

CNG TO H2



HONDA'S NATURAL GAS CIVIC GX

CLEAN-RUNNING AND PAVING THE WAY TO HYDROGEN



Little distinguishes this as a CNG vehicle.



The GX uses a 1.7-liter natural gas engine.

Just over seven years ago, Honda began mass production of the compressed natural gas (CNG) Civic GX, right alongside the conventionally-powered Civics being manufactured at Honda's East Liberty, Ohio plant. This was a first and a milestone for the auto industry, as well as Honda. It proved that clean, alternative fuel vehicles could be built in conventional ways, at affordable cost, by skilled assemblers working on gasoline vehicles one moment and gaseous fuel vehicles the next. It remains a testament to Honda assembly line flexibility.

The Civic GX was a hit. And why wouldn't it be? It's a popular sedan, powered by a familiar powerplant, achieving the lowest emissions of any internal combustion engine vehicle...*ever*. So why haven't you heard much about the Civic GX over the years? It's because sales have been aimed exclusively at fleets, whose centralized operations have allowed overcoming the challenges of a limited CNG fueling network. But that's about to change.

CLEAN BURNING GASEOUS FUEL

The natural gas that powers the Civic GX is an exceptional fuel. This same gaseous fuel is used extensively at powerplants to generate electricity and in homes for heating and cooking...for much the same reasons. It is very efficient and burns quite cleanly. In fact, natural gas combusts so efficiently in this Civic's 1.7-liter four-cylinder engine that this model is distinguished by the American Council for an Energy Efficient Economy as the "Greenest Car of 2005," topping the rankings in ACEEE's latest *Green Book Online*. The Civic GX is also certified by the state of California as an AT-PZEV (Advanced Technology – Partial

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Zero Emission Vehicle). Plus, the U.S. Environmental Protection Agency has described the Civic GX as “the cleanest internal combustion engine ever tested” by the agency. In 2005, Honda is the only manufacturer to offer a natural gas powered sedan on a light-duty platform. The Civic GX is also a dedicated natural gas vehicle, which means it’s designed to operate exclusively on this clean-burning alternative fuel.

Honda’s Civic GX uses advanced technologies to efficiently run on compressed natural gas. These include multi-point gaseous fuel injectors and a higher 12.5:1 compression ratio, which enabled the first GX to produce 110 horsepower – four more horsepower than the standard gasoline Civic model. Now equipped with Honda’s continuously variable transmission (CVT), the GX achieves EPA estimated fuel economy of 28 mpg in the city and 34 on the highway. Natural gas is stored in a special composite fuel cylinder at 3600 pounds per square inch (psi). This tank carries a volume of compressed natural gas equivalent to the energy of eight gallons of gasoline, providing a real-world driving range of about 220 miles.

While the comfortable and capable Civic GX offers responsive acceleration and a driving experience that’s indiscernible from gasoline-fueled Civic models, there is one difference worth noting. Because it runs on clean-burning natural gas, California allows the Civic GX to be driven in carpool lanes with just a single occupant. Other states are enacting similar legislation.

REFUELING AT HOME

Now, everyday drivers can benefit from this environmentally-positive sedan. What’s changed? The initial debut of Honda’s Civic GX for consumer sales in California and a phased roll-out to other states, plus the introduction of Phill, an affordable home refueling appliance that enables Civic GX owners to refuel in their own garage.

Developed with partner FuelMaker, Phill takes the low pressure natural gas available at most homes and compresses it to the higher pressure needed to fill this Civic’s CNG tank, allowing the Civic GX to be conveniently refueled in 12 hours or less...right at home. Of course, the Civic GX can be refueled at any available public CNG station in about the same amount of time it takes to fill up a gasoline vehicle. However, Phill’s slow-fill approach is ideal for most drivers who prefer enjoying the convenience of at-home refueling while their car is parked overnight or, for that matter, anytime it’s at home and not in use, indoors or out.

“The biggest obstacle to broader acceptance of natural gas vehicles is the limited availability of refueling stations,” points out Tom Elliott, executive vice president of American Honda. “Our research indicates people like the convenience of filling up at home. Plus, natural gas offers many benefits as an alternative to gasoline and is an abundant domestic resource that strengthens America’s energy independence.” In fact, the U.S. has the sixth largest natural gas reserves in the world and most of the natural gas consumed here is domestically produced.

Bringing Honda’s Civic GX and convenient home refueling to consumers is just part of the larger vision at Honda, which offers the most hybrid vehicle models of any automaker and is noted for its high-efficiency, low emission model lineup. Honda has also fielded its innovative FCX, the first hydrogen fuel cell vehicle to be certified by both the U.S. Environmental Protection Agency and the California Air Resources Board. This limited-production vehicle is now operating in three states and, not coincidentally, is being tested with several Home Energy Stations that use hydrogen fuel cells to heat and power a home while providing at-home gaseous hydrogen refueling for fuel cell vehicles.



Gaseous fueling is at the standard location.



Honda’s personal CNG refueling appliance.



Phill enables natural gas fueling at home.

For more information about the Civic GX, visit www.civicgx.com or call 1-800-33-HONDA.