

Common faults in ignition coils

Diagnosing faulty ignition coils

Ignition coils take power from the battery and relay it to the spark plugs igniting the fuel and makes your vehicle run. There are some common signs to look out for when looking to diagnose a faulty ignition coil.

Poor Fuel Economy

A reduced performance in vehicle economy and lower MPG could be a sign of an ignition coil failure. Less power reaching the spark plug means vehicles struggle and expend more fuel to compensate for insufficient power.

Vehicle Backfiring

A backfiring vehicle can be an early symptom of an ignition coil failure. The cause of this is unused fuel, emitted through the exhaust system. If the issue is not addressed, serious damage can also be done to the exhaust, resulting in preventable and expensive repairs.

Vehicle Stalling

With ignition coil failure, vehicles have irregular sparks emitting to the plugs to keep the vehicle running, resulting in stalling. When the vehicle is brought to a stop, it may shut off totally, forcing a restart.

Problems starting the vehicle

Check your high tension leads (HT Leads). They run between the distributor and spark plugs. Ignition coil failures result in 1 or more spark plugs not receiving the appropriate amount of charge. If you have trouble starting your vehicle in the cold, this is a good sign of potential ignition coil failure. You can run a simple test on the HT leads to check that there is in fact a spark going from each lead to each spark plug.

Common causes for ignition coils failing

Damaged or worn spark plugs

If the spark plugs are worn out, it forces ignition coils to operate at a much higher output. Keeping your spark plug in optimum condition can reduce your chances of experiencing an ignition coil failure.

As spark plugs wear down, the gap in each spark plug is fired is widened meaning the coil needs to provide a higher voltage in order to bridge the gap. This additional strain on the ignition coil may cause voltage overload leading to overheating and eventually failure.



Vibrations

Vibrations can damage ignition coil windings and insulation causing shorts or breaks in the secondary windings.

Overheating

The overheating of ignition coils can hinder their ability to conduct electricity.

Wear and tear

Wear and tear is a common reason for ignition coils failing. It causes degrading of the insulation between the primary and secondary coil windings and the primary coil. The reduction in insulation can cause the coil to overheat.