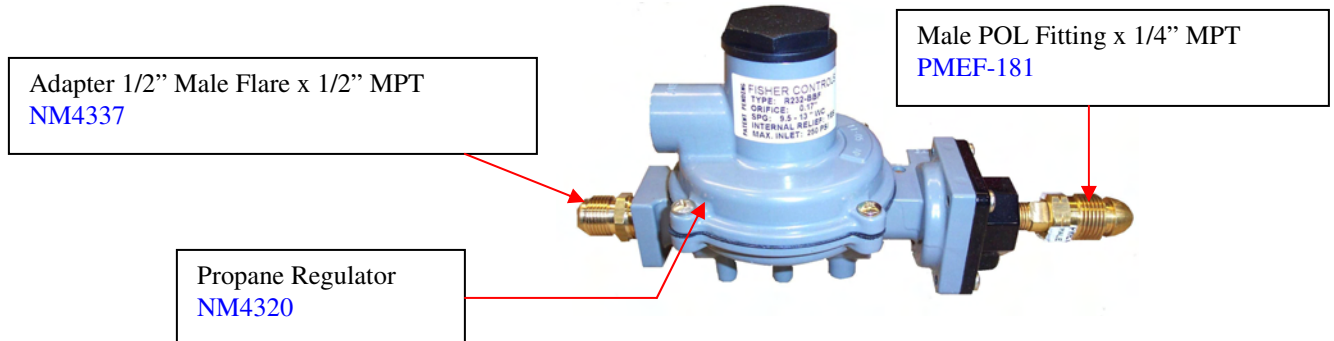
- 21) Connect 3-tank adapter (AT69) to the regulator and tanks.



- 22) Move the trailer outside before testing for propane leaks. Do not smoke and make sure there are no ignition sources in the testing area. Close the gas shutoff valve. Open the tank valves and check regulator assembly and fittings for propane leaks. If leak is detected, close tank valves and repair or replace parts as needed.
- 23) Open all trailer doors and vents. Open the gas shutoff valve and check fittings and hoses for leaks from the bulkhead fitting to the TES unit. If a leak is detected, close tank valves and repair or replace parts as needed. Close tank valves and gas shutoff valves.

Removing TES from Trailer for Portable Use

- 1) For operation of TES unit outside of the trailer, a second propane regulator (**NM4320**) is required. Install a Male POL fitting (**PMEF-181**) on the inlet port of the regulator. Install a 1/2" Male Flare Fitting x 1/2" MPT adapter (**NM4338**) into the outlet port of the propane regulator.



- 2) Close the gas shutoff valve. Close the tank valves and disconnect the tanks from the regulator. Transport the tanks to the operating location. Place the TES unit in an area close to a convenient entry point for hoses to heat exchangers. Heater must be level and in a well ventilated area. Consideration must be given to the security of the selected area in regards to theft, tampering and safety. The TES unit must be at least 10 ft. away from any door, window or gravity air inlet into any building and at least 3 ft. from any overhang.
Propane tanks must be placed in proper use position on a solid level area and secured if necessary to prevent tipping. Position the TES unit and tanks to keep tanks away from heater.
- 3) Disconnect the 1/2" Female Flare swivel connector from the 15' propane hose connected to the gas shutoff valve and connect the second regulator to the 1/2" Female Flare swivel connector and the 10' hose to the TES unit.
- 4) Loosen and remove tie down straps or turn buckles. Remove mounting frame from under TES.
- 5) Move the TES unit to the operating location and connect the second regulator to the propane tanks. Place the TES unit in an area close to a convenient entry point for hoses to heat exchangers. Heater must be level and in a well ventilated area. Consideration must be given to the security of the selected area in regards to theft, tampering and safety. Do not place TES unit where exhaust fumes can enter buildings. The TES unit must be at least 10 ft. away from any door, window or gravity air inlet into any building and at least 3 ft. from any overhang.
- 6) Proceed with normal operation setup as outlined in the Operator's Manual. Propane Fittings must be checked for leaks every time they are re-connected.