IGNITION COIL PROGRAM

2026

STANDARD BLUE STREAK

WHAT'S IN YOUR BOX?™

HERE'S WHAT'S IN OURS.

700+
SKUs

Standard® and Blue Streak® offer the industry's most complete Ignition Program with more than 700 precision-engineered Coils

100%
TESTED AND VALIDATED

All Standard® and Blue Streak® Ignition Coils are extensively tested and end-of-line validated

ENGINEERING IMPROVEMENTS

Popular Blue Streak® Ignition Coils feature design improvements to solve OE flaws and increase durability

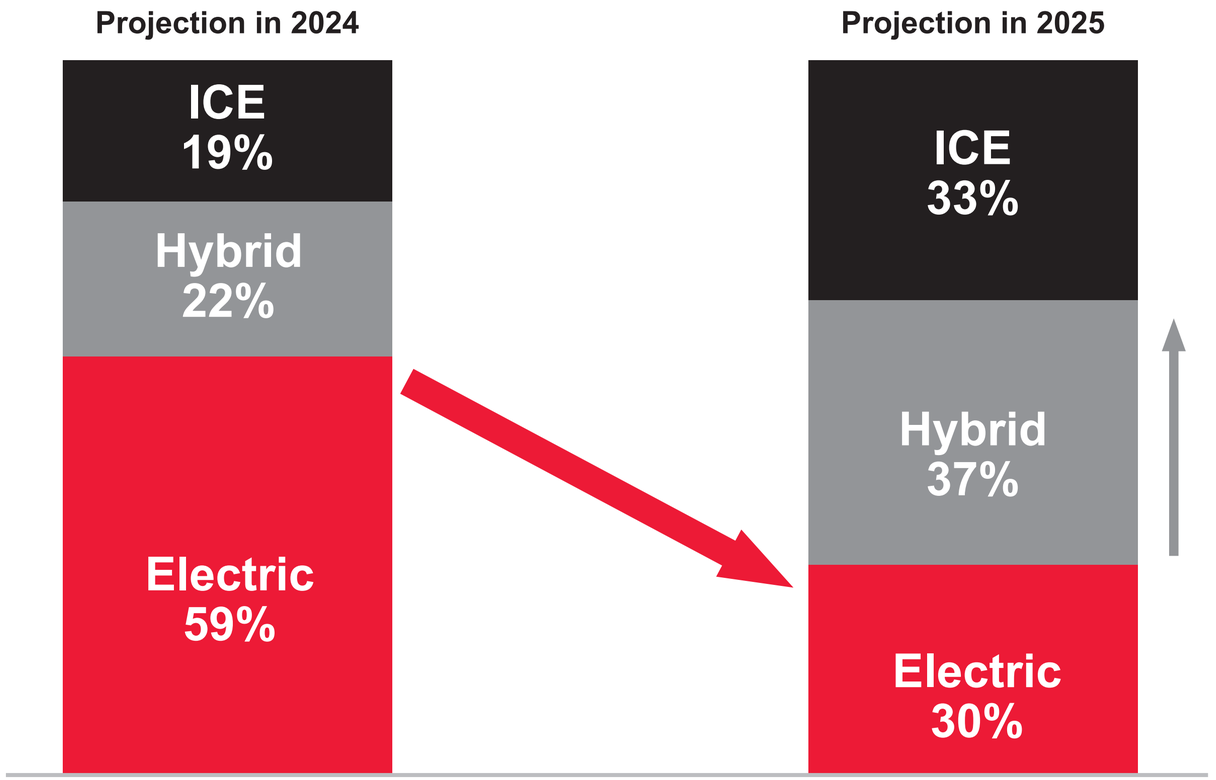
Growing Market

Analysts have been predicting as recently as last year that the automotive market would take a rapid shift toward electric vehicles. However, forecasts and expectations have shifted significantly in the past year to suggest that around 70% of brand new vehicles will still require ignition coils in the next 10 years.

Around 93% of vehicles sold today require ignition coils and will for the entirety of their lifecycles on the road. Current forecasts are predicting that by 2035, around 90% of vehicles on the road will still utilize internal combustion engines which require ignition coils. Ignition coils will remain an extremely strong category for decades to come.

Projections of 2035 New Vehicle Sales by Powertrain

2024 Forecast vs 2025 Forecast



Sources: 2024 Joint EV Trends & Outlook Forecast; 2025 Joint EV Trends & Outlook Forecast

In one year, EV forcecasts have been halved.

Hybrid and ICE vehicles will remain popular for decades.

