P1691 Immobilizer-Antenna Coil Error

Component Location

HG12IMM11P169111

General Description

This wireless communication runs on Radio frequency. The antenna coil is mounted on the top of ignition lock 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 Immobilizer unit. And the received messages from the PCM/ECM are converted into an RF signal, which is to the transponder by the antenna. Coil.transmitted antenna provides energy to the transponder key and retrieves signal from the transponder and send it to Immobilizer unit.

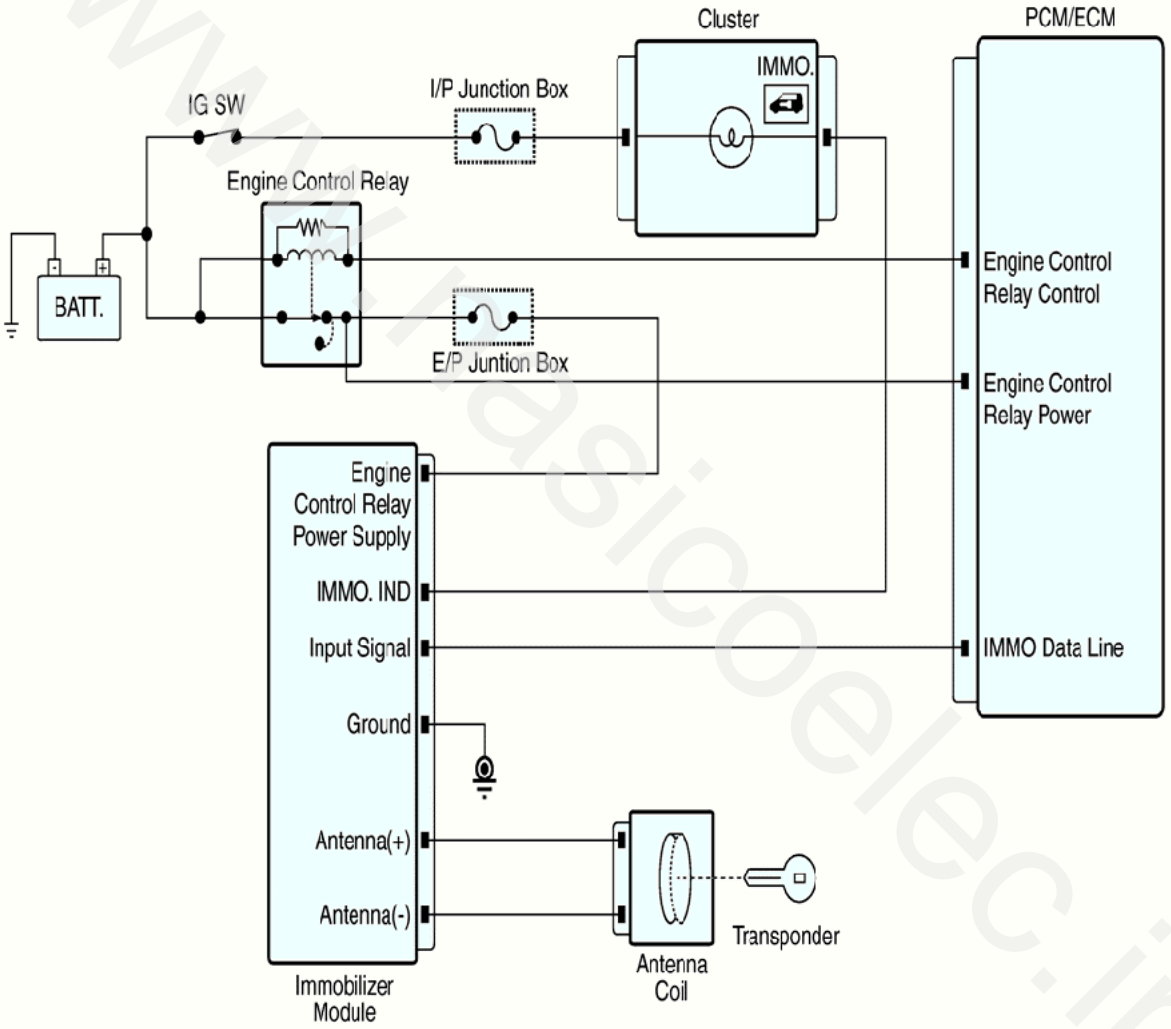
DTC Description

The PCM/ECM sets DTC if there is any open or short circuit between the antenna coil and Immobilizer unit.

DTC Detecting Condition

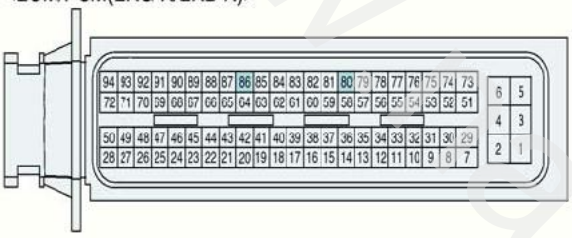
Item	Detecting Condition	Possible Cause
DTC Strategy	• Data status receiving from transponder	Open or short circuit in antenn-. ١ a coil Faulty antenna Coil. ٢ Faulty ICU. ٣
Threshold value	• Open or Short circuit	
Detecting time	• time ١	
DTC Erasing Condition	• Without a fault or using a scantool	

Diagnostic Circuit Diagram



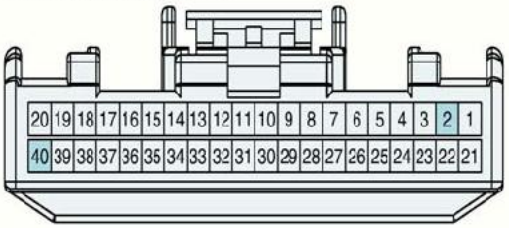
TA12IMM12P1677DD

<ECM/PCM(EKG-K/EKB-K)>



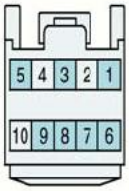
80. IMMO. Signal(ECM/EKG-K)
86. IMMO. Signal(PCM/EKB-K)

<Instrument Cluster(M01)>



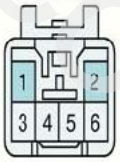
2. IMMO. IND
40. Power

<Immobilizer Module(M09)>



1. Antenna Coil (-)
3. IMMO. IND
5. Memory PWR
6. Antenna Coil (+)
7. GND
8. Body K-Line
9. IMMO. Signal

<Door Warning Switch(M05)>



1. Antenna Coil (+)
2. Antenna Coil (-)

TA12IMM12P1677DD1

Signal Waveform & Data

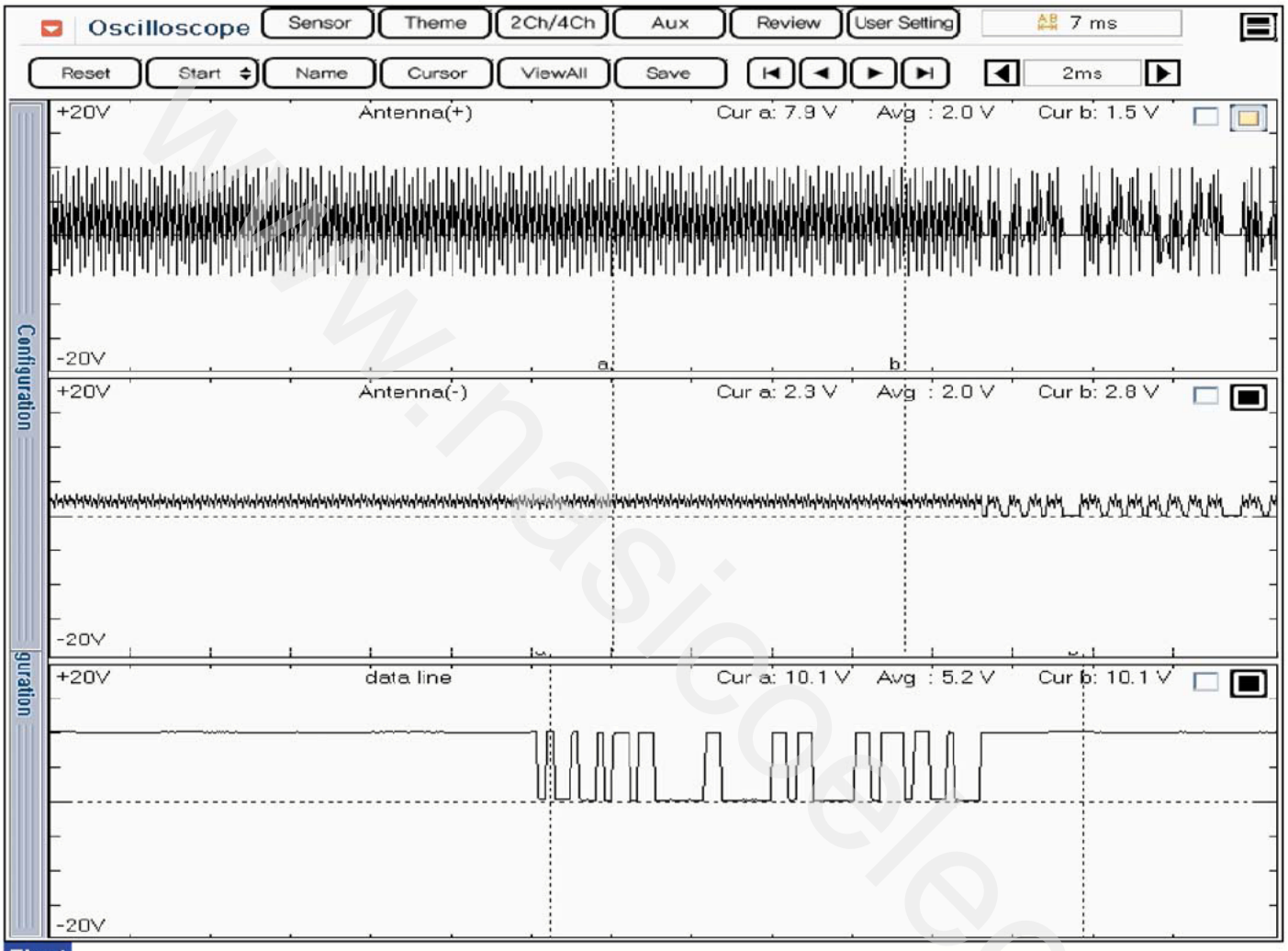


Fig.1

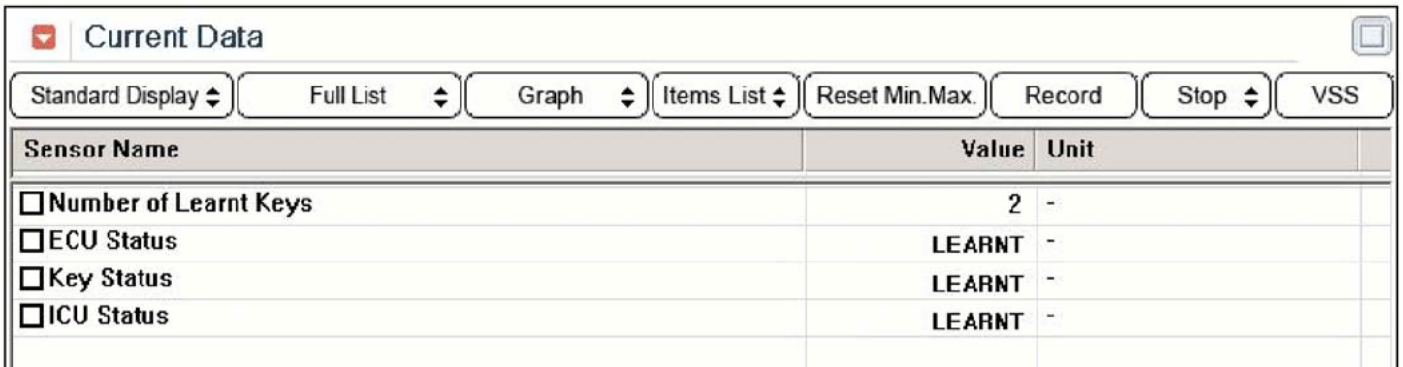
JC12IMM11P169111S

A normal signal waveform of antenna and(Fig.1
immobilizer communication when IG :key(TP
is OFF to ON.(Transponder

Monitor Scantool Data

IG "ON" & Engine "OFF"..١

After connecting Scantool, Monitor the CURRENT.٢
DATA to check key status.



JC12IMM11P169121S

Is the current data OK ?.٣

YES Fault is intermittent caused by poor contact▶ in ICU and Antenna coil or was repaired and PCM/ECM memory was not cleared. Therefore Check connectors for looseness, poor connection, bending, corrosion, contaminati- deterioration, or damage. Repair or replace on as necessary and then go to "Verification of Vehicle Repair" procedure.

