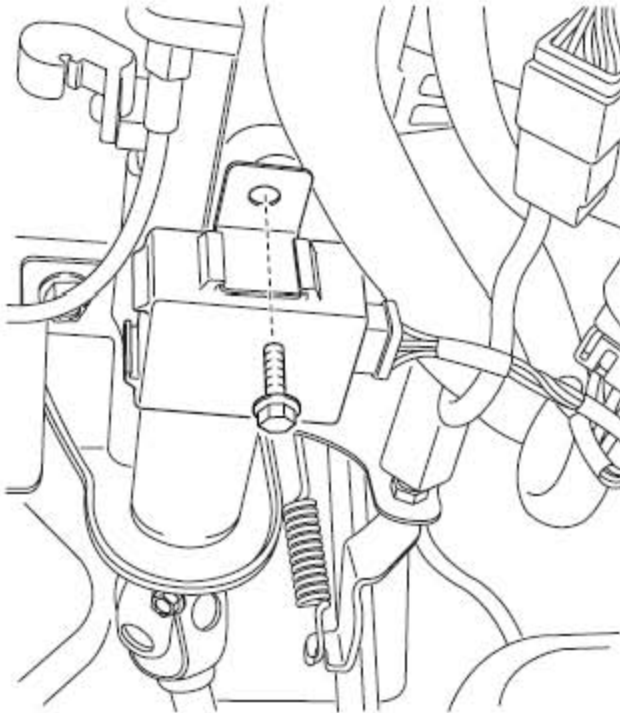


P1676 SMARTRA MESSAGE ERROR

COMPONENT LOCATION



GENERAL DESCRIPTION

The SMARTRA carries out communication with the built-in transponder of the ignition key. This wireless communication runs on RF (Radio frequency of 125 kHz). The SMARTRA is mounted at the ignition lock close to the antenna coil for RF transmission and receiving. The RF signal from the transponder received by the antenna coil is converted into messages for serial communication by the SMARTRA device. And the received messages from the ECM are converted into an RF signal, which is transmitted to the transponder by the antenna. The SMARTRA does not carry out the validity check of transponder or the calculation of encryption algorithm. This device is only an advanced interface, which converts the RF data flow of the transponder into serial communication to ECM and vice versa.

SMARTRA : SMART Transponder Antenna
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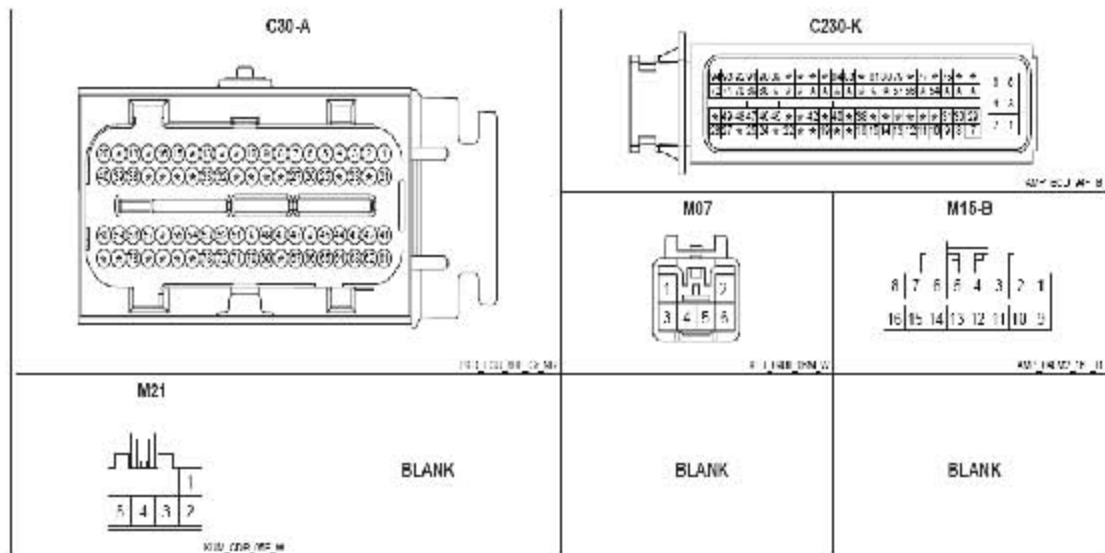
DTC DESCRIPTION

