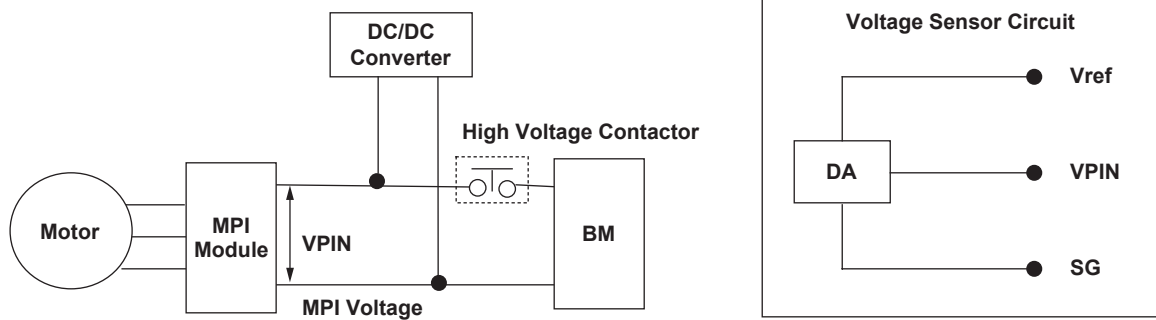# Advanced Diagnostics

DTC P1576 (11): Motor Drive Module (MDM) Voltage Signal Circuit High Input

P1576-0071

General Description

The MPI (motor power inverter) module voltage (VPIN) is used for controlling the IMA (integrated motor assist) motor and IMA battery energy management. If the VPIN cannot be detected precisely, the exhaust emissions, fuel economy, or drivability may be adversely affected.

Normally, the sensor output VPIN is less than 4.756 V. If it is beyond the specified range, a malfunction is detected and a DTC is stored.

Monitor Execution, Sequence, Duration, DTC Type

Execution	Continuous
Sequence	None
Duration	2 seconds or more
DTC Type	One drive cycle, MIL ON, IMA system indicator ON

Enable Conditions

Condition	Minimum	Maximum
MCM power-supply voltage	10.5 V	—
Ignition switch	ON	
No active DTCs	MPI, BM	

Malfunction Threshold

The MPI voltage (VPIN) sensor output is 4.756 V or more for at least 2 seconds.

Diagnosis Details

Conditions for illuminating the MIL

When a malfunction is detected, the MIL comes on and the DTC and the freeze frame data are stored in the ECM memory.

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