IGNITION PROGRAM

Highlights

1 NAPA® Echlin® offers more than 880 coils for 99% aftermarket-leading coverage

2 Every ignition coil is subjected to extensive testing and product validation

3 Popular NAPA® Echlin® Heavier-Duty Coils are available in multi-packs for a complete coil service

What's in your box?

NAPAEchlin.com

NAPA® ECHLIN®
IGNITION PROGRAM

Growing Market

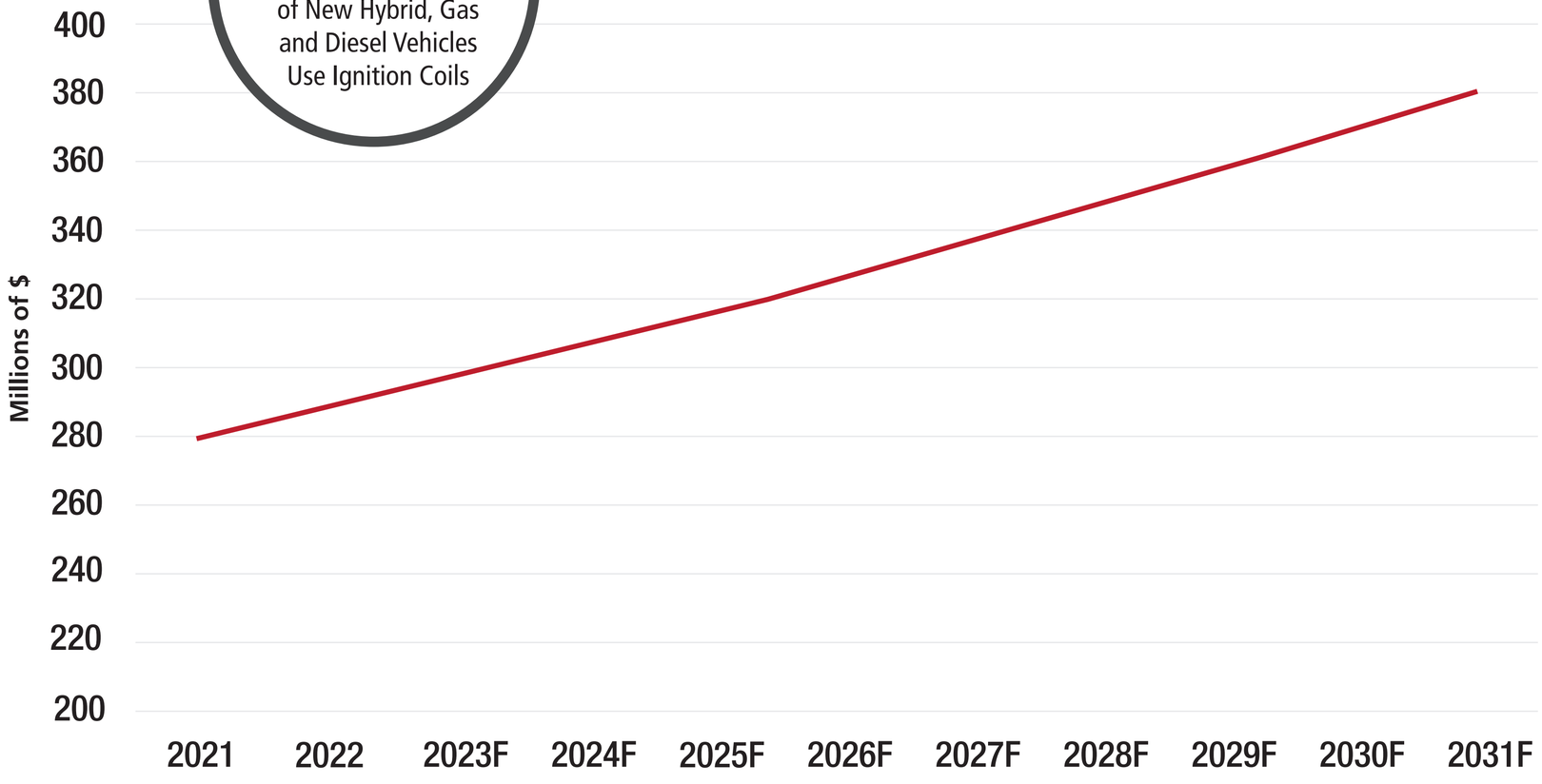
The North American ignition coil market is expected to expand at a compound annual growth rate of 3.1% through 2031.

