

GAS FUEL INJECTION & RELATED PARTS

Highlights

1

Complete Fuel Injection Program with more than 1,100 new, not remanufactured GDI, Multi-Port, TBI Injectors and related components

2

Engineered and manufactured in our IATF 16949-certified facility in Greenville, SC

3

Application-specific flow and spray patterns to match OE specs and increase fuel economy



What's in your box?™



ECHLIN

LOOKS RIGHT. FITS RIGHT. PERFORMS RIGHT.

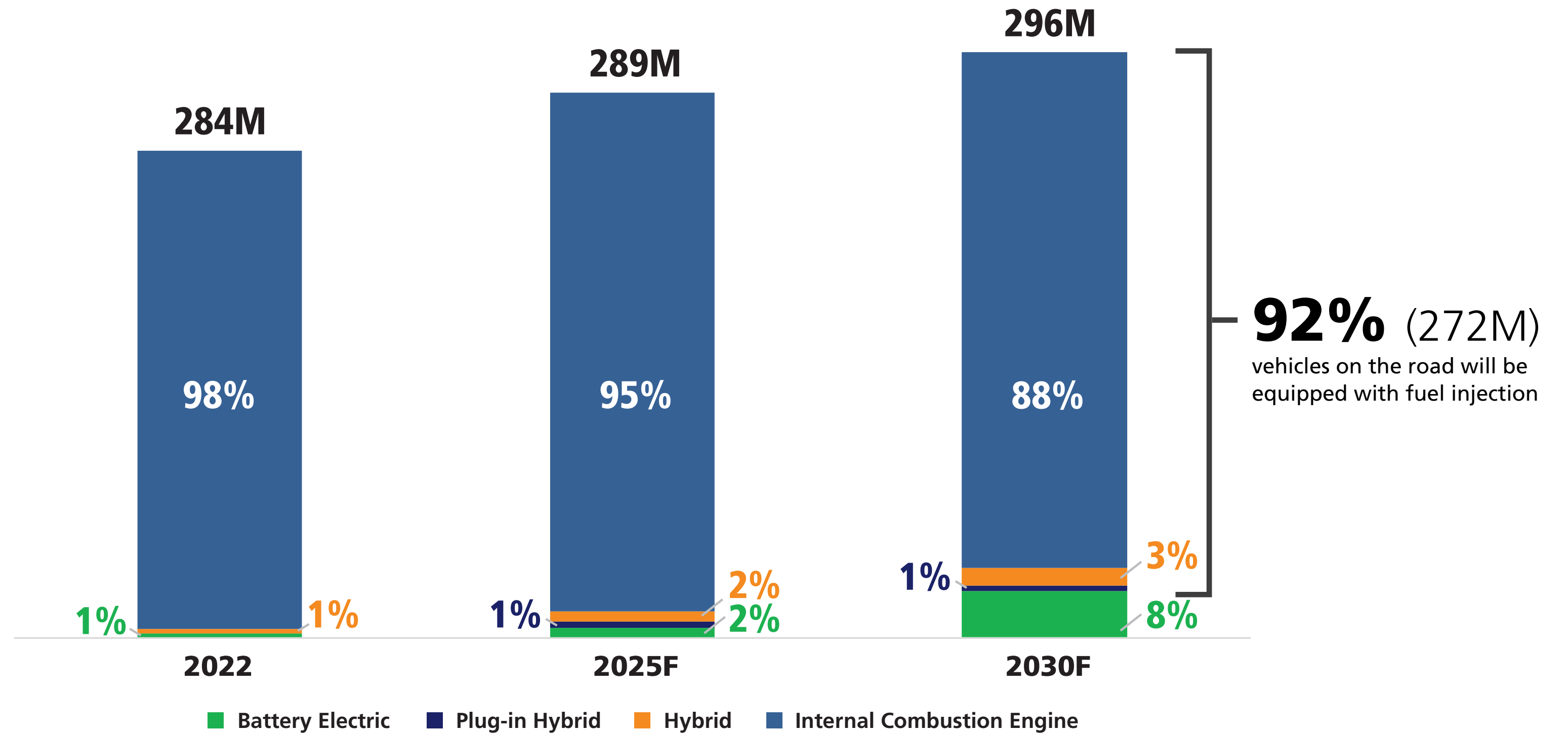
NAPAEchlin.com

Growing Market

While electric vehicles are making headlines, most new car buyers are still choosing gasoline (including hybrid) vehicles. In fact, 94% of all new cars sold in 2022 were equipped with an internal combustion engine.

Fast forward to 2035, roughly 94% or more of the cars entering service bays will have internal combustion engines with some type of fuel injection that will require maintenance and repair.

Vehicle Registrations by Powertrain*



*2022 Joint EV Trends and Outlook Forecast, MEMA Aftermarket and Auto care Association

Did You Know

Many modern vehicles are now equipped with both Multi-port and Direct Injection. This helps improve fuel economy, reduce emissions and reduces carbon build-up on the valves, and can also lead to more service opportunities.



