



2015

**Silverado/Sierra Bi-Fuel
(Gasoline/CNG) Supplement**



2015 Chevrolet/GMC Silverado/Sierra Bi-Fuel (Gasoline/CNG) Supplement

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This manual describes features that may or may not be on the vehicle because of optional equipment that was not purchased on the vehicle, model variants, country specifications, features/applications that may not be available in your region, or changes subsequent to the printing of this owner manual.

Refer to the purchase documentation relating to your specific vehicle to confirm the features.

This vehicle is designed to operate on gasoline or Compressed Natural Gas (CNG). It will not operate on diesel or Liquefied Petroleum Gas (LPG) fuel.

Keep this manual in the vehicle for quick reference.

Canadian Vehicle Owners

Propriétaires Canadiens

A French language manual can be obtained from your dealer, at www.helminc.com, or from:

On peut obtenir un exemplaire de ce guide en français auprès du concessionnaire ou à l'adresse suivante:

Helm, Incorporated
Attention: Customer Service
47911 Halyard Drive
Plymouth, MI 48170

Using this Supplement

This supplement contains information specific to the unique components of the vehicle. It does not explain everything you need to know about the vehicle. Read this supplement along with the owner manual to learn about the vehicle's features and controls.

Index

A good place to look for what you need is the Index in back of this supplement. It is an alphabetical list of what is in the supplement, and the page number where you will find it.

Instruments and Controls

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Warning Lights, Gauges, and Indicators

Fuel Gauge

The vehicle has a gasoline/CNG fuel gauge.



Metric



English

5-2 Instruments and Controls

When the ignition is on, the gasoline/CNG fuel gauge indicates about how much fuel is left in the tank.

When the engine is running, the fuel gauge displays the level for the type of fuel that is currently being used. The fuel level for the second fuel not being used (gasoline or CNG) is displayed in the Driver Information Center (DIC).

For CNG, the fuel gauge has been calibrated to display full at approximately 24 800 kPa (3,600 psi) and empty at approximately 2 758 kPa (400 psi).

CNG fuel gauge readings are affected by changes in fuel temperature and fuel pressure.

See “Fuel Gauge” in the owner manual.

Malfunction Indicator Lamp



The malfunction indicator lamp is in the instrument cluster.

This vehicle has been specifically designed to illuminate this indicator when emissions exceed acceptable levels while operating on either gasoline or CNG fuel.

The malfunction indicator lamp comes on to indicate that there is a problem and service is required. Malfunctions often will be indicated by the system before any problem is apparent. This system is also designed to assist the service technician in correctly diagnosing any malfunction.

Caution

If the vehicle is continually driven with this light on, the emission controls might not work as well, the vehicle fuel economy might not be as good, and the engine might not run as smoothly. This could lead to costly repairs that might not be covered by the vehicle warranty.

This light should come on as a check to show you it is working when the ignition is on and the engine is not running.

See the owner manual for more information.

CNG Malfunction Indicator



The CNG indicator light on the fuel selector switch in the center stack will show if the CNG system has an error. If the light is blinking rapidly and does not stop, an error has occurred. The light will continue to flash rapidly until the problem is corrected. See your dealer for service.

Information Displays

Driver Information Center (DIC)

The DIC displays are shown in the center of the instrument cluster in the Info app. A bi-fuel vehicle with the uplevel cluster will have the following additional DIC info pages.

DIC Info Pages

Fuel Level: While operating on CNG, the gasoline fuel level can be viewed in the DIC.

CNG Fuel Level: While operating on gasoline, the CNG fuel level can be viewed in the DIC.

Driving and Operating

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Driving Information

Vehicle Load Limits

 **Warning**

Do not remove the Compressed Natural Gas (CNG) fuel tank shield. Things carried in the bed of the truck could shift forward during a sudden stop or a collision. The CNG fuel tank could be damaged and cause a natural gas leak. If the gas is, accidentally, ignited, you or others could be seriously injured. Make sure things in the bed of the truck are properly secured.