Why OE Ignition Coils Fail

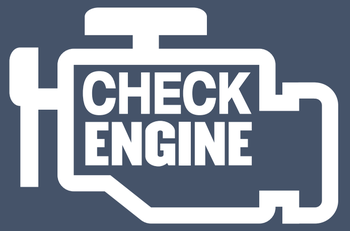
Moisture intrusion can quickly damage the internal electrical components of an ignition coil

Ignition coils with a poor internal design or coils with low spark energy are forced to work at maximum capacity causing them to overheat and fail

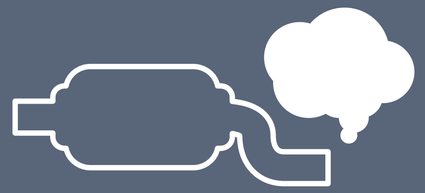
Worn spark plugs require an ignition coil to use more energy in order for the spark to jump a wider gap

Impact on Engine Systems

Ignition coils work together to ignite fuel thousands of times per minute. As one coil wears, the others will typically wear evenly. Worn ignition coils will not fully ignite fuel, resulting in reduced engine performance



Misfires in high-performance environments may lead to severe engine damage as the pistons, valves, and head gaskets all work to withstand increased temperatures



Severe misfires can inject unburned fuel into the exhaust system, damaging expensive components such as catalytic converters and oxygen sensors

Comparision Tests

Our Advanced Engineering and Testing Center in Bialystok, Poland recently tested the performance and durability of four popular ignition coils for the Ford 4.6L and 5.4L V8 engines:

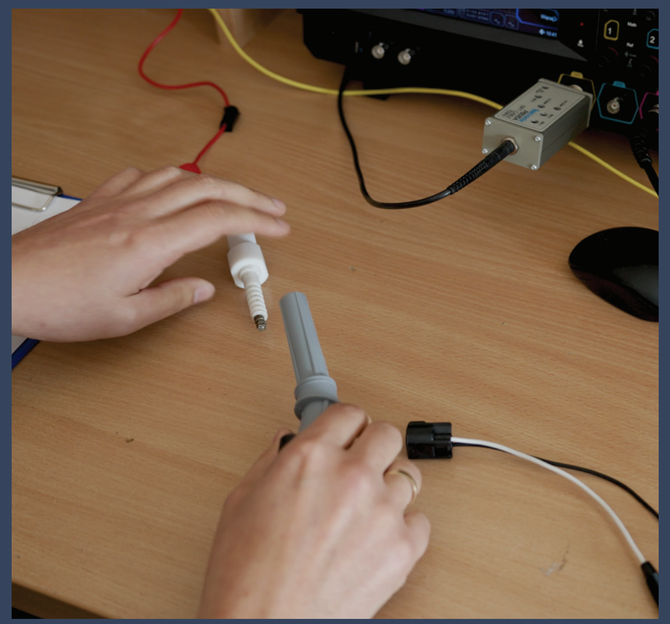
- Original Equipment
- Blue Streak®
- Low-Cost Competitor
- Premium Aftermarket Competitor

High OE failure rates make this a popular application and we wanted to see how each coil compared to OE. Each coil was tested for discharge duration, spark energy and then tested for durability while operating in a high-heat chamber.