NO Go to "Component Inspection" procedure ▶

Component Inspection

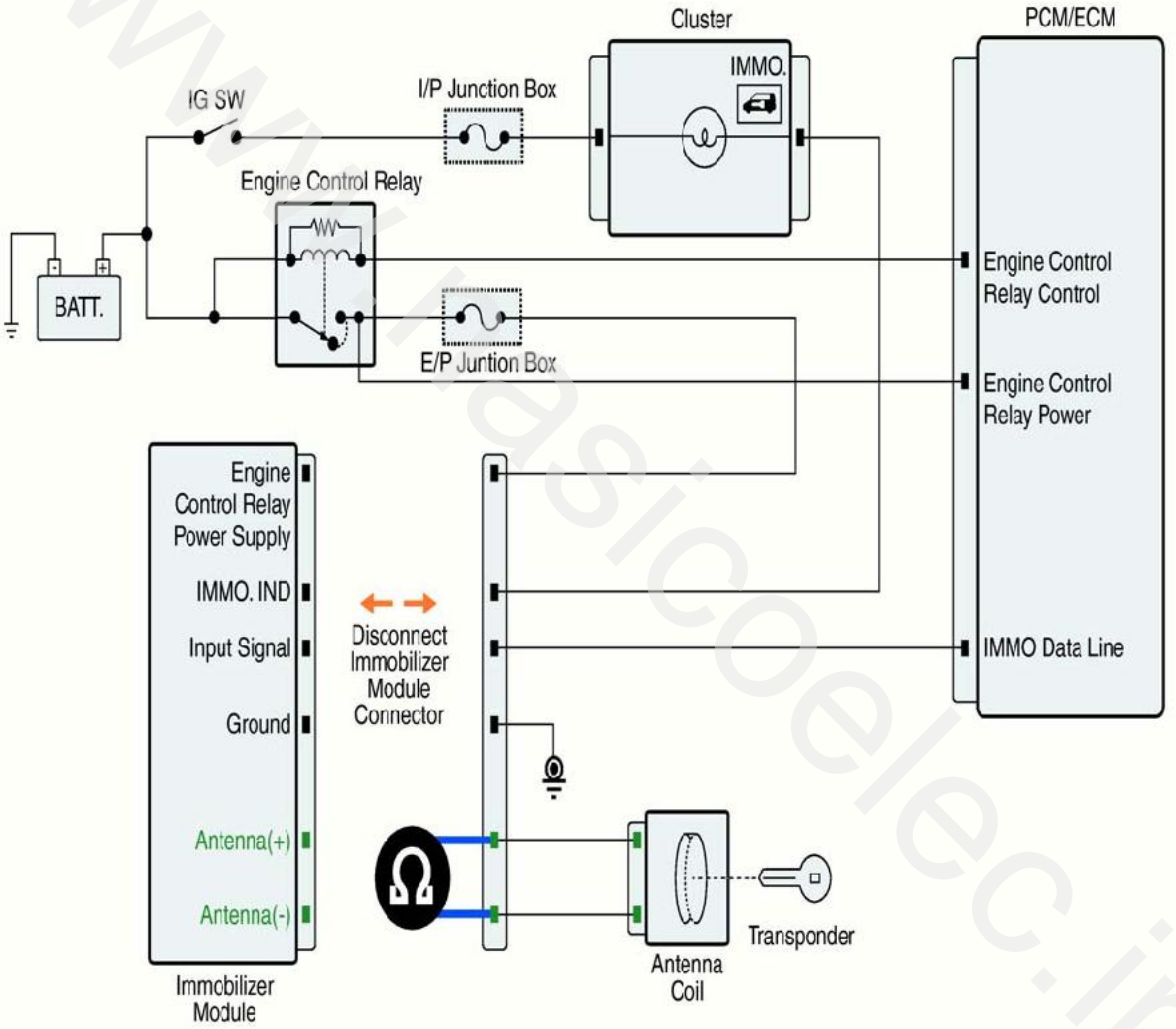
Check antenna coil..١

Ignition "OFF".(١

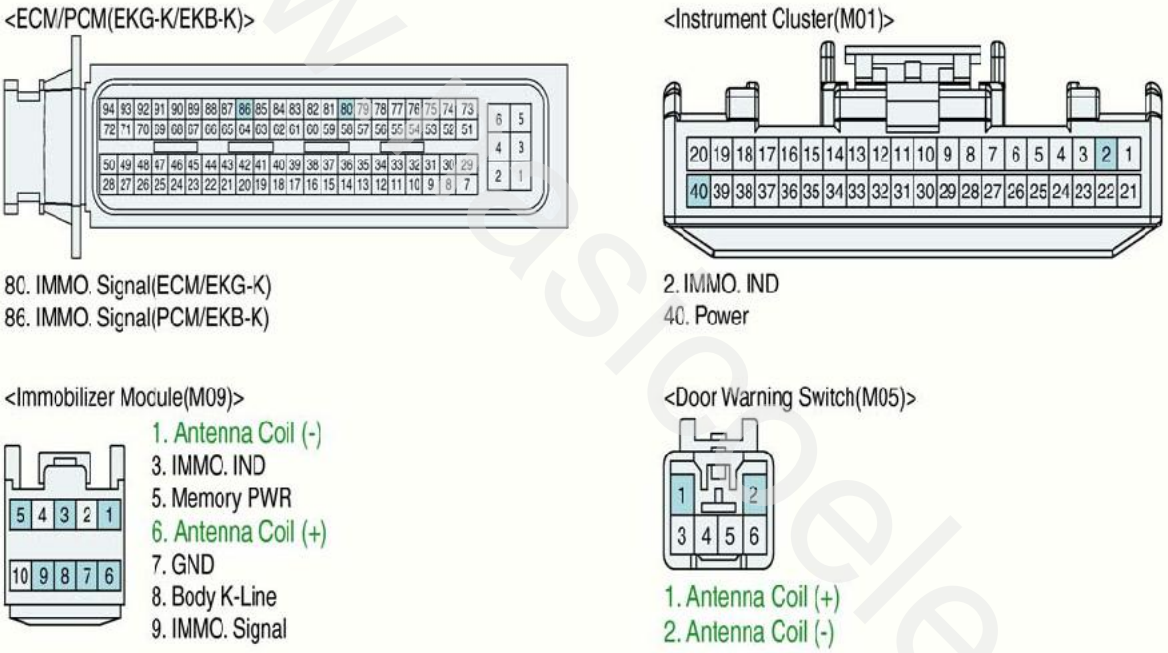
Disconnect ICU connector.(٢

Measure resistance between antenna coil(+) and(٣ terminal of ICU harness connector.(-)

Specification : Approx 7.5 Ω



TA12IMM12P169141



TA12IMM12P169141-1

Is measured resistance within specification ?(ε

YES Substitute with a known-good ICU and chec-► k for proper operation. and then go to "Verification of Vehicle Repair" procedure.

After replacing ICU or PCM/ECM, perform► Key teaching procedure with scantool.

NO Check for open or short in antenna coil. Re-► pair as necessary and go to "Verification of Vehicle Repair" procedure.

Substitute with a known-good antenna Coil► and check for proper operation. 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.

۲. Select "Diagnostic Trouble Codes(DTCs)" mode and Clear the DTCs.

۳. Are any DTCs present ?.

YES ◄ Go to the applicable troubleshooting procedure

NO ◄ System is performing to specification at this time

P1693 Immobilizer-Transponder Error

Component Location

HG12IMM11P169111

General Description

Transponder is located near the Key knob and communicates while ignition ON translates encrypted PIN data back and forth.

(Reference

1. Transponder does not need a battery, only receives energy from the vehicle.
2. Transponder is all in one with the Key. Therefore, transponder cannot be removed or replaced and is semi-permanent unless damaged by induced shock.

DTC Description

If transponder is not in the place, DTC will set.

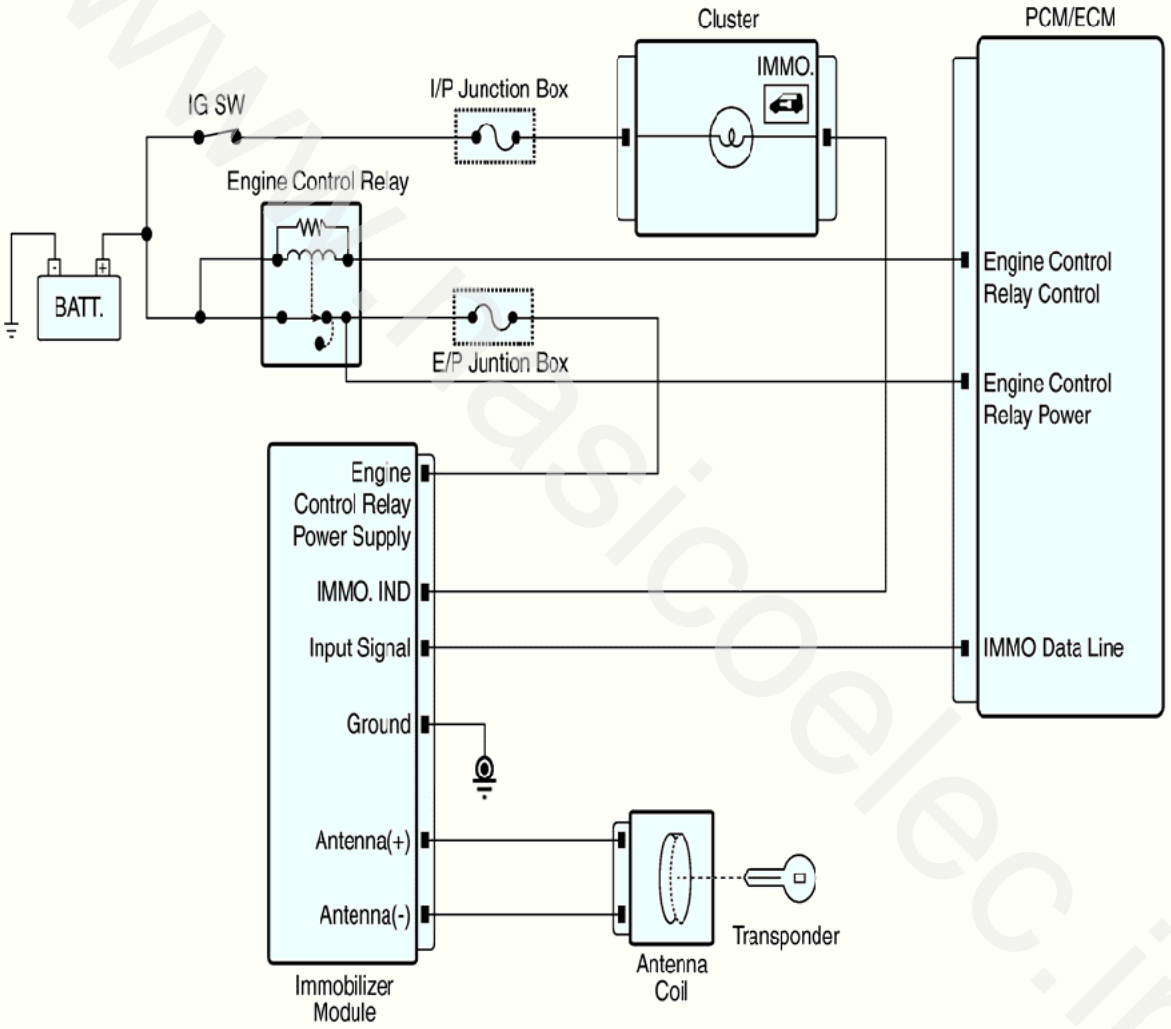
CAUTION

If 2 transponders are piled together and approach at the antenna coil, DTC is set.

DTC Detecting Condition

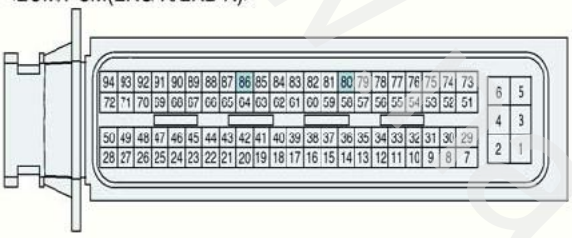
Item	Detecting Condition	Possible Cause
DTC Strategy	• Data status receiving from transponder	Faulty Transponder. ١ ⚠ CAUTION If 2 transponders are piled together and approach at the antenna coil, DTC will set
Threshold value	• When the coil supplies energy to the transponder which in turn accumulates energy in the condenser, ICU transmits the data(40bit) to the transponder If no data(serial no. etc) transmitted by transponder.. ١ DTC will set If PCM/ECM detects no transponder in the magnetic. ٢ DTC will set.field	
Detecting time	• consecutive times after ignition On ٥	
DTC Erasing Condition	• Without a fault or using a scantool	

Diagnostic Circuit Diagram



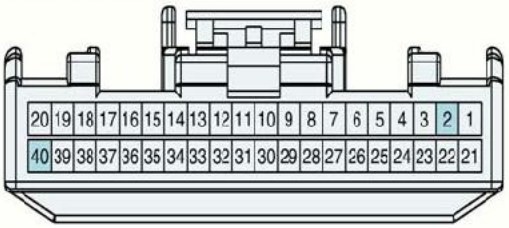
TA12IMM12P1677DD

<ECM/PCM(EKG-K/EKB-K)>



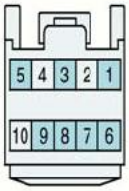
80. IMMO. Signal(ECM/EKG-K)
86. IMMO. Signal(PCM/EKB-K)

