Now and in the future, Bosch is your best choice.
For reliability, around the world again and again.
For better performance, with any engine in any vehicle.
For lower emissions and a cleaner planet. And for your wallet.
The fuel you save – up to $500 a year – can help you take that vacation you've been putting off.

Bosch, the most trusted fuel pump and injector supplier in the world.
Bosch Fuel Pumps andInjectors: German and American Engineering Prowess

Replacing fuel system components can cost as much as 5x what it did only 10 years ago.

So you need reliability. You need Bosch.

With the German engineering and global manufacturing of over 50 million pumps and one billion injectors, Bosch achieves OE standards competitors can’t match:

- **Design**
- **Engineering**
- **Materials**
- **Manufacturing**
- **Compatibility**

**Bosch Fuel Pumps**

It starts in the tank with Bosch Fuel Pumps. Demand controlled for energy and performance, Bosch manufactures all fuel pumps to meet or exceed OE specifications.

**How durable?**

You could drive around the earth 6 times without requiring a replacement.

That’s durable. That’s reliable. That’s Bosch.

**Bosch Milestones**

- **1952**
  - Bosch introduces mechanical direct injection.

- **1954**
  - Bosch mechanical direct injection used in the season’s most successful Formula 1 race car.

- **1955**
  - Bosch mechanical direct injection introduced in Gullwing.

- **1967**
  - Bosch introduces Jetronic electronic injection.
  - Bosch introduces K-tronic fuel pump.
Fuel is distributed to your engine through a Port Fuel or Gas Direct Injector (GDI)

Port fuel injectors are located in the manifold and deliver fuel to the intake port to create the ideal fuel-air mixture to power your vehicle.

GDI injectors are positioned directly in the cylinder, where fuel is sprayed at pressures up to 2900 psi.

Bosch Port Fuel Injectors

Bosch produces an estimated 40 million injectors every year at our Charleston, South Carolina plant. That’s more injectors than any other supplier in America.

Bosch Port Fuel Injectors are the high-quality performance-tested, economical choice. They offer many advantages, including:

- Reducing CO₂ emissions
- Minimizing vapor leakage
- Increasing engine output

1971
Bosch introduces generation 3 and 4 in-line fuel pumps.

1974
Bosch introduces a continuous injection system. Used worldwide through the 1980s.

1986
Bosch introduces generation 10 in-tank fuel pump.

1992
Bosch introduces EV-6 injector.

1994
Bosch introduces generation 13 and 14 in-tank turbine fuel pumps.
Bosch Gas Direct Injectors (GDI)

By 2020, more than a half of new cars produced in the U.S. will use GDI.

To allow for super precise fuel breakdown in the combustion chamber, Bosch utilizes a unique and proprietary laser drilling technology to create the GDI injector spray holes. This process uses an ultra-short-pulse laser that briefly heats material hotter than the surface of the sun, as many as 800,000 times a second.

The end result is

- Increased power
- Better fuel economy
- Improved cold-start capabilities

At maximum engine speed, a single GDI injector feeds fuel to a cylinder at a rate of 3000 injections/minute or every 20 milliseconds.

So literally in the blink of an eye (400 milliseconds), a single Bosch GDI injector injects fuel 20 times.

That’s fast. That’s Bosch.

For turbocharged engines, the news is even better. Bosch GDI systems help to eliminate turbo-lag and deliver up to 40% more lower-end torque.
Gasoline Direct Injection systems not only contain a fuel module near the tank, but also use a High Pressure Pump (HPP) under the hood.

Performance optimized from: 65 psi up to 2900 psi

Volumetric efficiency > 85%
Flow rate up to 1.12 cu ft/min
Maximum pump speed: 175 strokes/sec
Zevap = zero evaporation
Pumps on non-turbo and turbo engines

That’s what you expect from Bosch.

Bosch Fuel System Components
In 2016 new emissions standards were implemented with the goal of a city/highway rating of 54.5 miles per gallon by 2025. Fuel economy will become increasingly important for vehicle owners, the national economy, and the planet.

Bosch fuel system components are designed and engineered to stay ahead of this curve and produce the maximum combination of performance and fuel economy.
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