 **Caution**

The CNG fuel tank and/or shield could be damaged if objects are stacked on or against the fuel
(Continued)

Caution (Continued)

tank shield or sit or stand on the shield. Never put anything on or against the CNG fuel tank shield.

See “Vehicle Load Limits” in the owner manual for cargo loading instructions.

Truck-Camper Loading Information

The vehicle was neither designed nor intended to carry a slide-in type camper.

 **Caution**

Adding a slide-in camper or similar equipment to the vehicle can damage it, and the repairs would not be covered by the vehicle warranty. Do not install a slide-in camper or similar equipment on the vehicle.

Starting and Operating

Starting the Engine

Always maintain a minimum gasoline level of at least one-quarter tank. To protect engine components, a switch to gasoline may occur at any time. The vehicle will not start if the engine stalls due to lack of gasoline.

Fuel

If a fuel leak is suspected, see *Fuel System Leak* on page 9-8.

- Whichever mode is selected, the vehicle always starts on gasoline. When CNG mode is selected, the vehicle will automatically transition from gas to CNG. Always keep the gasoline tank at least one-quarter full.
- It is very important not to run the gasoline tank out of fuel. The system will not switch over to CNG operation if the engine stalls while running on gasoline.
- If the vehicle runs out of CNG fuel, it will automatically switch over to gasoline operation. For normal CNG operation, fill the CNG fuel storage system until the fuel gauge or DIC fuel level indicator displays at least one-quarter full.

- If it takes unusually long to fill the CNG cylinder, the fuel fill filter may be clogged. Contact your dealer for inspection and/or replacement.

This vehicle is designed to operate on gasoline or Compressed Natural Gas (CNG) and has a gasoline tank and a CNG fuel storage system. See “Recommended Fuel” under “Fuel” in the owner manual for gasoline information.

The general marketplace fuel quality of CNG (for motor vehicles) in the state of California should be in compliance with Title 13 California Code of Regulations, Section 2292.5. The remaining regions of North America do not employ regulated fuel quality standards for general marketplace vehicle usage, however, fuel is available at both private and public filling stations. We recommend use of natural gas fuel from fueling stations designed for providing fuel for vehicle use.

The main component of CNG is methane, a highly flammable, colorless gas. An odorant has been added for detection through smell. The smell is similar to that of rotten eggs. The CNG in the vehicle is stored under high pressure (maximum 24 800 kPa/3,600 psi). Gas should never be smelled and a hissing sound should not be heard, unless refueling is being done. If gas is smelled or a hissing sound is heard at any other time, shut down the vehicle and have it serviced. It may be possible to hear the fuel flowing while the engine is running if standing close to the pipework or various fuel system components (regulator, filter). This is normal and should not be confused with a hissing sound at fittings that may indicate a fuel leak. Follow the instructions under *Fuel System Leak* on page 9-8.

Fuel Selector Switch



The fuel selector switch is on the instrument panel below the climate controls. When the ignition is in ON/RUN, press  to select between gasoline and CNG mode. The operating mode will be maintained between key cycles. The switch also includes the fuel operation indicator lamp.

The vehicle always starts on gasoline. If the fuel selector switch is in CNG mode when the vehicle is started, the vehicle will start on

gasoline and switch to CNG when conditions for CNG operation have been met. While waiting to transition, the fuel operation indicator lamp will be flashing at a rate of once per second. If the vehicle is turned off in gasoline mode, when started it will remain in gasoline mode until the fuel selector switch is pressed. At temperatures below freezing, it may take 10 to 15 minutes for the vehicle to switch from gasoline to CNG. If the button is pressed to switch to gasoline from CNG while driving, the engine will change to gasoline operation. If operating in CNG mode and the CNG tank is emptied, the vehicle will automatically switch to gasoline operation and the indicator light will flash continuously. Press  to stop the indicator light flashing. If the system transitions more than 20 times in a single key cycle, it will remain in the last mode selected.

When the vehicle is heavily loaded, such as when towing a trailer up a grade, it may be prevented from

9-4 Driving and Operating

switching to CNG. Once the high loads are no longer present, the system will switch.

