

**Topic**

Effects of gap growth on Ignition Coils

**Issue**

Please note that Spark Plug excessive gap growth combined with extended engine operation with this condition will severely impact Ignition Coil operation.

The ignition coil could experience the following as a result:

- 1) Overheating
- 2) Cracking
- 3) Insulation delamination
- 4) Random misfire
- 5) Primary and secondary winding deterioration
- 6) Spontaneous thermal event

**Solution**

NGK recommends replacing **all Ignition Coils** if the presented vehicle has Spark Plugs with excessive gap growth as a precautionary measure to ensure uninterrupted vehicle operation

**Additional Information**

Ignition Coils should be replaced if:

- ✓ There exists evidence of distortions, cracking, warping or overheating on ignition coils – replace all coils as a general rule if one or more show these symptoms
- ✓ Oil contamination – replace all Ignition Coils affected
- ✓ Other fluid contamination – coolant, fuel, Power Steering fluid, Windshield washer fluid, AC refrigerant, etc
- ✓ Causes of spark plug fouling – either mechanical or fuel-based (excessive mechanical wear <worn rings, valve seals, bearings, etc>)
  - Prolonged issues causing excessively lean or rich conditions will lead to IC failure
  - Primary sensors (WRAF, O2)
  - Secondary sensor systems (MAF, IAT, CMP, CKP, etc)

