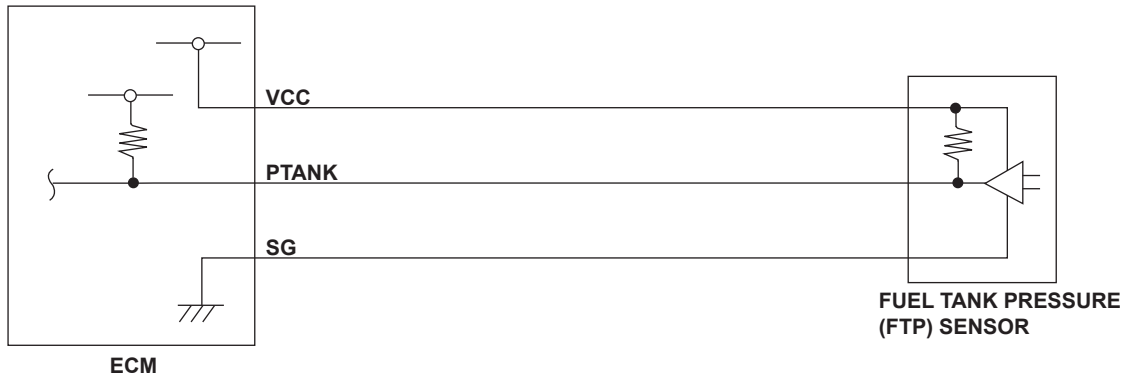


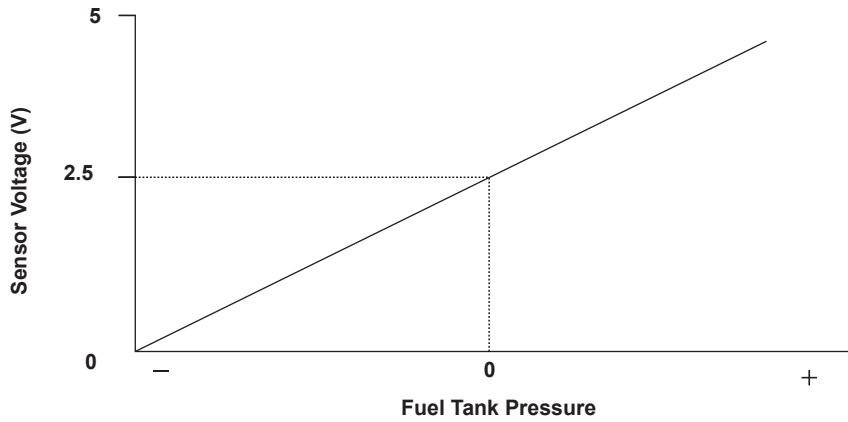
Advanced Diagnostics

DTC P0451: Fuel Tank Pressure (FTP) Sensor Range/Performance Problem



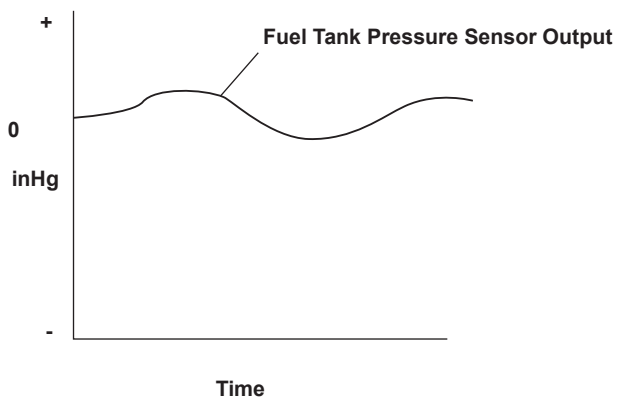
P0452-9603

Fuel Tank Pressure (FTP) Sensor Output Voltage

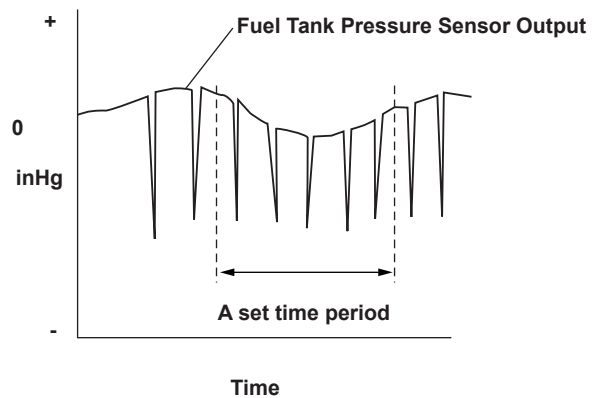


P0452-9672

Normal Operation



Failure Operation (Noise)



P0451-0071

General Description

The fuel tank pressure (FTP) sensor is installed between the evaporative emission (EVAP) two way valve and the EVAP bypass solenoid valve. The FTP sensor is used to detect leaks in the EVAP system.

The engine control module (ECM) monitors the FTP sensor output voltage. The FTP sensor output voltage rises as the fuel tank pressure increases. Conversely, the FTP sensor output voltage drops as the fuel tank pressure decreases.

Rapid changes in the FTP sensor output voltage due to electrical noise or an intermittent open during the EVAP leak detection may cause an incorrect leak detection, so abnormal output is monitored.

If the FTP sensor output voltage changes a specified number of times or more within a set time period, the ECM detects a malfunction and stores a DTC.

Monitor Execution, Sequence, Duration, DTC Type

Execution	Once per driving cycle
Sequence	None
Duration	17 seconds or more
DTC Type	Two drive cycles, MIL ON

Enable Conditions

Condition	Minimum	Maximum
Elapsed time after starting the engine	2 seconds	—
Initial engine coolant temperature	—	95°F (35°C)
No active DTCs	ECM, ECT, FTP, TP* ¹ , VSS, A/T System* ²	
Other	At idle	

*1: M/T

*2: CVT

Malfunction Threshold

The FTP sensor output fluctuates by ± 0.3 kPa (± 2 mmHg, ± 0.1 in.Hg) or more five times within 3 seconds.

Driving Pattern

Start the engine at an engine coolant temperature as specified under Enable Conditions, and let it idle.

Diagnosis Details

Conditions for illuminating the MIL

When a malfunction is detected during the first drive cycle with the ECT at engine start-up within the specified temperature range, a Temporary DTC is stored in the ECM memory. If the malfunction recurs during the next (second) drive cycle with the ECT at engine start-up within the specified temperature range, the MIL comes on and the DTC and the freeze frame data are stored.

Conditions for clearing the MIL

The MIL will be cleared if the malfunction does not recur during three consecutive trips in which the diagnostic runs.

The MIL, the DTC, the Temporary DTC, and the freeze frame data can be cleared by using the scan tool Clear command or by disconnecting the battery.