Sales Opportunities

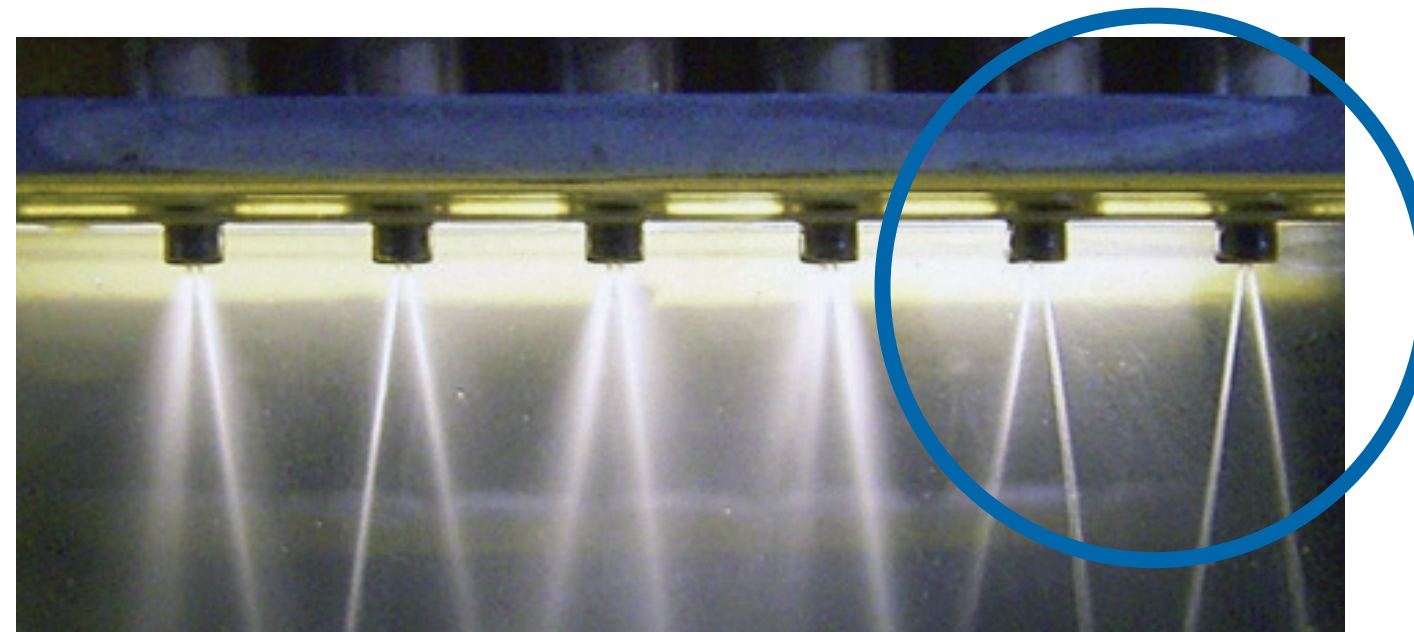
Replace in Sets

When one fuel injector fails, replace all of the injectors with a full new set, especially on high-mileage vehicles.

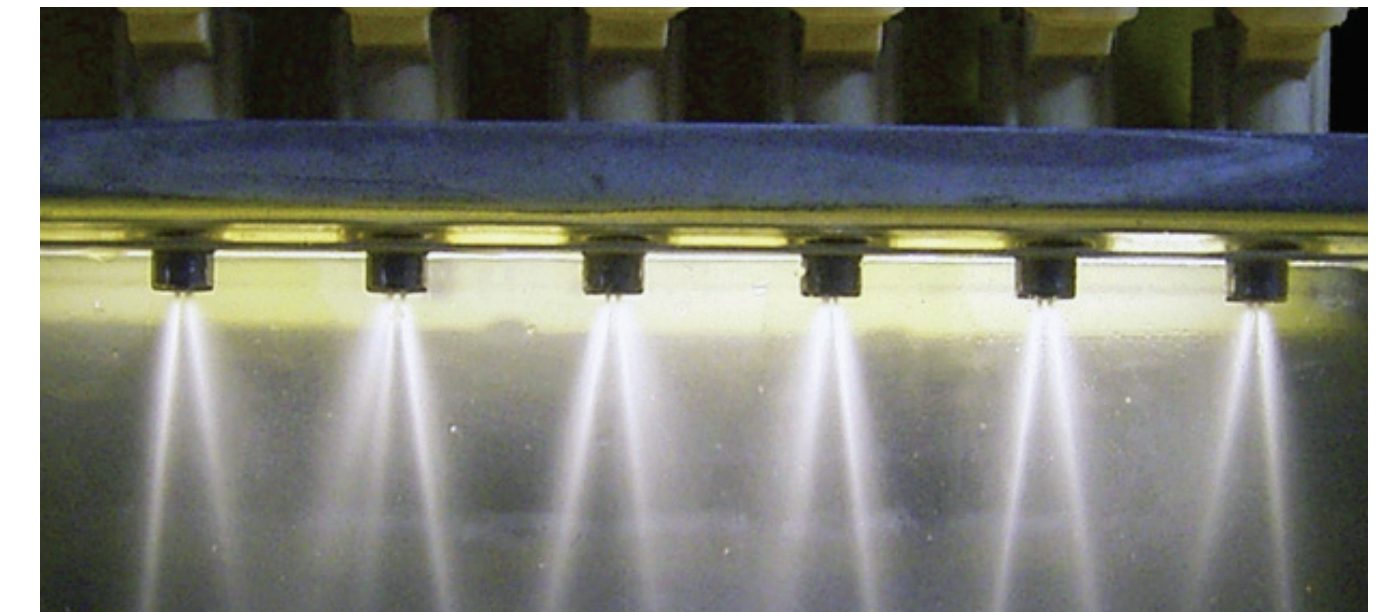
One worn or failed injector means the other injectors have been subjected to the same extreme wear and tear or fuel contamination.

In the long run, the most cost-effective repair is to replace the full set.

Replace Fuel Injectors in Sets



High-Mileage Injectors



New Injectors

Did You Know

Replacing only the worn or failed injector may create a fuel imbalance, as high-mileage injectors have unmatched spray patterns that increase fuel consumption. New NAPA® Echlin® Injectors have evenly matched spray patterns that improve fuel economy.

Complete Program

NAPA® Echlin® Gas Fuel Injectors are always 100% new, not remanufactured.

With unmatched coverage, NAPA® Echlin® Injectors are meticulously designed, manufactured, and tested to exceed the quality of the failed original injector they are replacing.

We have a full offering of fuel injection components including fuel pressure sensors, regulators, damper assemblies, fuel/water separator sensors, O-ring kits, and more.