Even with the growth of hybrid and electric powertrains, high OE failure rates will continue to drive aftermarket demand for ignition coils.

Did You Know?
Additionally, pencil ignition coils are projected to account for more than 33% of the sales through 2031.

Projected Growth of Ignition Coils

100%
of New Hybrid, Gas and Diesel Vehicles Use Ignition Coils



Source: SMP Internal Data, Future Market Insights Ignition Coil Growth Report

NAPA® ECHLIN® IGNITION PROGRAM

Sales Opportunities

Some manufacturers, such as BMW, have released TSBs recommending that ignition coils be replaced with something other than the ones produced by the OE supplier due to faults causing failure. In the case of the N52T engine, OE ignition coils were failing because of high-temperature fluctuations, which caused the coils to deteriorate over time.

NAPA® Echlin® offers a complete Ignition line designed to solve OE problems such as this.

SI B12 18 14
Engine Electrical Systems

September 2015
Technical Service

This Service Information bulletin supersedes SI B12 18 14 **dated March 2015.**

NEW designates changes to this revision

SUBJECT
Engine Misfire Due to Failed Ignition Coil

MODEL
All

With the N51,NEW N52*, N52K, and N52T engines

NEW *Only N52 produced from 4/2006

SITUATION

- The Check Engine or Service Engine Soon (MIL) lamp is on with misfire fault(s) stored in the DME.
- Intermittent performance or rough running without a relevant DME fault stored

The most likely cause is that an ignition coil has failed, which can be confirmed in many cases with basic diagnosis.

CAUSE
During operation with high temperature fluctuations, the different materials used in the Bosch ignition coil construction can deteriorate over time, leading to a failure.

2014 BMW 320i

OE PROBLEM

Engine Misfires Due to Failed Ignition Coil

NAPA® ECHLIN® SOLUTION

New Ignition Coils

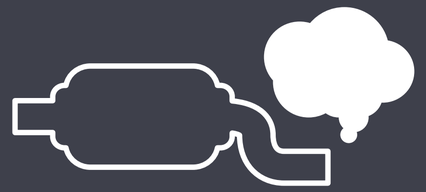
NAPA® Echlin's IC770 premium Ignition Coils are manufactured using high-quality materials to withstand extreme conditions. They also undergo extensive testing to ensure reliability

NAPA® ECHLIN®
IGNITION PROGRAM

Impact on Engine Systems

Exposure to heat and water intrusion are two of the leading causes of premature failure in OE coils

If the ignition coil is not operating as it should be, the battery will not send the right amount of power to the spark plugs and your vehicle will burn more gas to compensate



An ignition-related misfire can damage the catalytic converter and oxygen sensors in a few miles or several minutes of driving if a vehicle doesn't register the faulty coil and continues to feed fuel to the cylinder

NAPA® ECHLIN®
IGNITION PROGRAM

What's New

NAPA® Echlin® is committed to regularly releasing new coils to provide the coverage you need. With high OE failure rates, technicians continue to look for reliable aftermarket alternatives, even on late model vehicles. NAPA® Echlin® already offers over 880 ignition coils and is committed to regularly releasing new applications to give technicians the aftermarket solutions they are looking for.

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

IC989
Mazda Cars
(2021-18)
VIO: 808K

IC1029
Ford Super Duty
(2022-20)
VIO: 194K

IC981
Subaru Cars and SUVs
(2020-19)
VIO: 511K

NAPA® ECHLIN® IGNITION COILS

Top Movers

IMPORT APPLICATIONS

IC770
BMW Cars & SUVs
(2019-01)

IC686
Lexus/Toyota Cars & SUVs
(2021-08)

IC242
Honda/Acura Cars & Vans
(2010-99)

IC479
Nissan/Infiniti Cars,
Trucks & SUVs
(2021-01)

IC655
Audi/Volkswagen Cars & SUVs
(2019-04)

DOMESTIC APPLICATIONS

IC369
Ford Cars, Trucks, Vans & SUVs
(2019-97)

IC751
Chrysler, Dodge, Jeep & RAM
(2021-11)

IC749
Ford Cars, Trucks & SUVs
(2021-11)

IC243
Chrysler, Dodge, Jeep & RAM
(2008-99)

IC558
Ford Cars, Trucks & SUVs
(2009-04)

NAPA® ECHLIN® & NAPA® BELDEN®
IGNITION PROGRAM

Additional Coils and Related Parts

In addition to the traditional Coil-On-Plugs, NAPA® Echlin® offers an array of other high-quality coils and components to help with ignition repairs. From unique coil designs to service kits, NAPA® Echlin® and NAPA® Belden® has you covered.