Fuel Operation Indicator Lamp

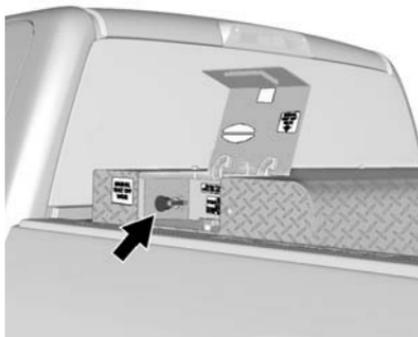
The fuel operation indicator lamp shows the current fuel mode or indicates a transition between fuels.

- Off: Vehicle is currently operating on gasoline.
- On: Vehicle is currently operating on CNG.
- Flashing Slowly (Once per Second): Vehicle is awaiting changeover to selected fuel or has started the changeover.
- Flashing Rapidly (10 Times per Second): CNG system error. See your dealer.

Filling the Tank

Warning

CNG is flammable and highly explosive. You could be killed or seriously injured if leaking natural gas is ignited. If you suspect a leak, do not start the engine or drive the vehicle. Have the vehicle immediately towed, inspected, and repaired by an authorized GM dealer.



Before filling either fuel tank, turn off the engine.

The gasoline tank is filled through the standard fill pipe. See “Filling the Tank” under “Fuel” in the owner manual.

The CNG fill valve is behind the fuel door on the driver side of the tank shield in the pickup bed.



There is an identifying blue diamond-shaped CNG label on the rear of the vehicle. Do not remove this label. This label is necessary for compliance with NFPA-52 regulations. Driving without this label may violate the laws or

regulations in some states. Replacement labels can be ordered from your dealer.

Refueling Procedure

There are two methods of refueling: fast filling or slow filling. Fast filling is normally used in fuel stations for natural gas vehicles. It takes about six to eight minutes to fill up the fuel tanks. Slow filling is done with a vehicle refueling appliance or a time-fill post provided by the fleet operator. Refueling time varies depending upon the refueling system used — consult with the refueling station attendant or system provider. Always observe all safety recommendations and operating instructions on the refueling equipment. When refueling, use a fuel fill nozzle that complies with ANSI/CSA-NGV 1-2006 standards. Nozzles are designed according to their maximum fill pressure: P30 (blue handle) for 20 684 kPa (3,000 psi) and P36 (yellow handle) for 24 800 kPa (3,600 psi).

Refuel with a yellow P36 nozzle where available. Using a blue P30 nozzle will provide a partial fill only.

During fueling, CNG needs to be delivered to the vehicle at the appropriate pressure in relationship to the ambient temperature. This can be done automatically by a temperature compensation system on the CNG fuel dispenser or manually by stopping the CNG fill at a recommended pressure. GM recommends that customers use CNG fueling stations that have a temperature compensation system whenever possible. Check with the fuel station. If one is not available, see the temperature compensation chart that follows in this section to choose the appropriate fill pressure for the ambient temperature. In addition, fill only to the pressure level for the lowest ambient temperature anticipated during fueling.

Leaving a vehicle connected to a slow fill station can cause the tank to be filled to a higher pressure than

recommended, especially when outside temperatures fluctuate. Disconnect the vehicle from the fill station as soon as it is full, unless an auto shutoff feature is used.

Warning

If CNG tanks are filled to a higher pressure than recommended and then exposed to a much higher ambient temperature environment, expansion of the gas caused by the temperature change may cause pressure relief devices on the vehicle CNG tank(s) to release gas, as designed. If an ignition source is present, this could create a risk of fire or explosion. If there is any possibility that the tank has been over pressurized, take steps to relieve the excess pressure, such as by driving or running the vehicle in an open area to remove some fuel.

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Make sure that your CNG vehicle is properly maintained and repaired to avoid elevated temperatures surrounding the tank, since elevated temperatures in the area of the tank could also raise the CNG pressure in the tank.