<Instrument Cluster(M01)>



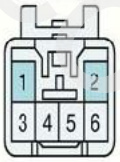
2. IMMO. IND
40. Power

<Immobilizer Module(M09)>



1. Antenna Coil (-)
3. IMMO. IND
5. Memory PWR
6. Antenna Coil (+)
7. GND
8. Body K-Line
9. IMMO. Signal

<Door Warning Switch(M05)>



1. Antenna Coil (+)
2. Antenna Coil (-)

TA12IMM12P1677DD1

Signal Waveform & Data

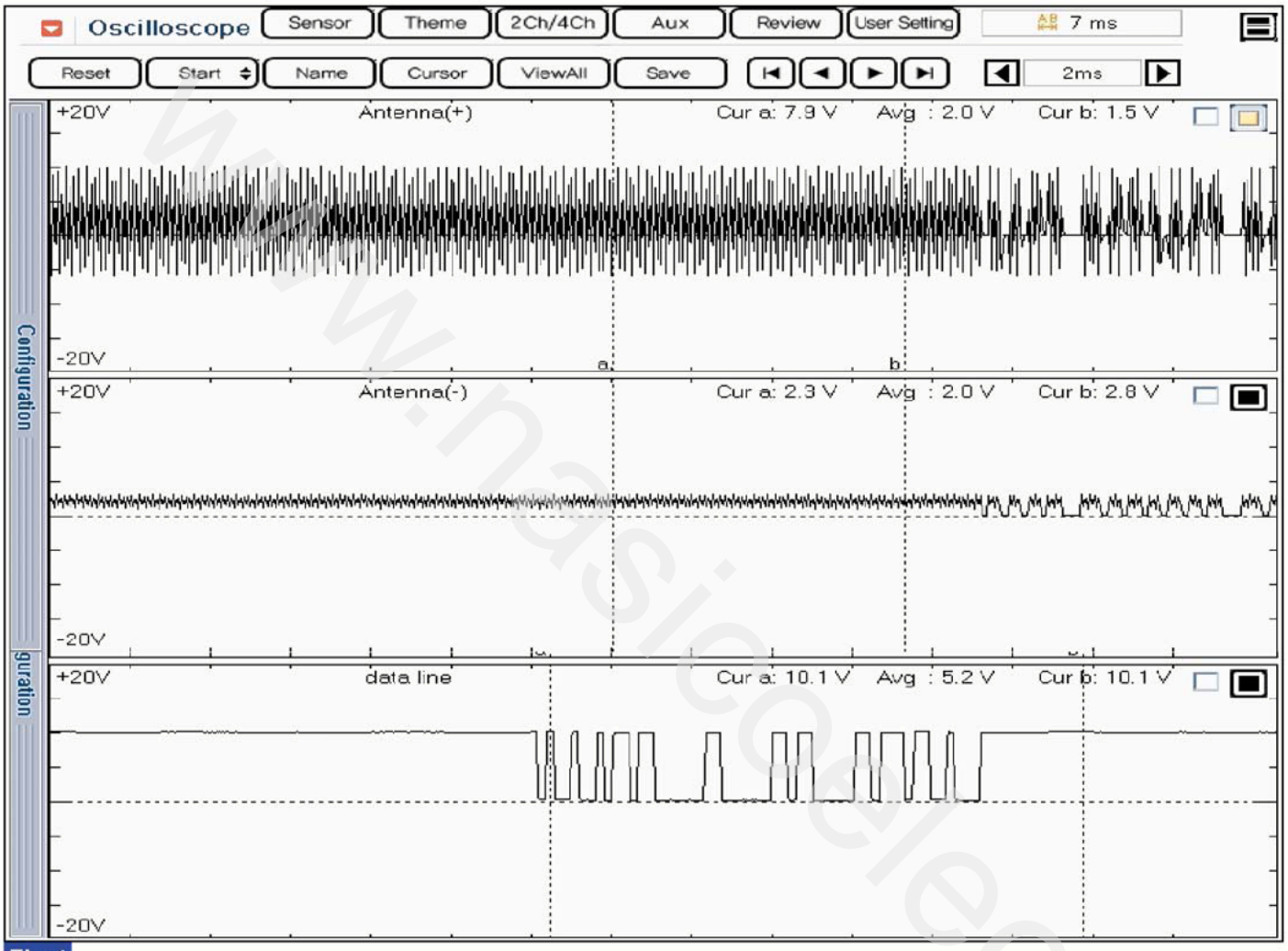


Fig.1

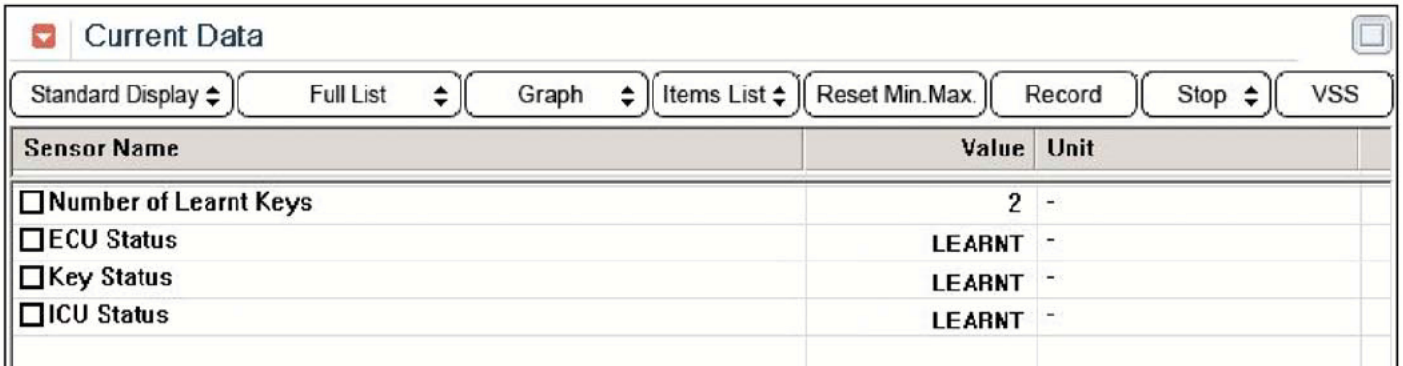
JC12IMM11P169111S

A normal signal waveform of antenna and(Fig.1
immobilizer communication when IG :key(TP
is OFF to ON.(Transponder

Monitor Scantool Data

IG "ON" & Engine "OFF"..١

After connecting Scantool, Monitor the CURRENT.٢
DATA to check key status.



Is the current data OK ?.٣

YES Cause of the malfunction would be if 2 TP a-▶
pproaches the ANT. Coil or intermittent comm.
error or was repaired and ICU memory was not
.cleared
If needed, erase memory using the scantool, t-
hen repair or replace as necessary and then, g-
o to "Verification of Vehicle Repair" procedure.

NO Replace with trial transponder and check w-▶
hether problem persists. If the problem is resol-
replace the transponder and go to verifica-.ved
.tion
If transponder is replaced, run Key registrati-▶
on using the scantool.

Verification of Vehicle Repair

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

Connect scan tool and monitor "CURRENT DATA"..١

Select "Diagnostic Trouble Codes(DTCs)" mode and.٢
Clear the DTCs.

Are any DTCs present ?.٣

YES Go to the applicable troubleshooting proced-▶
.ure

NO System is performing to specification at this▶
.time

P1698 Immobilizer-Invalid TP (TP has different PIN)

Component Location

HG12IMM11P169111

General Description

Transponder is located near the Key knob and communicates while ignition ON translates encrypted PIN data back and forth.

(Reference

Transponder does not need a battery, only receives energy from the vehicle. ١

Transponder is all in one with the Key. Therefore, transponder cannot be removed or replaced and is semi-permanent unless damaged by induced shock. ٢

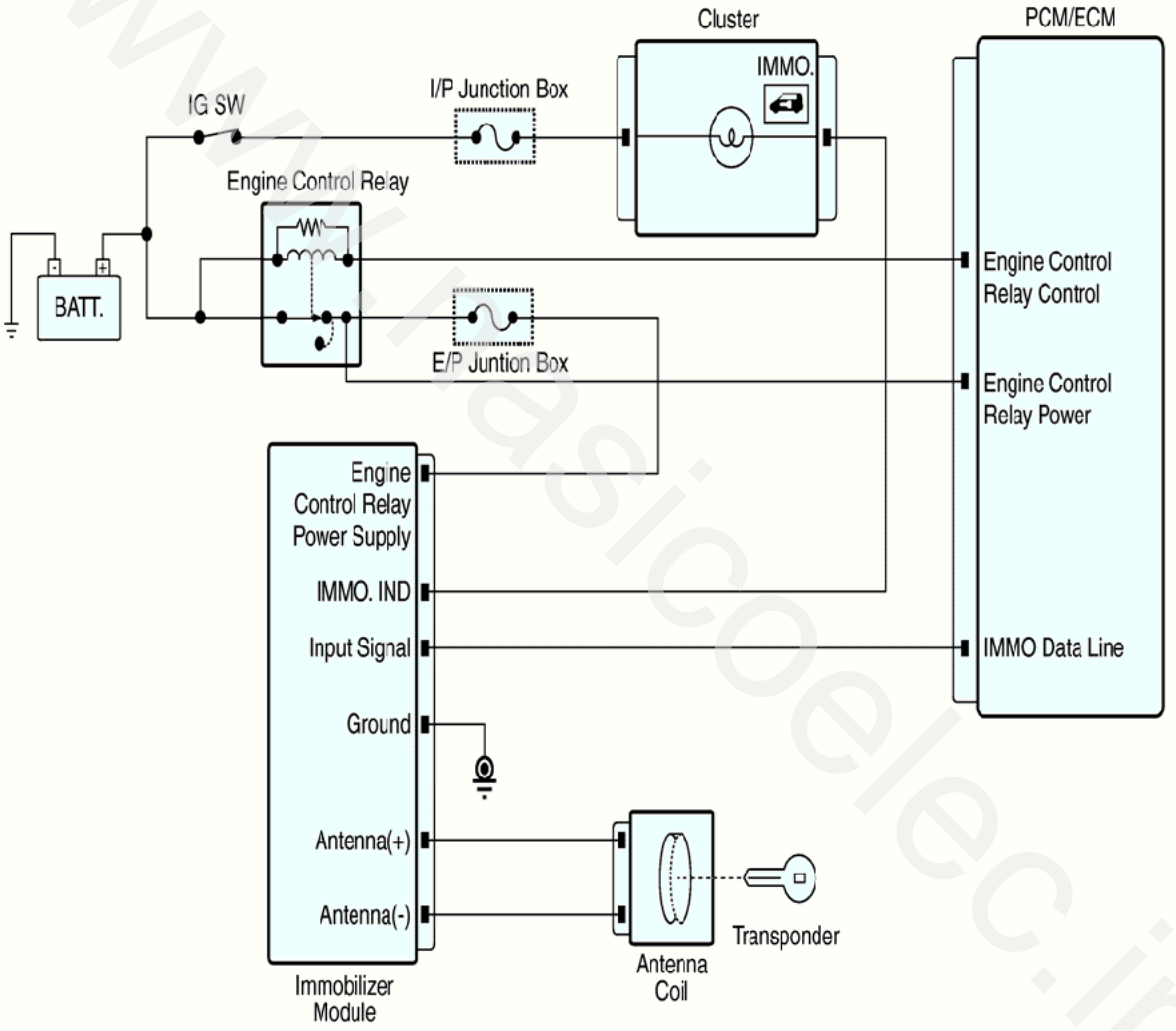
DTC Description

If ICU detects invalid transponder data, the DTC will set.

DTC Detecting Condition

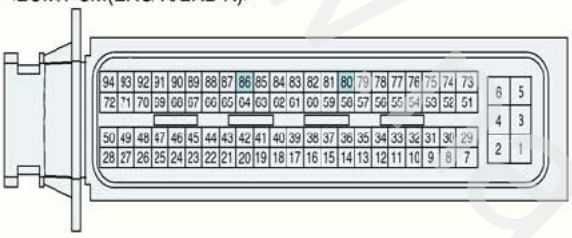
Item	Detecting Condition	Possible Cause
DTC Strategy	• Data status receiving from transponder	1. Faulty Transponder
Threshold value	• When the coil supplies energy to the transponder which in turn accumulates energy in the condenser, ICU transmits the data(40bit) to the transponder If PCM/ECM detects difference between data receiving from transponder and predetermined value, DTC will set	
Detecting time	• time ١	
DTC Erasing Condition	• Without a fault or using a scantool	

Diagnostic Circuit Diagram



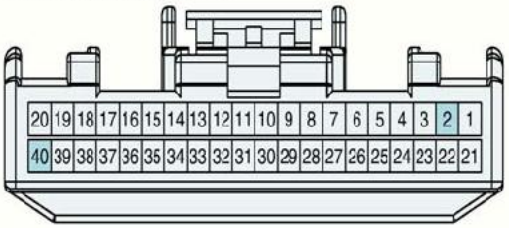
TA12IMM12P1677DD

<ECM/PCM(EKG-K/EKB-K)>



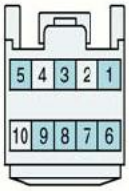
80. IMMO. Signal(ECM/EKG-K)
86. IMMO. Signal(PCM/EKB-K)

<Instrument Cluster(M01)>



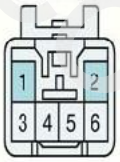
2. IMMO. IND
40. Power

<Immobilizer Module(M09)>



1. Antenna Coil (-)
3. IMMO. IND
5. Memory PWR
6. Antenna Coil (+)
7. GND
8. Body K-Line
9. IMMO. Signal

<Door Warning Switch(M05)>



1. Antenna Coil (+)
2. Antenna Coil (-)

TA12IMM12P1677DD1

Signal Waveform & Data

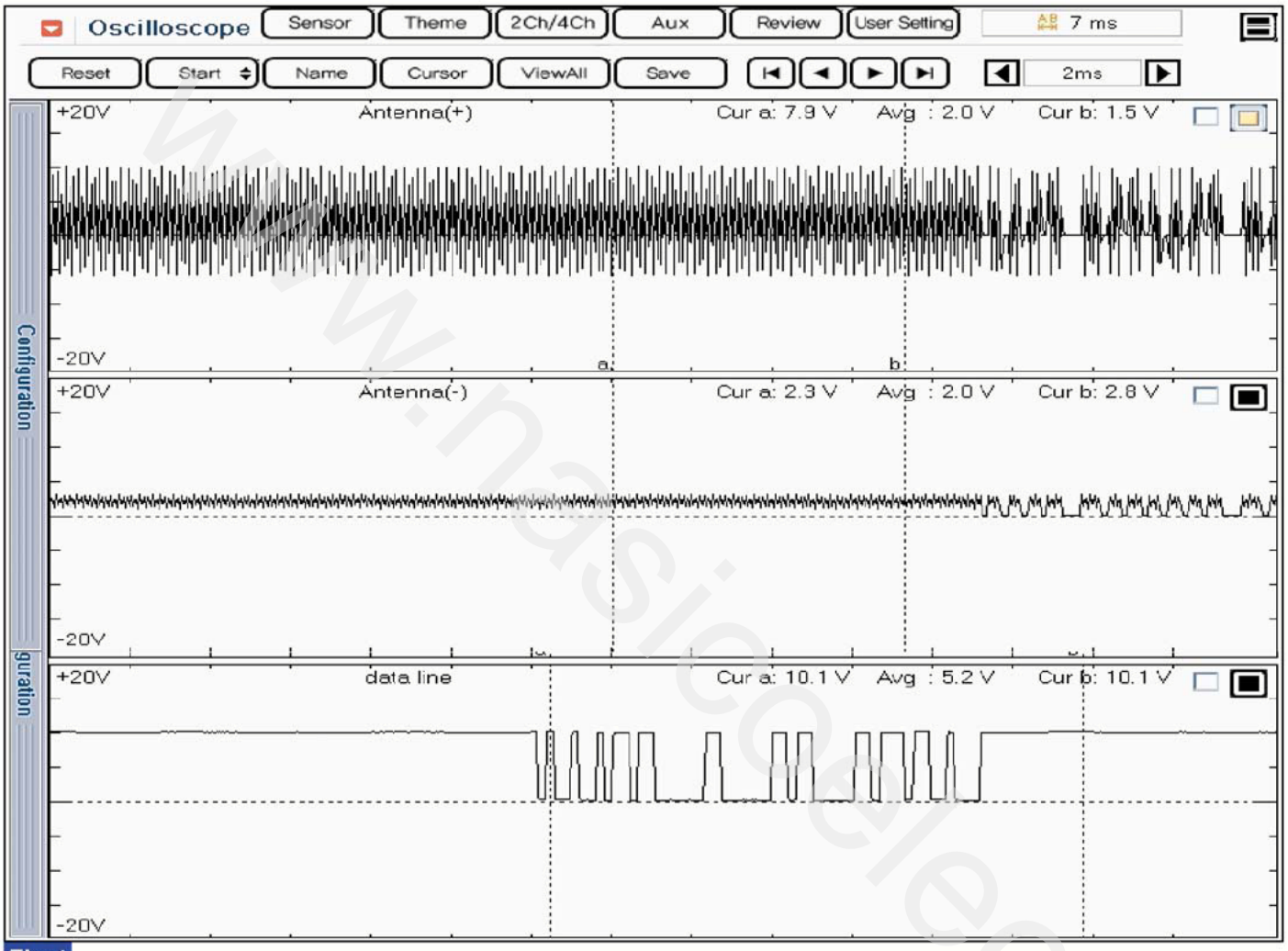


Fig.1

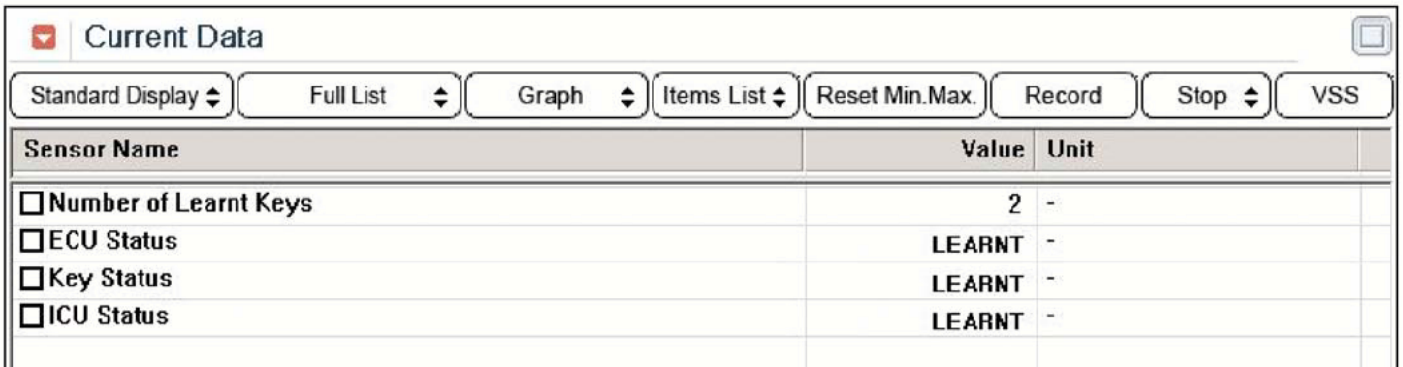
JC12IMM11P169111S

A normal signal waveform of antenna and(Fig.1
immobilizer communication when IG key(TP :
is OFF to ON.(Transponder

Monitor Scantool Data

IG "ON" & Engine "OFF"..١

After connecting Scantool, Monitor the CURRENT.٢
DATA to check key status.