Multi Port Fuel Injectors (MFI)

More than 900+ MFI Injectors

All NAPA® Echlin® MFI Injectors are flow-matched to each specific application, with advanced laser-drilled metering holes that deliver precise flow and spray patterns for proper injector performance and improved fuel economy under all conditions



Gasoline Direct Injectors (GDI)

170+ GDI Injectors (and growing)

Built to deliver maximum performance and fuel economy, each GDI Injector is precision-engineered to match the failed OE injector it is replacing

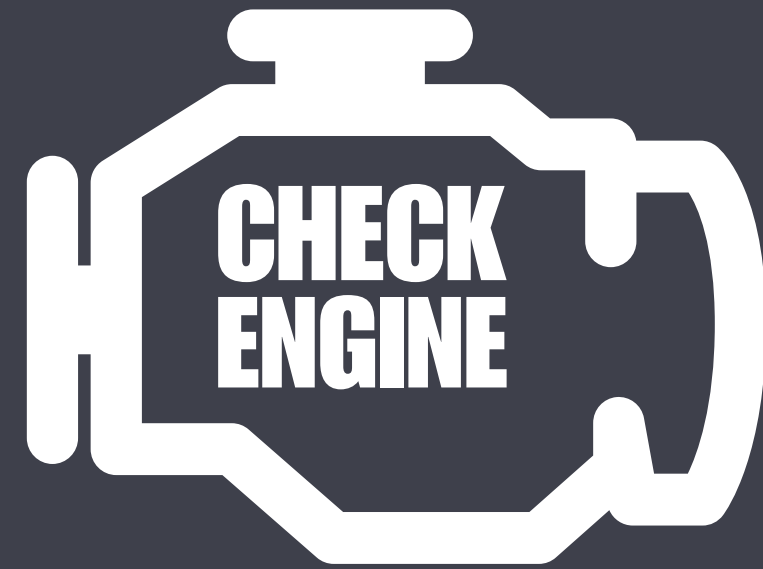


Throttle Body Injectors (TBI)

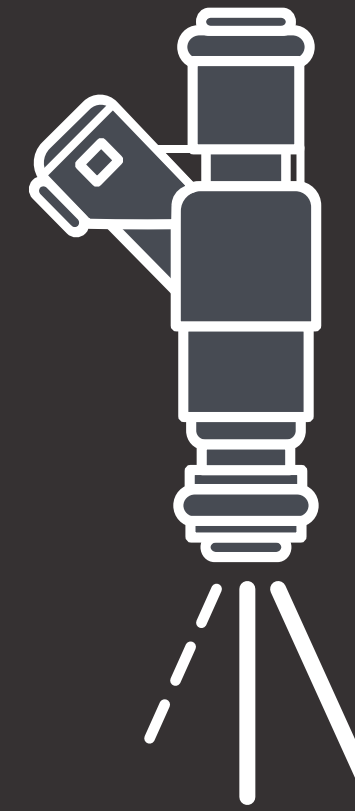
50+ TBI Injectors

Meticulous engineering and precision machining ensures every NAPA® Echlin® Throttle Body Injector matches the original it's replacing for fit, form and function to deliver optimal performance and fuel economy

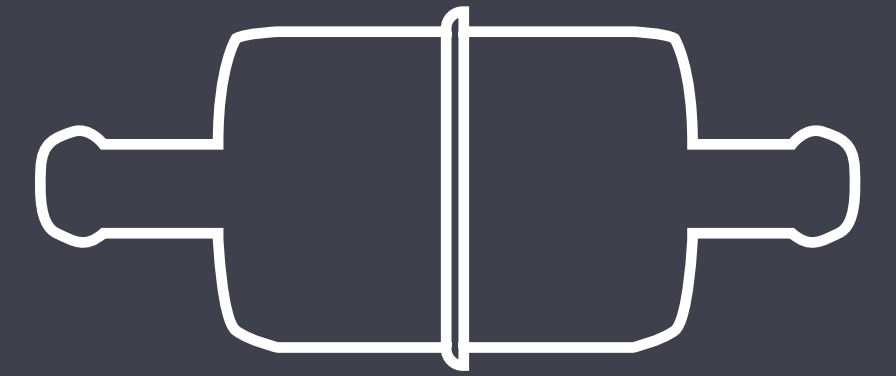
Impact on Engine Systems



Faulty injectors will typically trigger the check engine light and set a variety of trouble codes such as P0171 or P0174 which indicates an incorrect air/fuel ratio



If an injector is “stuck on” it may flood the cylinder(s), flood the crankcase, and fill the exhaust with raw fuel — This could result in engine failure and damage additional exhaust components



When an injector is being replaced, it is also recommended that a new fuel filter and new injector seals are also installed to help reduce comebacks

What's New

A complete program means regularly introducing new part numbers. NAPA® Echlin® is constantly researching, testing, and releasing MFI and GDI Injectors for late-model vehicles.

For the most recent applications, check the online catalog at NAPAEchlin.com.



2-39562
Honda Civic
(2019-16)
VIO: 690K



2-34579
Honda Insight / Clarity
(2021-18)
VIO: 102K



2-39556
Audi / VW Cars
(2022-15)
VIO: 482K



2-39553
Infiniti Q50 / Q60
(2019-16)
VIO: 133K



What's New

RELATED PARTS

New applications are continually being added to our complete Gas Fuel Injection Program. It's how we continue to deliver the most complete fuel injection offering in the industry.

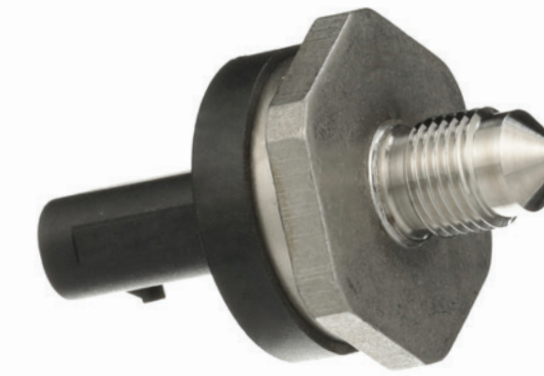
For the most recent applications, check the online catalog at NAPAEchlin.com.



