TROUBLESHOOTING

DIAGNOSTIC TROUBLE CODE CHART

DTC No.	Detection item	See page
P1610	•No answer from SMARTRA •Invalid message from SMARTRA to ECM	BE-173
P1800	•Antenna coil error	BE-175
P1801	•Invalid transponder data •Programming error	BE-176
P1803	•Invalid request from engine ECM or corrupted data	BE-178
P1805	•Inconsistent data of EEPROM •Invalid write operation to EEPROM •Not plausible immobilizer indicator stored in the ECM •No valid data from SMARTRA after 3 attempts by ECM •Invalid tester message or unexpected requests by tester	BE-179

DTC	P1610	No Answer or Invalid Message from SMARTRA

DTC DETECTING CONDITION

DTC No.	Detecting Condition	Possible Cause	Remarks
P1610	1. No answer from SMARTRA 2. Invalid message from SMARTRA to ECM	•An open in the wire between immobilizer antenna (SMARTRA) and engine ECM •Faulty immobilizer antenna unit (SMARTR) •Faulty engine control main relay circuit	P1801 and P1805 can be displayed when P1610 occurs

INSPECTION PROCEDURES

1. PROBLEM VERIFICATION

1. Connect the hi-scan (pro) to data link connector.
2. Turn the ignition switch to ON and verify the DTC "P1610" is displayed.
3. Erase the DTC "P1610" with the hi-scan (pro) and then monitor again.

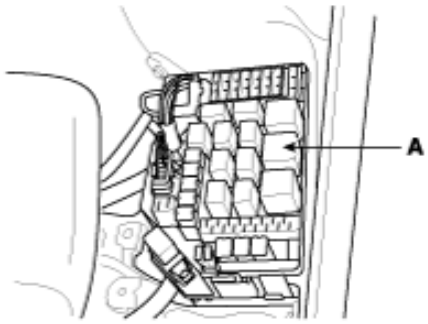
Is the same code displayed ?

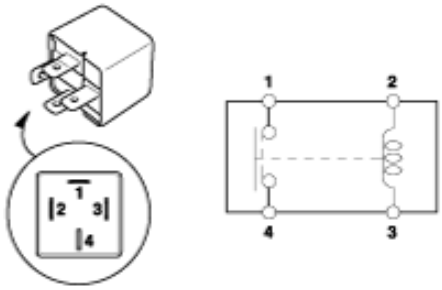
Yes	No	Problem is intermittent and engine control module memory was not cleared.

2. CHECK ENGINE CONTROL MAIN RELAY

1. Check that an operating noise can be heard from the engine control main relay(A).
2. Check for continuity between the terminals of main relay.

Terminal / Power (No.2-No.3)	2	3	1	4
Disconnected	○	○		
Connected	⊖	⊕	○	○



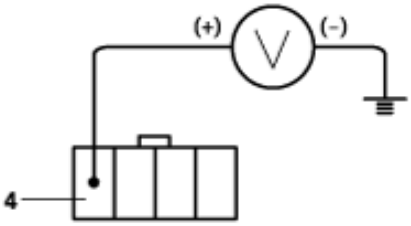


OK		
	NG	Replace the engine control main relay.

3. CHECK POWER VOLTAGE TO SMARTRA

1. Turn the ignition switch to ON.
2. Measure the power input voltage of SMARTRA between SMARTRA harness connector terminal 4 and body ground.

• Specification : approximately B+ (12V)



Yes		
	No	Check for these problems ; • A blown ECU fusible link (20A) or sensor fuse (10A) in the engine compartment relay & fuse box. • An open or short in the wire between the engine control main relay and SMARTRA unit.

4. CHECK HARNESS AND CONNECTOR BETWEEN ANTENNA COIL, SMARTRA UNIT AND ECM

Check for continuity between SMARTRA harness connector terminal 1 and ECM harness connector (C183-1) terminal 47.

Is there continuity ?

Yes		
	No	Repair an open in the wire between the SMARTRA unit and the ECM.

5. FAULTY SMARTRA UNIT

If all the tests are OK, replace the SMARTRA unit and recheck.

DTC	P1800	Antenna Coil Failure

DTC DETECTING CONDITION

DTC No.	Detecting Condition	Possible Cause	Remarks
P1800	Antenna coil error	•An open in the wire between SMARTRA and antenna coil •Faulty antenna coil	P1801 and P1805 can be displayed when P1800 occurs

INSPECTION PROCEDURE

1. PROBLEM VERIFICATION

1. Connect the hi-scan (pro) to data link connector.
2. Turn the ignition switch to ON and verify the DTC "P1800" is displayed.
3. Erase the DTC "P1800" with the hi-scan (pro) and then monitor again.

Is the same code displayed ?

Yes	No	Problem is intermittent and engine control module memory was not cleared.

2. CHECK FOR CONTINUITY BETWEEN ANTENNA COIL AND SMARTRA UNIT

Is there continuity ?

Yes	No	Repair an open in the wire between the antenna coil and the SMARTRA unit.

3. FAULTY ANTENNA COIL ASSEMBLY

If all the tests are OK, replace the antenna coil assembly and recheck.