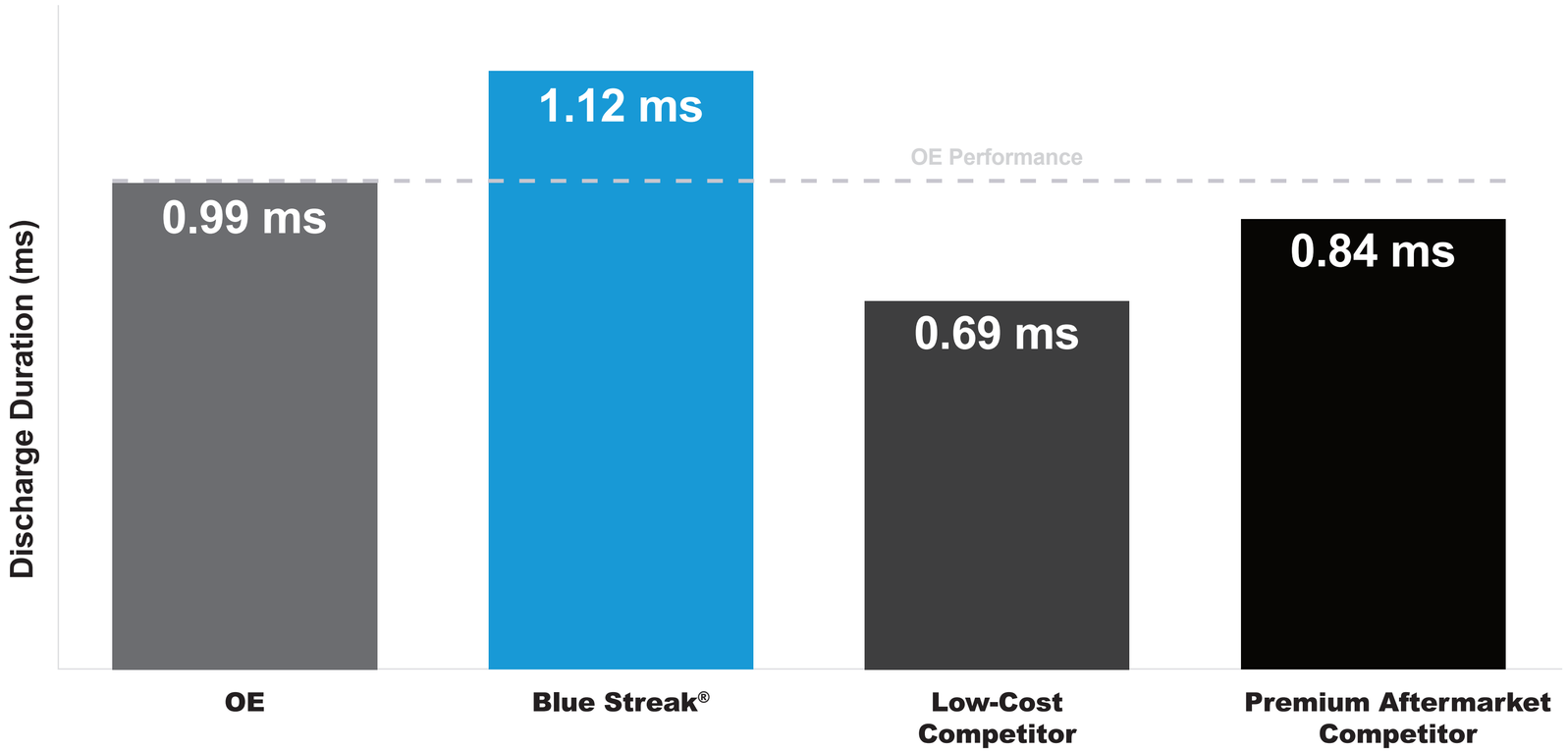
Comparision Tests

1. Spark Discharge Duration

This test measures, in milliseconds, how long each spark produced by the ignition coil lasts.



Spark Discharge Duration



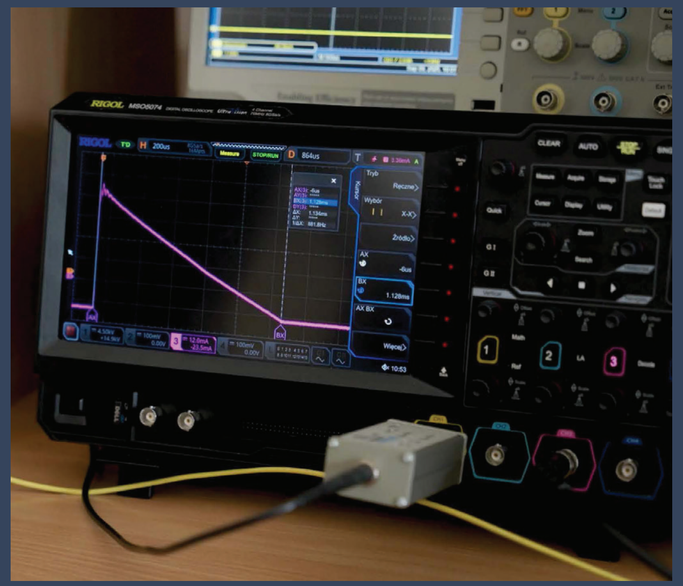
Only the Blue Streak® Coil exceeds the performance of the OE coil

