

Diagnostic Trouble Codes - Troubleshooting Manual

Immobiliser Unit

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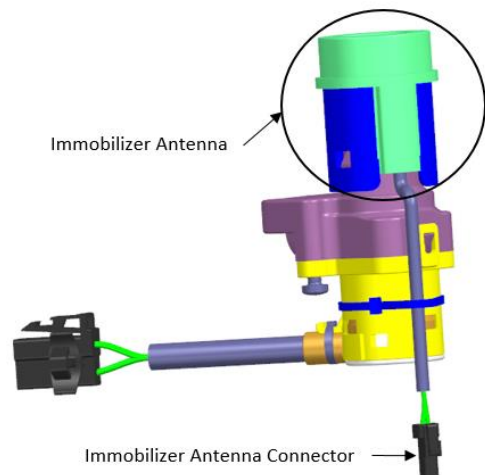
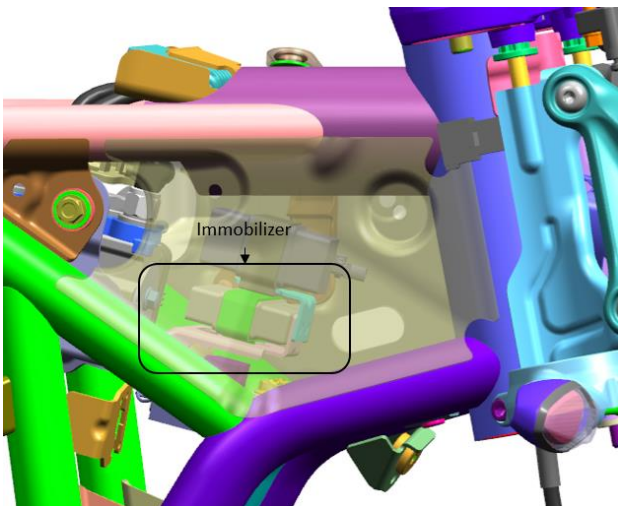
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U1110-40 – ICU antenna malfunction

Overview:

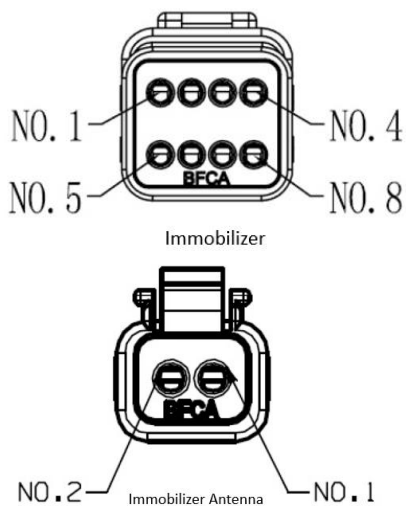
DTC	U1110-40
Customer Symptom	Vehicle will not crank
Fault effects (On vehicle)	Starter Motor, Starter Relay, Fuel Injector, Throttle valve disabled
Lamp Status (If any)	Alarm tell-tale & MIL ON
Fault detection condition	This fault is registered upon failure of Immobilizer Antenna mounted on Ignition switch barrel, or upon connection failure of Immobilizer antenna to Immobilizer.
Probable trouble area	Ignition switch, Harness, Immobilizer
Healing condition	Fault rectification after electrical diagnosis.

Component Location & Image:



Connector View & Information:

Component Side:

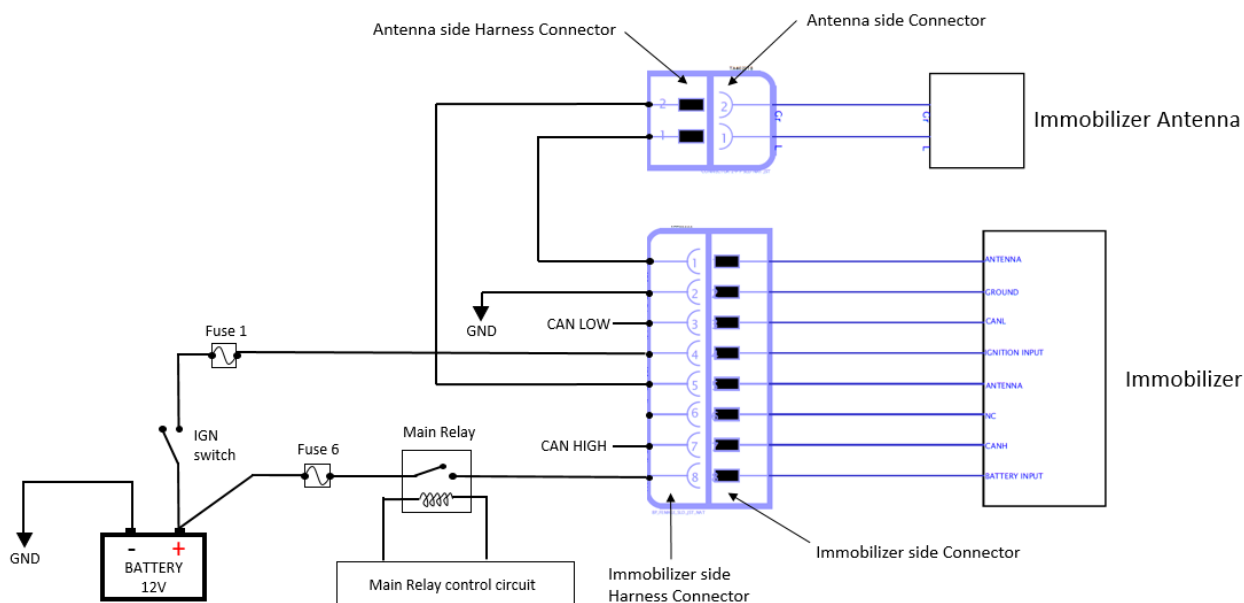


Pin Number	Pin Description (Immobilizer)
Pin 1	Antenna 1
Pin 5	Antenna 2

Wiring Harness Side:



Circuit Interface:



Troubleshooting:

Step	Checkpoint	If Yes	If No
1	Is there any rust/ oxidation observed on Immobilizer antenna connector terminals from Ignition switch side?	Replace/ Check Ignition switch	Go to Step 2
2	Is there any terminal bend/ damage inside Immobilizer antenna connector from Ignition switch side?	Replace/ Check Ignition switch	Go to Step 3
3	Is resistance of antenna = $8 \pm 0.5 \Omega$. Check resistance of antenna by connecting multimeter at pin 1 & 2.	Go to Step 4	Replace/ Check Ignition switch

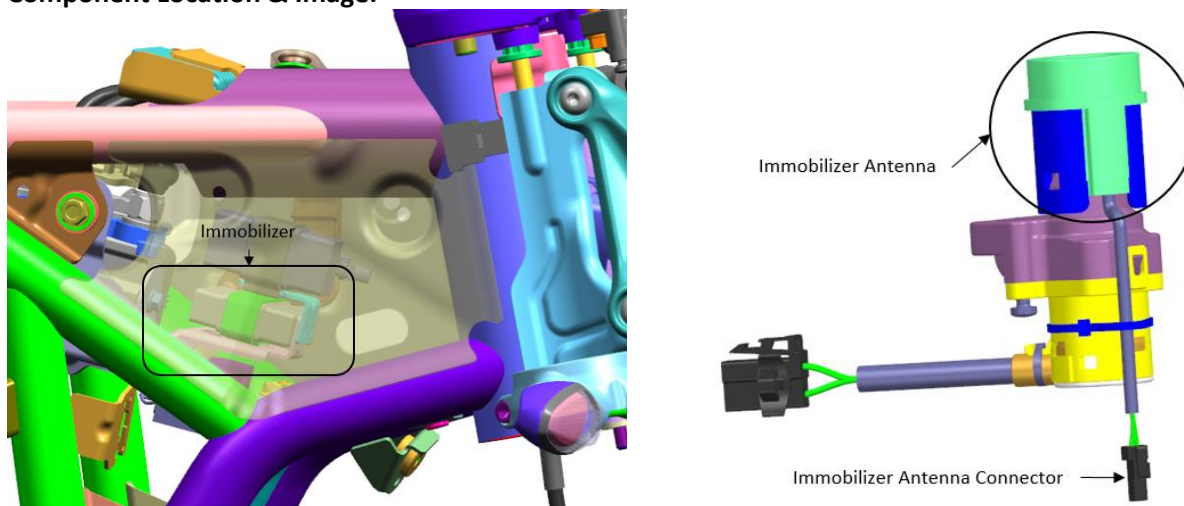
4	Is there a wire continuity between Pin 1 of Antenna to Pin 1 of Immobilizer unit. <i>Disconnect battery before this activity.</i>	Go to Step 5	Replace/ Check wiring harness
5	Is there a wire continuity between Pin 2 of Antenna to Pin 5 of Immobilizer unit. <i>Disconnect battery before this activity.</i>	Go to Step 6	Replace/ Check wiring harness
6	Clear DTC and check again for same fault. Is the same fault still registered?	--	Replace Immobilizer unit with lock set.

U1120-00– No Transponder present

Overview:

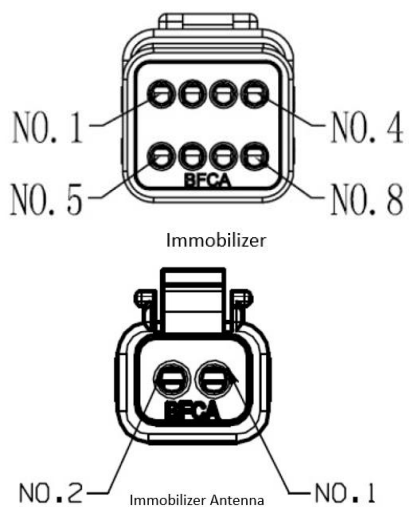
DTC	U1120-00
Customer Symptom	Vehicle will not crank
Fault effects (On vehicle)	Starter Motor, Starter Relay, Fuel Injector, Throttle valve disabled
Lamp Status (If any)	Alarm tell-tale ON
Fault detection condition	This fault is registered when there is no transponder chip available in Ignition Key, or transponder is not in close proximity of Immobilizer Antenna.
Probable trouble area	Ignition Key, Immobilizer Antenna, Immobilizer
Healing condition	Fault rectification after electrical diagnosis.

Component Location & Image:



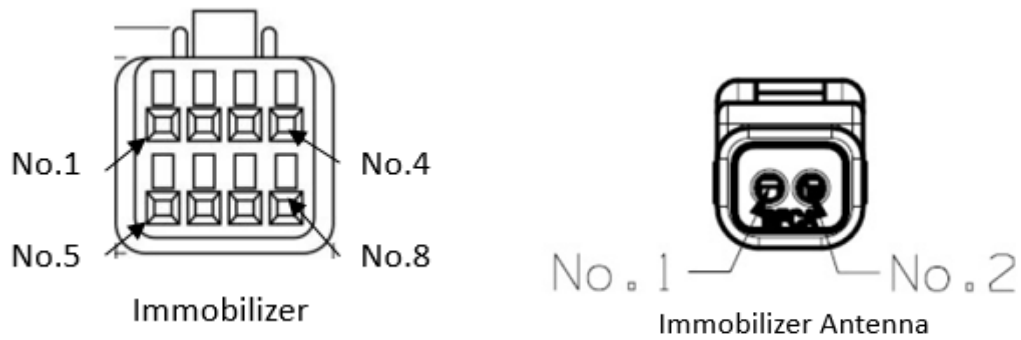
Connector View & Information:

Component Side:

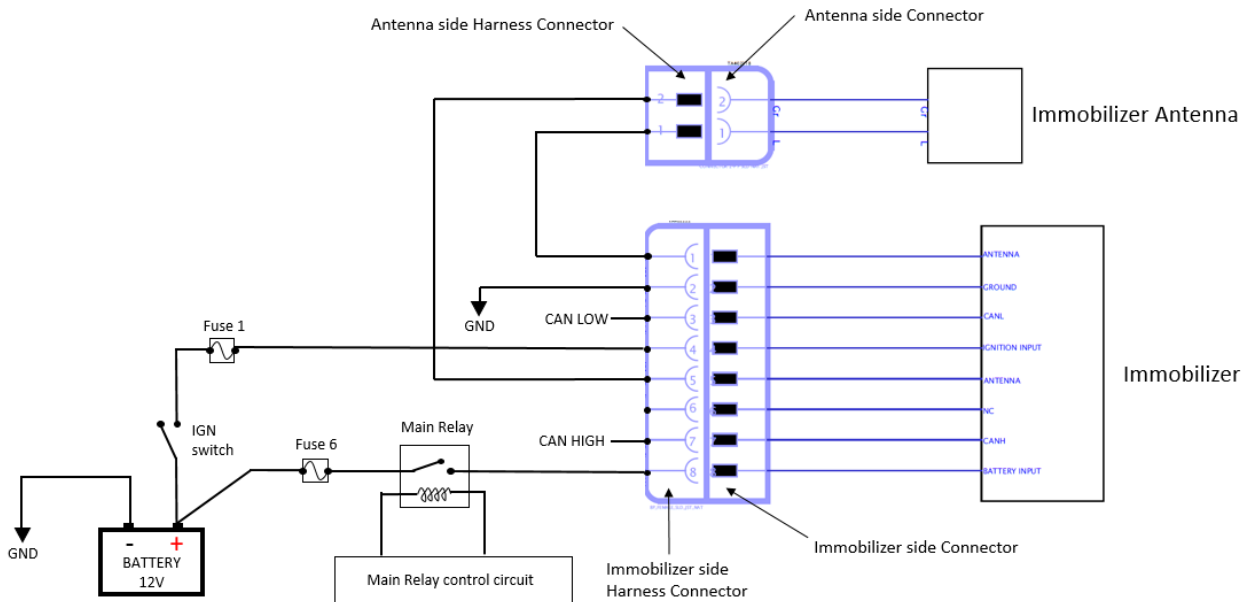


Pin Number	Pin Description (Immobilizer)
Pin 1	Antenna 1
Pin 5	Antenna 2

Wiring Harness Side:



Circuit Interface:



Troubleshooting:

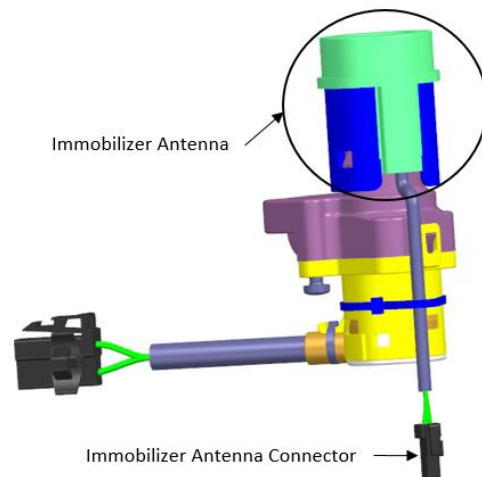
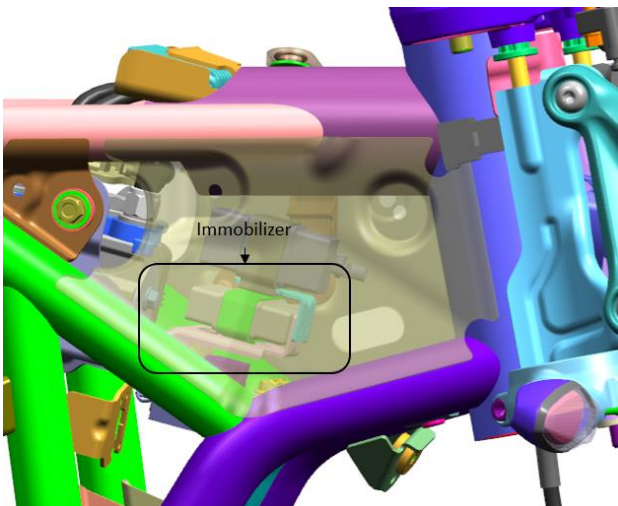
Step	Checkpoint	If Yes	If No
1	Is intended key being used in ignition switch	Go to Step 2	Check/ Replace ignition key
2	Is ignition key damaged/ tampered	Check/ Replace ignition key	Go to Step 3
3	Are two or more keys kept in close vicinity to each other?	Keep only one key & check	Go to Step 4
4	Is there any rust/ oxidation observed on Immobilizer antenna connector terminals from Ignition switch side?	Replace/ Check Ignition switch	Go to Step 2
5	Is there any terminal bend/ damage inside Immobilizer antenna connector from Ignition switch side?	Replace/ Check Ignition switch	Go to Step 3
6	Is resistance of antenna = $8 \pm 0.5 \Omega$. Check resistance of antenna by connecting multimeter at pin 1 & 2.	Go to Step 4	Replace/ Check Ignition switch
7	Is there a wire continuity between Pin 1 of Antenna to Pin 1 of Immobilizer unit. <i>Disconnect battery before this activity.</i>	Go to Step 5	Replace/ Check wiring harness
8	Is there a wire continuity between Pin 2 of Antenna to Pin 5 of Immobilizer unit. <i>Disconnect battery before this activity.</i>	Go to Step 6	Replace/ Check wiring harness
9	Clear DTC and check again for same fault. Is the same fault still registered?	--	Replace Immobilizer unit with lock set

U1125-00– Incorrect transponder ID

Overview:

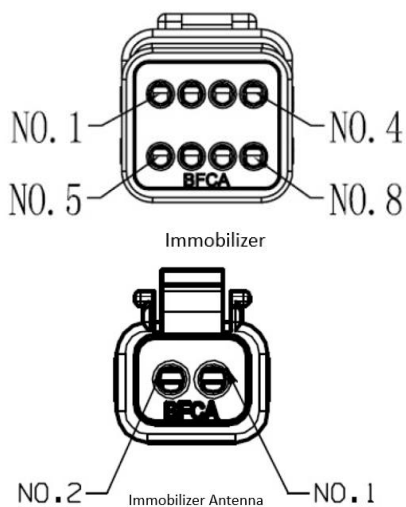
DTC	U1125-00
Customer Symptom	Vehicle will not crank
Fault effects (On vehicle)	Starter Motor, Starter Relay, Fuel Injector, Throttle valve disabled
Lamp Status (If any)	Alarm tell-tale ON
Fault detection condition	This fault is registered when there is mismatch between Ignition key, which is already paired to Immobilizer, or there are two keys kept together near close proximity of Immobilizer Antenna.
Probable trouble area	Ignition Key, Immobilizer Antenna, Immobilizer
Healing condition	Fault rectification after electrical diagnosis.

Component Location & Image:



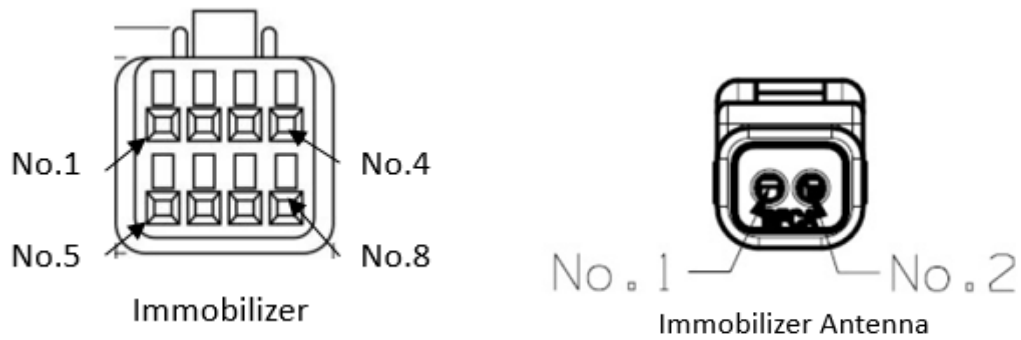
Connector View & Information:

Component Side:

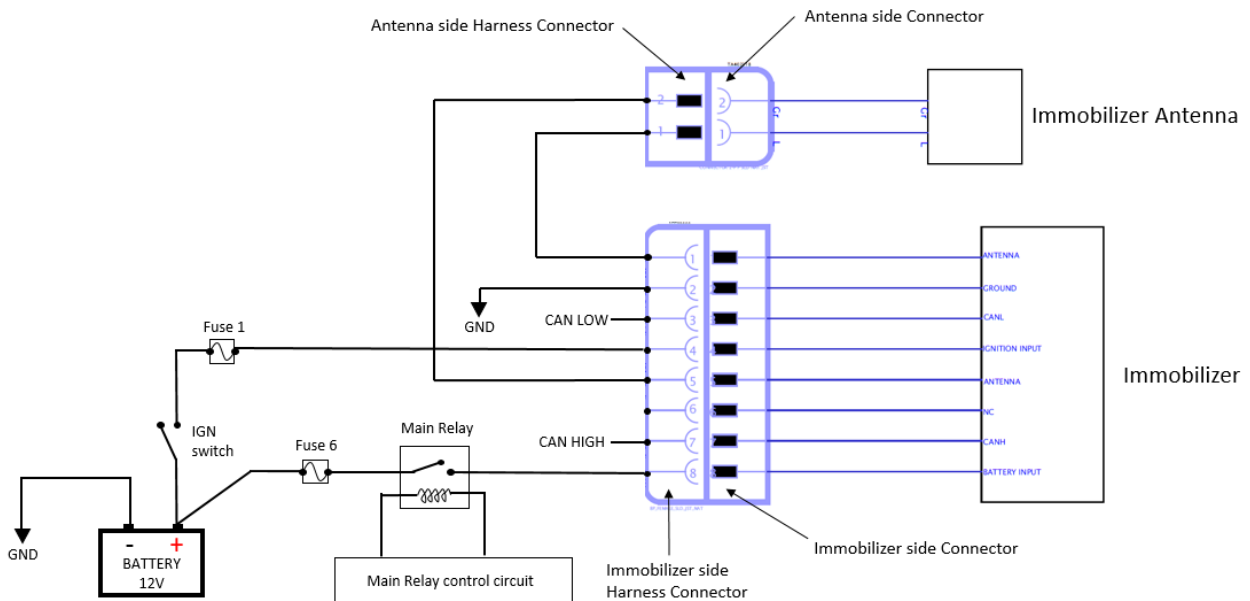


Pin Number	Pin Description (Immobilizer)
Pin 1	Antenna 1
Pin 5	Antenna 2

Wiring Harness Side:



Circuit Interface:



Troubleshooting:

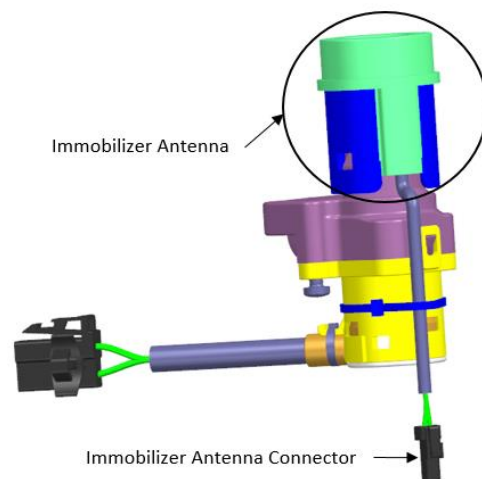
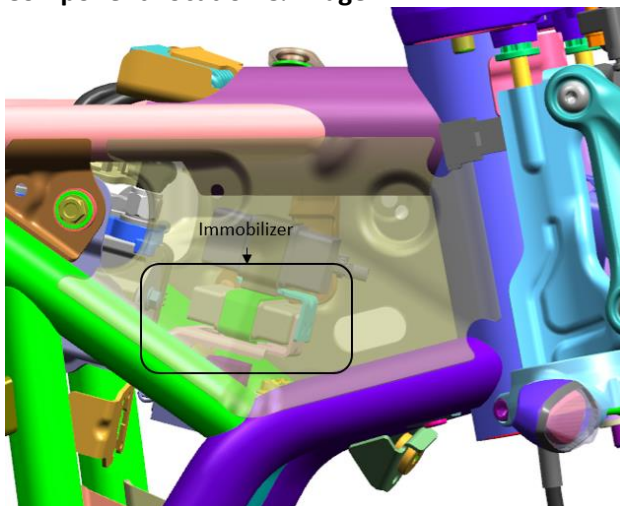
Step	Checkpoint	If Yes	If No
1	Is the intended key for same vehicle is used to start vehicle?	Go to Step 2	Use Intended Key
2	Are there two keys in proximity of Immobilizer Antenna on Ignition switch barrel?	Use only one key for turning ON vehicle	Go to Step 3
3	Is Immobilizer unit & keys are from same lock set?	Go to Step 4	Check label/ sticker on Immobilizer, identification on ignition barrel & key tag
4	Is there any rust/ oxidation/ terminal bend/ damage inside Immobilizer connector from wiring harness side?	Replaced wiring harness	Go to Step 5
5	Clear DTC and check again for same fault. Is the same fault still registered?	Replace Immobilizer unit with lock set	--

U1128-00– Transponder ID correct, false encrypt

Overview:

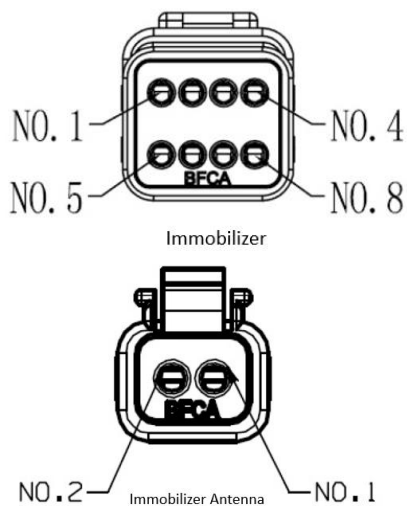
DTC	U1128-00
Customer Symptom	Vehicle will not crank
Fault effects (On vehicle)	Starter Motor, Starter Relay, Fuel Injector, Throttle valve disabled
Lamp Status (If any)	Alarm tell-tale ON
Fault detection condition	This fault is registered when authentication between transponder and Immobilizer is unsuccessful. This mainly indicates that keys are intended but may not be learnt.
Probable trouble area	Ignition key, Immobilizer Antenna, Immobilizer
Healing condition	Fault rectification after electrical diagnosis.

Component Location & Image:



Connector View & Information:

Component Side:

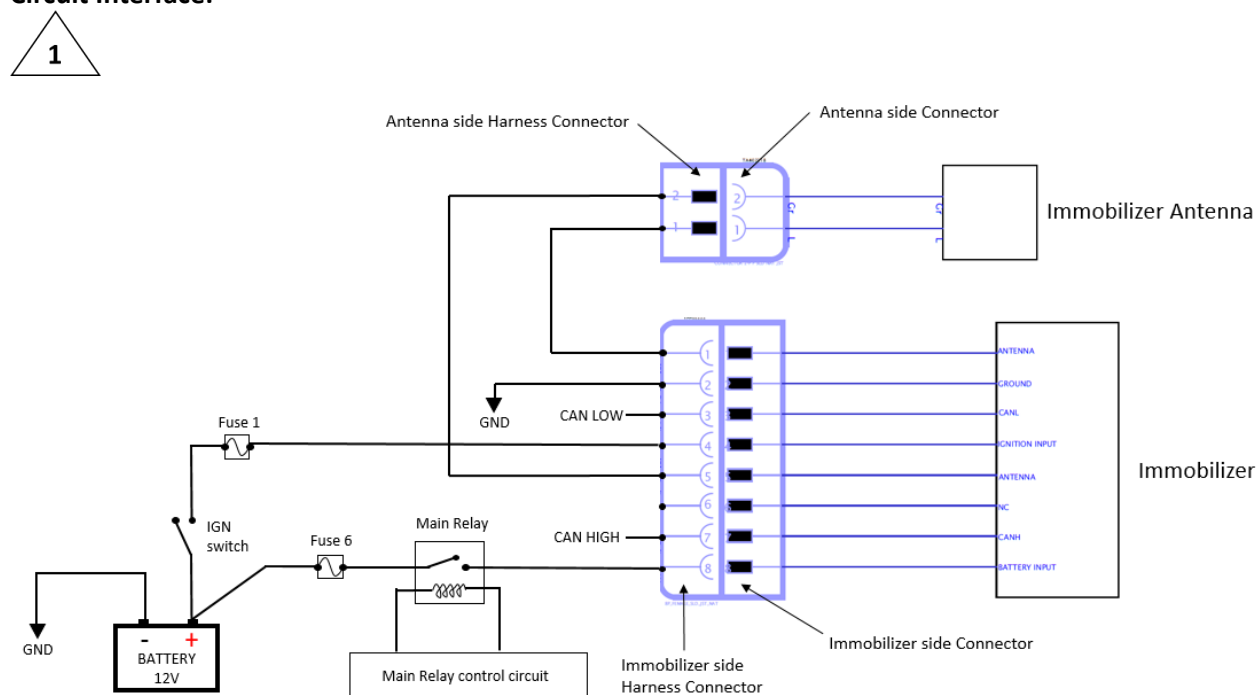


Pin Number	Pin Description (Immobilizer)
Pin 1	Antenna 1
Pin 5	Antenna 2

Wiring Harness Side:



Circuit Interface:



Troubleshooting:

Step	Checkpoint	If Yes	If No
1	Are there two keys in proximity of Immobilizer Antenna on Ignition switch barrel?	Use only one key for turning ON vehicle	Go to Step 2
2	Is there an unusually large metallic keychain used by customer?	Suggest to use non metallic keychain	Go to Step 3

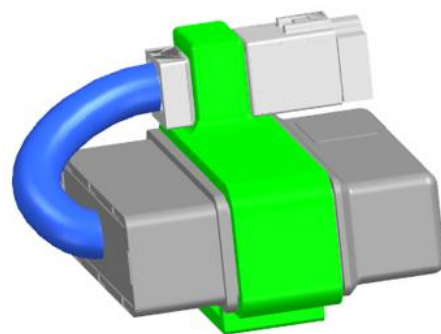
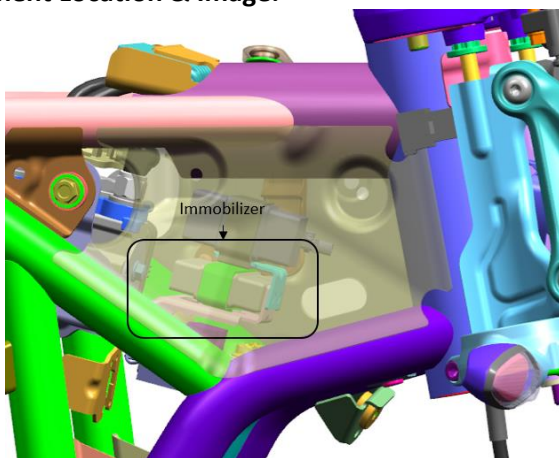
3	Do key learning process using tester tool. Is key learning successful?	Go to Step 4	Replace keys/ Try with new keys.
4	Clear DTC and check again for same fault. Is the same fault still registered?	Replace Immobilizer with Lock set	-

U1000-43– EEPROM malfunction

Overview:

DTC	U1000-43
Customer Symptom	Vehicle will not crank
Fault effects (On vehicle)	Starter Motor, Starter Relay, Fuel Injector, Throttle valve disabled
Lamp Status (If any)	Alarm tell-tale ON
Fault detection condition	This fault is registered due to internal EEPROM errors in Immobilizer control unit.
Probable trouble area	Immobilizer
Healing condition	Part replacement

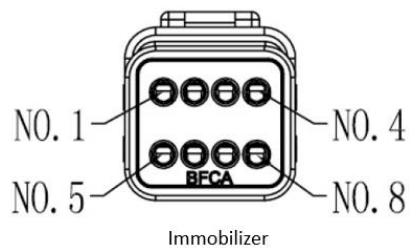
Component Location & Image:



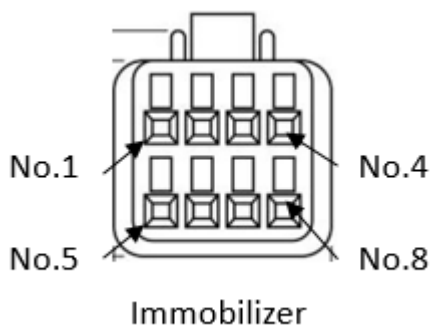
Immobilizer

Connector View & Information:

Component Side:

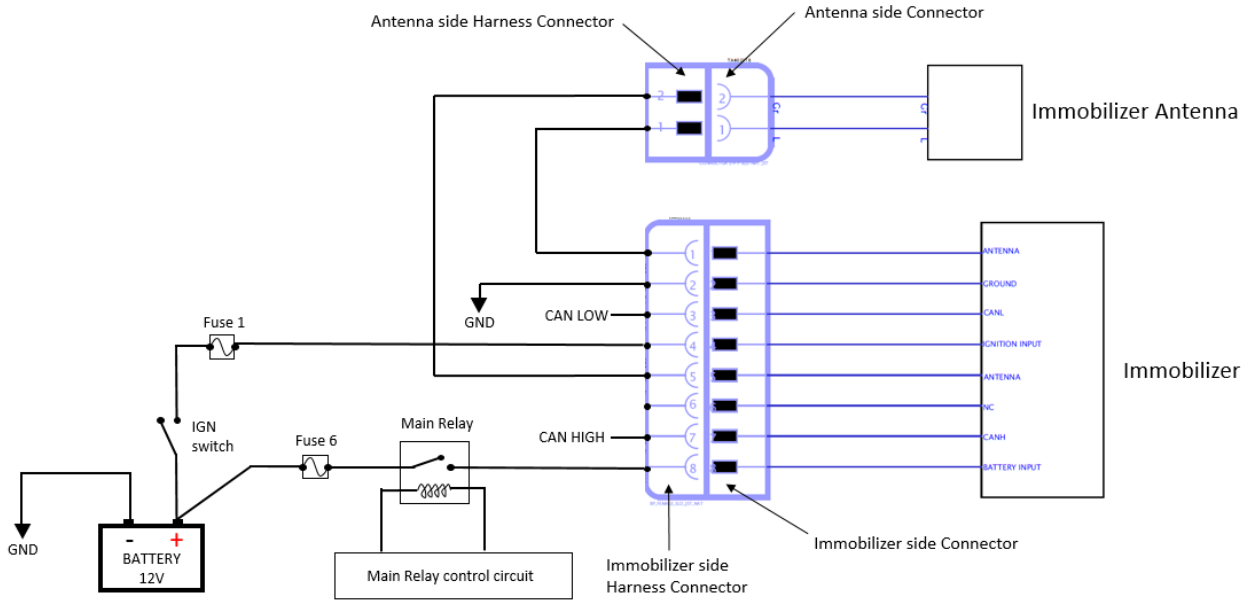


Wiring Harness Side:



Circuit Interface:

1



Troubleshooting:

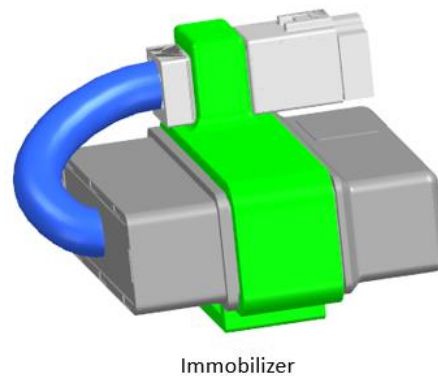
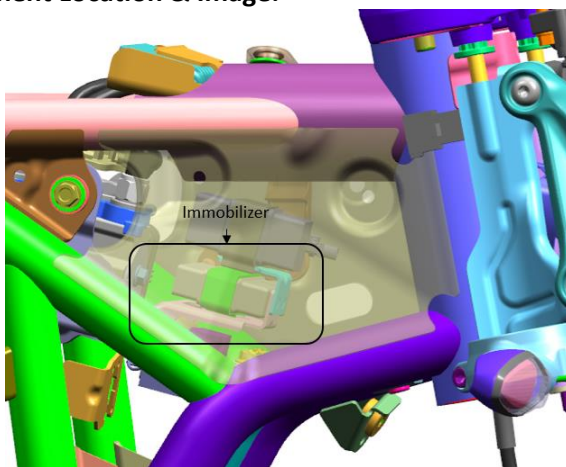
Replace Immobilizer Control Unit on vehicle.

U1012-08– Internal CAN error

Overview:

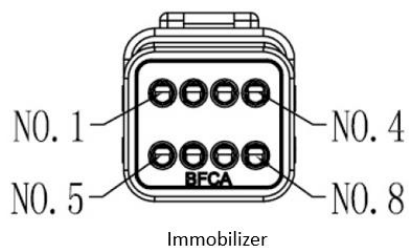
DTC	U1012-08
Customer Symptom	Vehicle will not crank. Immobilizer functions disabled.
Fault effects (On vehicle)	Starter Motor, Starter Relay, Fuel Injector, Throttle valve disabled
Lamp Status (If any)	Alarm tell-tale ON
Fault detection condition	This fault is registered due to Immobilizer's internal CAN error in control unit
Probable trouble area	Immobilizer
Healing condition	Part replacement

Component Location & Image:

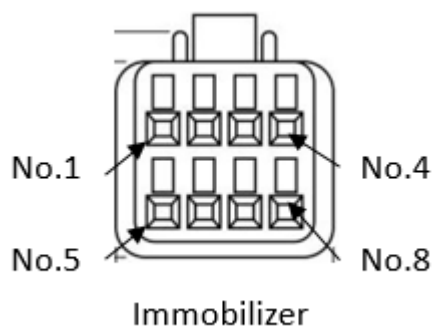


Connector View & Information:

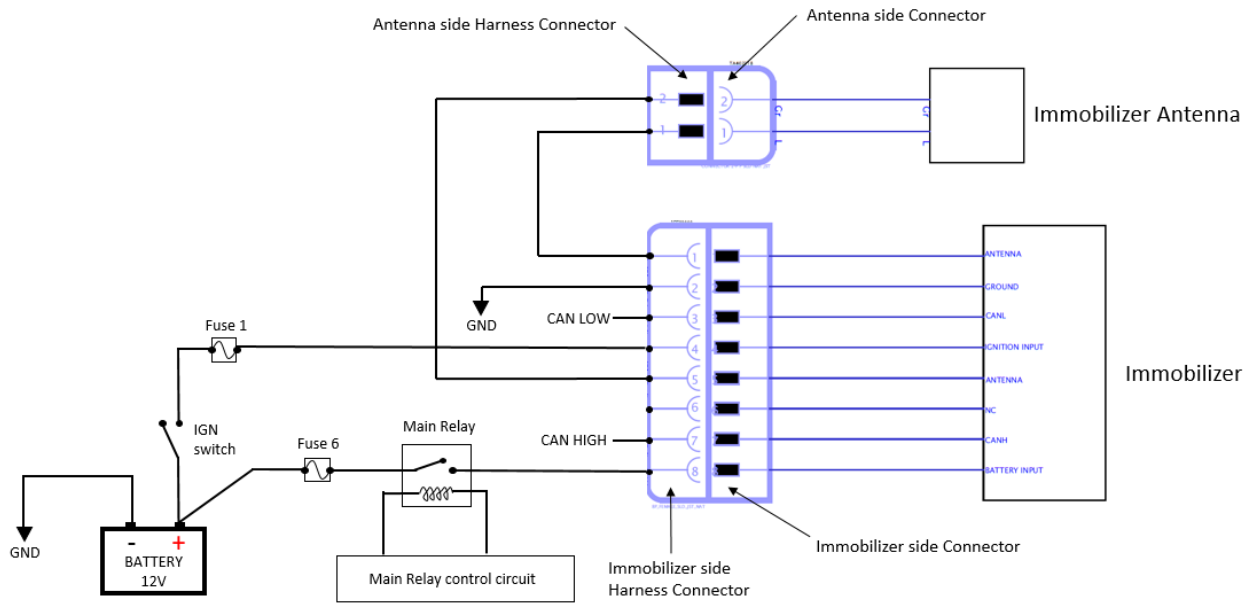
Component Side:



Wiring Harness Side:



Circuit Interface:



Troubleshooting:

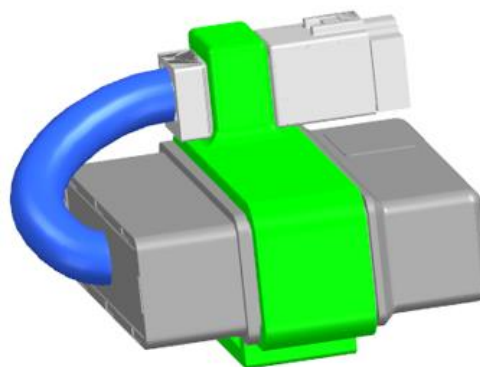
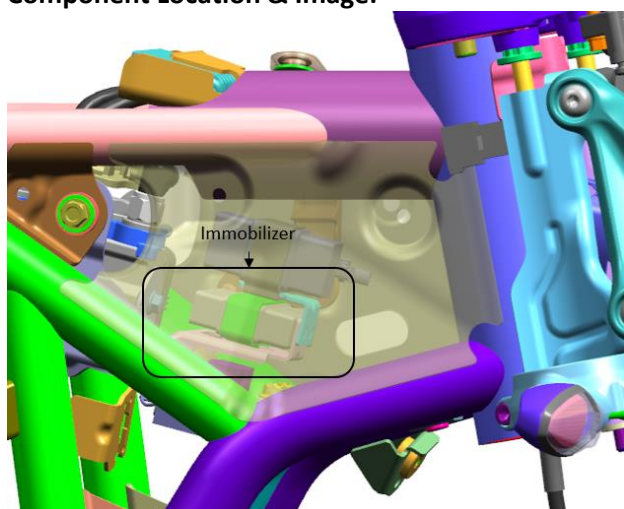
Replace Immobilizer Control Unit on vehicle.

U1180-90– No handshake received from ECU

Overview:

DTC	U1180-90
Customer Symptom	Vehicle will not crank. Immobilizer functions disabled.
Fault effects (On vehicle)	Starter Motor, Starter Relay, Fuel Injector, Throttle valve disabled
Lamp Status (If any)	Alarm tell-tale ON
Fault detection condition	This fault is registered when there is no handshake received from EMS ECU during ignition ON within 200 msec.
Probable trouble area	Immobilizer, Wiring Harness, EMS ECU
Healing condition	Fault rectification after electrical diagnosis.

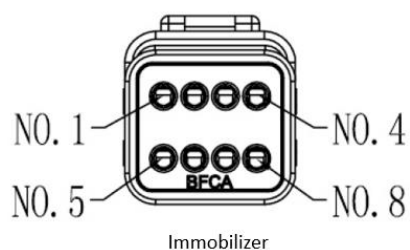
Component Location & Image:



Immobilizer

Connector View & Information:

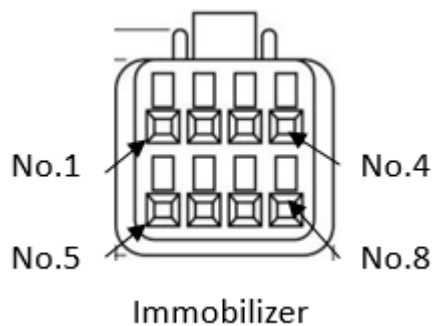
Component Side:



Immobilizer

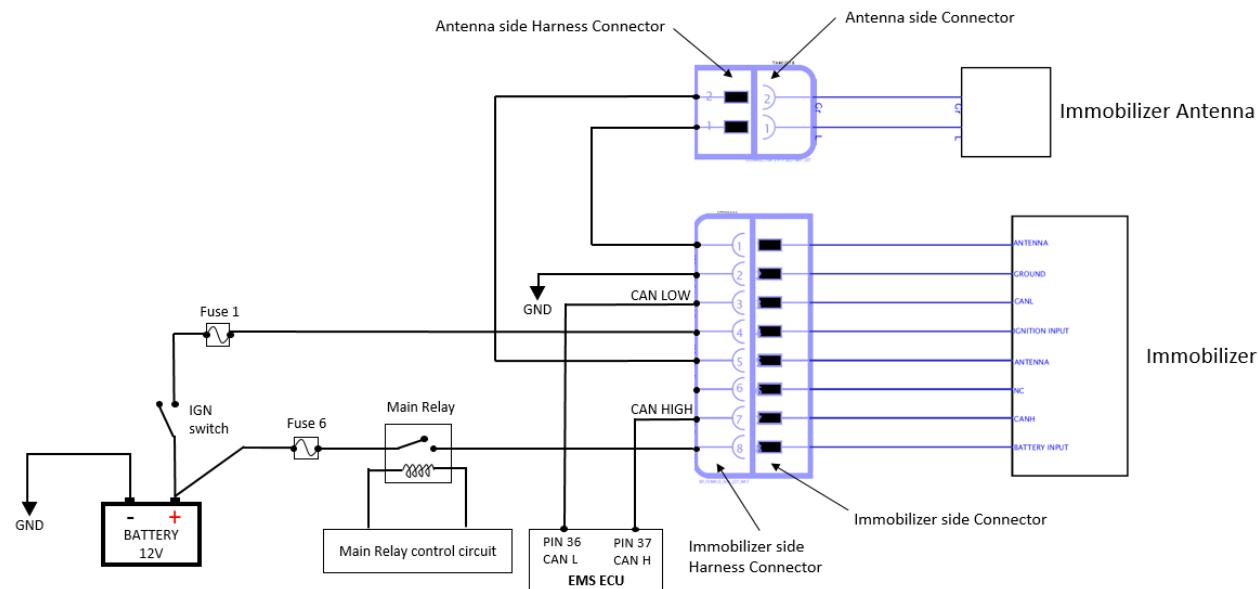
Pin Number	Pin Description (Immobilizer)
Pin 3	CAN Low
Pin 7	CAN High

Wiring Harness Side:



Immobilizer

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Troubleshooting:

Step	Checkpoint	If Yes	If No
1	Are Immobilizer and EMS ECU not paired together?	Pair Immobilizer and EMS ECU via Diagnostic Tool	Go to Step 2
2	Is there any rust/ oxidation/ terminal bend/ damage observed on Immobilizer connector terminals from Immobilizer side?	Replace Immobilizer	Go to Step 3
3	Is there any rust/ oxidation/ terminal bend/ damage inside Immobilizer connector from wiring harness side?	Replace wiring harness	Go to Step 4
4	Is there continuity between CAN High wire ECU pin no 37 to Immobilizer Pin no 7? <i>Disconnect battery before checking.</i>	Go to Step 5	Replace wiring harness
5	Is there continuity between CAN Low wire ECU pin no 36 to Immobilizer Pin no 3? <i>Disconnect battery before checking.</i>	Go to Step 6	Replace wiring harness
6	Clear DTC and check again for same fault. Is the same fault still registered?	Replace Lock set /EMS ECU	-

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