Coil Near Plugs (CNP)

Reinforced bobbins prevent voltage flashover for extended service life.

High-dielectric epoxy is injected into the case and pulled into vacuum to eliminate air pockets and prevent moisture intrusion or thermal breakdown

Cassette Coils

High heat-resistant housing compound and coil boot withstands heat stress for longer durability

100% pure copper windings in the primary and secondary bobbins to improve durability and provide higher resistance to internal shorts and dielectric breakdown

Coil Packs

Housing made from thermoplastic compounds to withstand heat stress

Full E-Lam core of silicon steel and solid brass high-voltage terminals protect against corrosion.

Ignition Coil Connectors

Utilizes high-grade materials to ensure peak conductivity and perfect connections

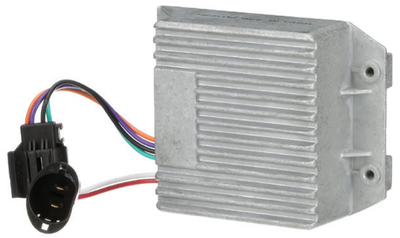
Coil-On-Boot Service Kits

Multiple-piece design featuring a phenolic tube and silicone tip. Includes spring and resistor

NAPA® ECHLIN® & NAPA® BELDEN®
IGNITION PROGRAM

Other Ignition Systems

In addition to newer style coils, NAPA® Echlin® and NAPA® Belden® offer multiple ignition components for classic vehicles. These components help restore performance to older, higher-mileage vehicles.



Ignition Modules

NAPA® Echlin® Ignition Modules use top of the line technology to ensure perfect timing every time

Matches the OE part and ensure better connections, greater dependability, and longer life despite being subjected to intense vibrations and the tough operating environment of the engine

300+ SKUs

Distributor Assemblies

High-dielectric strength cap ensures accurate energy transfer and spark timing, while stainless steel screws protect against corrosion

Improved gear design for enhanced performance in high-torque applications

Available for GM 4.3L V6 and 5.0/5.7L V8 applications

Spark Plug Wire Sets

Designed, built, and tested to meet or exceed the tough international IATF 16949 quality standards

NAPA® Belden® Spark Plug Wire Sets feature matching boots, a wire core and jacket, and extras like clips, trays, looms, and numbered leads

Available for domestic and import vehicles

NAPA® ECHLIN® MULTI-PACKS

Problem Solving Kits

Many of the most popular NAPA® Echlin® Heavier Duty Coils are now available in multi-packs. These are available for both import and domestic vehicles and help technicians solve known problems at once.

A total of 30 NAPA® Echlin® Coil Multi-Pack Kits are currently available with more to come.

IC369-8MP
Ford
Trucks, SUVs & Cars
(2016-97)

IC479-6MP
Nissan/Infiniti
Trucks, SUVs & Cars
(2020-02)

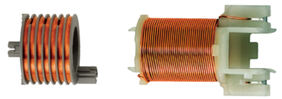
IC414-6MP
General Motors
SUVs
(2008-02)

NAPA® ECHLIN® IGNITION COILS

Engineering Improvements

Premium parts start with premium components. Each NAPA® Echlin® Ignition Coil is engineered with features to ensure that our Coils will perform under the most extreme conditions.

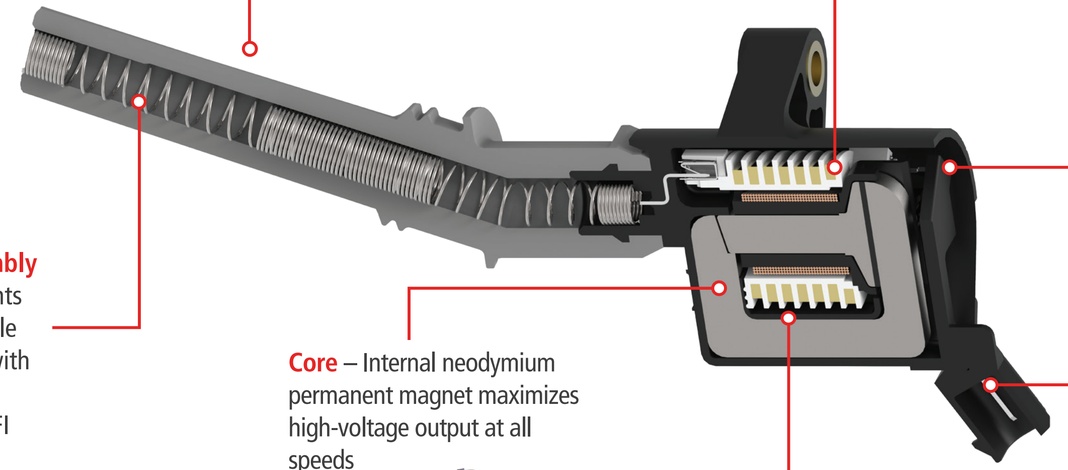
Heat is a leading cause of coil failure. The NAPA® Echlin® IC369 features multiple design improvements to improve insulation and reduce operating temperatures. This means better-performing and longer-lasting ignition coil.