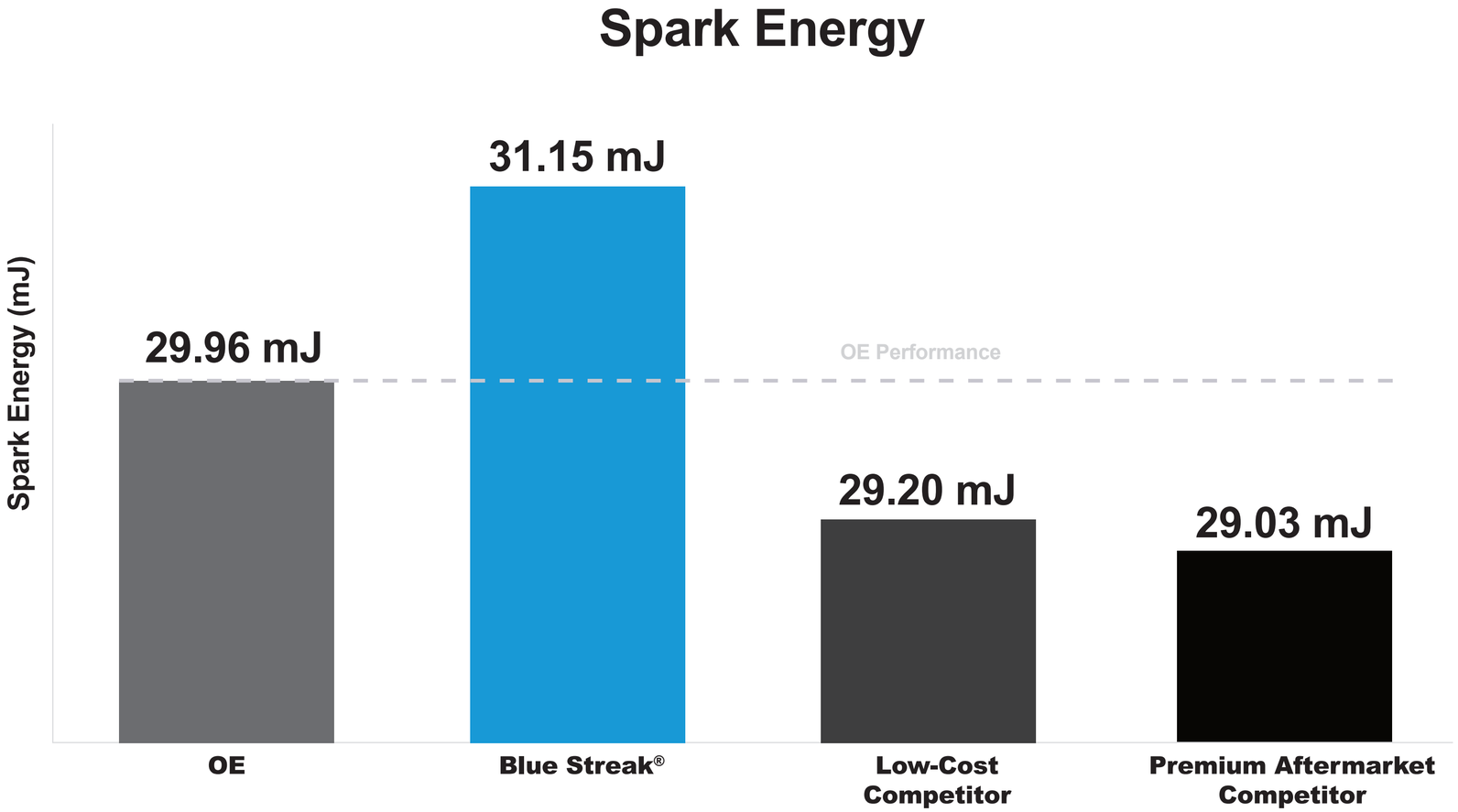
OE set the bar with the performance requirement of 0.99 ms. This means a coil must have a discharge duration equal to the benchmark to match OE performance. A shorter duration can result in unburnt fuel and reduced performance. A slightly longer duration is good insurance and can help promote a more complete fuel burn.

Comparision Tests

2. Spark Energy

Spark energy is the actual electrical output of an ignition coil, measured in millijoules (mJ).





Only the Blue Streak® Coil exceeds the performance of the OE coil

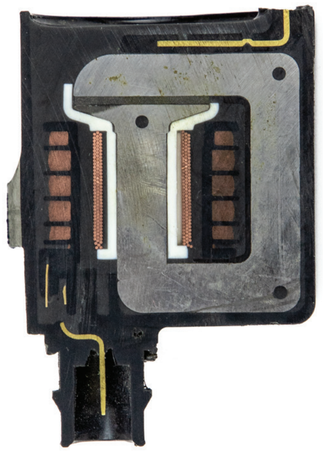
The OE coil is capable of almost 30 mJ of spark energy. A coil with any less won't be able to meet the design requirements of the engine and will be forced to work at maximum capacity most of the time, resulting in over-heating and premature failure. The Blue Streak® Coil is capable of more spark energy than the original design, which can help improve performance when towing and also means the coil doesn't have to work as hard in normal driving conditions.

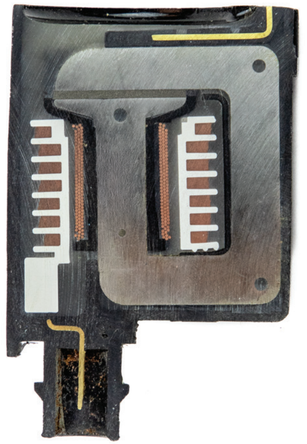
Comparision Tests

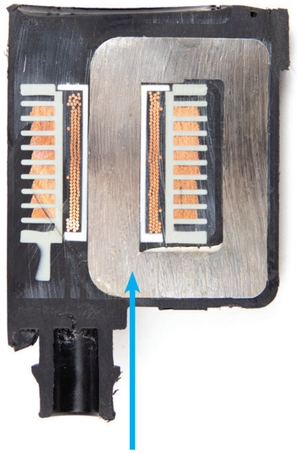
3. Durability

Heat is the enemy of ignition coils and our final test simulates real-world driving conditions in a high-heat chamber.

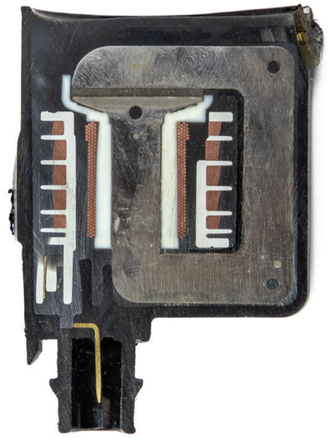
OE	Blue Streak®	Low-Cost Competitor	Premium Aftermarket Competitor
PASS	PASS	FAIL	PASS







Poor internal core design, cheaper to manufacture, doesn't match OE design or performance



Comparison Test Conclusion

This Ford application was chosen because the OE coil is known to fail prematurely. The Low-Cost and Premium Aftermarket coils both displayed shorter discharge duration and less spark energy than OE. The Low-Cost Competitor also failed the high-heat durability test.

