SYSTEM DESCRIPTION

The engine immobiliser system has been designed to prevent the vehicle from being stolen. This system uses a transponder key ECU that stores the key code of the authorized ignition key. If an attempt is made to start the engine using a non-authorized key, the transponder key ECU sends a signal to the ECM to prohibit fuel delivery and ignition, effectively disabling the engine.

EI

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:
- Use this procedure to troubleshoot the engine immobiliser system.
- The intelligent tester should be used in steps 4, 5 and 7.

EI

1	VEHICLE BROUGHT TO WORKSHOP

NEXT

2	CUSTOMER PROBLEM ANALYSIS CHECK AND SYMPTOM CHECK

NEXT

3	CRANK ENGINE FOR MORE THAN 10 SECONDS

NEXT

4	CHECK FOR DTC

(a) Check for DTCs and note any codes that are output.
(b) Delete the DTC.
(c) Recheck for DTCs. Try to prompt the DTC (SFI system and engine immobiliser system) by simulating the original activity that the DTC suggested.
   (1) If the DTC does not reoccur, proceed to A.
   (2) If the DTC (SFI system) reoccurs, proceed to B.
   (3) If the DTC (engine immobiliser system) reoccurs, proceed to C.

B	Go to SFI SYSTEM

C	Go to step 8

A

5	READ VALUE OF INTELLIGENT TESTER ((IMMOBILISER ECU (TRANSPONDER KEY ECU ASSEMBLY) (SWITCH CONDITION))

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch ON and push the intelligent tester main switch ON.
(c) Select the item KEY SW in the DATA LIST and read its value displayed on the intelligent tester.

Transponder key ECU

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
KEY SW	Unlock warning switch signal / ON or OFF	ON: Key is in ignition key cylinder OFF: No key is in ignition key cylinder	-

NG ➤ **Go to DTC B2780**

OK

6	PROBLEM SYMPTOMS TABLE

(a) If the fault is not listed on the problem symptoms table, proceed to A.
(b) If the fault is listed on the problem symptoms table, proceed to B.

B ➤ **Go to step 8**

A

7	OVERALL ANALYSIS AND TROUBLESHOOTING

(a) Inspection with the intelligent tester (ECU DATA MONITOR).
(b) Inspection with the intelligent tester (ACTIVE TEST).
(c) Terminals of ECU (See page EI-10).

NEXT

8	ADJUST, REPAIR OR REPLACE

NEXT

9	CONFIRMATION TEST

NEXT

END

EI