Is the current data OK ?.٣

YES Fault is intermittent caused by poor contact in Antenna Coil’s and/or PCM/ECM’s connector or was repaired and ICU’s and/or PCM/ECM memory was not cleared. 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. ◄Therefore

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. After replacing Transponder, Register transponder key by scantool. ◄

Verification of Vehicle Repair

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

Connect scan tool and monitor "CURRENT DATA"..١

Select "Diagnostic Trouble Codes(DTCs)" mode and Clear the DTCs.٢

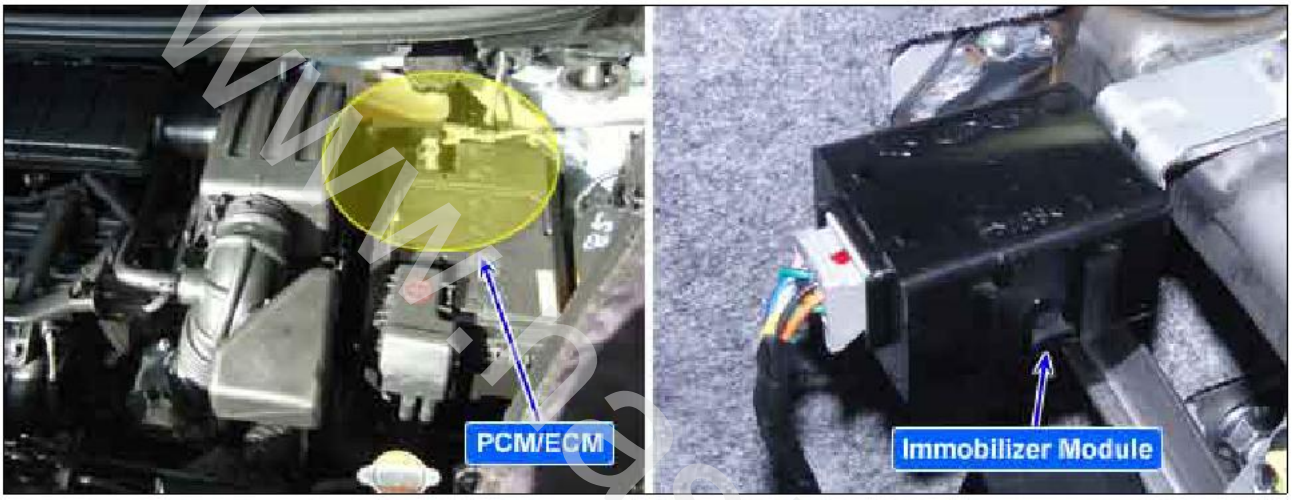
Are any DTCs present ?.٣

YES Go to the applicable troubleshooting procedure ◄

NO System is performing to specification at this time ◄

P1677 Immobilizer-EMS VIN Data Error (EMS has different VIN)

Component Location



HG12IMM11P167711

General Description

Immobilizer Control Unit (ICU) supplies power to the coil
receives and analyses signal from the antenna
transmits signal to engine PCM/ECM and transponder
stores VIN(Not the number on the bulkhead of vehicle but Vehicle Identification Number for Immobilizer) data which composes of ID code and password.

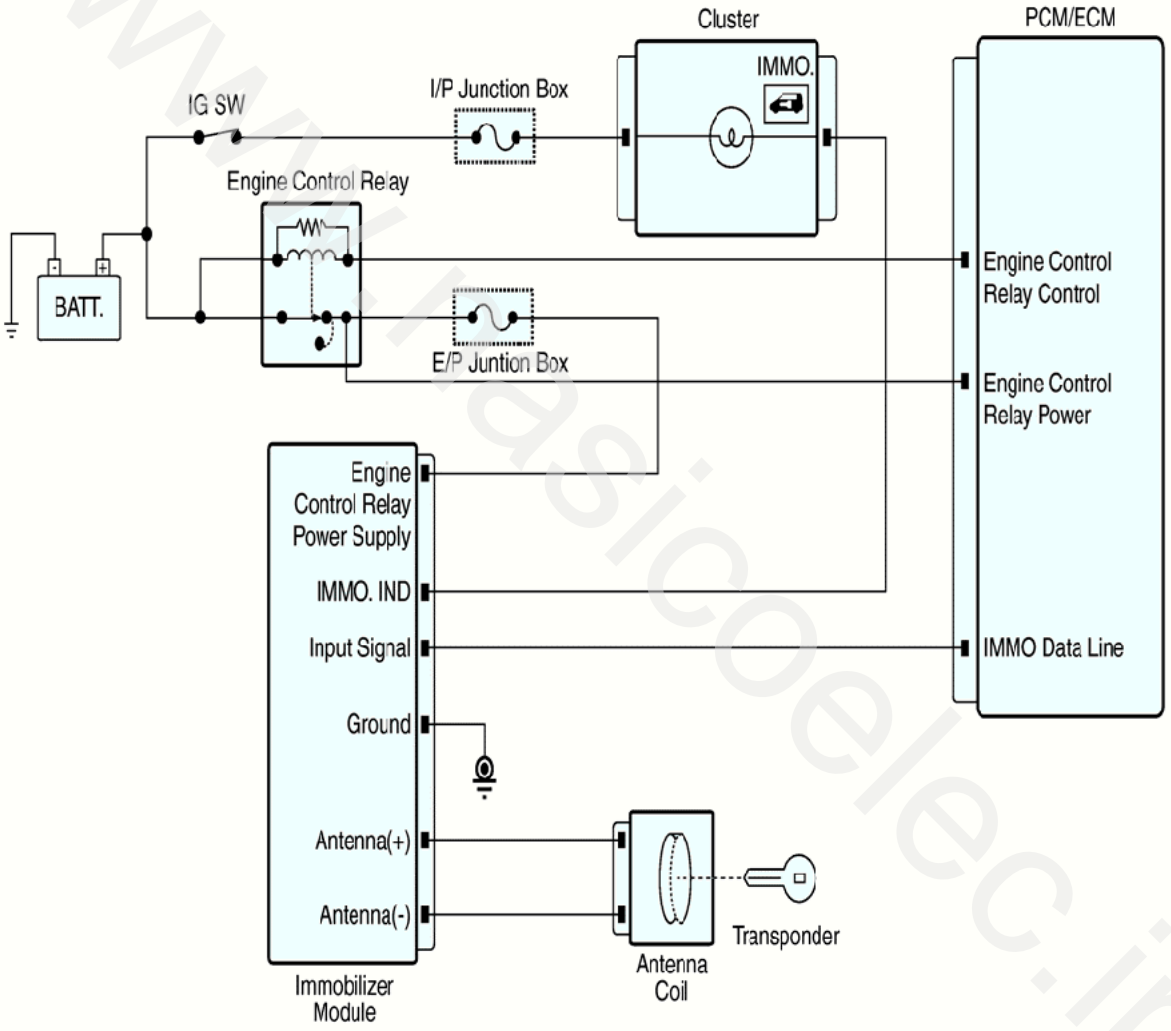
DTC Description

ICU stores VIN which composes of ID code and
This DTC is defined that VIN of EMS is password inconsistent data of ICU.

DTC Detecting Condition

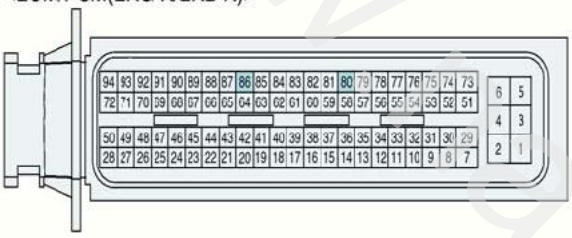
Item	Detecting Condition	Possible Cause
DTC Strategy	• Data status receiving from PCM/ECM	Faulty PCM/ECM.١ Faulty ICU.٢
Threshold value	• Difference between VIN data from EMS and "LEARNT" Immobilizer in authentication procedure	
Detecting time	• time١	
DTC Erasing Condition	• Without a fault or using a scantool	

Diagnostic Circuit Diagram



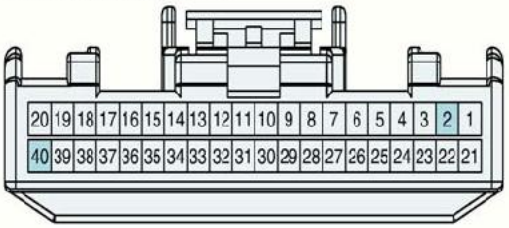
TA12IMM12P1677DD

<ECM/PCM(EKG-K/EKB-K)>



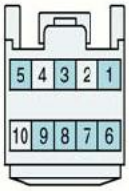
80. IMMO. Signal(ECM/EKG-K)
86. IMMO. Signal(PCM/EKB-K)

<Instrument Cluster(M01)>



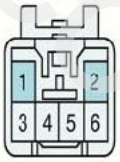
2. IMMO. IND
40. Power

<Immobilizer Module(M09)>



1. Antenna Coil (-)
3. IMMO. IND
5. Memory PWR
6. Antenna Coil (+)
7. GND
8. Body K-Line
9. IMMO. Signal

<Door Warning Switch(M05)>



1. Antenna Coil (+)
2. Antenna Coil (-)

TA12IMM12P1677DD1

Signal Waveform & Data

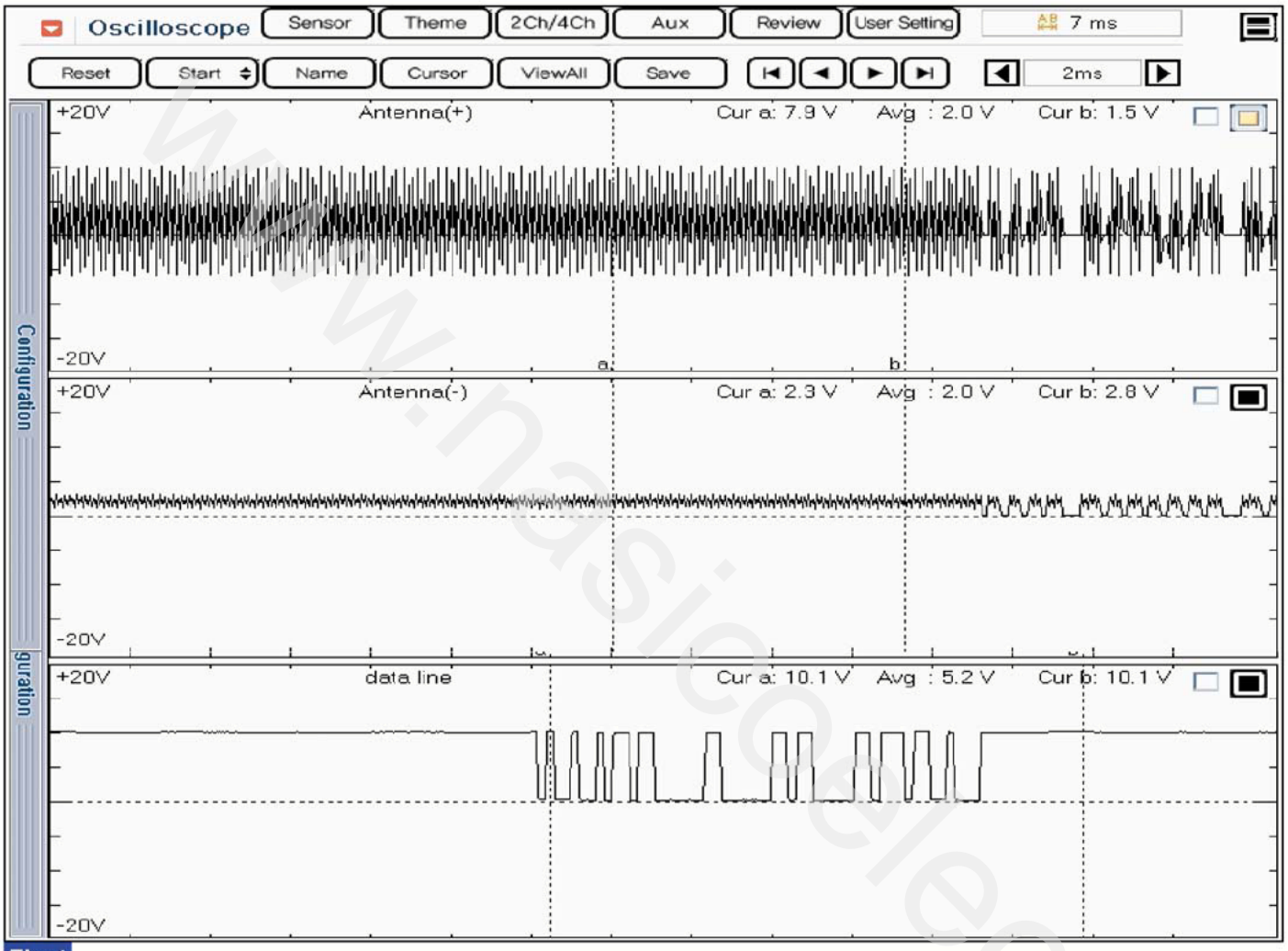


Fig.1

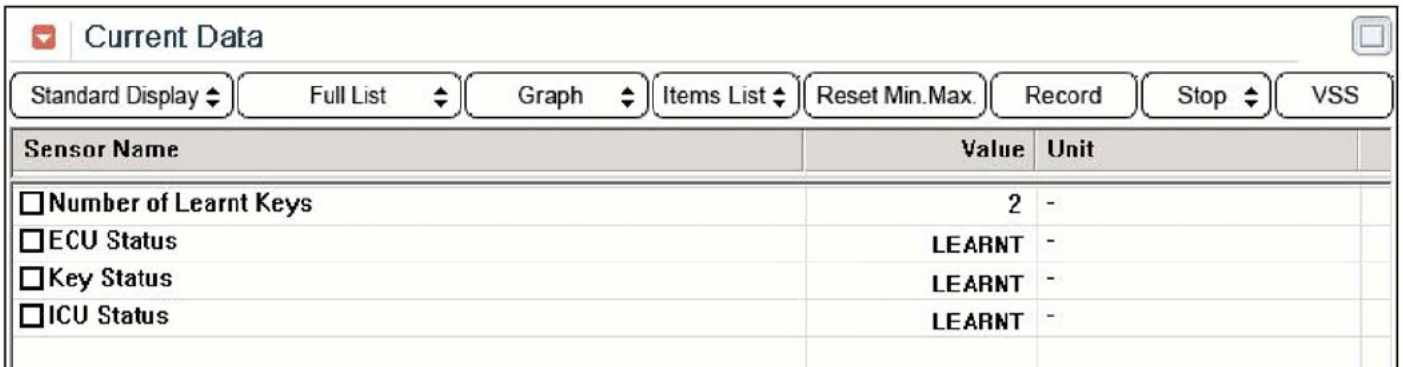
JC12IMM11P169111S

A normal signal waveform of antenna and(Fig.1
immobilizer communication when IG :key(TP
is OFF to ON.(Transponder

Monitor Scantool Data

IG "ON" & Engine "OFF"..١

After connecting Scantool, Monitor the CURRENT.٢
DATA to check key status.



