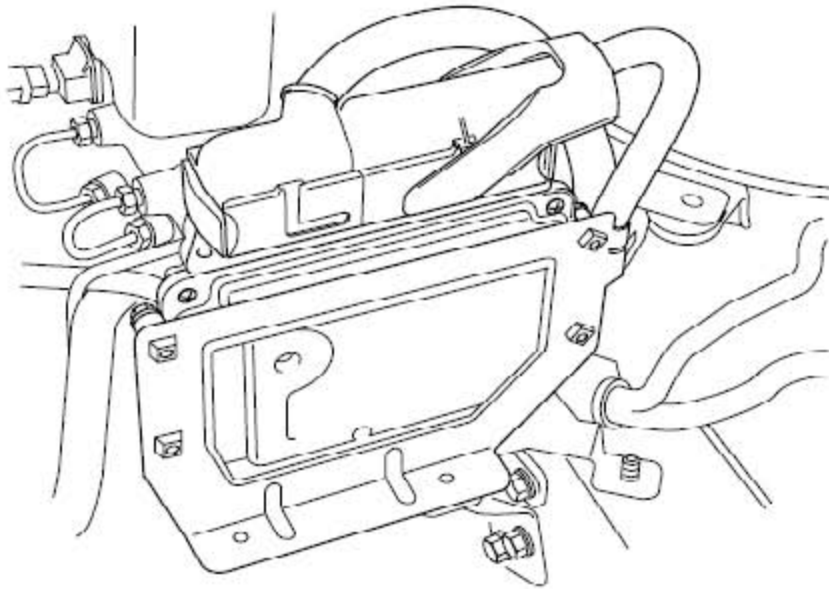


P1610 NON-IMMOBILIZER-EMS CONNECTED TO AN IMMOBILIZER

COMPONENT LOCATION



GENERAL DESCRIPTION

Immobilizer is device that prevents car from being thieved by reproduced key. Major components of immobilizer are ECM(Engine Control Module) and SMARTRA. Besides them, Immobilizer has transponder and coil antenna in it. If driver inserts key into key hole, SMARTRA gets transponder signal by wireless communications via coil antenna and delivers it to ECM through K-line communication line. then ECM deciphers code in it. If inserted key has invalid transponder with incorrect code or doesn't have transponder in it, ECM judges that inserted key is reproduced key and prohibits engine starting.

DTC DETECTING CONDITION

Item	Detecting Condition	Possible cause
DTC Strategy		• Invalid ECM
Enable Conditions		
Threshold value	• IG ON	
Diagnostic Time		
Fail Safe		

MONITOR DTC STATUS

- 1). Connect scantool to Data Link Connector(DLC).
- 2). Ignition "ON" & engine "OFF".
- 3). Selet "Diagnostic Trouble Codes(DTCs)"mode and monitor "DTC Status" parameter
- 4). Is the DTC B1610 present?

YES

Substitute with a known-good ECM with immobilizer and check for proper operation.If the problem is corrected, replace ECU and then go to "Verification of Vehicle Repair" procedure.

NO

Fault is intermittent caused by poor contact in SMARTRA's and/or ECM's connector or was repaired and ECMmemory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

VERIFICATION OF VEHICLE REPAIR

After a repair, it is essential to verify that the fault has been corrected.

- 1). Connect scantool and selet "Diagnostic Trouble Codes(DTCs)" mode and then clear DTC.
- 2). Operate the vehicle and monitor the DTC on the scantool.
- 3). Are any DTCs present?

YES

Go to the applicable troubleshooting procedure.

NO

System is performing to specification at this time.