

Ignition applications



ENGINE MANAGEMENT

Ignition applications

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Context

In today's automotive world, engine performance, fuel economy and low emissions are key objectives. For gasoline engines, the ignition system is a key factor in achieving these important goals.

Ignition coils convert low voltage from the battery into the high voltage necessary to jump the sparkplug gap and ignite the fuel-air mixture in each cylinder.

Coil performance is of critical importance to the overall efficiency of the ignition function, in particular with today's static ignition and electronic fuel injection systems. Fuel consumption, emissions, vehicle reliability and acceleration can all be improved through innovative coil design. And now smart coils can work together with electronic control units to bring advanced functionalities to new engine technologies.

Ignition wire sets carry tens of thousands of volts from the coil to the sparkplugs, delivering maximum spark energy to the engine. They too can affect vehicle performance. Advanced design and manufacture can avoid problems related to electromagnetic interference, energy loss, misfires and vehicle breakdowns.

With long experience in ignition systems, Electricfil develops innovative technologies and products to meet your needs, offering improved reliability and performance while reducing costs.

Ignition coils needs

In today's gasoline engines, ignition coils must satisfy a number of needs to meet objectives in engine performance, fuel economy, low emissions and cost:

- High energy efficiency
- Extended spark duration
- Minimum electromagnetic interference
- Small size
- Low weight
- Secure connections
- Easy mounting
- High reliability and long life
- Integration of new functions

- Low cost

Ignitions wire needs

Ignition wires are critical automobile components, affecting both performance and vehicle reliability. For this reason, they must offer:

- Effective suppression of electromagnetic interference to avoid disturbing on-board electronic circuits, radios, televisions and mobile communications
- High reliability and long life to avoid vehicle breakdowns
- Secure connections

Electricfil solutions

Electricfil Automotive **masters all ignition coil and wire technologies** to produce optimum solutions for every need. The solution path is based on more than 50 years of experience in the field.

- **Analysis of customer needs and application constraints** to select the most suitable coil type from our proven core technologies (integrated ignition coil & wire set, integrated ignition unit, pencil coils, etc.)
- **Selection of components**, connections and assembly technology
- **Integration of additional functions** such as diagnostics or detection of cylinder number, cylinder pressure or sparkplug fouling
- **Rigorous testing and inspections** on the manufacturing line to ensure exceptionally high quality of the final product and compliance with specifications.

Electricfil prime ignition solutions

- > Ignition wire sets
- > Integrated ignition units
- > Integrated ignition coil and wire set
- > [Pencil coils](#)