Are both Key and ECU status learnt ?.٣

YES Fault is intermittent caused by poor contact▶ in Antenna Coil’ s and/or PCM/ECM’ s connector or was repaired and ICU’ s and/or PCM/ECM memory was not cleared.

Check connectors for looseness, p-.Therefore oor connection, bending, corrosion, contamina-

deterioration, or damage. Repair or repla-.tion ce as necessary and then go to "Verification of Vehicle Repair" procedure.

NO Perform Password Teaching/changing and t-▶ eaching process after neutralizing the ICU and/ or PCM/ECM. If problem persists, check by replacing the trial ICI and/or PCM/ECM. If resolv-

replace ICU and/or PCM/ECM, then go to.ed .verification

After replacing ICU and/or PCM/ECM, perfo-▶ rm Key teaching procedure with scantool.

Verification of Vehicle Repair

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

Connect scan tool and monitor "CURRENT DATA"..١

Select "Diagnostic Trouble Codes(DTCs)" mode and.٢ Clear the DTCs.

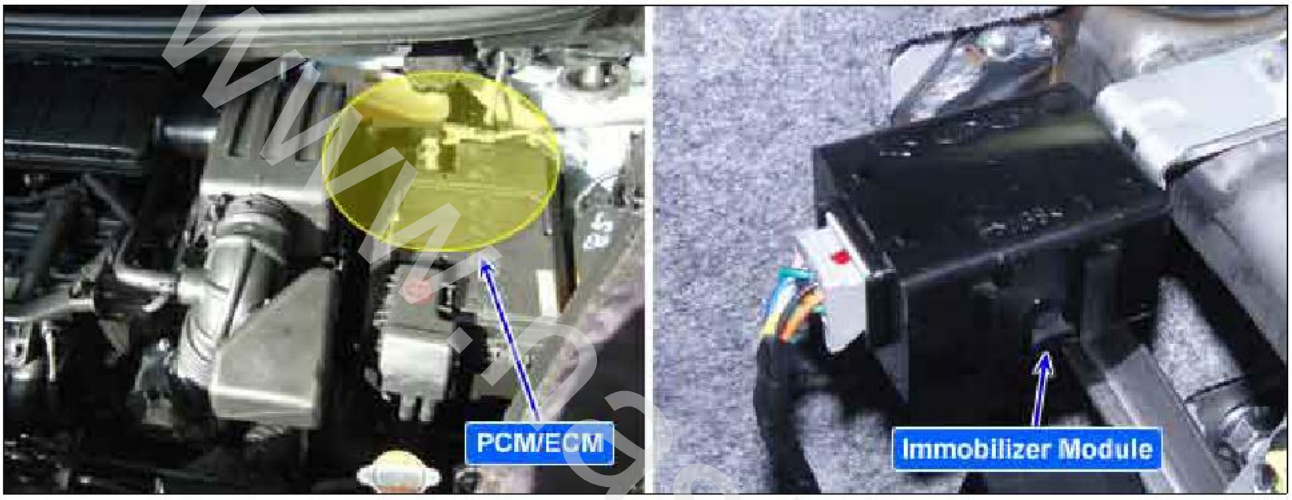
Are any DTCs present ?.٣

YES Go to the applicable troubleshooting proced-▶ .ure

NO System is performing to specification at this▶ .time

P1678 Immobilizer-EMS No Request (EMS data line open, no immo.)

Component Location



HG12IMM11P167711

General Description

In the Ignition ON position, the PCM/ECM receives information from the ICM and permits injection to take place If the CODE memorized in PCM/ECM is coincided with ICM.

When the ID code from the transponder is verified by the ICM then the registering sequence is complete and a answer signal is sent to the PCM/ECM.

The ICM sends a START or NO START signal to the .PCM/ECM

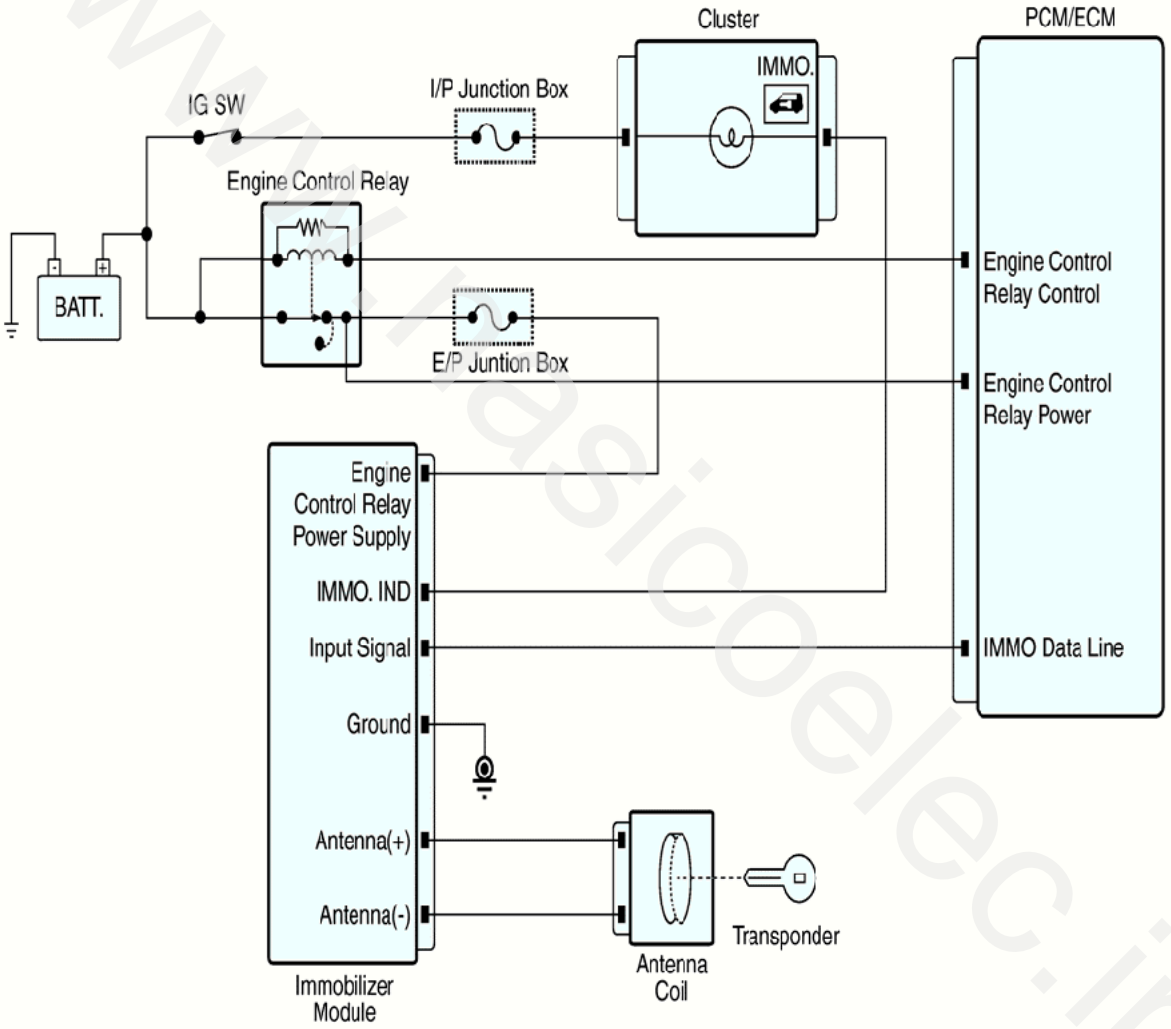
DTC Description

The DTC will set, there is no data transmitted from PCM/ECM for 5 seconds after ignition ON.

DTC Detecting Condition

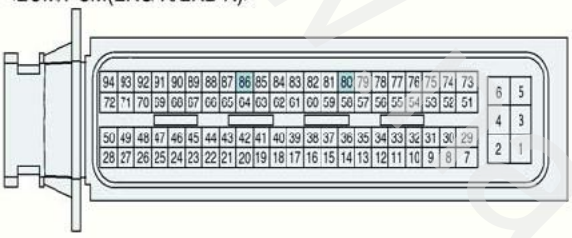
Item	Detecting Condition	Possible Cause
DTC Strategy	• CAN Data status receiving from PCM	1. Open or Short in harness between PCM and ICU Faultv PCM.۲ Faultv ICU.۳
Threshold value	• No data transmitted from PCM for 5 seconds after ignition ON	
Detecting time	• time۱	
DTC Erasing Condition	• Without a fault or using a scantool	

Diagnostic Circuit Diagram



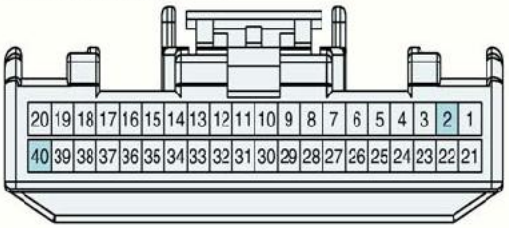
TA12IMM12P1677DD

<ECM/PCM(EKG-K/EKB-K)>



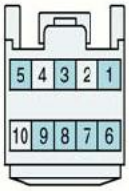
80. IMMO. Signal(ECM/EKG-K)
86. IMMO. Signal(PCM/EKB-K)

<Instrument Cluster(M01)>



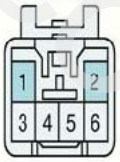
2. IMMO. IND
40. Power

<Immobilizer Module(M09)>



1. Antenna Coil (-)
3. IMMO. IND
5. Memory PWR
6. Antenna Coil (+)
7. GND
8. Body K-Line
9. IMMO. Signal

<Door Warning Switch(M05)>



1. Antenna Coil (+)
2. Antenna Coil (-)

TA12IMM12P1677DD1

Signal Waveform & Data

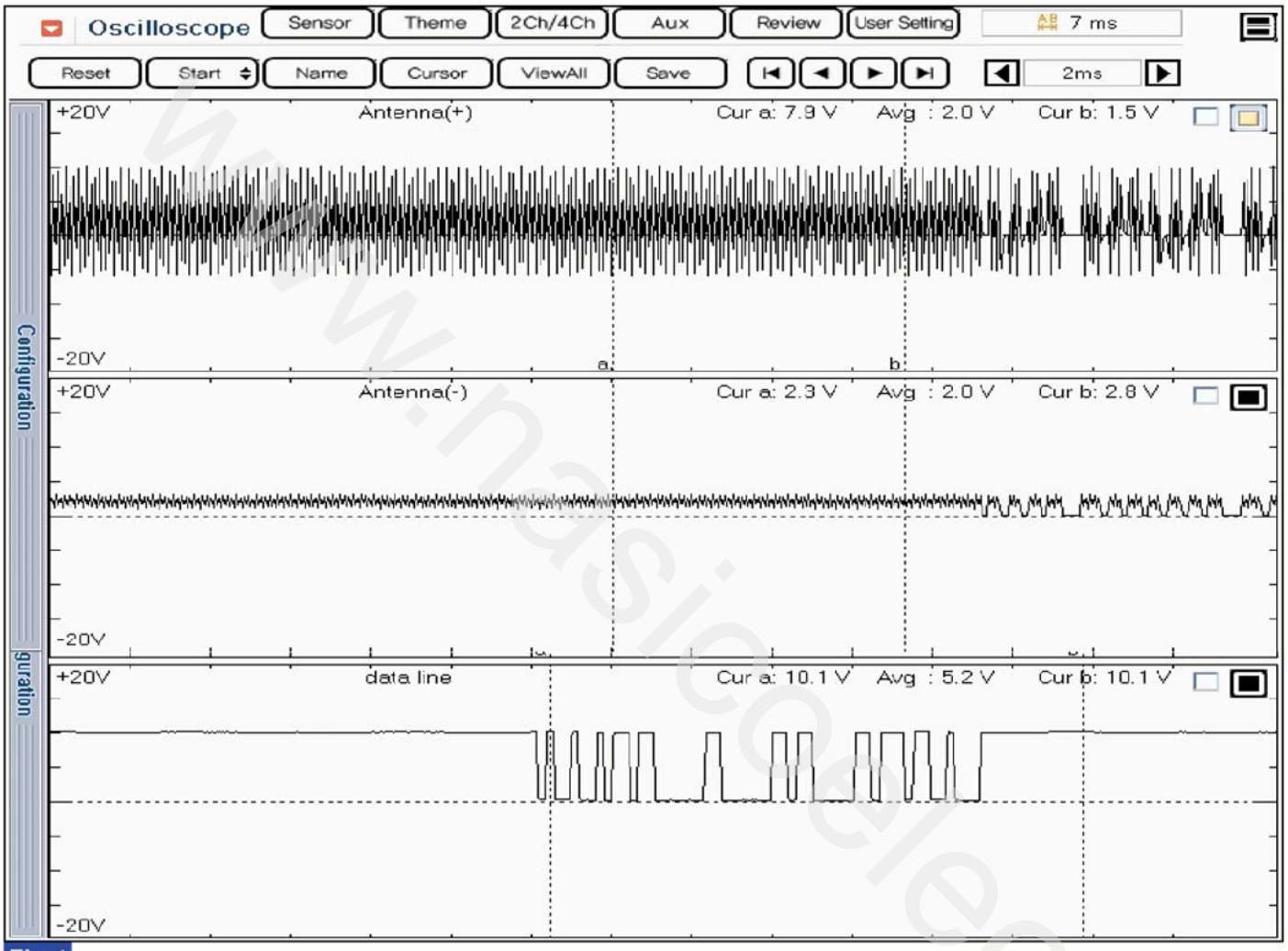


Fig.1

JC12IMM11P169111S

A normal signal waveform of antenna and(Fig.1 immobilizer communication when IG :key(TP is OFF to ON.(Transponder

Terminal and Connector Inspection

Many malfunctions in the electrical system are.١ caused by poor harness(es) and terminals. Faults can also be caused by interference from other electrical systems and mechanical or chemical .damage

Thoroughly check connectors for looseness, poor.٢ bending, corrosion, contamination..connection or damage..deterioration

Has a problem been found ?.٣

YES Repair as necessary and then go to "Verific-▶ ation of Vehicle Repair" procedure.