Fuel Pressure Sensor

2-34550

Ford Cars, Trucks & SUVs
(2021-20)
VIO: 540K



Fuel Pressure Sensor

2-34551

Ford Trucks & SUVs
(2021-19)
VIO: 1.2M



Fuel Pressure Sensor

2-34555

Jeep / Fiat SUVs
(2022-19)
VIO: 53K



Fuel Injector Seal Kit

2-12455

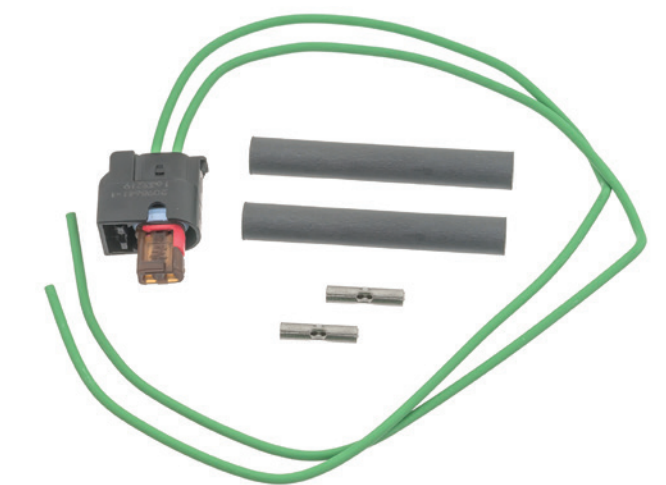
Ford Trucks, SUVs & Vans
(2020-11)
VIO: 6.8M



GDI High Pressure Fuel Pump

2-34274

Honda / Acura Cars & SUVs
(2020-15)
VIO: 2M



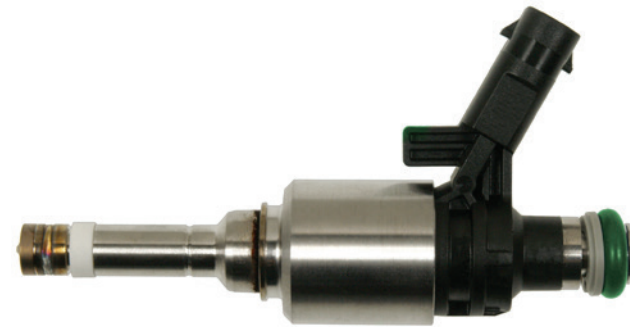
Fuel Injector Connector

EC2771

Ford / GM Cars & SUVs
(2021-14)
VIO: 3.3M

Top Movers: Fuel Injectors

**IMPORT
APPLICATIONS**



2-39124

Audi / VW Cars & SUVs
(2017-08)



2-38868

Honda / Acura
Cars, Trucks & SUVs
(2017-03)



2-38867

Honda / Acura Cars & SUVs
(2011-03)



2-39213

Hyundai / Kia Cars & SUVs
(2017-12)



2-38873

Honda / Acura Cars & SUVs
(2004-00)



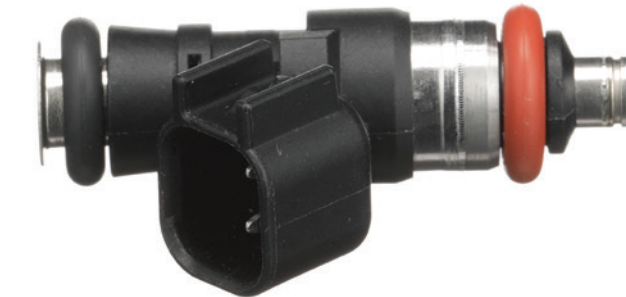
2-39214

Chrysler / Dodge / Jeep / RAM
Cars, Trucks & SUVs
(2020-11)



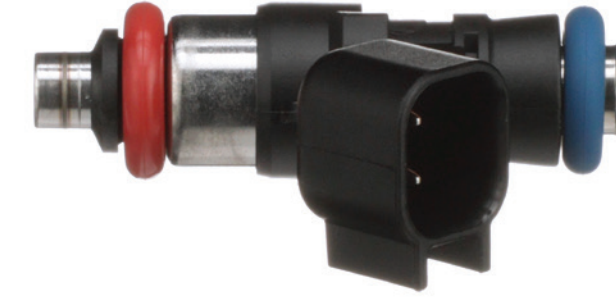
2-38763

Chevrolet / GMC Trucks & SUVs
(2007-99)



2-39067

Ford / Lincoln Cars & SUVs
(2015-07)



2-39183

Ford Cars, Trucks & SUVs
(2022-11)



2-38857

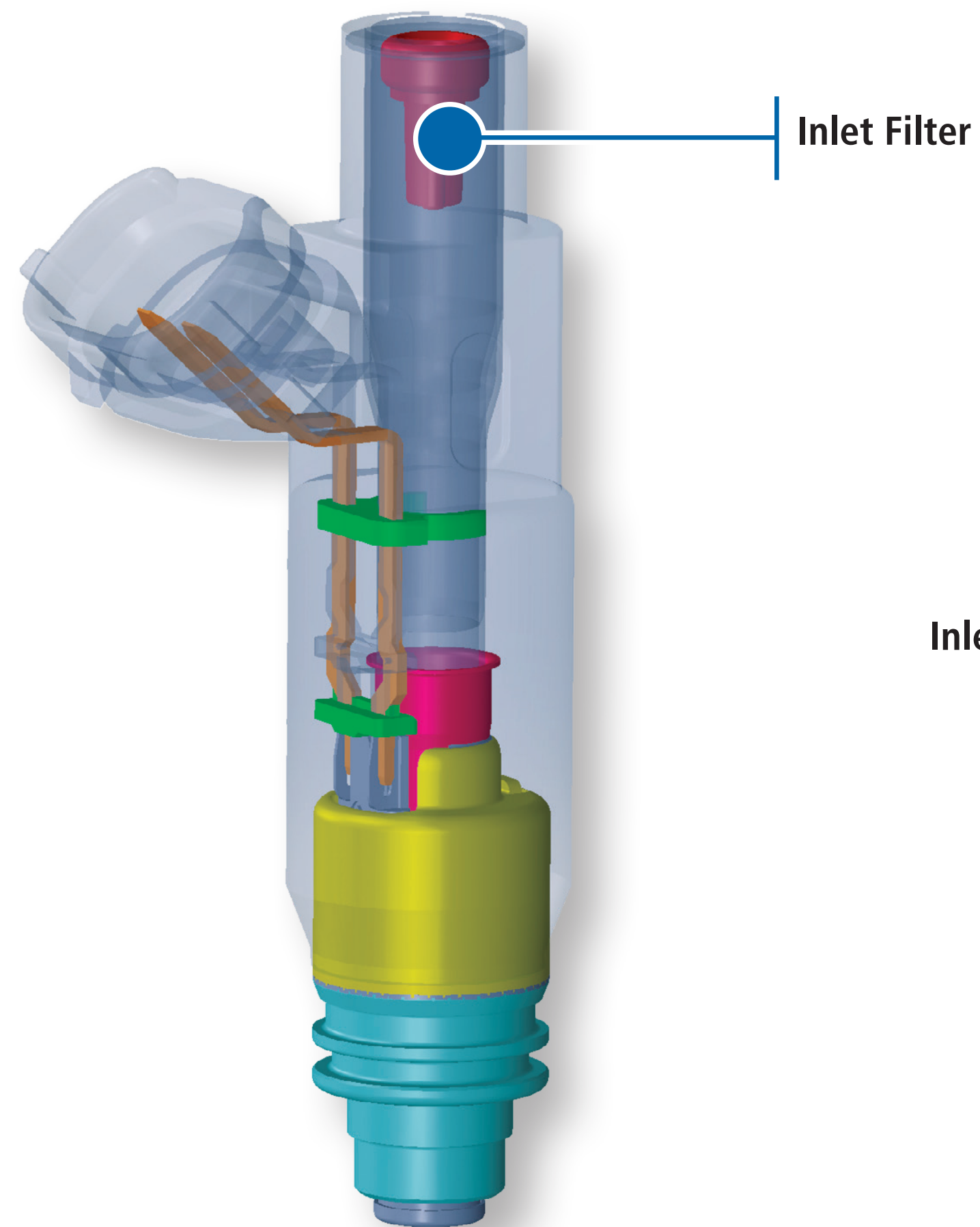
Dodge / Jeep / RAM
Trucks & SUVs
(2012-04)