Only the Blue Streak® Coil outperformed the OE, demonstrating why it is the best replacement choice.

TOP MOVERS RANKED:

Ignition Coils

IMPORT APPLICATIONS

UF596
Toyota / Lexus / Scion
Cars & SUVs
(2022-08)

1

UF549
Nissan / Infiniti
Cars, Trucks, SUVs & Vans
(2023-06)

2

UF667
BMW / Mini
Cars & SUVs
(2022-01)

3

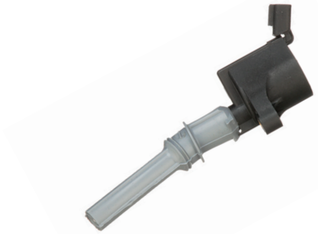
UF487
Toyota / Lexus
Cars, Trucks & SUVs
(2024-05)

4

UF495
Toyota / Lexus / Scion
Cars, Trucks & SUVs
(2024-03)

5

DOMESTIC APPLICATIONS



FD503
Ford / Lincoln / Mercury
Cars, Trucks, SUVs & Vans
(2019-97)

UF648
Chrysler / Dodge / Jeep / RAM
Cars, Trucks & SUVs
(2023-11)

UF504
Chrysler / Dodge / Jeep / RAM
Cars, Trucks & SUVs
(2025-05)

UF742
GM
Cars, Trucks, SUVs & Vans
(2024-14)

FD508
Ford / Lincoln / Mercury
Cars, Trucks & SUVs
(2009-04)

TOP MOVERS RANKED:

Blue Streak® Ignition Coil Multipacks

IMPORT APPLICATIONS

UF596K4
Toyota / Lexus / Scion
Cars & SUVs
(2022-08)

1

UF487K6
Toyota / Lexus
Cars, Trucks & SUVs
(2019-05)

2

UF349K6
Nissan / Infiniti
Cars, Trucks, SUVs & Vans
(2020-02)

3

UF667K6
BMW
Cars & SUVs
(2019-99)

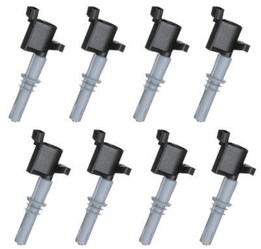
4

UF242K6
Honda / Acura
Cars & SUVs
(2008-99)

5

DOMESTIC APPLICATIONS

FD503K8
Ford / Lincoln / Mercury
Cars, Trucks, SUVs & Vans
(2016-97)



FD508K8
Ford / Lincoln / Mercury
Cars, Trucks & SUVs
(2009-04)

UF270K8
Chrysler / Dodge / Jeep
Trucks & SUVs
(2007-99)

FD502K6
Ford / Mercury / Mazda
Cars & SUVs
(2011-01)

UF303K6
GM
SUVs
(2005-02)

Additional Coils and Related Parts

Standard® offers a wide array of ignition components beyond coil-on-plug. From coil packs to service kits, Standard® has the ignition components needed to keep customers' cars on the road.

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

Heat-resistant housing compound and coil boots withstands heat stress for durability

100% pure copper windings in the primary and secondary bobbins improve durability and provide higher resistance against 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 protects against corrosion

Ignition Coil Connectors

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

Coil-on-Boot Service Kits

Multiple-piece design features a phenolic tube and silicone tip

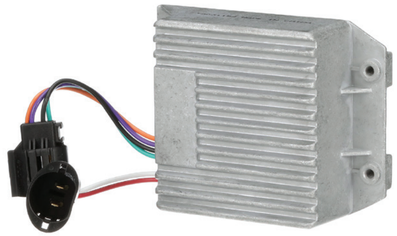
Includes spring and resistor

Other Ignition Systems

In addition to newer-style Coils, Standard® offers multiple ignition components for classic vehicles. These components help restore performance on older, higher-mileage vehicles.

Did You Know

Older ignition systems are typically comprised of primary (module and coil) and secondary (cap, rotor, wires, plugs) components. If a primary component has failed, it is typically due to high resistance in the secondary components. Newer coil-on-plug assemblies include the primary and secondary in one piece.



Ignition Modules

Standard® Ignition Modules use top-of-the-line technology to ensure perfect timing every time

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

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 tough international IATF 16949 quality standards

Standard® 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

Blue Streak® Ignition Coil Multipacks

Ignition coils lose spark energy over time. A failed coil suggests the others may have endured the same heat and stress. To help restore performance and fuel economy, Blue Streak® offers matched sets of our OE Durability Improved Ignition Coils.

To help technicians replace all coils at once for a complete repair, many of the most popular Blue Streak® OE Durability Improved Coils are offered in multipacks. Blue Streak® multipacks are available for both import and domestic vehicles.

A total of 15 Blue Streak® Ignition Coil Multipacks are currently available with more to come.

