



IMPORTANT INSTALLATION INSTRUCTIONS FOR FLOW-LONGER PROPANE KITS MER470 STANDARD KIT MER471 PLUS KIT

LP-Gas demands respect and understanding if it is to be used safely. It is important to read all instructions before installing your kit. Please observe all cautions and warnings that we have given throughout these instructions. They are for your safety.

The **Flow-Longer** LP-Gas Line Tap Kit makes it possible to connect small, portable appliances, normally fueled by disposable LP-Gas cylinders, to the existing LP-Gas fuel supply of a recreational vehicle, cottage, back yard patio, etc. without interrupting the supply of regulated fuel to the system. **Flow-Longer** eliminates the need to purchase an extra LP-Gas cylinder or several small, disposable-type cylinders. The MER470 **Flow-Longer** kit includes one (ME415) brass tee and one (MER421-144) 12 foot high pressure appliance hose. The tee fitting must be installed between the vapor withdrawal valve on your LP-Gas container and the pressure regulator. This properly places the tee fitting in the high-pressure portion of the LP-Gas system. Gas connections to the tee fitting are not designed for movement or rotation after installation. Flexing, twisting, or vibration should be avoided.

The **Flow-Longer** tee contains a flow limiting feature designed to reduce the flow of gas should it detect an excess flow condition in the system. This device may activate each time you open the cylinder valve. Follow the general lighting instructions herein, to allow this flow limiting device to properly reset.

CAUTION: The **Flow-Longer** tee and associated hose assembly are intended for outdoor use only, with approved DOT cylinders or ASME tanks with a 350 psi pressure relief valve. These components must only be connected to cylinder valves supplying LP-Gas vapor. DO NOT connect to any valve delivering liquid propane. DO NOT allow cylinders to lie on their side or become physically oriented in such a manner as to allow liquid propane to be withdrawn. DO NOT attempt to transfer liquid propane through **Flow-Longer** hose or fittings to fill any LP-Gas container.

WARNING: LP-Gas is flammable, under pressure, and can freeze skin. Liquid propane introduced into the **Flow-Longer** components, or a pressure regulator would result in damage to both the regulator and the gas appliance controls. Failure to follow these instructions could result in a LP-Gas leak, which if ignited, could result in fire, explosion, severe personal injury, property damage or death.



WARNING: These products contain a chemical known to the state of California to cause cancer and birth defects or reproductive harm

INSTALLATION PROCEDURE:

- 1) Turn off all appliances connected to the existing LP-Gas system.
- 2) Close the vapor withdrawal valve at the cylinder (clockwise rotations). If your LP-Gas system is a double cylinder installation, turn both cylinders off. (See note on following page regarding double cylinder installations.)
- 3) With a 7/8 inch open end wrench, unthread the brass POL nut that connects the propane vapor withdrawal valve to the pressure regulator or pigtail hose. This is a left-hand threaded connection, so turn the brass nut clockwise to loosen.



Marshall Excelsior Co.

- 4) It will be necessary to move the existing POL fitting on your regulator away from the vapor withdrawal valve far enough to place the **Flow-Longer** tee between them. If the **Flow-Longer** is being installed on an RV's ASME tank, this may also require moving the regulator cover.
- 5) Thread the male POL fitting on the **Flow-Longer** tee, into the vapor withdrawal valve. Turn this left-hand nut counter-clockwise to tighten, but before tightening, position the fitting's top outlet port for best access. Use a 7/8 inch wrench to tighten the POL nut into the vapor withdrawal valve.
- 6) Flow Longer Tee - Thread the male POL fitting attached to the pressure regulator or pigtail hose, into the female POL fitting on the **Flow-Longer** tee. Again, turn the left-hand POL nut counter-clockwise. Two (2) wrenches are required to tighten this connection properly, but before tightening, be sure to orient your pressure regulator in its original position. It is important not to break the factory seal on the threaded inlet and outlet connections on the **Flow-Longer** tee. Use one wrench to securely hold the **Flow-Longer** female fitting while tightening the male POL nut with a second wrench. Prevent rotating the **Flow-Longer** tee while tightening this connection.

Flow Longer Plus Tee – Can follow same installation instructions as above or can be used with a standard Type I connection, by turning the plastic nut onto the male threads clockwise until hand tight. Do not use tools to make this connection.

- 7) If you installed the **Flow-Longer** tee on an RV's ASME tank, securely fasten the pressure regulator and its accompanying low-pressure outlet hose to the vehicle, to avoid possible damage or loosening due to “over the road” vibration. Depending upon the particular layout of your vehicle's LP-Gas container compartment, it may be necessary to have an LP-Gas dealer or RV service technician fabricate brackets or supporting hardware.

LEAKAGE CHECKS for the Flow-Longer tee:

After all connections are tightened securely, the installation must be checked for leaks. Make sure all gas appliances are off, and then turn the LP-Gas vapor withdrawal valve counter-clockwise to its full open position. Using an ammonia-free soap, prepare a soapy water solution and check for leakage at all the connections from the valve up to and including the low-pressure outlet of the regulator. If a leak is found at one of the POL connections, tighten it until the bubbles stop. If however, leakage is found at a pipe thread connection at the **Flow-Longer** tee, or at the pressure regulator, close the cylinder valve immediately and contact your LP-Gas dealer.

WARNING: An LP-Gas leak, if ignited, could result in fire, explosion, severe personal injury, property damage, or death. Matches, candles, or other sources of open flame must NEVER be used to test for leaks.

