

# TECH TIPS

## EXHAUST TEMPERATURE SENSOR



### DIAGNOSIS PROCEDURE

#### COMMON SYMPTOMS:

- Appearance of the check engine light, particle filter or flashing glow light;
- Increased fuel consumption;
- Increased polluting emissions (HC, CO and NOx);
- Loss of power, sudden slowing down of the vehicle;
- Untimely regeneration of the particulate filter.



#### COMMON CAUSES OF FAILURE:

- Faulty power supply;
- External damage;
- Internal damage to electrical wiring (vibration, shock);
- Excessively high exhaust gas temperatures (faulty fuel injection).

Fault codes related to the temperature pressure sensor:

- **P0544 / P2031** - Circuit malfunction;
- **P0546** - High input value;
- **P2033 / P0549** - High circuit value;
- **P247A** - Out of system range;

### CHECKING THE EXHAUST TEMPERATURE SENSOR:

- 1** Visually inspect the sensor for loose or corroded connections and broken wiring. Ensure that the sensor is clean (not contaminated with oil or other elements), in which case clean it with a clean dry cloth.
- 2** Take a heat gun and heat the temperature sensor probe. Using a multimeter set to "Ω", measure the nominal value of your sensor. Depending on the sensor technology (Positive or Negative Temperature Coefficient), refer to the reference values in the tables below:

Temperature	Resistance
200°C	350 Ω ±10 Ω
400°C	489 Ω ±10 Ω
600°C	618 Ω ±10 Ω
800°C	739 Ω ±10 Ω

Reference values  
PTC technology

Temperature	Resistance
200°C	934 Ω ±10 Ω
400°C	214 Ω ±10 Ω
600°C	92 Ω ±10 Ω
800°C	51 Ω ±10 Ω

Reference values  
NTC technology

As a reminder, a sensor with PTC technology will **increase its resistance as the temperature rises**. And, conversely, a sensor with NTC technology will see **its resistance decrease when the temperature increases**.



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