

the combustion chamber. To achieve a richer air/fuel ratio, the ECM extends the injector opening time. As the engine warms up the air/fuel ratio is leaned off.

The input to the sensor is a 5V reference voltage supplied from the voltage divider circuit within the ECM. The ground from the sensor is also connected to the ECM which measures the returned current and calculates a resistance figure for the sensor which relates to the coolant temperature.

The following table shows CHT values and the corresponding sensor resistance and voltage values.

Coolant Temperature Sensor Response

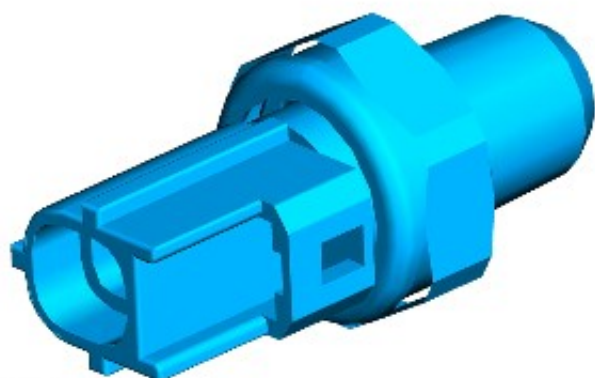
Temperature (Degrees Celsius)	Resistance (Kohms)	Voltage (Volts)
-40	925	4.54
-30	496	4.46
-20	277	4.34
-10	160	4.15
0	96	3.88
10	59	3.52
20	37	3.09
30	24	2.62
40	16	2.15
50	11	1.72
60	7.5	1.34
70	5.6	1.04
80	3.8	0.79
90	2.9	0.64
100	2.08	0.49
110	1.56	0.38
120	1.19	0.29
130	0.918	0.22
140	0.673	0.17
150	0.563	0.14

If the CHT sensor fails, the following symptoms may be observed:

- Difficult cold start.
- Difficult hot start.
- Engine performance compromised.
- Temperature gauge inoperative or inaccurate reading.

In the event of CHT sensor signal failure, the ECM applies a default value of 80°Celsius (176°F) coolant temperature for Fueling purposes. The ECM will also permanently operate the cooling fan at all times when the ignition is switched on, to protect the engine from overheating.

OIL PRESSURE SWITCH



E86095

The oil pressure switch, located in the oil cooler assembly, connects a ground input to the instrument cluster when oil pressure is present. The switch operates at a pressure of 0.15 to 0.41 bar (2.2 to 5.9 Psi).

FUEL RAIL PRESSURE SENSOR