

# How To Guide

## 2016 170 Versatile



# HOW TO: Propane System

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Your vehicle is equipped with a propane system which, when properly handled and maintained, will provide trouble and worry free operation of your propane fueled appliances.

## About Propane

Propane fuel is colourless, heavier than air and smells like garlic or rotten eggs. The odor is added by the distributor so propane may smell differently as you travel and purchase propane from various distributors. Being heavier than air it will collect in low spots and along the floor of your vehicle.

If you smell propane or your propane detector sounds, immediately get all occupants out of the vehicle through the side door. Leave door open. Once outside turn the manual shutoff valve off. Propane is heavier than air and will flow out of the side door outside. Opening windows will not help dissipate propane.

Wait for the propane to dissipate. Once the smell is gone, take the vehicle to a qualified repair facility to find and fix the problem before using the propane system again. If closing the manual shutoff valve does not stop the propane leak and you still smell propane, do not attempt to start, drive, occupy or otherwise use the vehicle in the presence of a propane smell.

## Smelling propane on the outside of the vehicle

If you smell propane outside the vehicle, especially after filling, it is quite likely that the attendant did not close the bleeder valve fully. The bleeder valve is a small brass knob used to vent gas to provide room for the liquid while filling. Check to make sure this valve is closed tightly.

## Regulatory Concerns

Many jurisdictions place restrictions on propane on highways, in tunnels, on ferries, and on bridges. Please follow all local restrictions in all the jurisdictions along your trip. Some bridges/tunnels/ferries require you to have your main tank valve closed. This valve must be closed whenever the vehicle is in motion in any case, not just in certain areas. Other bridges/tunnels/ferries ban vehicles with propane tanks entirely. Plan ahead and take an alternate route if passing through areas where vehicles with propane are prohibited.

## Propane Tank Location

The propane tank is located across the rear of the vehicle. To access the tank for filling and to turn the manual tank shutoff valve off and on, turn the two retaining tabs on either side of the access cover, located in the center of the rear bumper, and remove the access cover.

## Main Shutoff valve

The propane tank and its valves and controls is behind a door or cover. Please refer to the propane section of the manual for details. The pictures here are for illustrative purposes and may not reflect your particular model.



Propane tank cover



Propane tank main shutoff



You must close the tank shutoff valve when the vehicle is not in daily use. Further, you must close the shutoff valve when the vehicle is traveling. Never operate any propane appliance while the vehicle is in motion.

The propane tank valve operates reverse from the convention; right (clockwise) is open and left (counterclockwise) is closed.

If you close the main valve for an extended period of time it is possible for the distribution lines to fill with air. It may take a while for propane to fill the lines again. The fridge and water heater handle this automatically; for the stove you can hear the difference between propane and air. If you open the valve too quickly, especially after an extended shutoff, it is possible you will activate the slam shut valve. See below for more information.

## BBQ pigtail



High pressure BBQ pigtail, shown with yellow dustcap and valve in closed position



Propane pigtail with dustcap removed and valve in open position

The propane system has a high-pressure auxiliary BBQ takeoff. Locate the hose behind the access panel. The hose has a yellow dustcap, and an integral cutoff valve. This provides 15PSI regulated propane to appliances that have their own regulators or are built to use high-pressure propane. The auxiliary BBQ male connector is Cast Products part # 829000. The hose assembly in varying lengths is available as MB Sturgis part no. 100476.

The hose is available from your Roadtrek dealer.

## Propane Tank Filling



Propane fill valve



Propane bleed

To fill the tank, first turn off all propane appliances, then turn off the tank shutoff valve.

We recommend that you find a qualified LPG technician to fill the tank. The following is an outline of the process to help you understand and not intended to be complete, nor to substitute for formal training or instruction.

**✗** Do not attempt to fill the tank unless you have had appropriate training. Reading this HOWTO does not constitute sufficient training to safely fill propane. If you overfill the tank, propane will vent uncontrollably out of the relief valve.

Attach the fill hose to the fill valve, open the bleeder valve slightly, and fill the tank to 80% capacity. The stop-fill valve should automatically stop the filling process. You may also see liquid propane spit out of the bleeder valve. Stop filling immediately and close the bleeder valve.

We recommend that you use only propane from certified LPG retailers.

## Propane Relief Valve



Propane relief valve



Propane gauge and sender

Under no circumstances should anyone fill the tank to more than 80% capacity; doing so can cause liquid propane to flow into the regulators. If this happens the regulators will have to be replaced.

The relief valve with the blue plastic cover will automatically vent propane if the tank is overfilled or overheats. This is not a user-serviceable item; never attempt to remove the cover, test, or otherwise interfere with the operation of this valve. Sometimes an overfilled tank will not start venting until the temperature rises. If this valve should open, it is best to remove all sources of ignition and expeditiously leave the area until propane odor is no longer detectable. Venting unburned propane is a slightly more advantageous situation than a tank explosion, which is what this valve is designed to prevent.

## Propane Sender

The propane tank has a level indicator with a remote sender to the Monitor Panel. Both the three-light system on the monitor panel and the gauge on the tank will give you a rough idea of your propane level; you will get a more accurate indication when you fill up. Note the amount it takes to fill your tank. The ten gallon tank in your Roadtrek will hold eight gallons / 30.4 liters when completely empty and filled to the correct 80% full level. Subtract the amount you buy from this number, and you'll know how much was in the tank when you filled it. You may find that the gauge will read one light when you still have a considerable reserve, or you may find that empty means empty, and you'd be wise to refill as soon as it goes down to one light. It depends on the characteristics of your individual propane system.

## Slam shut valve

The propane system is equipped with a slam-shut valve. If this valve detects a sudden increase in flow (as if from a ruptured line) or a shock (as if from an accident) the valve will shut down the propane system. It will allow a small amount of propane through. If you detect minimal propane flow (ie. one burner will barely light and the second will not), and you have checked that you have propane in the tank, shut off all appliances, shut off the main valve, and wait several minutes.

Light one burner on the stove. The flame should be very low and flicker out. Close the burner valve.

Slowly turn on the propane main valve, turning the main valve in very small increments. You may hear a faint click as the slam shut valve resets. Continue to open the valve slowly, about 1/4 turn every 10 seconds, until the valve is open. Check for propane smell as you turn on the valve.

Once the valve is open, turn on the stove and try to light it. If air entered the line, it may take a short time to purge the air out of the line.

If you still have no propane at the stove, and you detect no propane smell, have a qualified technician check the system.



Propane tanks must not be placed or stored inside your vehicle. Propane tanks are equipped with safety devices which relieve excessive pressure by discharging gas to the atmosphere. The Roadtrek's propane tank is mounted outside the vehicle and will vent propane where it can dissipate; any tank inside the vehicle will vent into the passenger compartment, creating an explosive propane-air mixture inside the enclosed space, which also contains many potential sources of ignition.



To reduce the danger of fire or explosion do not store gasoline or other flammable liquids inside your vehicle. In a moving vehicle, containers get tipped over or jostled and leak, and flammable vapors will create an explosive air-vapor mixture inside your passenger compartment, which also contains many potential sources of ignition.



Purchase propane from a reputable propane facility. Contaminated propane is a common cause of system failure.



The auxiliary BBQ outlet is regulated to 15 P.S.I. If you are using an external grill with this hookup, ensure that the appliance is rated for that pressure or has its own regulator for lower pressure.