Engineered and tested to match or exceed OE for spark energy output, impedance, and durability

Primary & Secondary Bobbins with Winding Copper wound wire ensures high-voltage for peak performance while high dielectric strength bobbins prevent voltage flashover

Coil Housing – High-impact material bonds to epoxy to ensure a longer service life



Boot & Spring Assembly High-temp boot prevents high-voltage leaks while stainless steel spring with internal ferrite noise suppressor prevents RFI

Core – Internal neodymium permanent magnet maximizes high-voltage output at all speeds

Coil connector Advanced thermoplastics ensure proper connection and resist heat fractures

Isolator – High-voltage resistant thermoplastics prevent premature failure

IC369

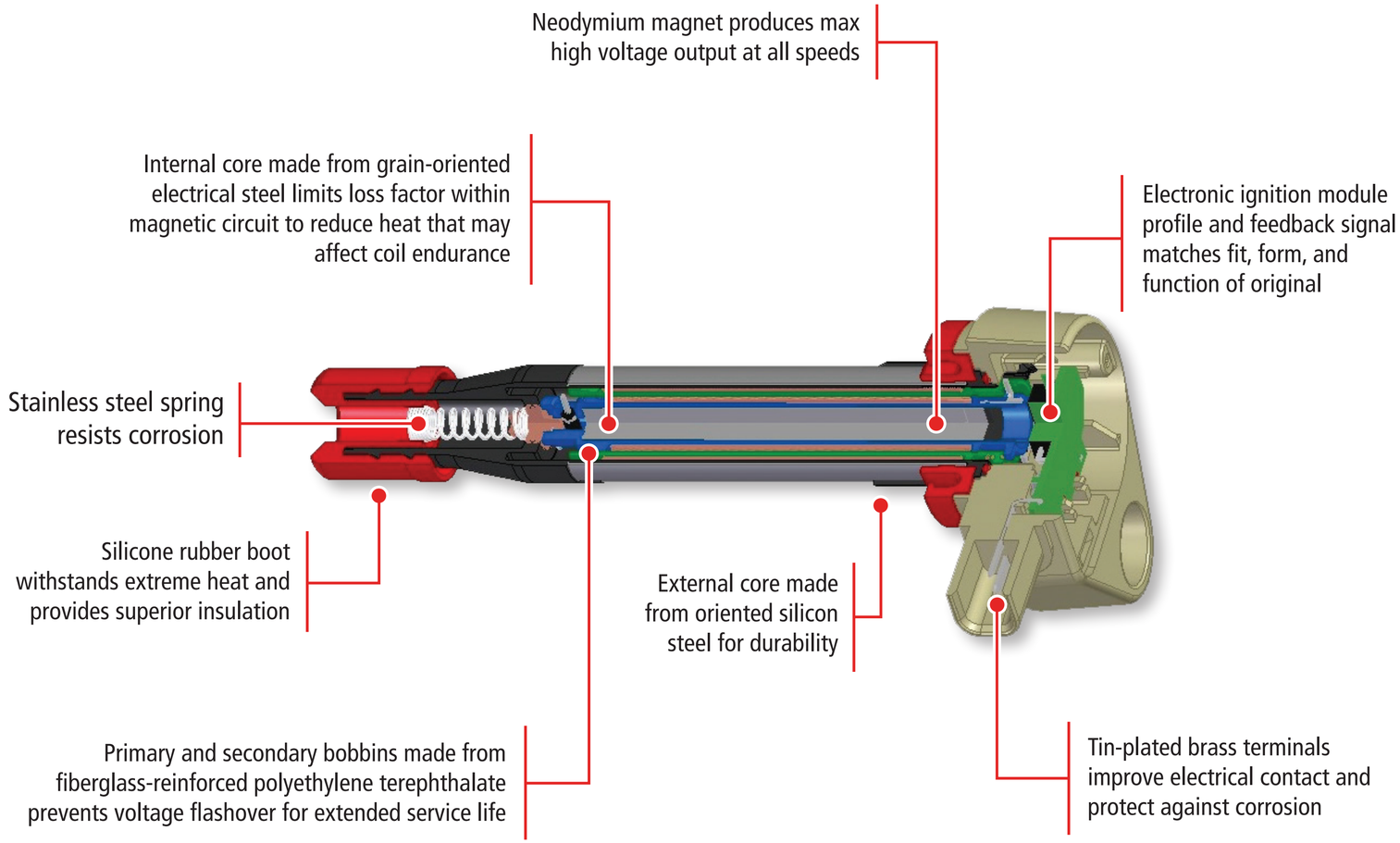
Ford / Lincoln (2019-97)
6.9M VIO

NAPA® ECHLIN® IGNITION COILS

Engineering Improvements

A Coil-On-Plug acts as both the ignition coil and the spark plug wire set: it creates spark energy while containing and delivering high-voltage energy to the spark plug.

Each NAPA® Echlin® Coil features an electronic ignition module profile and feedback signal that matches the performance designated by the vehicle manufacturer. NAPA® Echlin® Coils also feature a stainless steel spring to resist corrosion and a neodymium magnet to produce max high-voltage output at all speeds for a superior coil.



