



Advice to Owners of CNG Vehicles after Accidents

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CNG fuel systems must meet the same safety requirements as conventional fuel systems, but people are more aware of how a conventional vehicle should be treated after an accident. This bulletin explains how to be prepared in case of an accident with a CNG vehicle and what steps should be once an accident occurs.

1. What you should know and do beforehand?

The major difference between CNG and conventional gasoline or diesel vehicles is that the fuel is stored as a gas at high pressure in specially certified tanks or cylinders. Cylinders are typically made from high-strength steel or carbon fiber composite. Part of an owner's or driver's responsibility is to know about any special safety measures recommended by the manufacturer. Be sure to read the safety section of the owner's manual and ask the seller to explain anything that you feel uncertain about. If your vehicle was converted to CNG, the converter should provide safety information and answer your questions. CVEF can also provide assistance (www.cleanvehicle.org).

You should know a qualified CNG service facility. Safe servicing of CNG fuel systems requires special training and special tools. A CNG vehicle dealer or other service facility, employing ASE certified CNG technicians, will have the necessary expertise to service your CNG vehicle, including any service after an accident. The high pressure gas stored in CNG vehicles makes do-it-yourself an unsafe service practice. There have been serious injuries and fatalities when untrained people attempted to remove parts of the CNG system.

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As noted on the federal label on the cylinder, a CNG cylinder should be inspected every 36 months or 36,000 miles -- or after an accident or fire. CNG cylinders are designed to be extremely and durable in order to contain very high-pressure gas, but can be damaged in an accident. As mentioned, special training is necessary to determine whether visible damage has made the cylinder unsafe. A qualified service facility, employing certified inspectors, can perform this evaluation.

2. After an Accident:

Was it an “accident”? Three different types of accident damage are considered here: collisions; chemical spills; and fires. A single accident may involve all three types of damage. Running over an obstruction, such as a curb, or debris in the road can damage cylinders that are located below the vehicle and should be considered an accident.

Call a Fireman? Is there an odor of natural gas? If there is, there is likely a leak in the fuel system and fire fighters should be summoned. Just as if gasoline were spilled.

Make sure responders know it’s a CNG vehicle? Always notify any emergency first responders that the vehicle is powered by CNG. Firefighters have been trained in the different techniques necessary with alternative fuel vehicles, but may not notice the CNG diamond label on the rear of the vehicle. Make sure to share what you know in order to keep them safe.



Could the CNG system be damaged? Important questions to ask yourself are:

1. Did the collision damage the bodywork or chassis close to the CNG cylinders?
2. Is there damage to the cylinder covers?
3. Is there damage near the fuel lines?
4. Is there any evidence of fire damage near the cylinders? Cylinders are equipped with special heat-activated relief devices that will empty the cylinder in a severe fire, but each cylinder has its own relief devices not all cylinders may have been vented.
5. Did the accident involve damaging a battery near the cylinders (whether the battery is in the CNG vehicle or in the colliding vehicle)? Battery acid can damage cylinders.
6. Must the vehicle be towed?

If any of these conditions are present the vehicle should be transported to a qualified CNG service facility without delay for inspection and so the fuel can be safely remove. It is not safe to store a damaged vehicle with possibly damaged cylinders or fuel lines until the fuel has been removed. **DO NOT TRY TO VENT THE FUEL YOURSELF** since special procedures and equipment are required. If the vehicle has an accessible manual fuel shutoff **AND YOU ARE TRAINED TO USE IT**, shut off the fuel supply from the cylinders to the rest of the CNG system. This will prevent any significant leakage

of fuel if the downstream piping is damaged. This shutoff valve will not make a damaged cylinder safe so do not delay in having the cylinder inspected.

Why use a qualified NGV service facility? Always use a qualified CNG service facility. There are a number of special safety and operating features in CNG fuel systems that require special training and special tools in order to remove the fuel and perform service. Do not attempt to remove the fuel yourself because you may cause a more serious accident or may only think the fuel has completely been removed when it is really still in the cylinder. A qualified service facility may be able to determine that the cylinders and piping are not damaged without removing the fuel. Collision insurance typically will pay for these necessary post-collision services and repairs, but a deductible may apply.

Tell the service technician of anything unique Always tell the service facility about any possible chemical spills on a cylinder. Damage from harmful chemicals may not be apparent during a general inspection, so special procedures are necessary if the accident involved chemicals..