Recommending the Right Coil

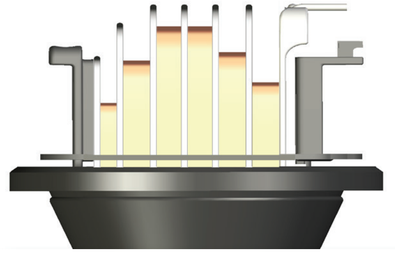
When choosing the correct replacement ignition coil for your customers, consider the engineering improvements available. Each Blue Streak® Ignition Coil is engineered with upgraded features that ensure they will perform under the most extreme conditions and outlast the original design.

1 A Low-Quality Part:

Less spark energy and capabilities than the original design

May operate at higher temperatures, leading to premature failure

Outsourced manufacturing with limited engineering resources

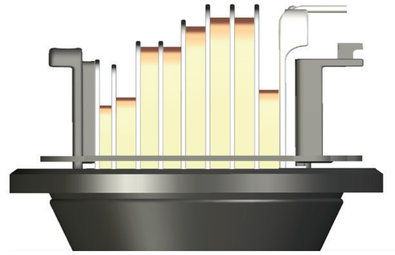


6 bobbin segments

2 An OE Part:

The same part that just failed on the vehicle

Many OE service coils are made in different factories and have less capabilities compared to the actual OE coil



8 bobbin segments

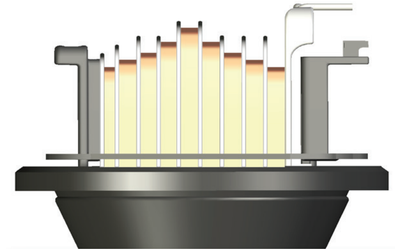
3 Precision-Engineered Replacement from Blue Streak®:

Design improvements to reduce heat for performance and reliability

Feature more spark energy and a longer discharge duration

In-house design, manufacturing, testing and validation

Industry-leading coverage makes it easier to find the Coils your customers need



UF349, 9 bobbin segments

Additional precision-wound bobbin segment improves energy distribution, resulting in less heat and a longer service life

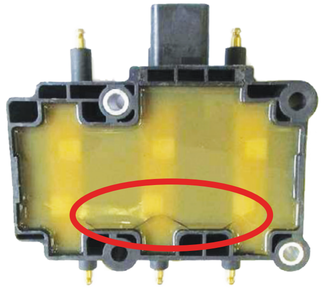
Engineering Improvements

Overheating and moisture intrusion are two of the main reasons OE coils fail. We have identified the root cause of these issues on many popular applications and have engineered ignition coils with design improvements to solve them.

Solving OE Problems

OE Problem:

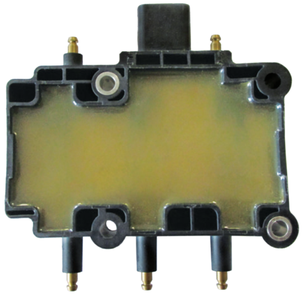
Heat causes the steel core to expand, cracking the epoxy, leading to moisture intrusion and coil failure



OE epoxy cracks after temperature test

Solution:

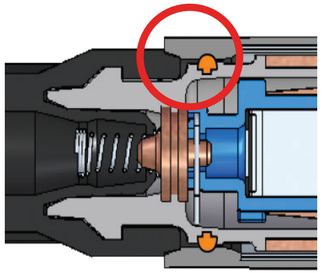
An elastomer overmold improves insulation and high-temperature epoxy resists cracking, even in high-heat conditions



No cracks after temperature test

OE Problem:

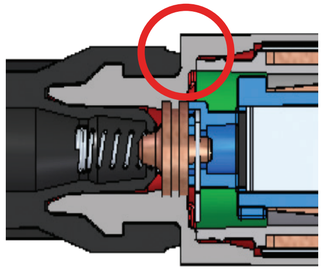
Many OE coils use a two-piece design that requires an O-ring. Over time, the O-ring breaks down, allowing moisture to enter the coil which results in coil failure



Two-piece design with O-ring

Solution:

Our engineers created a sealed, one-piece design that doesn't require an O-ring, eliminating the risk of moisture intrusion

