Types of Ignition Coils

Ignition coils have made many advancements through the years.

**Coil-Near-Plug (CNP)**

Although still connected to the spark plugs with short spark plug wires, Coil-Near-Plug (CNP) technology eliminates the distributor, providing better reliability than previous ignition systems.

**Coil-On-Plug (COP)**

The Coil-On-Plug (COP) coil is connected to the spark plug with a stainless steel spring connector and protective rubber insulating boot. This technology eliminates phantom misfires commonly found with earlier systems utilizing ignition wires.

**Stick Coil**

In 1996, DENSO developed the auto industry’s first compact stick-type ignition coil. The space-saving design, since adopted by many of the world’s leading automakers, requires no high-tension ignition cable, fitting neatly into the engine’s spark plug bore. Along with its stick coil technology, other advanced features pioneered by DENSO include micro-sized driver circuits and diagonal inductive windings. In the development of today’s high-tech ignition systems, the automakers and DENSO are full partners.

Watch TechTalk™ by Federated Auto Parts this season on Two Guys Garage.

Scan the code below to view this Federated TechTalk™ tip in full.

---

**Tech Tip**

The stick coil’s cylindrical ignition coil generates a high voltage to the spark plug. Based on a signal from the engine ECU, a driving circuit (igniter) drives the ignition coil. Because the cylindrical ignition coil is designed to be stored in the engine plug hole, DENSO’s stick coil is easy to install in the engine.
DENSO Compact Stick-Type Ignition Coil

Features:
- Improved coil efficiency reduces the need to generate high voltage
- Newly developed small-size driving circuit is integrated into top of coil
- Cylindrical ignition coil eliminates the need for ignition wires
- Small size, light weight, and smooth appearance on top of the engine head cover

Benefits:
- Small in size, light in weight and easy to install
- Eliminates phantom misfires
- Maximum available voltage under all operating conditions
- Energy saving, as improving the coil’s magnetic efficiency reduces the time needed to generate high voltage for the ignition coil

DENSO has developed a small-size integrated driving circuit into the top of the coil.

DENSO uses superior quality components and materials to ensure optimal performance.

DENSO conducts superior testing and inspection processes to ensure the highest quality.

DENSO uses diagonal windings to eliminate sectioned bobbin reducing size and weight.