NAPA® Echlin® Engineering

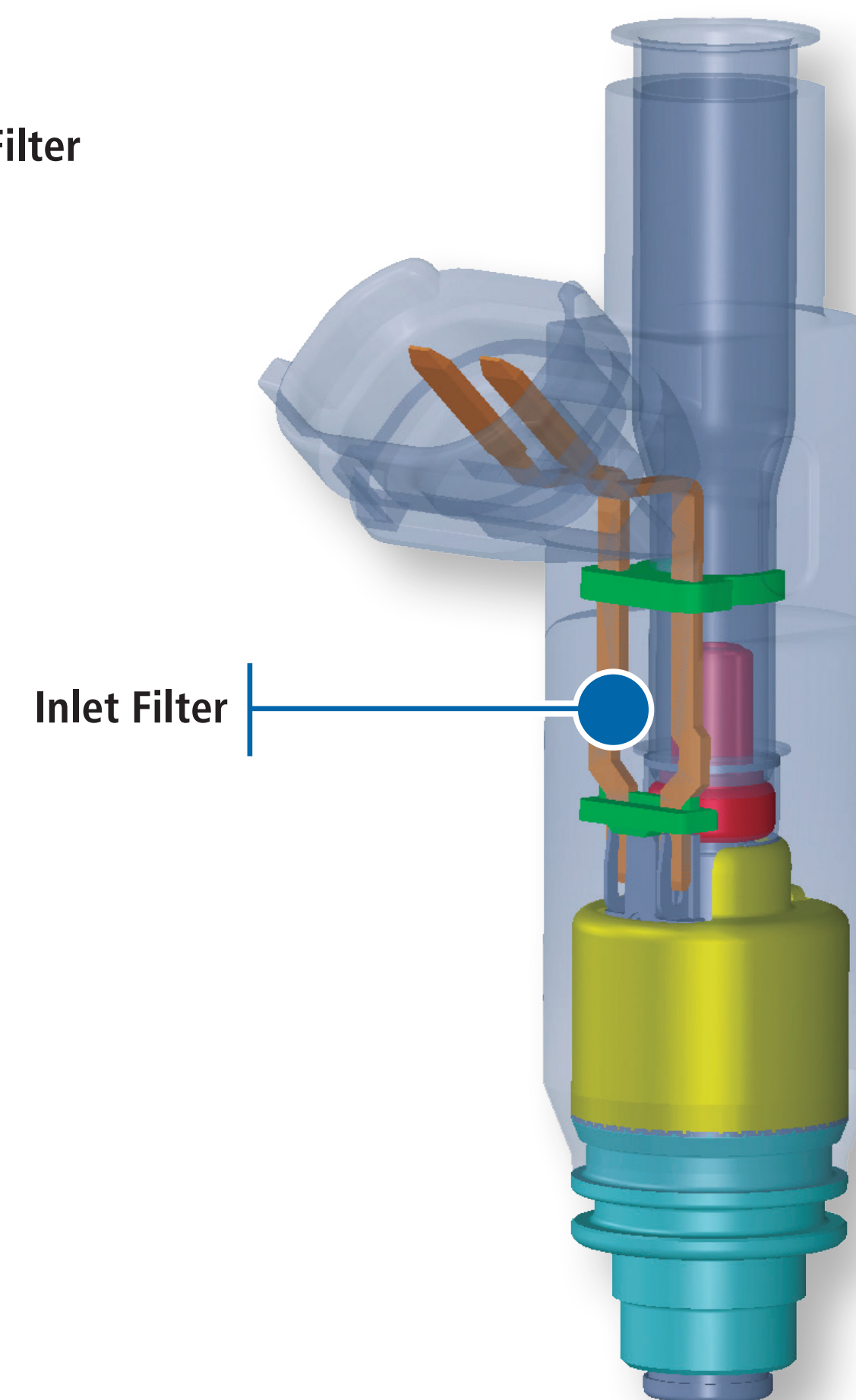
NAPA® Echlin® engineers identified a weakness in the OE design of these multi-port injectors. The OE inlet filter is installed at the end of the fuel inlet tube, increasing the risk of contaminants being introduced.

To eliminate this potential for contamination, we moved the filter location, adding it during the middle of the assembly process. Problem solved.