NO Go to "Power circuit Inspection" procedure ▶

Power circuit Inspection

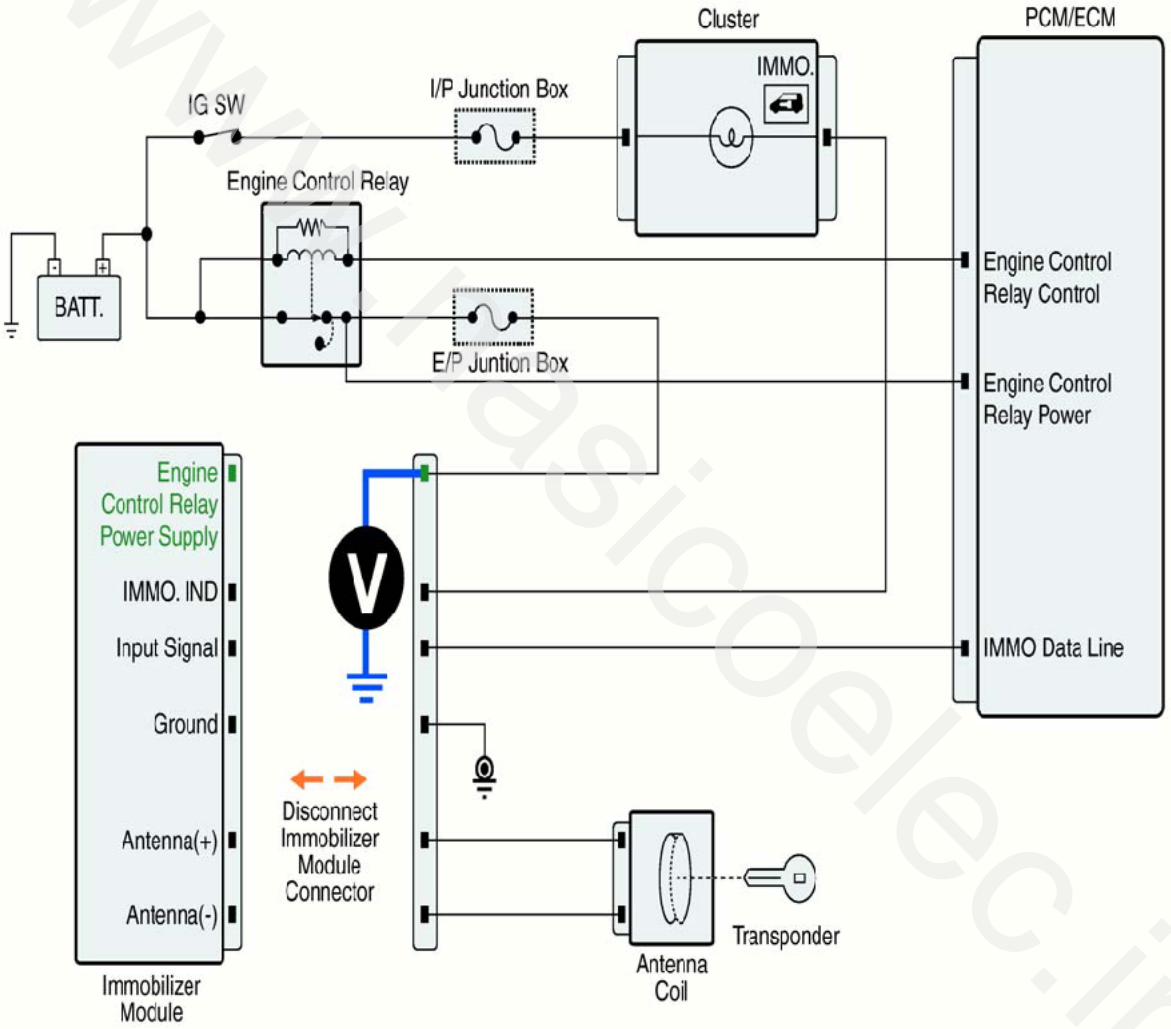
Ignition "OFF"..١

Disconnect ICU connector..٢

Ignition "ON" & Engine "OFF"..٣

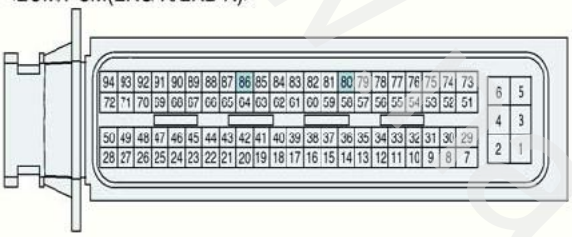
Measure voltage between Engine Control Relay.٤ Power of ICU harness connector and chassis ground.

Specification : B+



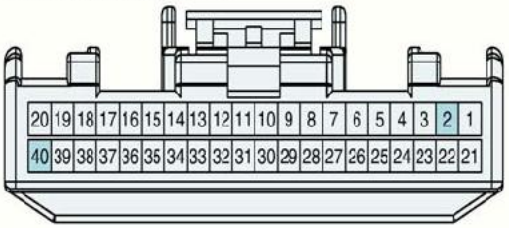
TA12IMM12P167831

<ECM/PCM(EKG-K/EKB-K)>



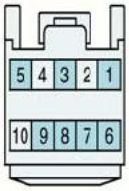
80. IMMO. Signal(ECM/EKG-K)
86. IMMO. Signal(PCM/EKB-K)

<Instrument Cluster(M01)>



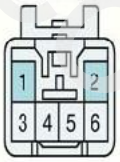
2. IMMO. IND
40. Power

<Immobilizer Module(M09)>



1. Antenna Coil (-)
3. IMMO. IND
5. Memory PWR
6. Antenna Coil (+)
7. GND
8. Body K-Line
9. IMMO. Signal

<Door Warning Switch(M05)>



1. Antenna Coil (+)
2. Antenna Coil (-)

TA12IMM12P167831-1

Is the measured voltage within specifications ?.٥

YES Go to "Signal circuit Inspection" procedure ▶

NO Check for open or short in harness. Repair ▶ as necessary and go to "Verification of Vehicle procedure."Repair

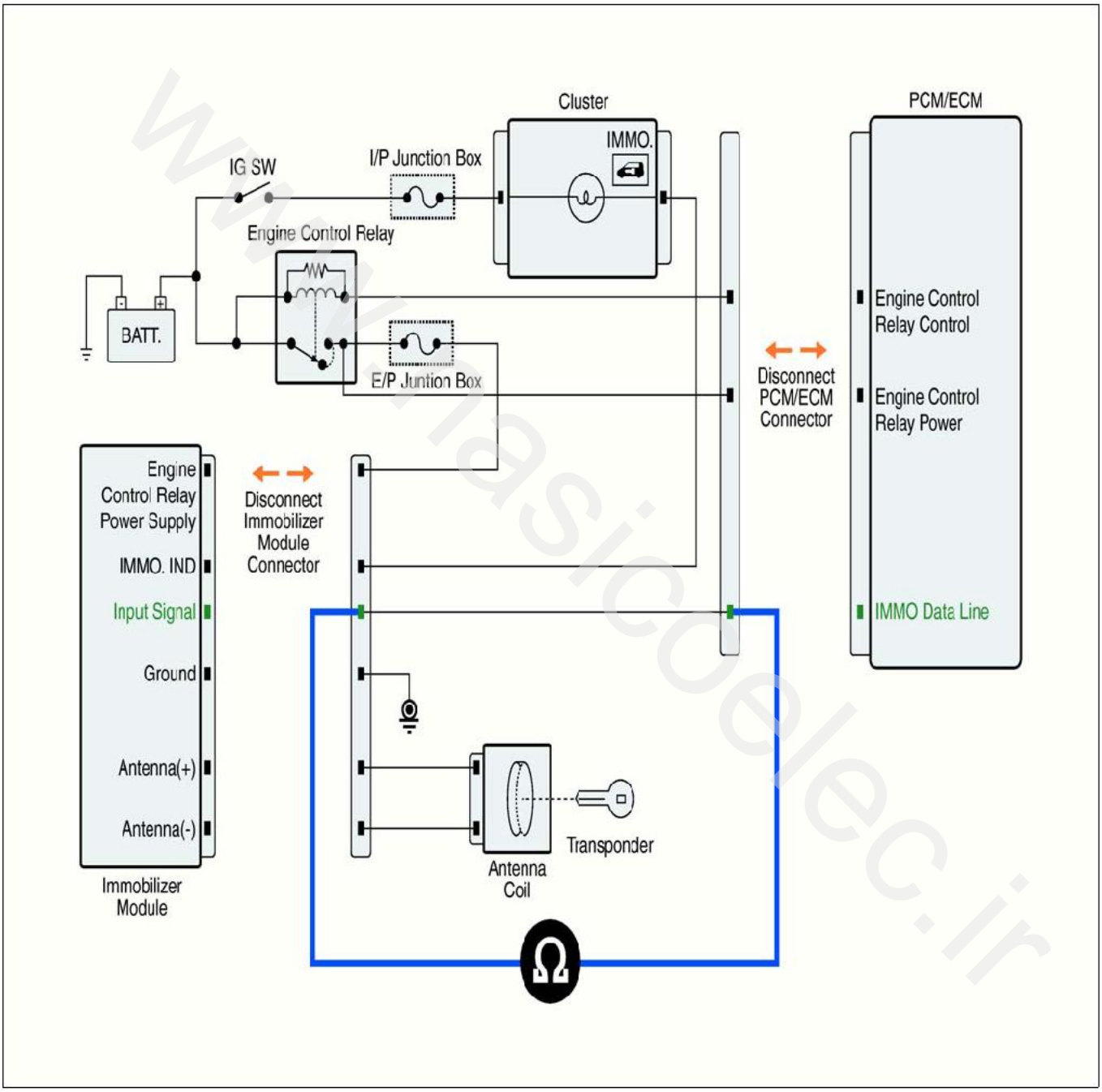
Signal Circuit Inspection

Check for open in harness■

Disconnect ICU and PCM/ECM connector..٢

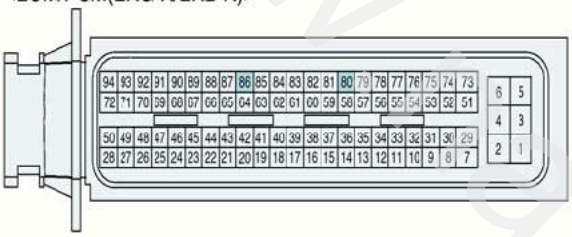
Measure resistance between signal terminal of ICU.٣ harness connector and PCM/ECM harness .connector

Specification : 1 Ω or less



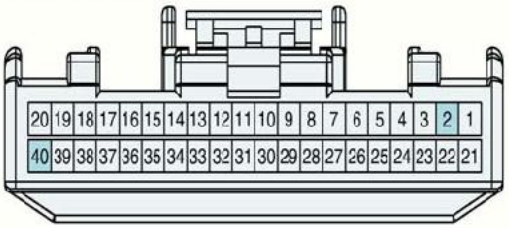
TA12IMM12P167832

<ECM/PCM(EKG-K/EKB-K)>



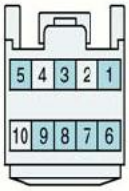
80. IMMO. Signal(ECM/EKG-K)
86. IMMO. Signal(PCM/EKB-K)

<Instrument Cluster(M01)>



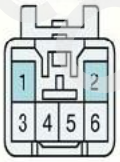
2. IMMO. IND
40. Power

<Immobilizer Module(M09)>



1. Antenna Coil (-)
3. IMMO. IND
5. Memory PWR
6. Antenna Coil (+)
7. GND
8. Body K-Line
9. IMMO. Signal

<Door Warning Switch(M05)>



1. Antenna Coil (+)
2. Antenna Coil (-)

TA12IMM12P167831-1

Is the measured voltage within specifications ?. ٤

YES Go to "Check for short in harness" procedur-► .e

NO Check for open in signal harness. Repair as► necessary and then go to "Verification of Vehicle Repair" procedure.

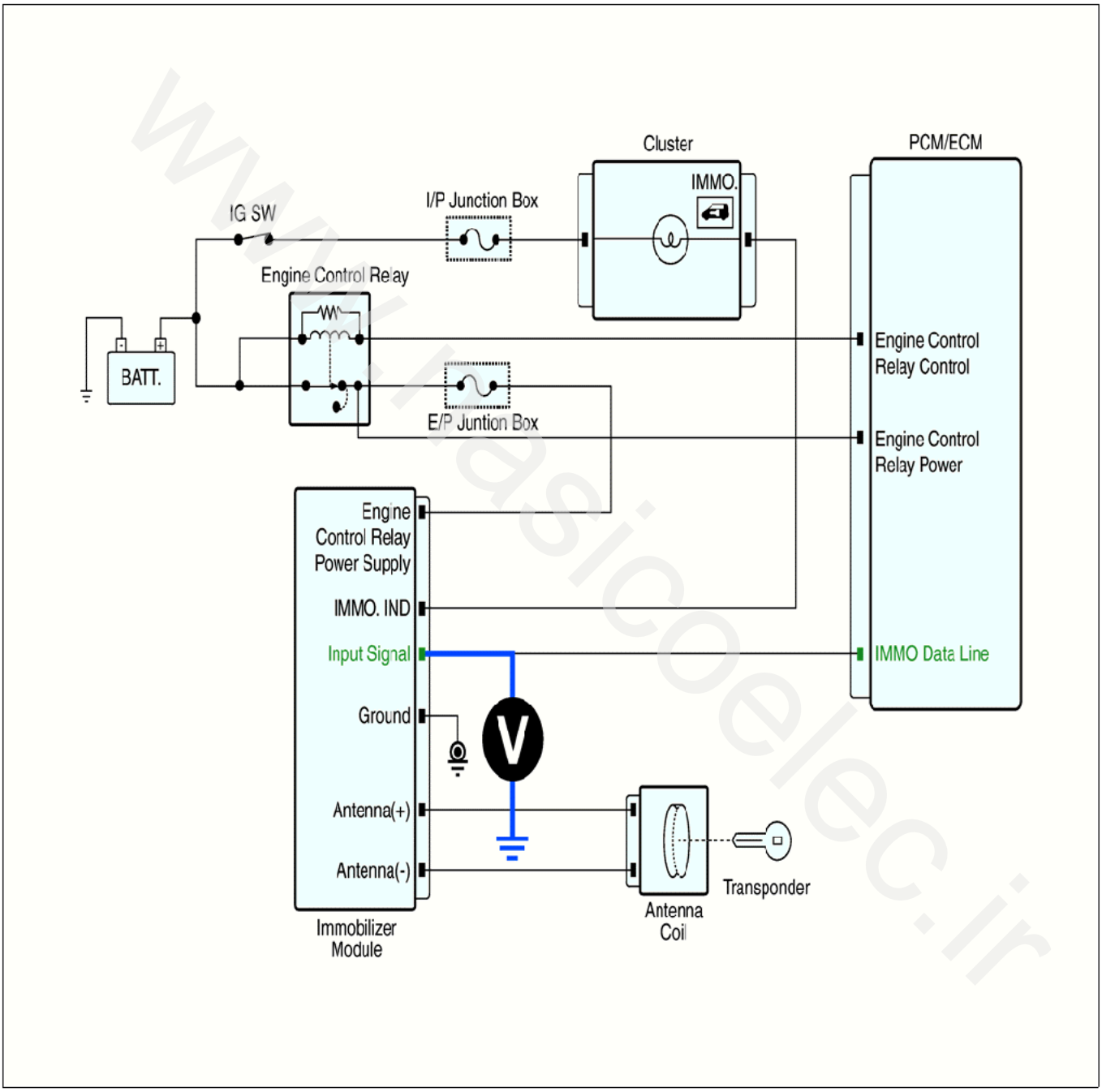
Check for short in harness■

Ignition "OFF".. ١

Ignition "ON" & Engine "OFF".. ٣

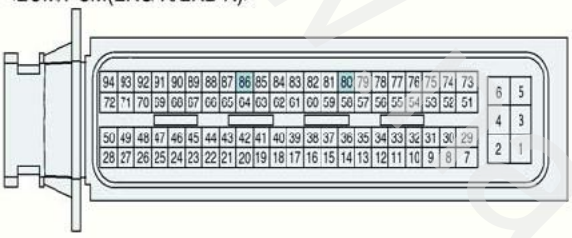
Measure voltage between signal terminal of ICU. ٤ harness connector and chassis ground.