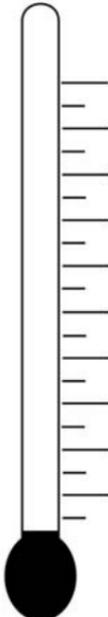
Consult materials available from NGVAmerica - <http://www.ngvc.org> and the Clean Vehicle Education Foundation - <http://www.cleanvehicle.org> on CNG fueling stations.

Ambient Temperature / Maximum CNG Fill Pressure Compensation Chart

To avoid the risk of fire or explosion if an ignition source were present, do not fill above the pressure level that corresponds to the lowest ambient temperature expected during fueling.

Service Pressure 24 800 kPa
(3,600 psig) at 21 C (70 F).

Fahrenheit	
Temperature (°F)	Pressure (psig)
130	4500*
120	4399
110	4240
100	4080
90	3920
80	3760
70	3600
60	3415
50	3230
40	3045
30	2860
20	2675
10	2490
0	2306
-10	2123
-20	1940
-30	1759
-40	1578



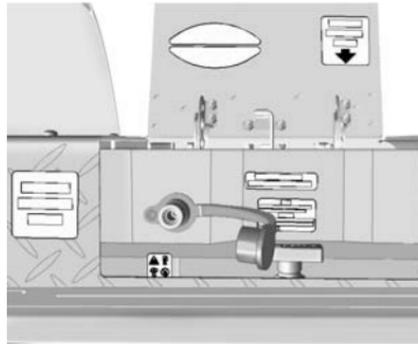
Celsius	
Temperature (°C)	Pressure (psig)
55	4500*
50	4426
40	4142
30	3857
21	3600
10	3230
0	2894
-10	2558
-20	2222
-30	1886
-40	1578

* Maximum allowable fill pressure regardless of ambient temperature

Depending on CNG fill station equipment/performance and environmental conditions, CNG fill volume will vary. This will affect overall vehicle range.

Warning

Attempting to fill a CNG fuel system that has a missing or damaged O-ring is dangerous. Natural gas can leak. If the natural gas is ignited, you or others could be injured. Replace the O-ring before filling the tank.

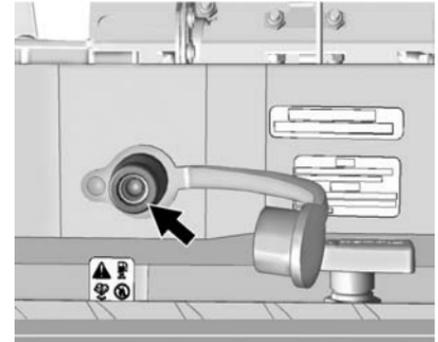


Put the vehicle into P (Park) and turn off the engine prior to refueling. Remove the dust cap from the receptacle, clean off any dirt or debris on the receptacle, and follow the refueling instructions on the pump or provided by the station operator.

Refueling will stop automatically when the tank is full. Wait for the high pressure fuel to be purged from the hose before disconnecting. See the station operator for information on how the line is purged. To disconnect the vehicle from the refueling station, remove the nozzle

from the fill valve. A hissing sound may be heard as a small amount of natural gas escapes. This is normal.

Put the fill valve dust cap on securely and close the fuel filler door.



If fuel or vapor is heard or seen leaking from the nozzle-fill valve connection, stop refueling immediately. Dirt or other debris may be preventing a positive connection. Turn off the refueling dispenser, disconnect the nozzle, and inspect the fill valve for a missing, damaged, dirty, or worn

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O-ring. Reconnect the refueling dispenser to the fill valve and begin refueling again. If it continues to leak, replace the fill valve O-ring.

To replace the fill valve O-ring:

1. Carefully remove the O-ring from the groove in the fill valve. A small flat-blade or pointed tool can be used.
2. Make sure the groove is clean and free of dirt and debris.
3. Install the new O-ring in the groove in the fill valve. Make sure the O-ring is properly seated in the groove.

If it continues to leak after you have replaced the O-ring, have an authorized dealer inspect the sealing O-ring in the fill valve.

If dirt or other debris is adhering to the inside of the fuel fill valve, gas may leak out after refueling. If you need to add more fuel, do the refueling procedure again.

See an authorized GM dealer for replacement O-rings.