Coil-on-Plug Pencil Coil
IC242
Honda/Acura (2010-99)

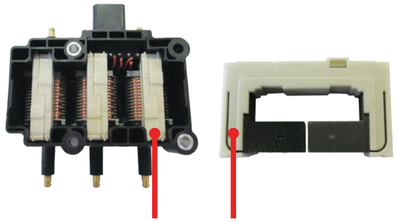
NAPA® ECHLIN® IGNITION COILS

Engineering Improvements

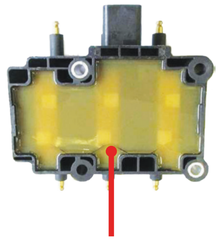
In addition to an inability to manage high temperatures, moisture intrusion is another common reason why OE coils fail. Our engineers identify OE weak points and design coils that last

Eliminating Moisture Intrusion

OE Coil

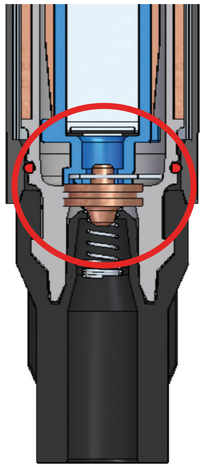


Polypropylene Cover



OE Epoxy Cracks after Temperature Test

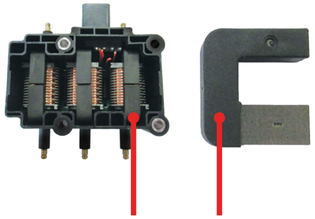
Higher temperatures cause the epoxy to crack, allowing moisture in and causing the OE coil to fail



OE design includes an O-Ring

Once the O-Ring breaks down, moisture can enter the coil, resulting in a coil failure

SMP Coil



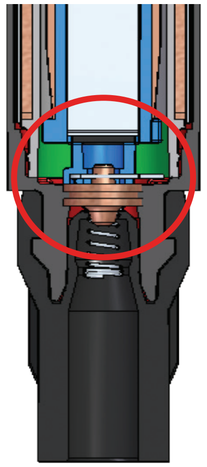
Elastomer Overmold

SMP has no cracks after temperature test

NAPA® Echlin's epoxy stays intact, keeping moisture out and allowing the coil to perform as designed

SMP engineered a robust, one-piece design

The SMP coil eliminates the need for an O-Ring, removing the chance of moisture intrusion

