12- Electrical system

Body controller (BCM)

Technical specifications

General specifications

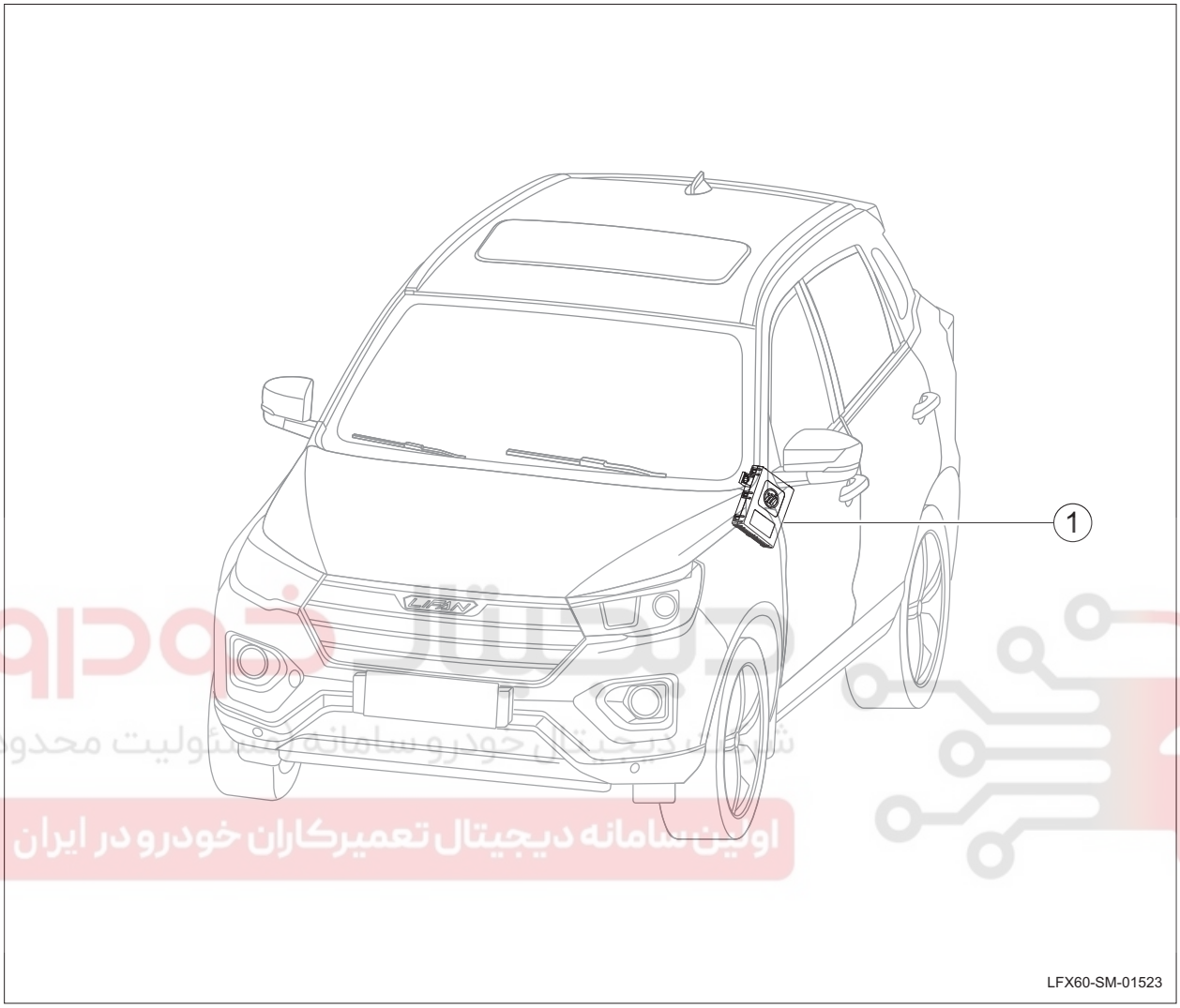
Body controller

Name	Torque range
Rated voltage	12V
Operating voltage	(9 ~ 16) V
Operating temperature	(-40 ~ 85) °C
Storage temperature	(-40 ~ 95) °C
Protection level	IP52
HF communication	Frequency hopping technology, with the frequency of 434.42 MHz ± 40 kHz or 433.42 MHz ± 40 kHz
Static sleeping current	≤3mA (testing static sleeping current of entire vehicle)
Service life	3 year or 60000km

Structure and installation location

Component Location Plan

Body controller



No.	Part name
1	Body controller (BCM)

No.	Part name

Operating principle

System overview

The body control system consists of body control module, body remote control key, power windows, left and right turn signals, headlights, four door lock motors, back door lock motor, indoor lights, combination switch, danger alarm switch and other components.