Pressure Relief Devices

The CNG tank has pressure relief devices that are designed to release pressure if the CNG tank is overheated or over pressurized.

If a pressure relief device releases CNG, the CNG tank will be emptied and will switch to gasoline, if gasoline is available. A loud rushing noise may be heard when CNG is released.

Fuel System Leak

Warning

Fuel vapors and fuel fires burn violently and can cause injury or death.

- Keep all smoking materials and sources of ignition away from the fuel system components.

(Continued)

Warning (Continued)

- CNG is non-toxic but the vapors are lighter than air and can cause oxygen depletion if they are enclosed in a confined space. Make sure there is adequate ventilation and use extreme caution if a leak is suspected.

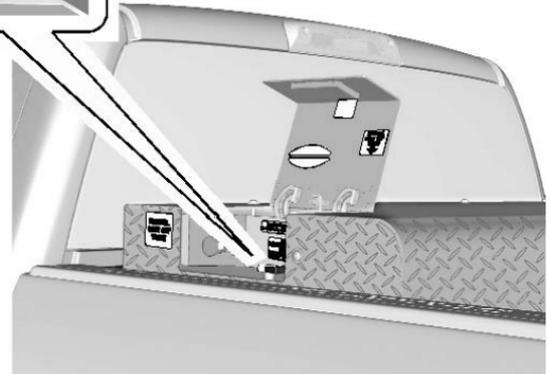
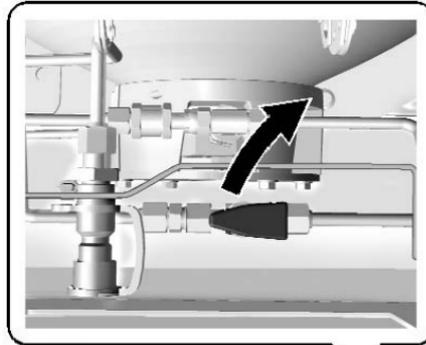
Warning

If you smell a persistent natural gas odor or hear a continual hissing sound, there could be a natural gas leak. If the natural gas is ignited, you or others could be injured. Do not start the engine or drive the vehicle. Have the vehicle towed to an authorized GM dealer for service.

A slight natural gas odor may be detected for a few moments after refueling. This is normal. You should not be able to smell natural gas at any other time. If you do, or if you hear a hissing sound, the fuel system may have a leak.

If natural gas is smelled or a hissing sound is heard:

1. Park the vehicle in a well-ventilated area and apply the parking brake. Keep heat, sparks, and flame away. Open all the vehicle doors for ventilation.
2. Turn the ignition to LOCK/OFF.



3. The manual shutoff is near the fuel fill valve on the driver side of the tank shield in the pickup bed.

A label is on the outside of the vehicle near the manual shutoff valve. Do not remove this label.

Turn the lever one-quarter turn clockwise to turn off.

Do not drive the vehicle. The vehicle should be towed to an authorized GM dealer.

Do not add anything to the vehicle that will cover the CNG fuel storage system or restrict access to the manual shutoff valve. See *Accessories and Modifications on page 10-1*.

Towing

Trailer Towing

For more information, see “Trailer Towing” in the owner manual.

Weight of the Trailer

How heavy can a trailer safely be?

It depends on how the rig is used. For example, speed, altitude, road grades, outside temperature, and how much the vehicle is used to pull a trailer are all important. It can depend on any special equipment on the vehicle, and the amount of tongue weight the vehicle can carry.

Maximum trailer weight is calculated assuming only the driver is in the tow vehicle and it has all the required trailering equipment. The weight of additional optional equipment, passengers, and cargo in the tow vehicle must be subtracted from the maximum trailer weight.

Use the following charts to determine how much the vehicle can weigh, based upon the vehicle model and options.