Specification : Approx. 10V



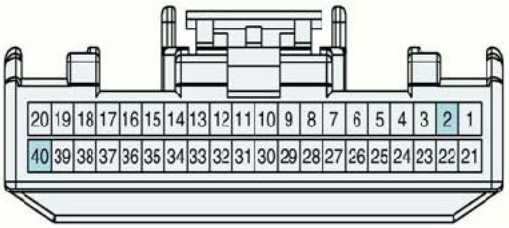
TA12IMM12P167833

<ECM/PCM(EKG-K/EKB-K)>



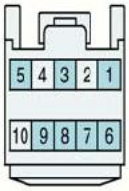
80. IMMO. Signal(ECM/EKG-K)
86. IMMO. Signal(PCM/EKB-K)

<Instrument Cluster(M01)>



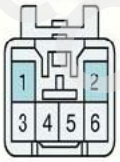
2. IMMO. IND
40. Power

<Immobilizer Module(M09)>



1. Antenna Coil (-)
3. IMMO. IND
5. Memory PWR
6. Antenna Coil (+)
7. GND
8. Body K-Line
9. IMMO. Signal

<Door Warning Switch(M05)>



1. Antenna Coil (+)
2. Antenna Coil (-)

TA12IMM12P167833-1

Is the measured voltage within specifications ?.٥

YES Fault is intermittent caused by poor contact▶ in ICU’s and/or PCM/ECM connector or was repaired and ICU’s and/or PCM/ECM memory was not cleared.

Check connectors for looseness, p-.Therefore oor connection, bending, corrosion, contamina-

deterioration, or damage. Repair or repla-.tion ce as necessary and then go to "Verification of Vehicle Repair" procedure.

Check with trial ICU and/or PCM/ECM to se-▶ e the performance and if the problem is resolv-

replace and go to verification..ed

After replacing ICU and/or PCM/ECM, perfo-▶ rm Key teaching procedure with scantool.

NO Check for short in harness. Repair as neces-▶ sary and 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.

Connect scan tool and monitor "CURRENT DATA".. ١

Select "Diagnostic Trouble Codes(DTCs)" mode and. ٢
Clear the DTCs.

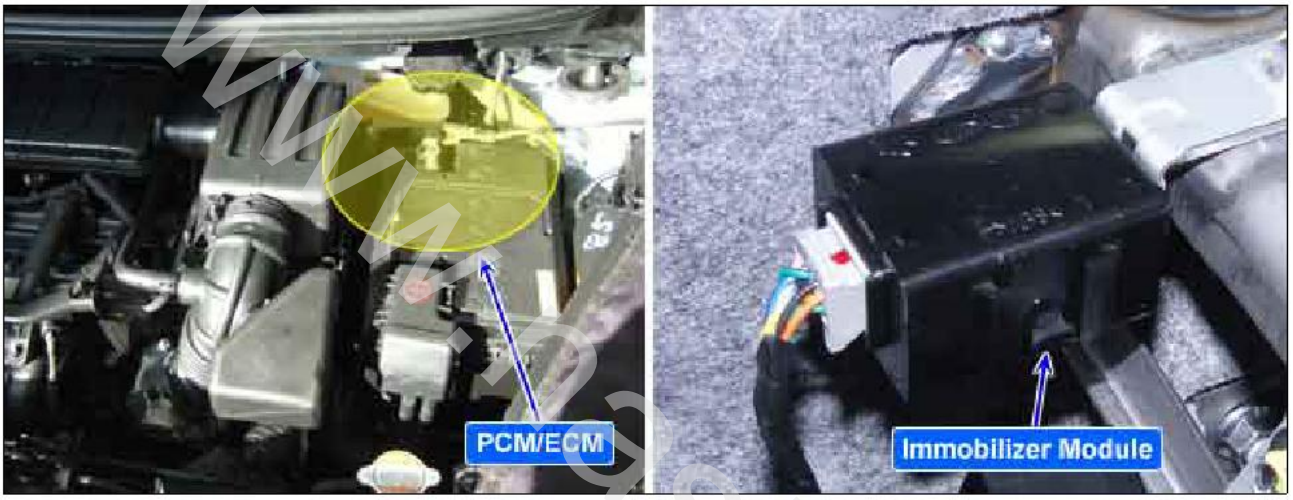
Are any DTCs present ?. ٣

YES Go to the applicable troubleshooting proced-▶ .ure

NO System is performing to specification at this▶ .time

P1679 Immobilizer-EMS Data Fail (Data frame, CS, Message error)

Component Location



HG12IMM11P167711

General Description

When the ID code from the transponder is verified by the ICU then the registering sequence is complete and a answer signal is sent to the EMS.

The ICU sends a START or NO START signal to the .EMS

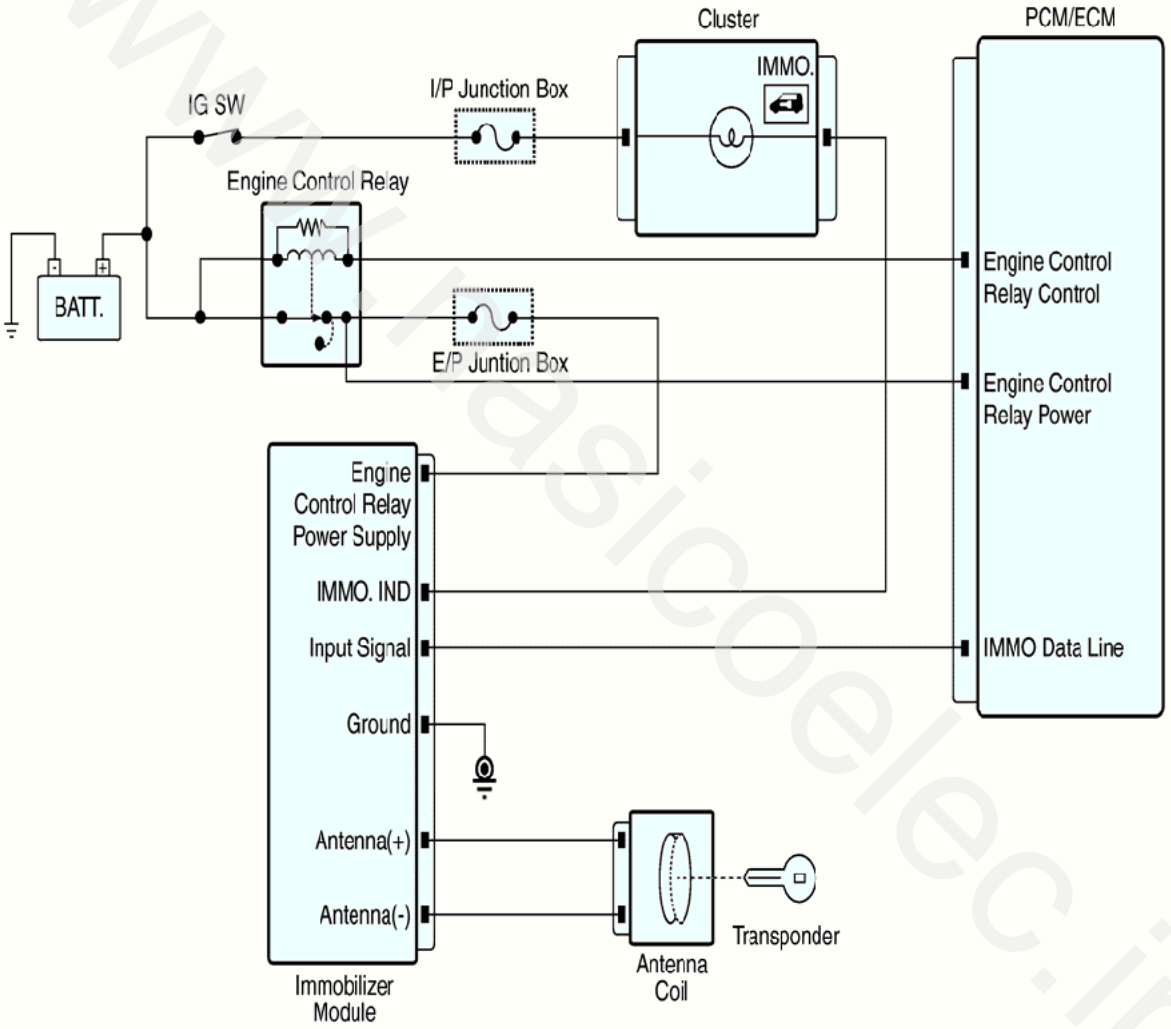
DTC Description

The DTC will set, if the data checksum sent by EMS and ICU is different.

DTC Detecting Condition

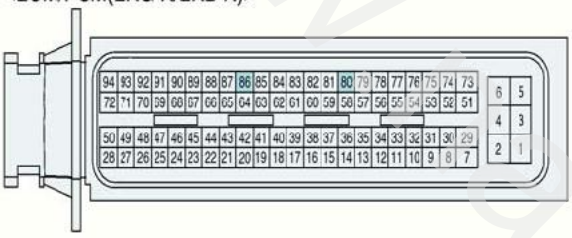
Item	Detecting Condition	Possible Cause
DTC Strategy	• CAN Data status receiving from PCM/ECM	Faulty PCM/ECM. ١ Faulty ICU. ٢
Threshold value	• Data frame error • Check sum error • Message error	
Detecting time	• time ١	
DTC Erasing Condition	• Without a fault or using a scantool	

Diagnostic Circuit Diagram



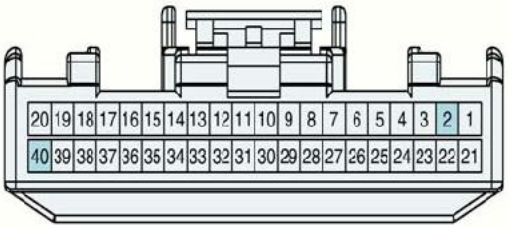
TA12IMM12P1677DD

<ECM/PCM(EKG-K/EKB-K)>



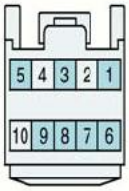
80. IMMO. Signal(ECM/EKG-K)
86. IMMO. Signal(PCM/EKB-K)

