THE OE’s ARE FAR FROM PERFECT

Many original OE designs can have unforeseen weak points that lead to product failure. These flaws don’t surface until vehicles are on the road.

THE WEAK POINTS IN MANY OE COIL DESIGNS LEAD TO PRODUCT FAILURE

OE FLAWS

Our engineers identify the OE flaws.

STANDARD® IMPROVEMENTS

We design the Standard® coil to overcome these flaws.

STANDARD® RELIABILITY

We manufacture a more reliable, better performing ignition coil.

THE STANDARD® ADVANTAGE

We have several years to evaluate the original part, identify the OE issues and correct these problems.

HIGH OE FAILURE RATES MAKE IGNITION COILS A KEY AFTERMARKET CATEGORY

Today’s advanced systems can push an ignition coil to the brink of destruction.

• High resistance overworks a coil
• Coils now operate in a harsher environment
• Ignition coils are mandatory replacement parts

OE WEAK POINT: EPOXY CRACKING

OE Design Flaw: Polypropylene Cover

The polypropylene cover on steel core leads to epoxy cracking, moisture intrusion, degraded performance and eventual coil failure.

SMP Solution: Elastomer Overmold

The Standard® design overmolds the iron core to prevent epoxy cracking, moisture intrusion, degraded performance and eventual coil failure.

OE WEAK POINT: MOISTURE INTRUSION

OE Design Flaw: Segmented Bobbin

OE Design Flaw: Polypropylene Cover

When the OE is run, moisture can penetrate the bobbin, impairing coil integrity and resulting in coil failure.

SMP Solution: Eliminate 0-ring Housing

The Standard® non-segmented bobbin design prevents epoxy air pockets while our one-piece overmolded terminal design prevents moisture intrusion for a long lasting, high-performing coil.

OE WEAK POINT: NO HIGH VOLTAGE CONNECTION

OE Design Flaw: Terminal Deformations

The OE metal terminal deforms while the epoxy cures causing the high voltage connection to fail.

SMP Solution: Spring Terminal Design

Standard® engineering features a spring terminal design to maintain a solid high voltage connection for top performance and long service life.

WHEN OE’s GO OFF-PLATFORM AND SOURCE, THEIR OE AFTERMARKET PARTS LOOK AND PERFORM DIFFERENTLY

We design the Standard® coil to overcome these flaws.

Our engineers identify the OE flaws.

We manufacture a more reliable, better performing ignition coil.

The Standard®® one-piece design with no O-ring housing prevents moisture intrusion for a long lasting, high-performing coil.

THE TEST RESULTS ARE IN

Standard® coils outperform the OE and OE aftermarket coils with more spark energy and longer lasting discharge to deliver improved performance and fuel economy.

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In 2006, SMP acquired an OE ignition coil company in Bialystok, Poland. This plant had been manufacturing coils for the OE since 1979.

- SMP Poland is now 108,000 sq. ft. and IATF 16949-certified
- We manufacture 6 million coils and 2 million sensors each year
- We introduce 110+ new products annually
- More than 750 employees including 60+ resident engineers
- Highest quality coils for optimal performance and maximum durability

Original Vehicle Platforms (% SMP Coil Sales)

<table>
<thead>
<tr>
<th>Brand</th>
<th>Platform Sales Note</th>
</tr>
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<tbody>
<tr>
<td>Hitachi</td>
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Top Selling Coils (% SMP Sales)

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<td>3</td>
<td>UF270</td>
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SMP OFF-PLATFORM SOURCING

Many OE’s use non-OE product in their aftermarket programs

Once a part comes off-platform, these OE’s source, rather than manufacture – OE’s aren’t built for “short-run” requirements.

We estimate that one OE is sourcing approximately 73% of its aftermarket coils from China.

Country of Origin

- China, 73%
- Other, 27%

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