Vehicle	Axle Ratio	Maximum Trailer Weight	GCWR*
2500 Series 2WD Regular Cab			
Long Box	3.73	4 355 kg (9,600 lb)	7 258 kg (16,000 lb)
Long Box with UB7	3.73	4 309 kg (9,500 lb)	7 258 kg (16,000 lb)
Long Box	4.10	5 897 kg (13,000 lb)	9 299 kg (20,500 lb)
2500 Series 2WD Double Cab			
Standard Box	3.73	4 218 kg (9,300 lb)	7 258 kg (16,000 lb)
Standard Box	4.10	5 897 kg (13,000 lb)	9 299 kg (20,500 lb)
Long Box	3.73	4 173 kg (9,200 lb)	7 258 kg (16,000 lb)
Long Box	4.10	5 897 kg (13,000 lb)	9 299 kg (20,500 lb)
2500 Series 2WD Crew Cab			
Standard Box	3.73	4 128 kg (9,100 lb)	7 258 kg (16,000 lb)
Standard Box	4.10	5 897 kg (13,000 lb)	9 299 kg (20,500 lb)
Long Box	3.73	4 082 kg (9,000 lb)	7 258 kg (16,000 lb)
Long Box	4.10	5 897 kg (13,000 lb)	9 299 kg (20,500 lb)

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Vehicle	Axle Ratio	Maximum Trailer Weight	GCWR*
2500 Series 4WD Regular Cab			
Long Box	3.73	4 218 kg (9,300 lb)	7 258 kg (16,000 lb)
Long Box	4.10	5 897 kg (13,000 lb)	9 299 kg (20,500 lb)
2500 Series 4WD Double Cab			
Standard Box	3.73	4 128 kg (9,100 lb)	7 258 kg (16,000 lb)
Standard Box	4.10	5 897 kg (13,000 lb)	9 299 kg (20,500 lb)
Long Box	3.73	4 037 kg (8,900 lb)	7 258 kg (16,000 lb)
Long Box	4.10	5 897 kg (13,000 lb)	9 299 kg (20,500 lb)
2500 Series 4WD Crew Cab			
Standard Box	3.73	3 992 kg (8,800 lb)	7 258 kg (16,000 lb)
Standard Box	4.10	5 897 kg (13,000 lb)	9 299 kg (20,500 lb)
Long Box	3.73	3 946 kg (8,700 lb)	7 258 kg (16,000 lb)
Long Box	4.10	5 897 kg (13,000 lb)	9 299 kg (20,500 lb)

Vehicle	Axle Ratio	Maximum Trailer Weight	GCWR*
3500 Series 2WD Regular Cab			
Long Box	3.73	4 264 kg (9,400 lb)	7 258 kg (16,000 lb)
Long Box	4.10	5 897 kg (13,000 lb)	9 299 kg (20,500 lb)
3500 Series 2WD Double Cab			
Long Box	3.73	4 128 kg (9,100 lb)	7 258 kg (16,000 lb)
Long Box	4.10	5 897 kg (13,000 lb)	9 299 kg (20,500 lb)
3500 Series 2WD Crew Cab			
Standard Box	3.73	4 082 kg (9,000 lb)	7 258 kg (16,000 lb)
Standard Box	4.10	5 897 kg (13,000 lb)	9 299 kg (20,500 lb)
Long Box	3.73	4 037 kg (8,900 lb)	7 258 kg (16,000 lb)
Long Box	4.10	5 897 kg (13,000 lb)	9 299 kg (20,500 lb)
3500 Series 4WD Regular Cab			
Long Box	3.73	4 128 kg (9,100 lb)	7 258 kg (16,000 lb)
Long Box	4.10	5 897 kg (13,000 lb)	9 299 kg (20,500 lb)

9-14 Driving and Operating

Vehicle	Axle Ratio	Maximum Trailer Weight	GCWR*
3500 Series 4WD Double Cab			
Long Box	3.73	3 992 kg (8,800 lb)	7 258 kg (16,000 lb)
Long Box	4.10	5 897 kg (13,000 lb)	9 299 kg (20,500 lb)
3500 Series 4WD Crew Cab			
Standard Box	3.73	3 946 kg (8,700 lb)	7 258 kg (16,000 lb)
Standard Box	4.10	5 897 kg (13,000 lb)	9 299 kg (20,500 lb)
Long Box	3.73	3 856 kg (8,500 lb)	7 258 kg (16,000 lb)
Long Box	4.10	5 897 kg (13,000 lb)	9 299 kg (20,500 lb)
*The Gross Combination Weight Rating (GCWR) is the total allowable weight of the completely loaded vehicle and trailer including any passengers, cargo, equipment, and conversions. The GCWR for the vehicle should not be exceeded.			