OE Design



NAPA® Echlin® Design



Our engineers improved on the OE design by relocating the inlet filter to protect against contamination

NAPA® Echlin® Engineering

GM's Vortec engines are equipped with a Sequential Port Injection System (SCPI) featuring a poppet valve that is prone to sticking.

NAPA® Echlin® engineers eliminated the OE failure point by moving the injector to the end of the tube.

NAPA® Echlin's improved system has many advantages including improved sealing, better response, faster temperature stabilization and reduced emissions.

Improved hot fuel handling over SCPI system

No poppet valve eliminates problem of deposit build-up

Improved spray injector nozzle design with longer seat

Enhanced pressure control at low recirculation rates



2-38886

Multi-Port Fuel Injection (MFI) System
GM V6 4.3L (2014-96)

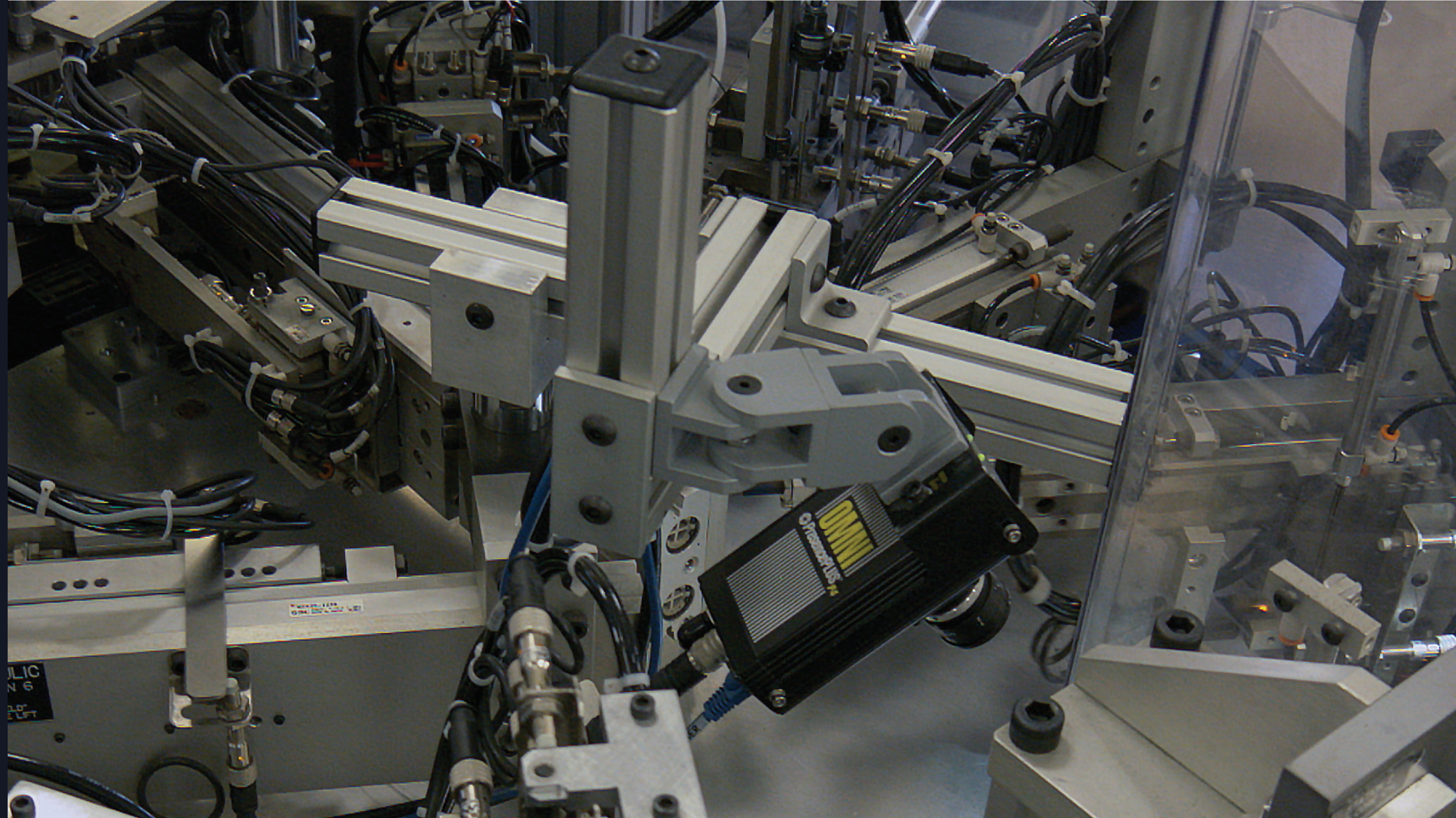
Did You Know

NAPA® Echlin's improved design retrofits to cover the older mechanical "poppet" style applications as well as the current electronic valve design in this engine family

Expert Manufacturing

Designed and Built in the USA

NAPA® Echlin® Fuel Injectors are expertly manufactured at our vertically integrated facility in Greenville, SC. From raw material to finished product, every Injector is subjected to extensive end-of-line and life-cycle testing, ensuring they meet our strict quality control standards.