DOUBLE CYLINDER INSTALLATIONS:

If your double cylinder installation has an automatic changeover regulator, the indicator arrow of the changeover must point at the cylinder to which the tee is connected to assure an uninterrupted supply of gas to the tee. As long as there is gas in the cylinder to which the tee is connected, the tee will function regardless of which cylinder the arrow points to. However, if the cylinder to which the tee is connected is emptied, the automatic regulator will not allow gas to flow to the tee if the arrow points to the opposite cylinder. If the cylinder to which the tee is connected is empty and the arrow is pointed to the empty cylinder, the gas pressure to the tee will be reduced to approximately 10 to 15 psi. While this pressure is sufficient for most portable appliances, it may not be suitable for appliances having larger BTU requirements. Also, some regulators on portable appliances function differently with less than full cylinder pressure. An empty cylinder

should be filled as soon as possible to assure safe and efficient operation of appliances connected to the **Flow-Longer** tee.

If your double cylinder installation has a manual changeover regulator with a tee check in the inlet; **Flow-Longer** will not function when the cylinder to which it is connected is empty, or if the cylinder's valve is turned off.

CONNECTING HIGH-PRESSURE LP-GAS APPLIANCES:

CAUTION: Portable heaters, lanterns, stoves, and grills are for outdoor use only. Use only the Marshall Excelsior MER421-144 (12 foot) or MER421-60 (6 foot) high-pressure appliance hose. Connect only to appliances designed for high-pressure LP-Gas vapor. These appliances have a female threaded inlet that mates with small throw-away 1 lb. cylinders. This is the same inlet connection that the appliance hose threads into.

WARNING: Use of hoses other than the high-pressure appliance hoses specified may cause component failure and LP-Gas leaks, which if ignited, could result in fire, explosion, severe personal injury, property damage, or death.

- 1) Turn the portable appliance gas valve off and thread the male end of the appliance hose into the appliance connection. (standard right-hand thread.) No tools are required for this connection. Hand tighten only.
- 2) Remove the protective brass cap from the tee fitting and thread in the female end of the appliance hose. No tools are required for this connection. Hand tighten only.

LEAKAGE CHECKS for the appliance hose:

The **Flow-Longer** tee and appliance end fitting of the hose are equipped with O-Ring seals. After the appliance hose is installed, both end connections must be checked for leaks. Make sure the gas appliance is off, and then turn the LP-Gas vapor withdrawal valve counter-clockwise to its full open position. Using an ammonia-free soap, prepare a soapy water solution and check the hose connections for leakage at the appliance and the **Flow-Longer** tee. If a leak is found at either connection, an O-Ring may have been damaged. Close the cylinder valve immediately and contact your LP-Gas dealer.

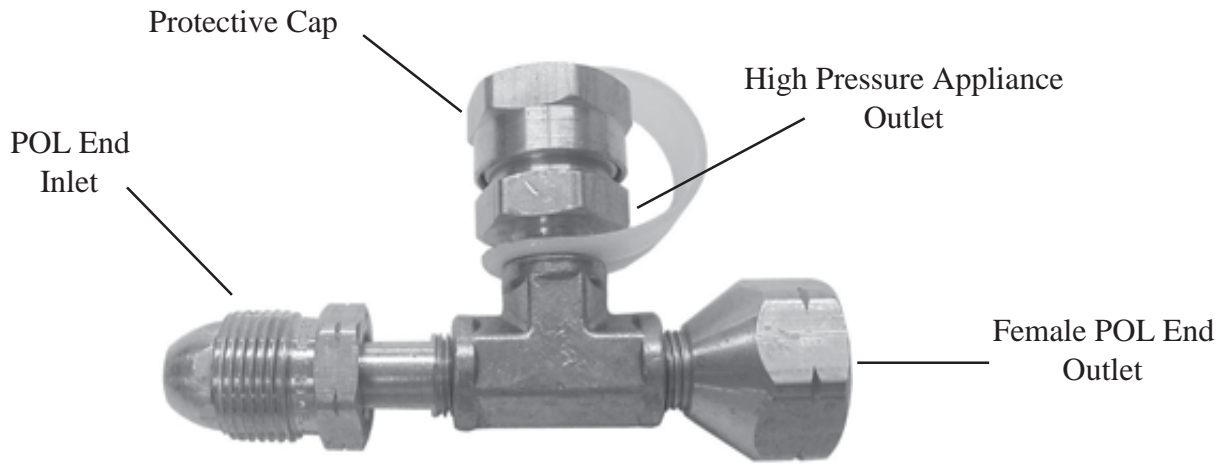
- 3) Light appliance according to the manufacturer's instructions.

TO DISCONNECT APPLIANCE HOSE:

WARNING: Make sure there are no open flames or other sources of ignition near the appliance hose while disconnecting. LP-Gas pressurized within this hose during use is flammable and if ignited, could result in fire, explosion, severe personal injury, property damage, or death.

- 1) Turn appliance off.
- 2) Unthread hose at tee fitting end, (not at appliance end) and replace the brass protective cap. Some LP-Gas will escape from this exposed end of the hose, so be sure to keep it away from flames or any source of ignition.
- 3) Disconnect hose from appliance
- 4) Coil the hose and thread the ends together for protection during storage.

Flow-Longer Tee



Flow-Longer Plus Tee