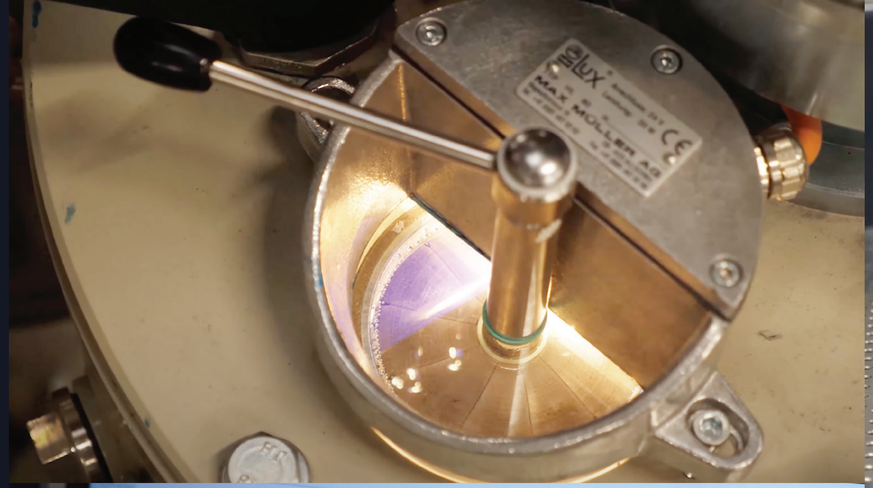


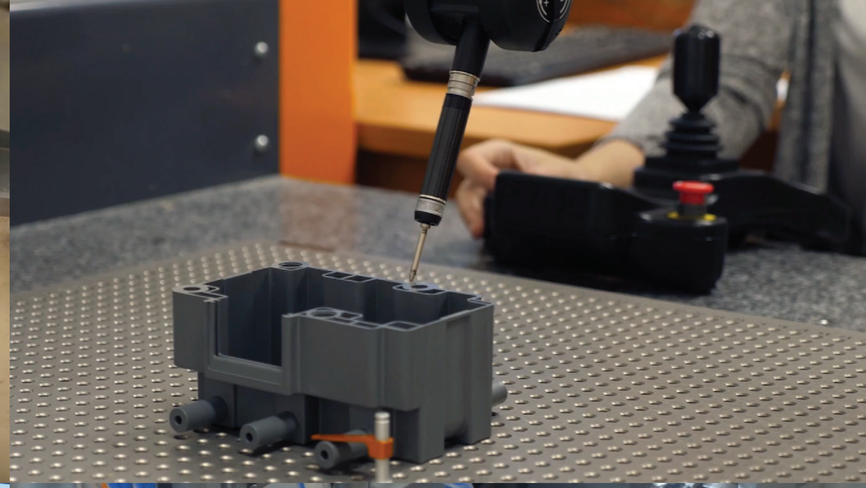
NAPA® ECHLIN®
IGNITION COMPONENTS

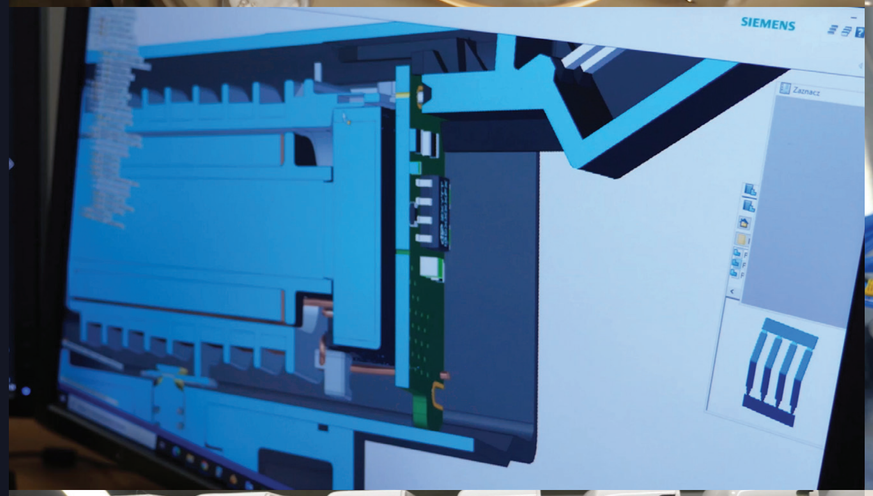
Manufacturing

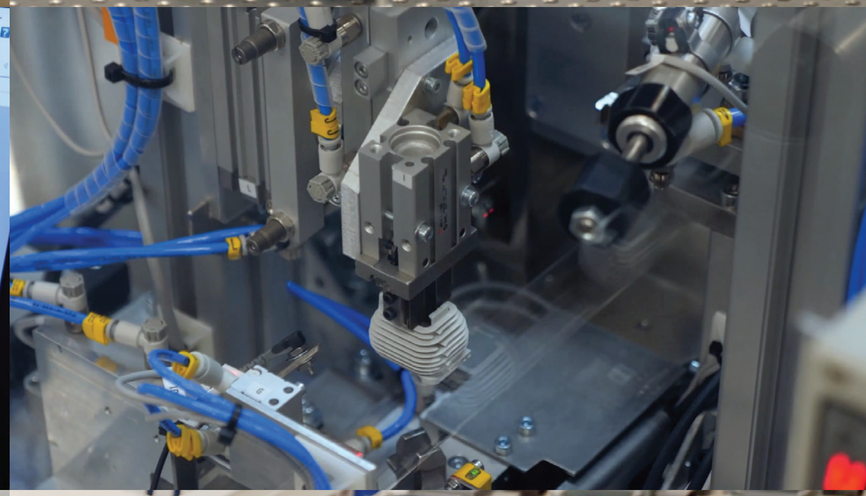
NAPA® Echlin® engineers and manufactures more than 6 million high-quality Ignition Coils and components at our 60,000 