Vehicle Care

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General Information

Accessories and Modifications

Warning

Installing an aftermarket accessory may damage the vehicle. Never install an accessory that will restrict or prohibit access to the manual shutoff valve or the CNG fuel storage system. Never install any type of cover over the CNG fuel storage system that may trap CNG fumes.

Adding accessories or making modifications to the vehicle, including to the CNG tank shields, could cause a malfunction or damage and would not be covered by the vehicle warranty.

Warning

To avoid damage to any fuel tanks and reduce the risk of explosion, tank shields must be present. Do not drill, modify, attach accessories, or use shields as a work surface. Do not use fire near shields or tanks.

If a CNG tank needs service or repair, have only a qualified technician perform the work. See "Accessories and Modifications" in the owner manual.

Vehicle Checks

Doing Your Own Service Work

 **Warning**

Never try to do your own service work on the Compressed Natural Gas (CNG) fuel system. The CNG fuel system operates under high pressure. You can be injured and the vehicle can be damaged if you try to do your own service work. Service and repair of this system should only be performed by a qualified dealer.

Fuel System Components

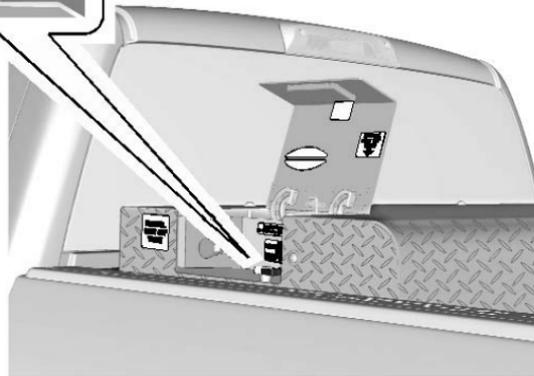
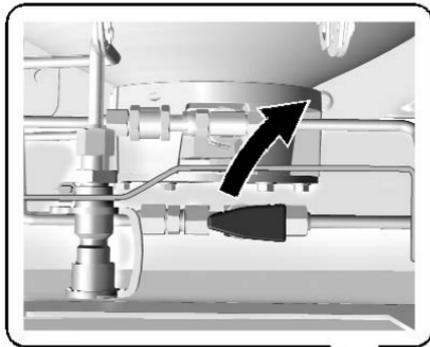
 **Warning**

Tampering with, or improperly maintaining the high-pressure fuel system can cause a dangerous condition in which serious injury or death may result. Never attempt to modify the fuel system, and always have the fuel system repaired and maintained by a qualified dealer.

CNG fuel system components comply with appropriate safety standards. These component parts have been designed and approved for use in a CNG vehicle. Never modify or replace any original CNG components or parts with those specified for a gasoline-powered vehicle. Improper parts or components can damage the vehicle fuel system and affect the vehicle safety and performance.

Do not modify, tamper with, or perforate the tank shield. Damage to the fuel system can result.

Manual Shutoff Valve



Locate the manual shutoff valve so that it can be found quickly if it is needed.

The manual shutoff valve is near the fuel fill valve on the driver side of the tank shield in the pickup bed.

A label is on the outside of the vehicle near the manual shutoff valve. Do not remove this label.

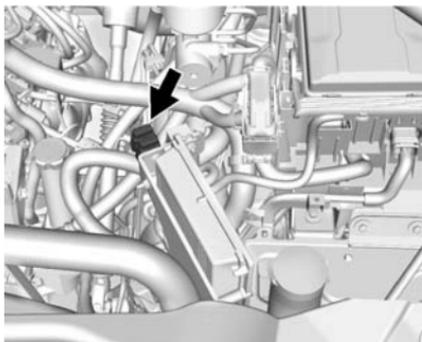
To turn off the valve, turn the lever one-quarter turn clockwise. Turn it counterclockwise to turn the valve back on.

