

## P1675 TRANSPONDER PROGRAMMING ERROR

### COMPONENT LOCATION



### GENERAL DESCRIPTION

- 1). During the key teaching procedure the transponder will be programmed with vehicle specific data. The vehicle specific data are written into the transponder memory. The write procedure is unique; therefore the content of transponder can never be modified or changed. The data are a string of 9 bytes defined by vehicle manufacturer. The transponder memory is split into two strings called authenticator and key password. After this programming the transponder memory is locked and the data (PIN code) cannot be read or changed respectively. The transponder status changes from "virgin" to "learnt". Additionally every transponder includes a unique IDE (Identifier number) of 32 bit. Unique means that the IDE of all transponder is different from each other. The IDE is programmed by the transponder manufacturer and is a read-only value. The authenticator and the key password are not transferred from ECM to transponder or vice versa. Only the results from the encryption algorithm are transferred. It is almost impossible to calculate the vehicle specific data from the encryption result.
- 2). For teaching of keys and special purposes the ECM is connected to the tester device.
- 3). When IG is ON, the coil supplies energy to the transponder which in turn accumulates energy in the condenser. Once the energy supply from the coil has stopped, using the stored energy in the condenser, the transponder transmits the ID CODE (stored within the ASIC).

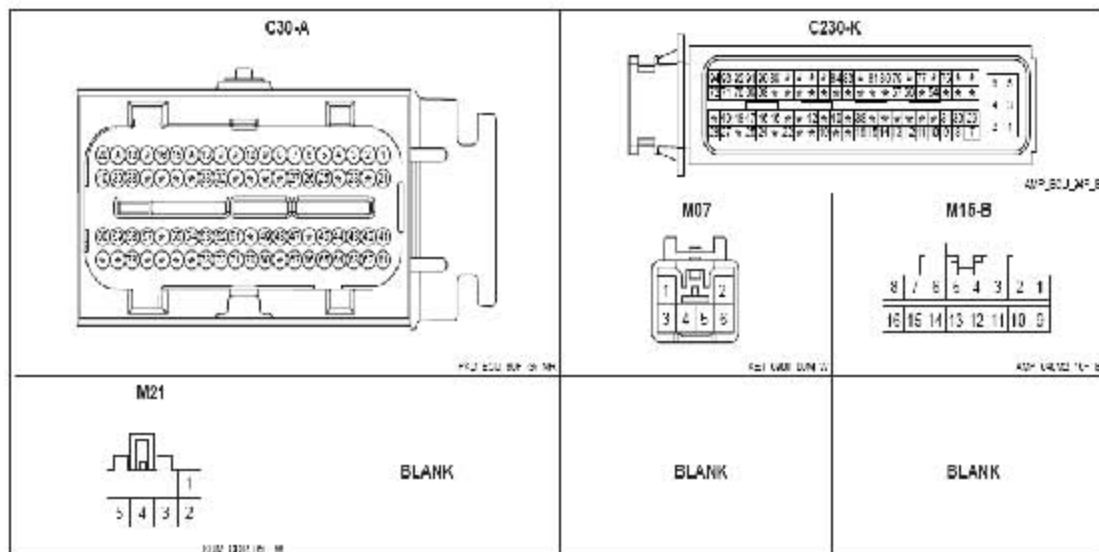
## DTC DESCRIPTION

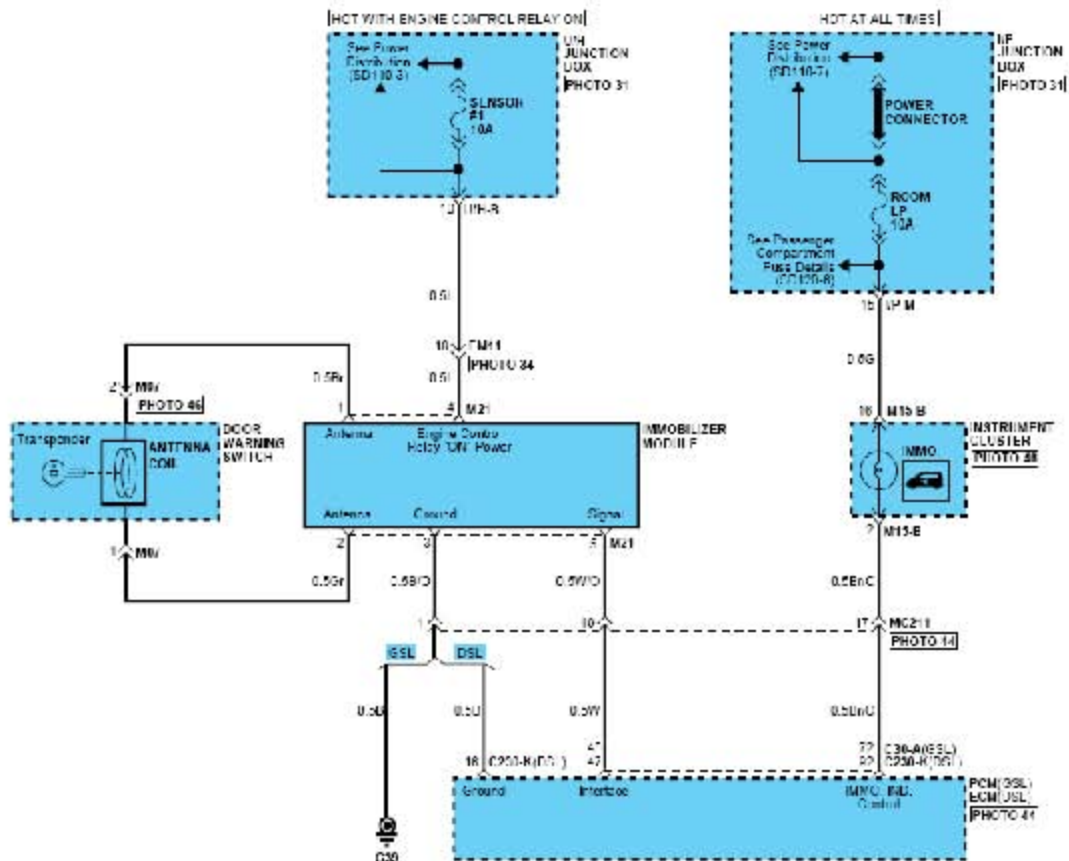
The ECM sets DTC P1675 if characteristic data of transponder doesn't coincide with that of ECM owing to transponder programming error.

## DTC DETECTING CONDITION

Item	Detecting Condition	Possible cause
DTC Strategy		<ul style="list-style-type: none"> <li>• Invalid transponder.</li> <li>• Invalid characteristic data</li> <li>• No transponder or more than two transponder is detected by coil antenna.</li> </ul>
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 B1675 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%;"> <span>FIX</span> <span>SCRN</span> <span>FULL</span> <span>PART</span> <span>GRPH</span> <span>HELP</span> </div>	

**Fig 1**

**Fig 1) The current data in abnormal state**

- C) Is the measured voltage 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 transponder
  - 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.