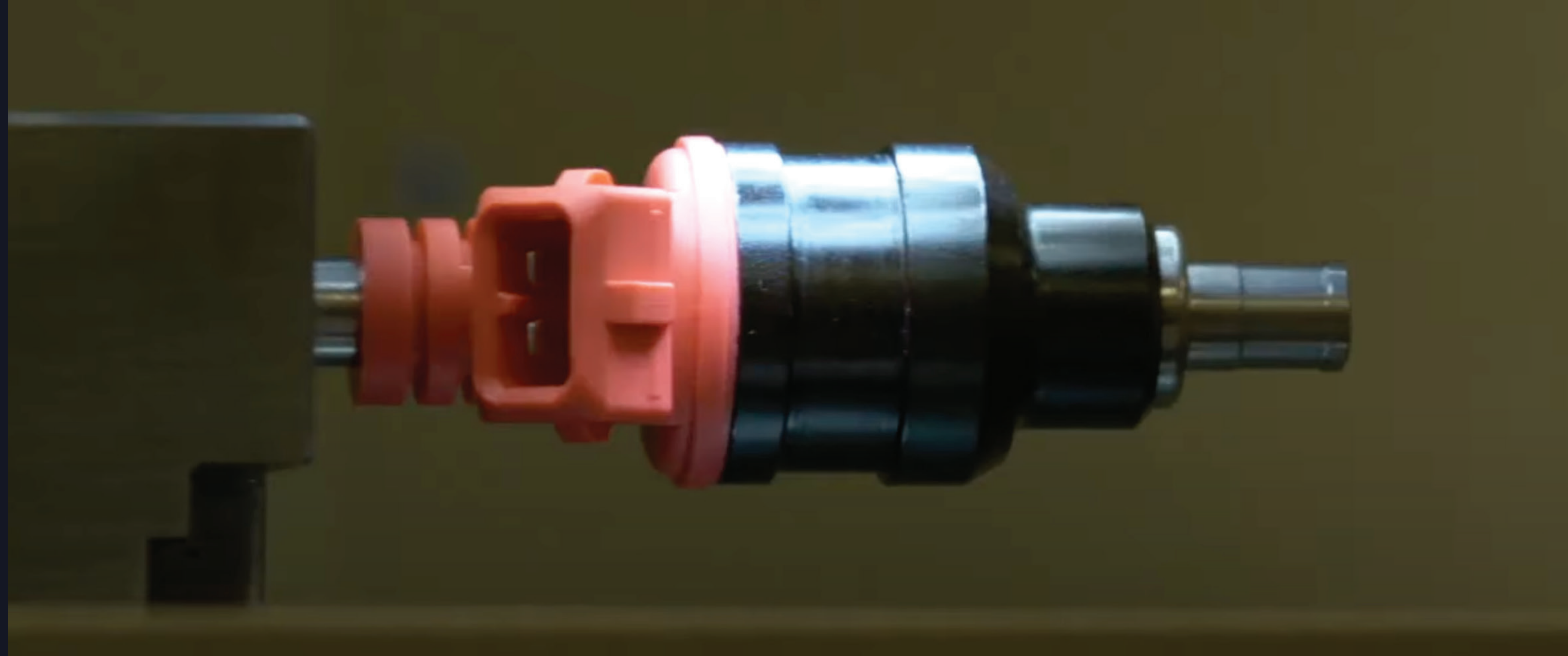
**Engineered and
manufactured in our IATF
16949-certified facility in
Greenville, SC**

**Precision quality,
application-specific
performance, durability,
and consistent product
reliability**

**100% NEW
(Not Remanufactured)
Gasoline Injectors**

Testing and Validation

To make sure every Fuel Injector meets our strict standards for precision quality, enhanced performance, and extra durability, NAPA® Echlin® performs initial life-cycle validation and 100% end-of-line testing. What's more, we subject our Fuel Injectors to more than 35 different tests and inspections.



Here are just a few of the elements and components that we test and inspect:

Body Color

Endurance

Spray Pattern

Body Style

Flow Linearity

Static Flow Rate

Coil Resistance

Flow Matching

Thermal Cycle Testing

Connector Shape

Humidity Storage

3 Axis Vibration

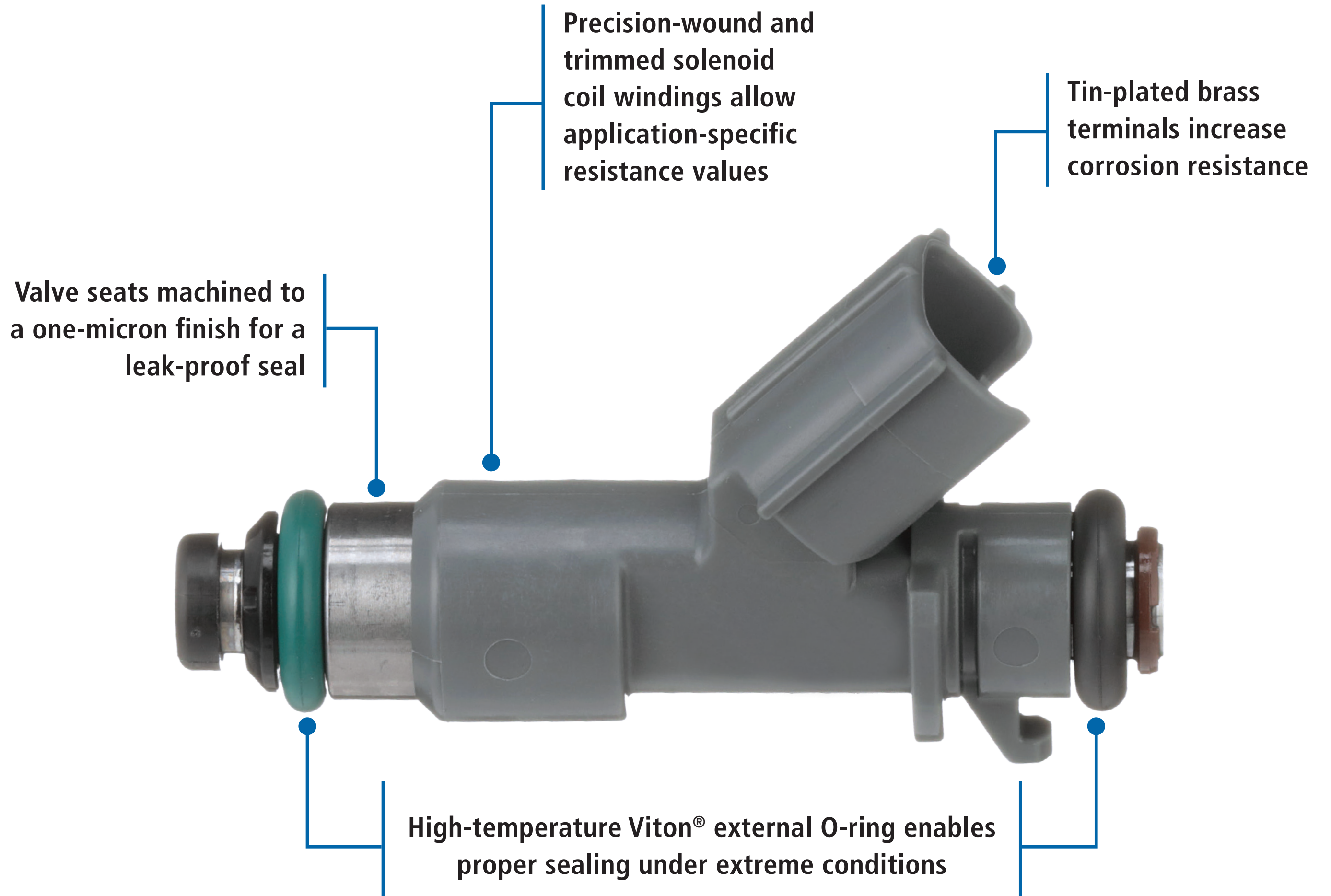
Dynamic Flow Rate

Shock Load

and more!