In order to reduce the fault rate of the vehicle and implement more effective control, all electrical applications are equipped with a centralized control mode (BCM) with a radio frequency receiver.

The main functions of the body control system:

- Central door lock control
- Trunk unlocking
- Remote search function
- Body anti-theft system
- Power window control
- Automatically folding of rearview mirrors
- Light function control
- Prompt function logic
- Locking prompt
- BCM controller sleep
- BCM controller waking up
- Communication and diagnosis functions

For the functional description of each system, please refer to the system overview of each system.

Diagnosis information and procedures

Diagnosis Instructions

Before BCM system troubleshooting, must understand and familiarize its working principle, and then perform its diagnosis, so as to determine the correct fault diagnosis procedure in case of fault, and more importantly, to determine whether the situations described by the user are normal.

For any BCM system fault diagnosis, must inspect it firstly, and then guide the maintenance staff to take the next logical steps for fault diagnosis. Comprehend and correctly use the diagnostic flow chart to shorten the diagnosis time and avoid the misjudgement.

General equipment

Name
Diagnostic equipment of vehicle
Digital multimeter

Visual inspection

1. Confirm the problem raised by the customer.
2. Check for the evident mechanical or electrical damage trace and collision deformation trace through the visual check.

Visual inspection table

Electrical
• Fuse • Line • Battery • Loosening or corrosion of the wiring harness connector

3. Check the system lines easy to see or can be seen.
4. If there is any significant smell or overheated part during the inspection process, must determine whether the part is damaged.
5. If the observed or raised problem is the evident and the cause has been found, ensure to fix this fault before proceeding with the next step.
6. If no problem is found through the visual check, confirm the fault and refer to the fault symptom list.