<Instrument Cluster(M01)>



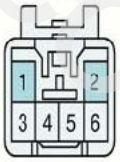
2. IMMO. IND
40. Power

<Immobilizer Module(M09)>



1. Antenna Coil (-)
3. IMMO. IND
5. Memory PWR
6. Antenna Coil (+)
7. GND
8. Body K-Line
9. IMMO. Signal

<Door Warning Switch(M05)>



1. Antenna Coil (+)
2. Antenna Coil (-)

TA12IMM12P1677DD1

Signal Waveform & Data

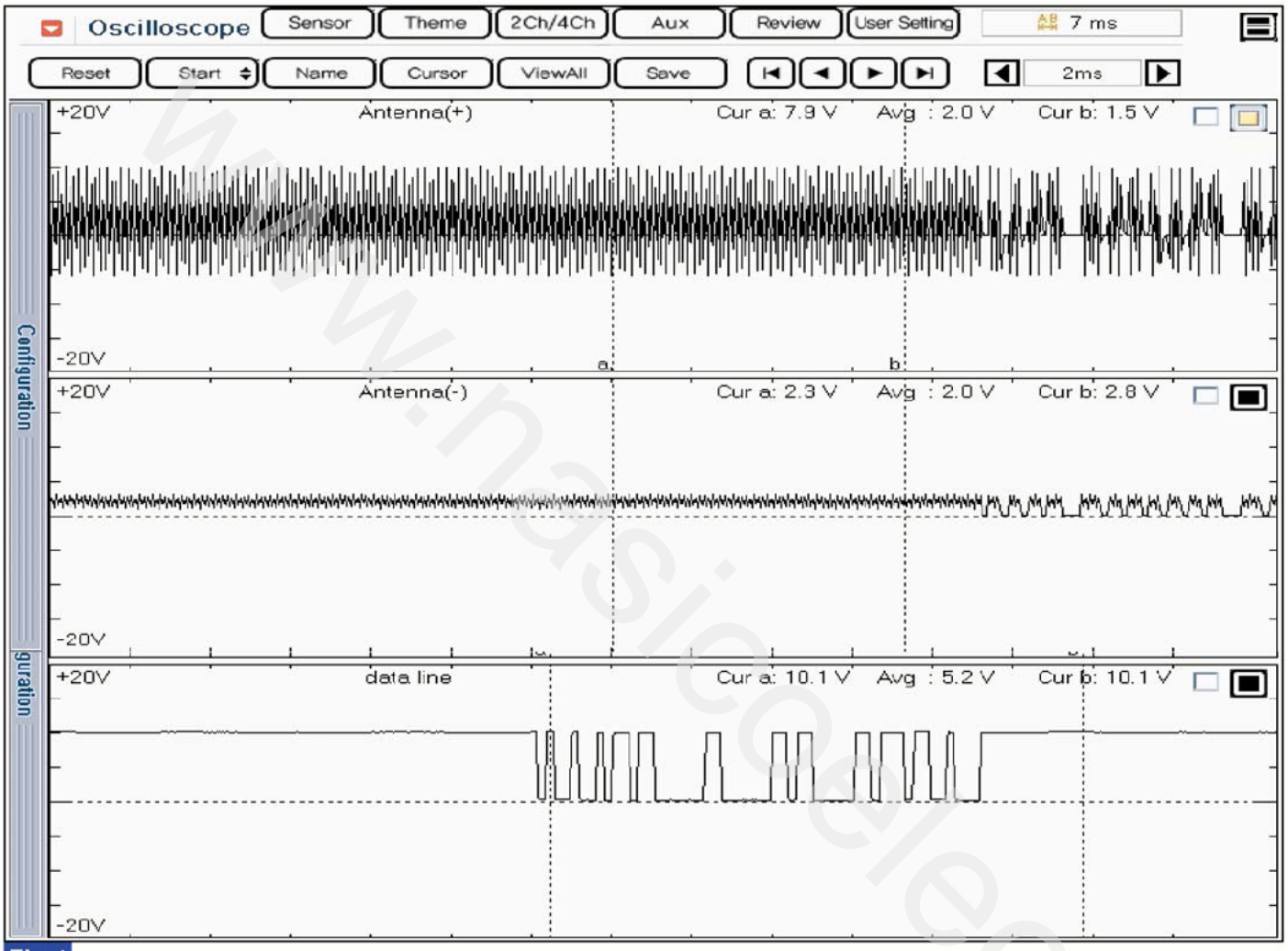


Fig.1

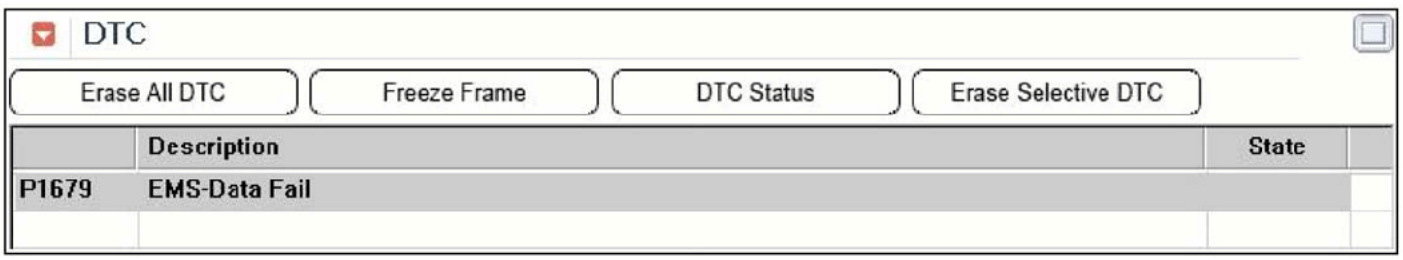
JC12IMM11P169111S

A normal signal waveform of antenna and(Fig.1
immobilizer communication when IG :key(TP
is OFF to ON.(Transponder

Monitor Scantool Data

IG "ON" & Engine "OFF"..١

Connect Scan tool and clear the DTCs..٢



JC12IMM11P167921S

Is DTC P1679 displayed again ?.٣

YES Fault is intermittent caused by poor contact in ICU's and/or PCM/ECM connector or was repaired and PCM/ECM memory was not cleared ▶
Therefore. 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 ICU and/or PCM/ECM and check for proper operation. and then go to "Verification of Vehicle Repair" procedure ▶

After replacing ICU and/or PCM/ECM, perform Key teaching procedure with scantool. ▶

Verification of Vehicle Repair

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

١. Connect scan tool and monitor "CURRENT DATA"..

٢. Select "Diagnostic Trouble Codes(DTCs)" mode and Clear the DTCs.

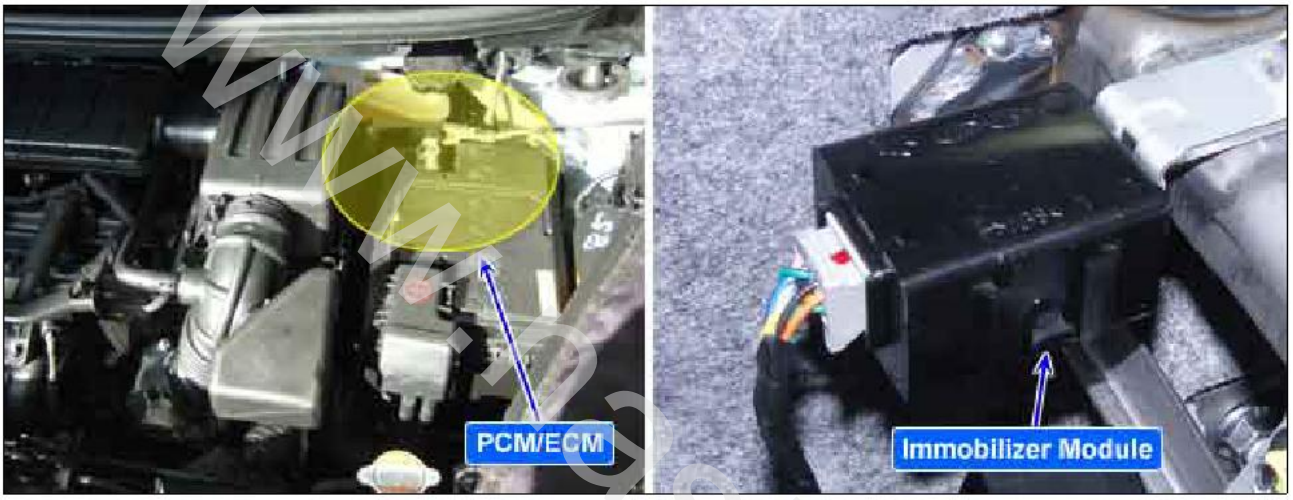
٣. Are any DTCs present ?.

YES Go to the applicable troubleshooting procedure ▶

NO System is performing to specification at this time ▶

P1688 Immobilizer Lock

Component Location



HG12IMM11P167711

General Description

In ICU system, scantool is mainly used for diagnosis. besides this, registration of key and neutralization of PCM/ECM is executed by scantool.

DTC Description

The DTC will set, if invalid PIN or password is inputted for more than 3 times using the scantool.

١. After entering the Key registration mode, the DTC will set if a PIN is entered that is differentto "LEARNT" ICU for more than 3 times.

٢. After entering the Neutral mode, the DTC will set if a PIN is entered that is different to "LEARNT" ICU for more than 3times.

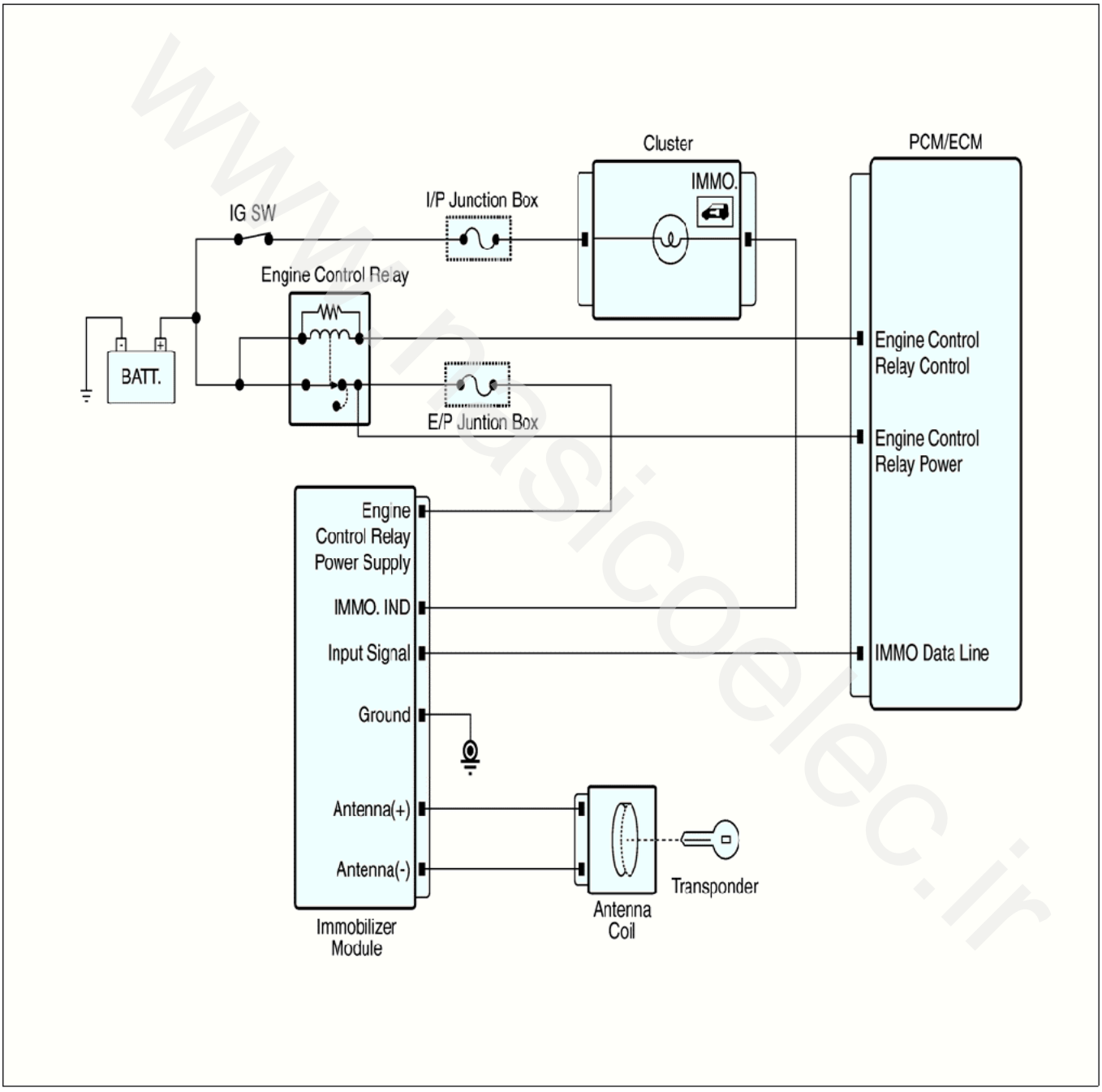
٣. After entering the Change User Password, the DTC will set if a PIN is entered that is different to "LEARNT" ICU for more than 3times.

٤. After entering the Limp Home mode, the DTC will set if a PIN is entered that is different to "LEARNT" ICU for more than 3times.

DTC Detecting Condition

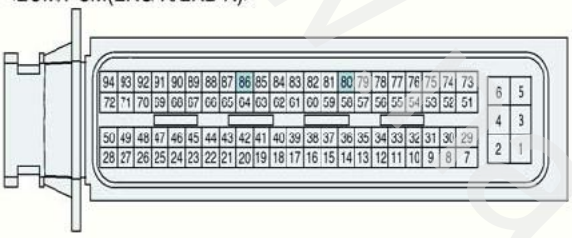
Item	Detecting Condition	Possible Cause
DTC Strategy	• Communication status check between PCM/ECM and scantool	١. Check for "LEARNT" PCM/EC-M PIN code ٢. Check for "LEARNT" PCM/EC-M password
Threshold value	• In the PIN or password inputting procedure	
Detecting time	• invalid PIN or password is inputted for more than 3 tim- es	
DTC Erasing	• Without a fault or using a scantool	

Diagnostic Circuit Diagram



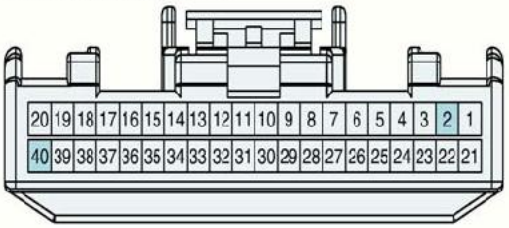
TA12IMM12P1677DD

<ECM/PCM(EKG-K/EKB-K)>



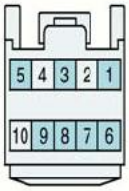
80. IMMO. Signal(ECM/EKG-K)
86. IMMO. Signal(PCM/EKB-K)

<Instrument Cluster(M01)>



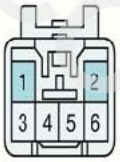
2. IMMO. IND
40. Power

<Immobilizer Module(M09)>



1. Antenna Coil (-)
3. IMMO. IND
5. Memory PWR
6. Antenna Coil (+)
7. GND
8. Body K-Line
9. IMMO. Signal

<Door Warning Switch(M05)>



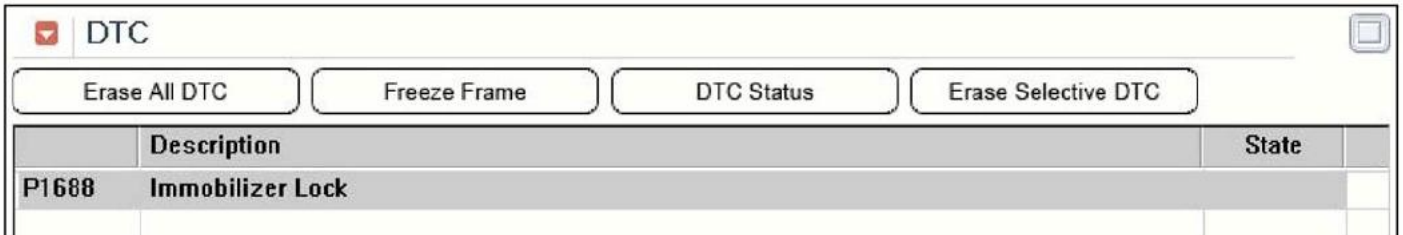
1. Antenna Coil (+)
2. Antenna Coil (-)

TA12IMM12P1677DD1

Monitor Scantool Data

IG "ON" & Engine "OFF"..١

Connect Scantool and clear the DTCs..٢



Is DTC P1688 displayed again ?.٣

YES While IGN1 On, when incorrect PIN is enter-▶
ed for more than 3 times, wait 1 hour to for ne-
xt attempt.
When PIN or Password lock is released, check the stored PIN or Password on the IMMO first, then perform verification of vehicle repair.

NO Fault is intermittent caused by poor contact▶
in ICU’ s and/or PCM/ECM connector or was re-
paired and ICU’ s and/or PCM/ECM memory w-
as not cleared. Therefore, Check connectors f-
or looseness, poor connection, bending, corro-
contamination, deterioration, or damage..sion
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.

Connect scan tool and monitor "CURRENT DATA"..١

Select "Diagnostic Trouble Codes(DTCs)" mode and.٢
Clear the DTCs.

Are any DTCs present ?.٣

YES Go to the applicable troubleshooting proced-▶
.ure

NO System is performing to specification at this▶
.time

FC00 DTC 가이드 전체회로도 입력用

Full Circuit Diagram