sq. ft. facility in Bialystok, Poland every year.

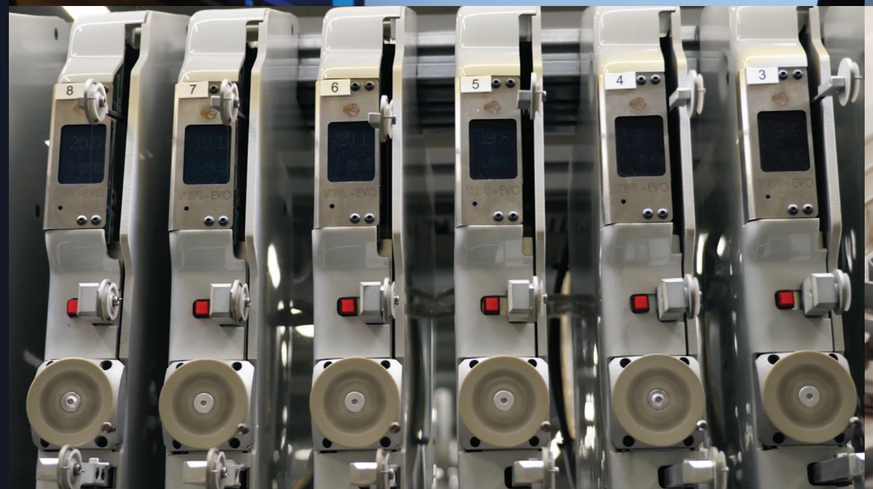
Highlights of the IATF 16949 and ISO 9001-certified facility include lean manufacturing methods and vertically integrated manufacturing processes that include multi-spindle winding, injection molding, potting, curing, and welding.