Turn off the valve if a fuel leak is suspected or the vehicle is involved in an accident. This valve, when turned, will stop CNG flow to the engine. If the vehicle has just been in storage and it will not switch over to CNG operation, verify that the valve is turned to the on position.

Electrical System

Fuses

Fuse Location



The bi-fuel system has two fuses that are part of the engine compartment wiring harness. Both fuses are in a plastic holder that is mounted inside the engine compartment, near the accessory battery tray.

Jump Starting

Warning

If the CNG fuel system has a leak, a spark from the jumper cables could ignite the natural gas, causing injury or death. Do not jump start the vehicle if you smell a persistent natural gas odor or hear a continual hissing sound. Close the manual shutoff valve, and have the vehicle towed to an authorized GM dealer for service. See *Fuel System Components* on page 10-2.

See “Jump Starting” in the owner manual.

Appearance Care

Exterior Care

Finish Damage

Warning

Heating the vehicle to above 82°C (180°F) may damage the Compressed Natural Gas (CNG) tanks and may cause the fuel pressure relief device to open and release CNG. If an ignition source is present, this could create a risk of fire or explosion.

CNG tank(s) must be drained by a qualified technician prior to heat curing a painted body repair.

Service and Maintenance

Maintenance Schedule

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Natural Gas Vehicle (CNG)
Service Records 11-3

Maintenance Schedule

 **Warning**

The tank shield protects the fuel tank in a crash and from road hazards. Operation with the shield removed may result in tank damage that could result in a rupture or possible explosion of the tank. You or others could be injured or even killed. If you must remove a tank shield for any reason, e.g., tank inspection or vehicle repair, always reinstall the shield before operating the vehicle.

 **Warning**

Keeping a CNG fuel tank in service after the tank service expiration date is dangerous and is prohibited by federal law. The tank may no longer withstand the CNG fuel system operating pressure. You could be severely injured or killed. Take the vehicle to an authorized GM dealer to have the tank replaced.

See instructions on fuel container for inspection and service life.

11-2 Service and Maintenance

This CNG vehicle is designed for routine maintenance (fluids, filters, etc.) according to the original specifications as provided in the owner manual for gasoline fuel vehicles. See the owner manual for maintenance service intervals and fluid specifications.

See your dealer or other qualified repair facility for required service and maintenance. Your dealer has the necessary training and parts to repair the vehicle.

In addition, the CNG system requires the following every 60 000 km (36,000 mi) or 36 months, whichever occurs first:

- Visual inspection of the CNG fuel tanks by a CSA International-certified inspector or authorized GM dealer. For more information, see your dealer or visit:

<http://www.csa-international.org>

Have the CNG fuel system and tanks inspected if the vehicle has been involved in a collision or fire. The fuel tanks must be replaced 15 years after manufacture. The expiration date of the fuel tanks is on a label on the fuel tanks. Have an authorized GM dealer replace the fuel tanks. Do not reuse old fuel tanks.

- Replacement of the high pressure CNG filter. See your dealer.

Maintenance Records

Natural Gas Vehicle (CNG) Service Records

Vehicle Identification Number (VIN)

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

CNG Tank Information

Size	Capacity*	Serial #	Exp. Date
533 mm x 1 327 mm (21 in x 52 in)	210 L (55.5 gal)		
* Total Container Water Volume			

11-4 Service and Maintenance

CNG Fuel Tank Inspection Record

Tank Serial Number:			Tank Expiration Date:	
Inspection Interval (Mileage or Years)	Inspection Date	Inspector	Inspector Initials	Type of Repair
15 Years	N/A	N/A	N/A	Tank Exchanged

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Vehicle Data

Capacities and Specifications

Application	Total Capacities	
	Canada 200 Bar @ 15°C	U.S. 3,600 psi @ 70°F
CNG Fuel Tank Capacity ¹	15.3 GGE	17.6 GGE
¹ GGE (Gasoline Gallon Equivalent)		

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