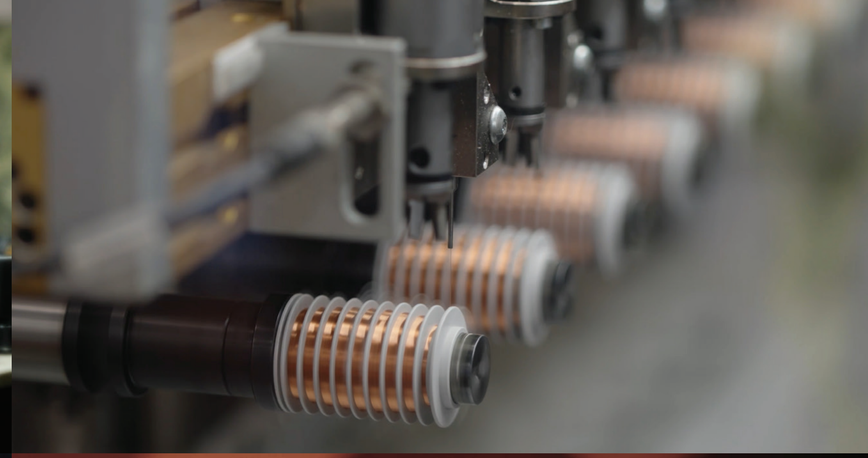


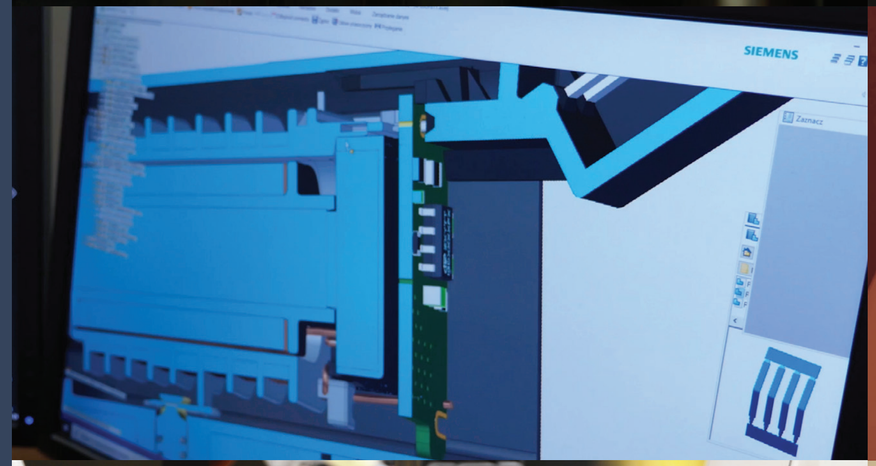
Sealed, one-piece design

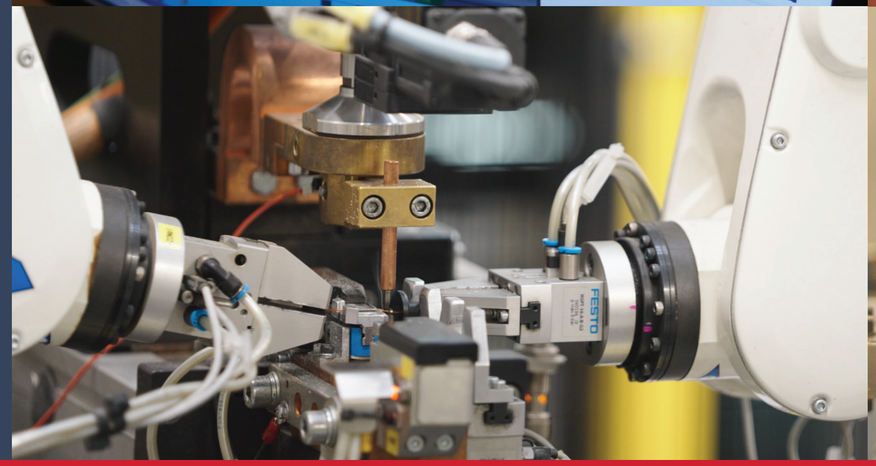
European Manufacturing

Standard® engineers and manufactures high-quality Ignition Coils and components at our state-of-the-art facility in Bialystok, Poland. We are able to maintain complete control over the entirety of the manufacturing process, ensuring only the highest-quality Ignition Coils are placed in Standard® and Blue Streak® boxes.

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





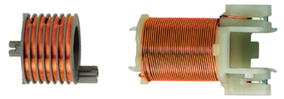


A Closer Look

High OE failure rates mean room for improvement upon many existing designs. Blue Streak® engineers design Ignition Coils with problem-solving upgrades throughout. Let's take a look at some of those featured upgrades on our popular Ford 4.6L and 5.4L V8 Ignition Coil, FD503.

Did You Know

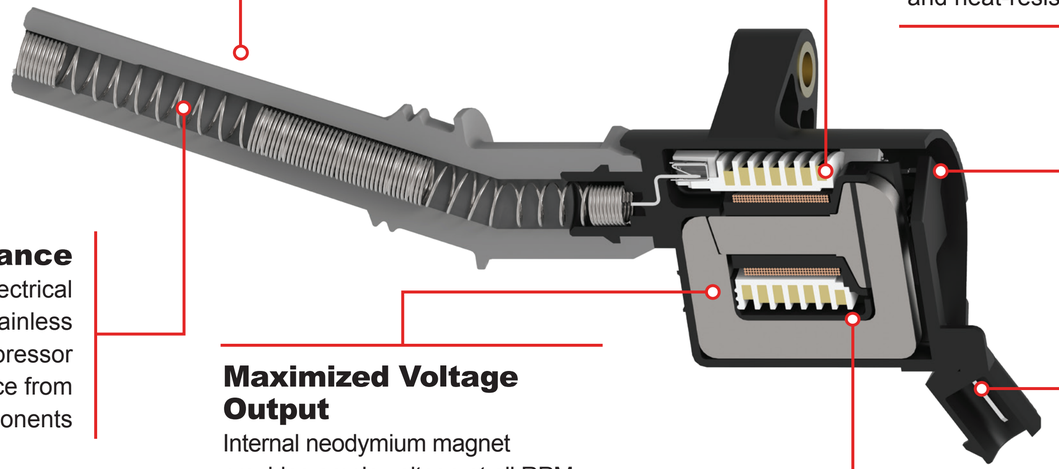
Many low-quality ignition coils lose voltage output at high RPM, when it is most critical. Blue Streak® Ignition Coils are designed to produce the same amount of energy through the entire RPM range, maintaining proper engine performance.