Quality Designed

NAPA® Echlin® Gasoline Fuel Injectors are always new, never remanufactured. Precision engineered to match injector flow, spray pattern, and flow rate, NAPA® Echlin® Injectors deliver better fuel economy and emissions.



2-39044

Honda / Acura Cars & SUVs
(2018-08)

Related Parts

The best new fuel injector can't perform as designed with worn O-rings, failing related components, or low fuel pressure.

NAPA® Echlin's complete Fuel Injection Program provides technicians with everything they need for a complete fuel system service.

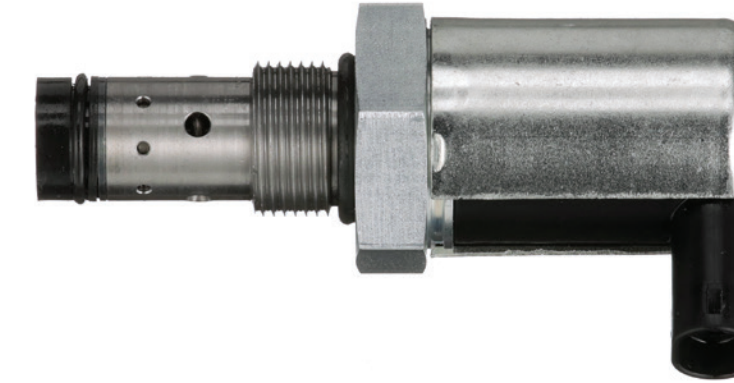
For our complete GDI Program, refer to the NAPA® Echlin® GDI Product Portfolio.



Fuel Pressure Sensors

Monitors flow to deliver designed fuel injection performance

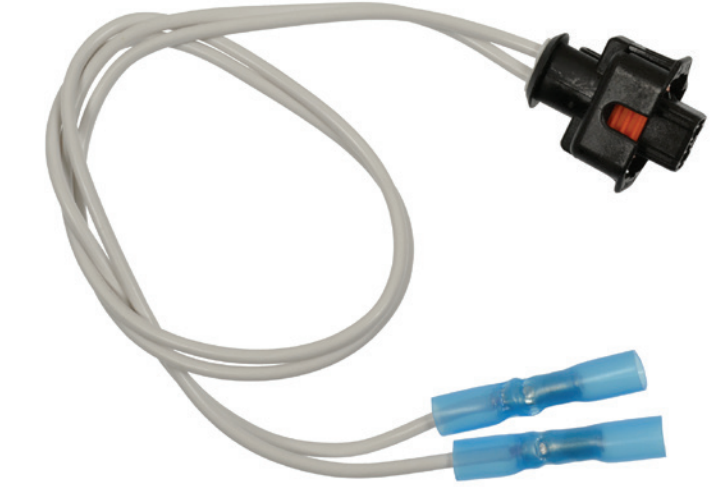
200+ SKUs with coverage through 2023



Fuel Pressure Regulators

Engineered for vehicle-specific fuel delivery and feature robust housing to reduce the chance of leakage

550+ SKUs through 2022



Fuel Injector Connectors

NAPA® Echlin® offers the right, quality connectors for fuel injectors and related fuel system components

Import and domestic coverage through 2023



Fuel Pressure Dampers

NAPA® Echlin® reinforced washers help prevent dangerous fuel leaks and premature failure

70+ Dampers for import and domestic applications



O-Ring Kits

New O-rings and seals will help ensure a proper install. Our O-Rings are made from high-quality materials to ensure performance and longevity

65+ O-Ring and Seal Kits specifically designed for fuel injection systems



GDI Components

NAPA® Echlin® offers hundreds of GDI system replacement parts – High-Pressure Fuel Pumps, Pressure Sensors, Fuel Feed Lines, O-rings, Gaskets, Service Kits and more

NAPA® Echlin® Pro Training Tech Tip

NAPA® Echlin® Pro Trainers have installed hundreds of fuel injectors and trained thousands of technicians. Here's what they say to look out for during a fuel injector install.



When using Fuel Trims to diagnose fuel injector faults, it is important to keep in mind that one injector that is out of spec will affect the entire bank – One over-fueling injector will offset 3 under-fueling injectors, so that's why replacing in sets is advised



Always replace the fuel filter and flush the rail and lines when replacing fuel injectors – Ensure that the intake bore is clean and the seals and O-rings are properly lubricated before installing the injectors

NAPA® Echlin® Professional Training

Award-Winning In-Person, Live
Virtual, and Online Learning

NAPA® Echlin® Pro Training delivers
accredited classes that educate
technicians in the latest automotive repair
technologies, and techs can earn CEU
credits.

An extension of NAPA® Echlin® training,
our extensive YouTube video library has
over 500 technical and installation videos.



Available Classes

E85 & Flex Fuel Vehicles

Lean Engine Diagnostics

Rich Engine Diagnostics

Diagnose Electronic Fuel Pump
Controls

Fuel Trim Diagnostics

Gasoline Fuel Injection
Fundamentals



Available Classes

Honda / Acura Diagnostics

Nissan / Infiniti Diagnostics

Ford EcoBoost

VW / Audi Diagnostics

GM Engine Controls

Toyota / Lexus Diagnostics



For information on replacing fuel injectors and related components,
search “Injector” on the **NAPA® Echlin®** YouTube channel