DTC	P1801	Invalid Transponder Data

DTC DETECTING CONDITION

DTC No.	Detecting Condition	Possible Cause	Remarks
P1801	1. Invalid transponder data 2. Programming error	•Storage of invalid data in transponder during key teaching •Faulty transponder or different kind of transponder •Omitted transponder in the key	P1805 can be displayed when P1801 occurs

INSPECTION PROCEDURES

1. PROBLEM VERIFICATION

1. Connect the hi-scan (pro) to data link connector.
2. Turn the ignition switch to ON and verify the DTC "P1801" is displayed.
3. Erase the DTC "P1801" with the hi-scan (pro) and then monitor again.

Is the same code displayed ?

Yes	No	Problem is intermittent and engine control module memory was not cleared.

2. KEY TEACHING PROCEDURES

1. The key teaching is done after replacing a defective ECM or for providing of additional keys to the vehicle owner.
2. Connect the hi-scan (pro) to data link connector.
3. Turn the ignition switch to ON and select "TEACHING" mode of immobilizer system on the hi-scan (pro).
4. Input the pin code which consists of 6 digits.

   NOTE
   Because the pin code is security code, contact authorized HMC service staff to know the pin code.

5. If incorrect pin code is inputted for 3 consecutive times, ECM should disallow key teaching function for 1 hours.
6. If the data is correct, the key teaching is completed.

Is the key taught completely ?

Yes	No	Check for these problems ; • Storage of invalid data in transponder. • Different kind of transponder. • Omitted transponder in the key.

3. CHECK IF DTC "P1801" IS DISPLAYED AGAIN

1. Connect the hi-scan (pro) to data link connector.
2. Turn the ignition switch to ON and verify the DTC "P1801" is displayed.

Is the same code displayed ?

Yes

4. FAULTY TRANSPONDER KEY

Replace the key set assembly and key teaching must be done.

DTC	P1803	Invalid Request from ECM or Corrupted Data

DTC DETECTING CONDITION

DTC No.	Detecting Condition	Possible Cause	Remarks
P1803	Invalid request from engine ECM or corrupted data	Faulty communication between key, SMARTRA and engine ECM	P1801 and P1805 can be displayed when P1803 occurs

INSPECTION PROCEDURES

1. PROBLEM VERIFICATION

1. Connect the hi-scan (pro) to data link connector.
2. Turn the ignition switch to ON and verify the DTC "P1803" is displayed.
3. Erase the DTC "P1803" with the hi-scan (pro) and then monitor again.

Is the same code displayed ?

Yes	No	Problem is intermittent and engine control module memory was not cleared.

2. CHECK HARNESS AND CONNECTOR BETWEEN SMARTRA UNIT AND ECM

Check for continuity between SMARTRA harness side connector terminal 1 and ECM harness side connector (C183-1) terminal 47.

Is there continuity ?

Yes	No	Repair an open in the wire between the SMARTRA unit and the ECM.

3. FAULTY SMARTRA UNIT OR ECM

If all the tests are OK, replace the SMARTRA unit or ECM and recheck.

NOTE
After replacing the ECM, key teaching must be done.

DTC	P1805	Communication Failure

DTC DETECTING CONDITION

DTC No.	Detecting Condition	Possible Cause	Remarks

P1805	1. Inconsistent data of EEPROM 2. Invalid write operation to EEPROM 3. Not plausible immobilizer indicator stored in the ECM 4. No valid data from SMARTRA after 3 attempts by ECM 5. Invalid tester message or unexpected requests by tester	•Faulty initialization of engine ECM EEPROM •Damage of engine ECM EEPROM data •Faulty immobilizer antenna unit (SMARTRA)	P1801 can be displayed when P1805 occurs

INSPECTION PROCEDURE

1. PROBLEM VERIFICATION

1. Connect the hi-scan (pro) to data link connector.
2. Turn the ignition switch to ON and verify the DTC "P1805" is displayed.
3. Erase the DTC "P1805" with the hi-scan (pro) and then monitor again.

Is the same code displayed ?

Yes	No	Problem is intermittent and engine control module memory was not cleared.

2. KEY TEACHING PROCEDURES

1. Connect the hi-can (pro) to data link connector.
2. Turn the ignition switch to ON and select "TEACHING" mode of immobilizer system on the hi-scan (pro).
3. Input the pin code which consists of 6 digits.

   NOTE
   Because the pin code is security code, contact authorized HMC service staff to know the pin code.

4. If the data is correct, the key teaching is completed.

Is the key taught completely ?

Yes	No	Check for these problems ; • Storage of invalid data in transponder. • Different kind of transponder. • Omitted transponder in the key.

3. CHECK IF DTC "P1805" IS DISPLAYED AGAIN

1. Connect the hi-scan (pro) to data link connector.
2. Erase the DTC with the hi-scan (pro).
3. Check if DTC "P1805" is displayed again.

Is the same code displayed ?

Yes

4. FAULTY SMARTRA UNIT OR ECM

If all the tests are OK, replace the SMARTRA unit or ECM and recheck.

NOTE
After replacing the ECM, key teaching must be done.