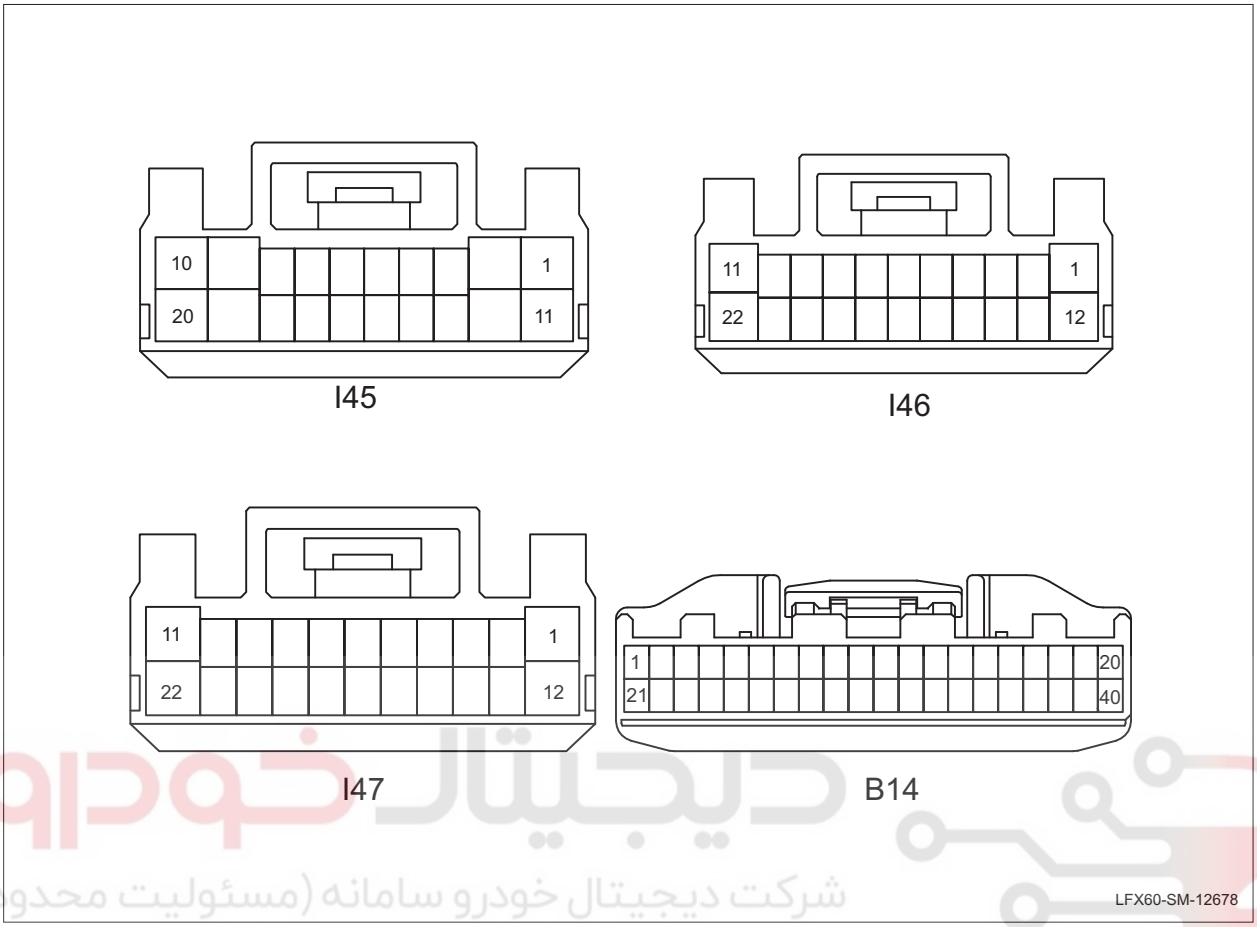
Fault symptoms table

Symptom	Possible cause	Recommended measure
Position light malfunction	• Is the fuse blown? • Are the fuse and connector contact pins bent? • Is the battery voltage between 11 ~ 14V? • Input signal invalid • Eliminate the fault and repair	• Inspect whether the position light switch can be turned on • Check whether the connector contact pins are reliable • Connect the diagnostic meter and check the input by reading the data stream • Connect the diagnostic meter and read the DTC to check for short circuit or open circuit • Connect the diagnosis instrument, perform the action test and inspect the connectors
Front fog lamp malfunction	• The fuse is blown • Are the fuse and connector contact pins bent? • Is the battery voltage between 11 ~ 14V? • Input signal invalid • Eliminate the fault and repair	• Inspect whether the front fog lamp switch can be turned on • Check whether the connector contact pins are reliable • Check whether the exterior relay and fuse are normal • Connect the diagnostic meter and check the input signal by reading the data stream • Connect the diagnostic meter and read the DTC to check for short circuit or open circuit
High beam malfunction	• Is the fuse blown? • The fuse and connector pins are bent • There is a relay load • The battery voltage is out of the range of 11 ~ 14V • Input signal invalid • Eliminate the fault and repair	• Inspect whether the headlamp switch can be turned on • Inspect whether the high beam switch can be turned on • Check whether the connector contact pins are reliable • Check whether the exterior relay and fuse are normal • Connect the diagnostic meter and check the input signal by reading the data stream • Connect the diagnostic meter and read the DTC to check for short circuit or open circuit
Rear fog lamp malfunction	• Is the fuse blown? • The fuse and connector pins are bent • There is a relay load • Is the battery voltage between 11 ~ 14V? • The start input signal is invalid • Eliminate the fault and repair	• Inspect whether the rear fog lamp switch can be turned on • Check whether the connector contact pins are reliable • Check whether the exterior relay and fuse are normal • Connect the diagnostic meter and check the input signal by reading the data stream • Connect the diagnostic meter and read the DTC to check for short circuit or open circuit
Left turn signal malfunction	• Is the fuse blown? • Are the fuse and connector contact pins bent? • Is the battery voltage between 11 ~ 14V? • Input signal invalid • Eliminate the fault and repair	• Inspect whether the left turn signal switch can be turned on • Check whether the connector contact pins are reliable • Connect the diagnostic meter and check the input by reading the data stream • Connect the diagnostic meter and read the DTC to check for short circuit or open circuit • Connect the diagnosis instrument, perform the action test, and inspect the connectors
Right turn signal malfunction	• Is the fuse blown? • The fuse and the connector pins are bent • The battery voltage is out of the range of 11 ~ 14V • Input signal invalid • Eliminate the fault and repair	• Inspect whether the right turn signal switch can be turned on • Check whether the connector contact pins are reliable • Connect the diagnostic meter and check the input by reading the data stream • Connect the diagnostic meter and read the DTC to check for short circuit or open circuit