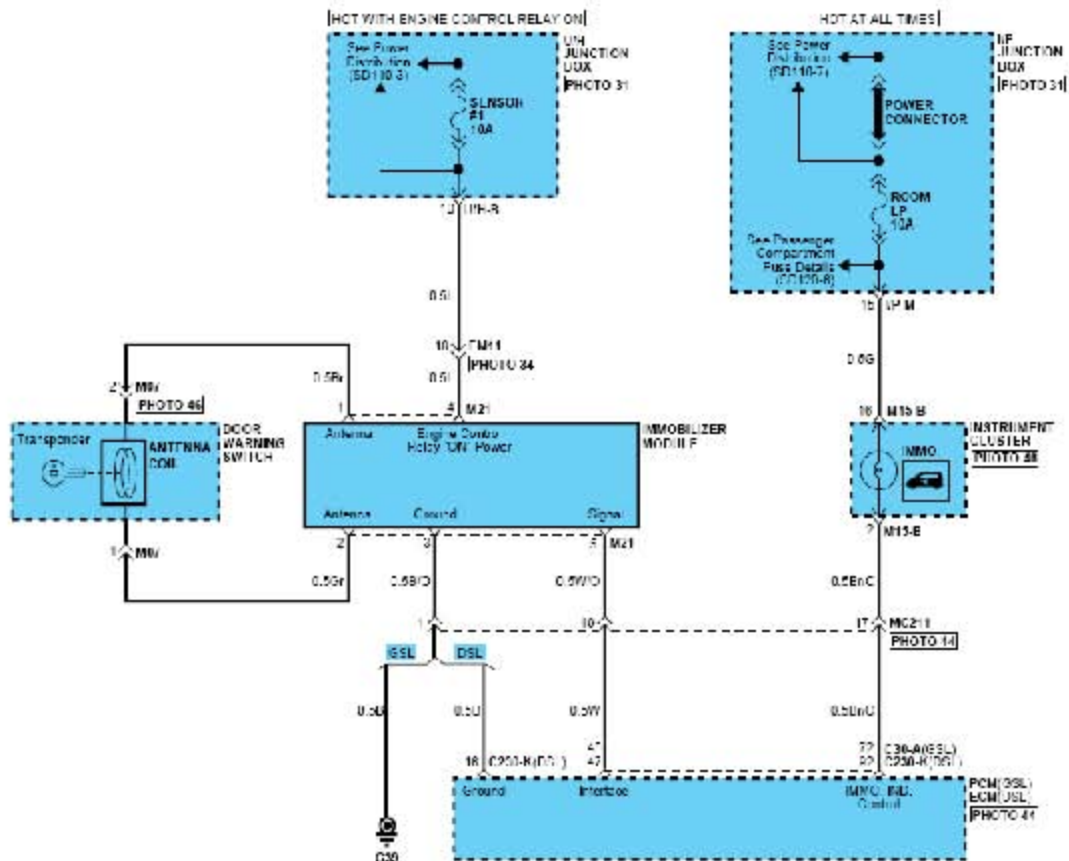
The ECM sets DTC P1676 if there's any fault in message from SMARTRA to ECU.

DTC DETECTING CONDITION

Item	Detecting Condition	Possible cause
DTC Strategy		<ul style="list-style-type: none"> Faulty SMARTRA.
Enable Conditions	•IG ON	
Threshold value		
Diagnostic Time		
Fail Safe		

SCHEMATIC DIAGRAM





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 B1676 present?

YES

Go to "Inspection & Repair" procedure.

NO

Fault is intermittent caused by poor contact in SMARTRA's and/or ECM's connector or was repaired and ECM memory 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.

COMPONENT INSPECTION

- 1). Check transponder and ECU status
 - A) IGN "ON" & Engine "OFF" with key intended to register.
 - B) Monitor the "KEY STATUS" Parameter on the Scantool.

Specification : 'LEARNT'

1.1 CURRENT DATA	
01. NO. OF LEARNT KEY	1
02. ECU STATUS	LEARNT
03. KEY STATUS	LEARNT
<div style="display: flex; justify-content: space-around; width: 100%;"> FIX SCRN FULL PART GRPH HELP </div>	

Fig 1

Fig 1) The current data in abnormal state

C) Are "KEY STATUS" and "ECU STATUS" Parameter within specifications?

YES

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.

NO

Go to "Check transponder" procedure.

2). Check SMARTRA

- A) IGN "ON" & Engine "OFF".
- B) Neutralize ECM and Register transponder key by scantool.
Pin code is required to Neutralize ECM and to Register transponder key.

C) Are Neutralizing and Registering completed normally?

YES

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.

NO

Substitute with a known-good transponder and check for proper operation. If the problem is corrected, replace transponder 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 select "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.