Additional Performance Capabilities
More spark energy and longer discharge duration mean the coil doesn't have to work as hard, allowing it to last longer

Reduced Operating Temperature
Better energy distribution through additional bobbin segments reduces heat, resulting in a longer-lasting ignition coil

Increased Durability
Epoxy seal bonded to a high-impact and heat-resistant synthetic housing

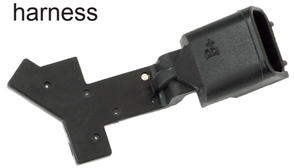


Consistent Performance
High-temp boot seals electrical energy while the internal stainless steel spring with ferrite suppressor prevents electrical interference from surrounding components

Maximized Voltage Output
Internal neodymium magnet provides ample voltage at all RPM

European Manufactured
Designed and manufactured at our own facility in Poland

Easy Installation
OE-matched connector provides an exact fit with the factory engine wiring harness



FD503
Ford / Lincoln / Mercury
(2019-97)
6.9M VIO

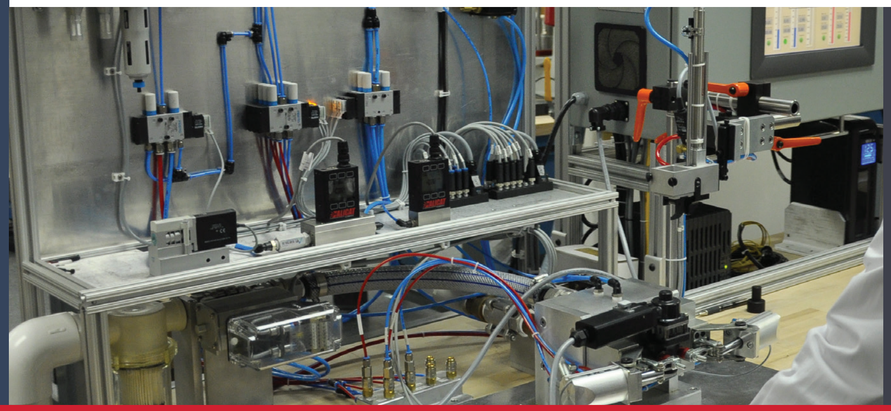
Testing and Validation

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 including thermal shock, thermal cycling, salt spray, vibration, and storage tests.

The result of all these extra steps is a line of premium ignition components that perform flawlessly and stand up to real-life conditions.

Salt Spray Test

The upgraded brass bushing featured on Blue Streak® UF549 remains unaffected and greatly outperforms the OE and competitor components in a 200-hour salt spray test



Blue Streak® OE Durability Improved Ignition Coils are extensively tested and thoroughly validated to be the best-performing Coils available on the market.

Standard® Pro Training Tech Tips

As experienced ASE-certified automotive technicians themselves, Standard® Pro Trainers are experts in ignition system technology.

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

Replacing ignition coils as a set will help restore performance, which may be noticeable to customers (this can be especially true for customers who use their vehicles for towing and hauling)

Ignition coil connectors on higher-mileage engines can become brittle and fail. Always inspect these connectors and consider replacing them when installing new ignition coils

If oil is found in the spark plug well(s), it is likely a valve cover seal leak may have lead to coil failure. Repair the oil leak to avoid new ignition coils failing sooner

Standard® Professional Training

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

Standard® Pro Training delivers accredited classes that educate technicians in the latest automotive repair technologies, and techs can earn CEU credits. An extension of Standard® training, our extensive YouTube video library has over 750 technical and installation videos.

All classes are taught by ASE Certified Master Automotive Technicians.

ASE Accredited Training Provider

PRO TRAINING ON-DEMAND

Available Classes

- Automotive Ignition Fundamentals
- Diagnosing Ignition Problems
- Diagnosing Low Power
- Essential Drivability Diagnostic Skills
- Misfire Diagnostics 101
- Misfire Diagnostics 102
- Misfire Troubleshooting Tips

PRO TRAINING ON-SITE

Available Classes

- Advanced Drivability Diagnostics
- Ignition System and Cam/Crank Synchronization
- Lab Scope Power User
- Misfire Diagnosis
- Powertrain Electronics
- Unleash the Power of Your Scan Tool

For information on Standard® and Blue Streak® Ignition Coils, search “Coils” on the **Standard Brand** YouTube channel or scan the QR code for the Ignition Coil playlist