Symptom	Possible cause	Recommended measure
Danger alarm light malfunction	• Is the fuse blown? • Are the fuse and connector contact pins bent? • Is the battery voltage between 11 ~ 14V? • Input signal invalid • Eliminate the fault and repair	• Inspect whether the danger alarm light switch can be turned on • Check whether the connector contact pins are reliable • Connect the diagnostic meter and check the input signal by reading the data stream • Connect the diagnostic meter and read the DTC to check for short circuit or open circuit
Indoor light malfunction	• Is the fuse blown? • Are the fuse and connector contact pins bent? • Is the battery voltage between 11 ~ 14V? • Input signal invalid • Eliminate the fault and repair	• Inspect whether the indoor light is turned to “Door” position • Connect the diagnostic meter and read the DTC to check for short circuit or open circuit
Brake light malfunction	• Is the fuse blown? • The fuse and connector pins are bent • The brake light switch is faulty • Is the battery voltage between 11 ~ 14V? • Input signal invalid • Eliminate the fault and repair	• Inspect whether the brake light switch can be turned on • Check whether the connector contact pins are reliable • Connect the diagnostic meter and check the input signal by reading the data stream • Connect the diagnostic meter and read the DTC to check for short circuit or open circuit
Anti-theft indicator malfunction	• Is the fuse blown? • The fuse and connector pins are bent • The battery voltage is out of the range of 9 ~ 16V • Input signal invalid • Eliminate the fault and repair	• Inspect whether the power supply is in ACC position • Inspect the door status data
Driver door unlocking malfunction	• Is the fuse blown? • Are the fuse and connector contact pins bent? • Is the battery voltage between 11 ~ 14V? • Input signal invalid • Eliminate the fault and repair	• Inspect whehter the fuse is blown or loosened • Inspect whether the central unlock switch can be turned on • Check whether the connector contact pins are reliable • Connect the diagnostic meter and check the input signal by reading the data stream
Driver door locking malfunction	• Is the fuse blown? • Are the fuse and connector contact pins bent? • Is the battery voltage between 11 ~ 14V? • Input signal invalid • Eliminate the fault and repair	• Inspect whether BCM fuse is blown or loosened • Inspect whether the central lock switch can be turned on • Check whether the connector contact pins are reliable • Connect the diagnostic meter and check the input signal by reading the data stream
Back door unlocking malfunction	• Is the fuse blown? • Are the fuse and connector contact pins bent? • Is the battery voltage between 11 ~ 14V? • Input signal invalid • Eliminate the fault and repair	• Check the BCM fuse for blowing or looseness • Inspect whether the trunk microswitch can be turned on • Inspect whether the connector pins are insered reliably • Connect the diagnostic meter and check the input by reading the data stream

Alarm speaker malfunction	• Is the fuse blown? • Are the fuse and connector contact pins bent? • Is the battery voltage between 11 ~ 14V? • Input signal invalid • Eliminate the fault and repair	• Check the BCM fuse for blowing or looseness • Inspect the speaker for any abnormity • Inspect and repair the correspinding line fault
Remote control malfunction	• Is the fuse blown? • Are the fuse and connector contact pins bent? • Is the battery voltage between 11 ~ 14V? • Input signal invalid • Eliminate the fault and repair	• Connect the diagnostic meter and check the remote control key request signal • Inspect whether the central control button and the trunk button can be locked or unlocked, or inspect the central lock • Connect the diagnosis instrument, inspect whether the power supply is in ACC position and whether there is IGN signal input by reading the data flow
Remote window opening/ closing malfunction	• Is the fuse blown? • Are the fuse and connector contact pins bent? • Is the battery voltage between 11 ~ 14V? • Input signal invalid • Repair the malfunction	• Connect the diagnostic meter and check the remote control key request signal • Inspect whether the window is normal
Other BCM input malfunction	• Is the fuse blown? • Are the fuse and connector contact pins bent? • Is the battery voltage between 11 ~ 14V? • Input signal invalid • Eliminate the fault and repair	• Inspect whether the corresponding input switch can be turned on • Inspect whether the corresponding connector pins are reliable • Connect the diagnostic meter and check the input signal by reading the data stream
ACC relay malfunction	• Is the fuse blown? • The fuse and connector pins are bent • Is the battery voltage between 11 ~ 14V? • Input signal invalid • Eliminate the fault and repair	• Inspect whther the relay is normal • Inspect whther the control line is normal

