

CNG Level Gauges



Henry CNG Level Gauge Kit



The Dashboard LED Indicator Not Included
LED indicator

Features

Henry CNG level gauges are suitable for all kinds of converted CNG fuel automobiles. The gauge can be mounted on a valve manifold connecting from CNG cylinder to engine. It signals out the pressure of the CNG cylinder and converts the pressure into an indication of CNG level in the cylinder, so that the driver knows when the car shall be refilled.

Technical Specifications



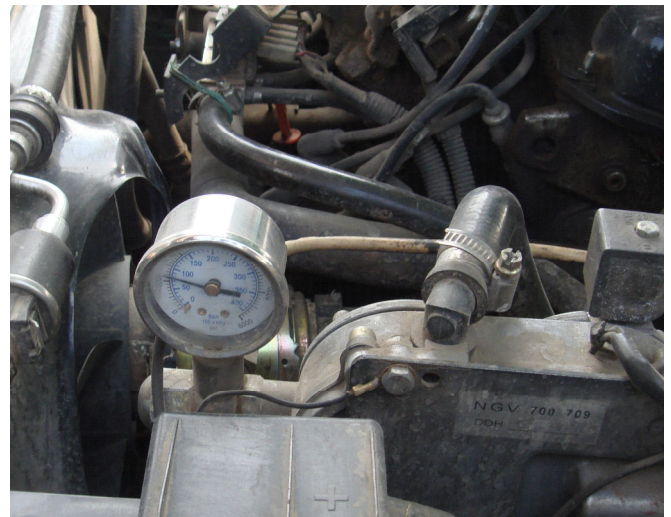
The CNG system in a dual fuel car



The CNG cylinder in the trunk



The LED dashboard display of CNG level



Henry CNG level gauge mounted in engine compartment

Other Henry Products:

Hand Pumps ranging from -1 to 600 bar

Electronic Pressure Calibrators with accuracy 0.02% FS and 0.05% IR. **Dead weight testers** of primary or transferring standards for pressure from -1 to 5000 bar with accuracy up to 0.005% IR.

Your Local Distributor:



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**Background Information:
Conversion of an Automobile into
CNG Powered**

Basic components of a CNG vehicle

1. Filler valve

The valve is used to fill the vehicle's pressure tank with natural gas at CNG fuel stations. The filler valve can be located in the engine compartment (the usual solution for converted automobiles), near the gas tank inlet, or separately in a different place. There are two filling methods - the "Italian" system (used chiefly in Italy) and the NGV 1 system (used in other European countries).

2. Pressure tank + multi-valve

Most tanks for pressurized natural gas have a volume of 70-100 liters and are fitted with a multi-valve for safe and reliable operation. The multi-valve functions as an operating device, which closes the pressure tank when the ignition is turned off and controls the amount of gas flowing from the vessel, and as a safety mechanism, which automatically shuts off gas flow if the piping system is damaged (pressure falls) and releases gas from the vessel if the pressure exceeds a certain value or if a heat sensor detects a fire. Pressure tanks are usually made of steel, but an increasing number of lightweight tanks made from aluminum or composite materials, as strong as steel but weighing up to three times less, have recently appeared on the market. While most converted cars have a CNG tank installed in the trunk, vehicles designed for the use of natural gas have a pressure tank below the chassis or in another suitable location. Most buses have CNG bottles in the luggage compartment or on the roof (low-profile buses).

3. Connecting high-pressure pipe

During the filling process, the pipe brings natural gas from the filling valve to the pressurized vessel. Conversely, while the vehicle is in the natural gas mode, the pipe delivers gas from the bottle to the regulator.

4. Pressure gauge (optional)

The pressure gauge shows the pressure in the high-pressure section of the gas system (pressure tank, connecting pipe).

5. Gas pressure regulator

The regulator reduces the high pressure of gas to the desired level. It includes a closing valve. The regulator is located in the engine compartment, where it is connected to the internal cooling circuit from which it takes heat.

Vehicles with direct gas injection feature:

6. Electronic injectors

Injectors are devices that control the injection of gas into the intake manifolds of individual cylinders. They work sequentially, which means that natural gas is injected separately to each cylinder.

7. Injection rail

The injection rail is part of the injectors and brings natural gas from the pressure regulator to individual injectors.

Vehicles with central gas mixing feature

6. Stepper

Based on signals sent by the control unit, the stepper continually adjusts the quantity of gas entering the mixing system to ensure optimal power, fuel consumption, and emissions.

7. Mixer

The mixer mixes the fuel (natural gas) with air to create an explosive mixture. It has the same function as a carburetor or a fuel injection system in vehicles powered by gasoline.

8. Electronic control unit

The unit ensures correct operation of a vehicle powered by natural gas by working together with the gasoline control unit and supplying natural gas according to operating modes and signals sent from the engine.

9. CNG/gasoline switch & fuel gauge

The switch and the fuel gauge are located on the dashboard in front of the driver; in mass produced CNG vehicles, they are incorporated into the dashboard. By switching from gasoline to natural gas, the supply of gasoline is stopped, and the gas intake from the regulator is opened. Gas regulation starts depending on information sent by the lambda sensor and the natural gas fuel gauge is activated.

10. Catalytic converter and lambda sensor

The lambda sensor analyzes the composition of exhaust fumes and sends information to the electronic control unit, which adjusts the supply of natural gas.

Your Local Distributor:

