P1780 TORQUE CONTROL SIGNAL FAILURE

GENERAL DESCRIPTION

Many control units is applied to the vehicle due to vehicle to be electronic control type and these perform many controls by receiving signals from sensors. So the common use of each sensors and the need of comunizing informations became a prominent figure. CAN comunicationmethod is used at power train (ABS, trnasmission, engine, ECS etc) control of vehicle because it withstands eletronical external noise by spark and can high-speed comunication. Though CAN communication, ECM and TCM hold engin RPM, APS, step of trensmission, decreasing of torque in common and perform the active control.
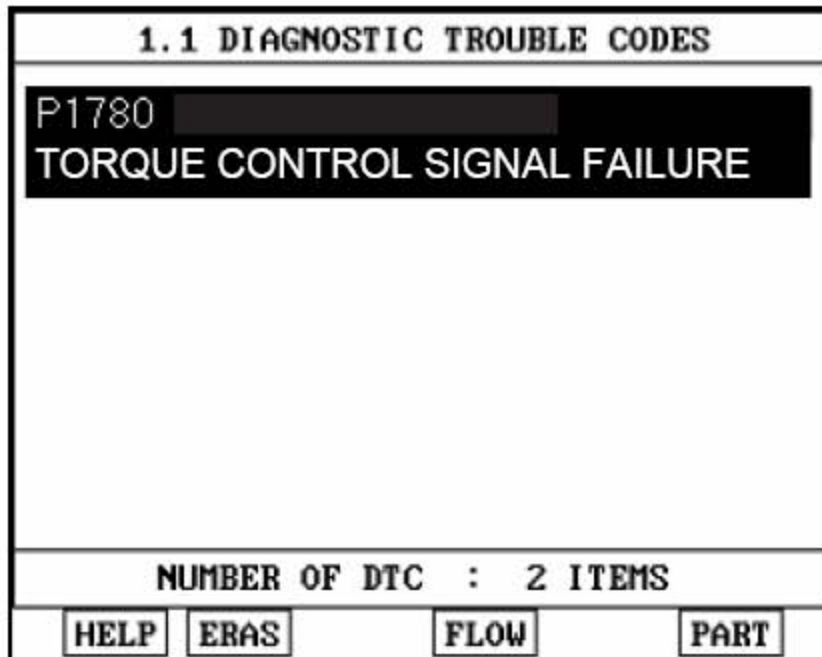
DTC DESCRIPTION

This code is set, if ITM-ECU detects invailid engine information like engine displacement, torque. If failure is detected TCCU prohibits the ITM control and cuts the current to control coil.

DTC DETECTING CONDITION

Item	Detecting Condition	Possible Cause
DTC Strategy	Invalid Engine size received	•Invalid Engine size received
Enable Conditions	Message present 1.0 sec self clearing	
Threshold Value	Invalid engine size received for greater than 1 second, and a fault will be set	
Diagnosticn Time	1 sec	
MIL on condition	0.5 Sec	
Fail Safe	Engine size set to zero, ECU will not send current to the clutch coil	

MONITOR DTC STATUS

1). Connect scantool to Data Link Connector(DLC).
2). Warm up the engine to normal operating temperature.
3). Monitor DTC(Diagnostics Trouble Code) on the scantool.

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│       1.1 DIAGNOSTIC TROUBLE CODES            │
│  ┌─────────────────────────────────────────┐ │
│  │ P1780                                    │ │
│  │ TORQUE CONTROL SIGNAL FAILURE            │ │
│  └─────────────────────────────────────────┘ │
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│                                               │
│         NUMBER OF DTC  :  2 ITEMS             │
│   ┌─────┐ ┌─────┐    ┌─────┐    ┌─────┐       │
│   │HELP │ │ERAS │    │FLOW │    │PART │       │
│   └─────┘ └─────┘    └─────┘    └─────┘       │
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4). Is the same DTC displayed again?

YES

▶ Check engine information.

▶ Repair or replace as necessary and go to "Verification of vehicle Repair" procedure.

NO

▶ Fault is intermittent caused by poor contact in the sensor' s and/or TCCU' s connector or was repaired and TCCU memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. Repair or replace as necessary and go to "Verification of vehicle Repair" procedure.

VERIFICATION OF VEHICLE REPAIR

1). Connect scan tool and select "Diagnostic Trouble Codes(DTCs)" mode.
2). Using scantool, Clear DTC.
3). Operate the vehicle within DTC Enable conditions in General information.
4). Are any DTCs present ?

YES

▶ Go to the applicable troubleshooting procedure.

NO

▶ System is performing to specification at this time.