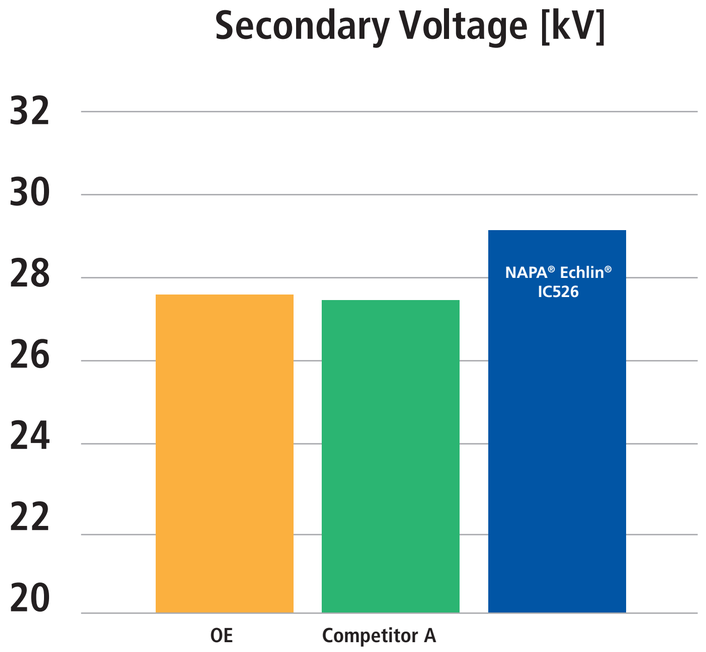


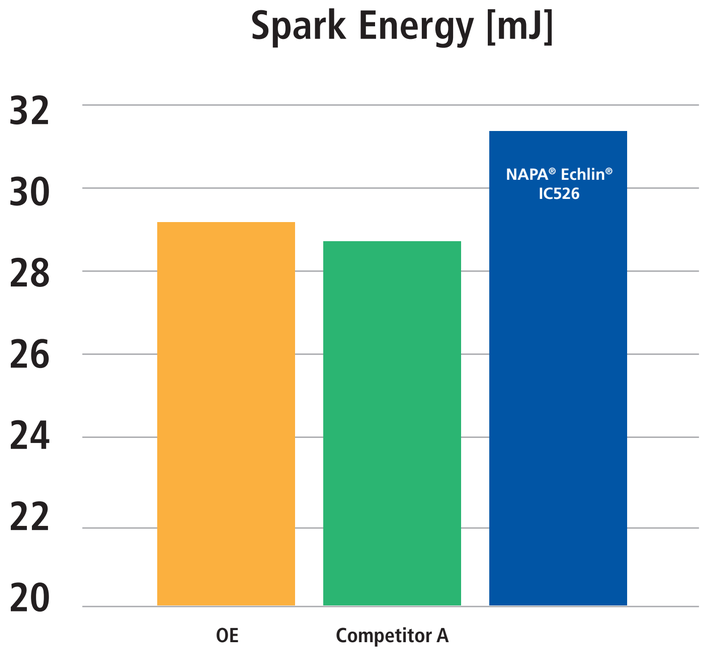
NAPA® ECHLIN®
IGNITION COMPONENTS

Testing and Validation

To ensure quality, all products manufactured at the SMP Poland facility undergo a full spectrum of measurement and life testing in addition to a full range of environmental analysis that include thermal shock, thermal cycling, salt spray, vibration, and storage tests.

The result is a line of premium Ignition components that perform flawlessly and stand up to real-life conditions.





The NAPA® Echlin® IC369 features a secondary voltage rating that is 5% higher than OE. This Coil also has a higher discharge current, as well as 7% higher spark energy than OE.

NAPA® ECHLIN®
IGNITION COMPONENTS

NAPA® Echlin® Training Tech Tip

As experienced ASE-certified automotive technicians themselves, NAPA® Echlin® Trainers are experts in Ignition System technology.

Here's what they say to look out for during an ignition coil install.

When replacing a faulty ignition coil, make sure that the driver in the PCM has not been damaged by a shorted coil - This is especially prevalent in Ford 2-wire coils

If the ignition coil is not operating as it should be, the right amount of energy will not be supplied to the spark plugs, resulting in the vehicle compensating by consuming more fuel

When replacing an ignition coil, replace all the secondary ignition components (plugs, boots, wires) as well

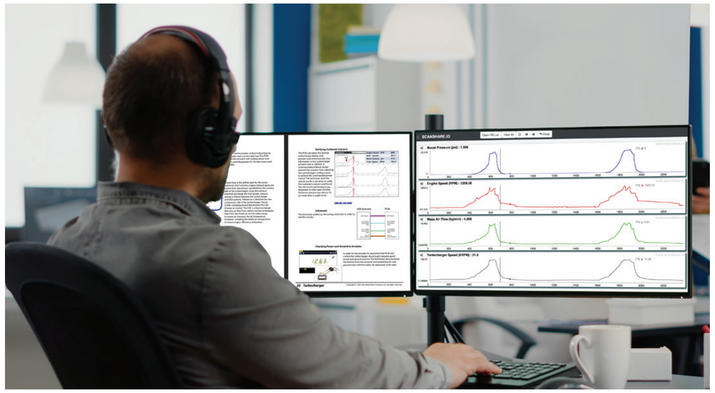
NAPA® ECHLIN®
IGNITION COMPONENTS

NAPA® Echlin® Professional Training

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

NAPA® Echlin® 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 ADA-compliant YouTube professional video library features more than 500 installation and product videos.



PRO TRAINING ON-DEMAND

NAPA® Echlin® offers an annual subscription to Pro Training On-Demand. This subscription grants access to more than 200 English, and over 50 Spanish 1-hour courses – and the NAPA® Echlin® on-demand library continues to grow. Topics range from fundamentals to advanced concepts, and include HVAC, diesel, hybrid, ignition, injection, electrical and communication diagnosis.

PRO TRAINING ON-SITE

Whether in-person at your location or virtually via computer, all NAPA® Echlin® Training classes feature a live instructor and are fully interactive as students work through real-life scenarios. Virtual class “workbooks” include on-demand links to video content and student configurable scan data.

Visit NAPAEchlinTraining.com