List of control module (BCM) terminals



Terminal No.	Wire diameter/color	Terminal description
I45-01	0.30 Br/W	Anti-theft identification coil backlight signal
I45-02	0.30 V	ACC signal feedback
I45-03	0.30 G/Bl	Right turn signal
I45-04	0.30 G/W	Overtaking lamp switch signal
I45-05	0.30 G/Br	Low beam switch signal
I45-06	0.30 Bl	Sensor analog grounding
I45-07	0.50 Br/G	Hatch unlocking signal
I45-08	0.50 Br/R	Front left door unlocking
I45-09	0.50 Br/Bl	4-door locking
I45-10	0.50 Br/Y	3-door unlocking
I45-11	0.30 Br/B	Key insertion signal
I45-12	0.30 R/Bl	IG1 signal feedback
I45-13	0.30 G/B	High beam switch signal
I45-14	0.30 G	Small lamp switch signal
I45-15	-	-

Terminal No.	Wire diameter/color	Terminal description
I45-16	0.30 Br/O	Collision signal input
I45-17	0.30 W/B	P/N switch signal
I45-18	0.50 R/G	Energy-saving output
I45-19	0.85W	Lock power
I45-20	1.25 B	Central lock ground
I46-01	1.25 B	Front left window/ rear right window ground
I46-02	0.50 G/B	Rear right door glass lift motor down signal
I46-03	0.50 G	Rear right door glass lift motor up signal
I46-04	0.50 Y/W	Front left door glass lift motor up signal
I46-05	0.50 Y/R	Front left door glass lift motor down signal
I46-06	0.30 G/W	Skylight control signal
I46-07	0.50 Y/Bl	Front right door glass lift motor up signal
I46-08	0.50 Y/G	Front right door glass lift motor down signal
I46-09	0.50 Y/V	Rear left door glass lift motor down signal
I46-10	0.50 Y/Br	Rear left door glass lift motor up signal
I46-11	1.25 B	Front right window/ rear left window ground
I46-12	1.25 R/Y	Front left window/rear right window glass lift power
I46-13	0.30 Bl/W	High beam control signal
I46-14	0.30 Bl/Y	Low beam control signal
I46-15	0.30 Bl	Reverse lamp signal
I46-16	-	-
I46-17	0.30 Bl/R	AUTO lamp switch signal
I46-18	0.30 Bl/W	Rear fog lamp switch signal
I46-19	0.30 Bl/B	Front fog lamp switch signal
I46-20	0.30 Br/W	Hazard warning lamp switch signal
I46-21	0.30 G/Y	Left turn lamp switch signal
I46-22	1.25 R/Y	Front right window/rear left window glass lift power
I47-01	0.50 R/G	Controller power
I47-02	0.30 Bl/B	PCAN-H
I47-03	0.30 Br	Anti-theft identification coil signal +
I47-04	0.30 Br/Y	Immobilizer indicator lamp power
I47-05	0.30 G/Bl	Dome lamp drive output
I47-06	0.30 G/Y	Backlight power supply
I47-07	0.30 Bl/G	Front right turn lamp power

Terminal No.	Wire diameter/color	Terminal description
I47-08	0.30 Bl/P	Front left turn lamp power
I47-09	0.30 Y/G	Exterior rearview mirror deployment signal output
I47-10	0.30 Y/Br	Exterior rearview mirror extending/folding signal output
I47-11	0.50 Y/W	Outside lamp power
I47-12	0.85 B	BCM grounding
I47-13	0.30 Bl/W	PCAN-L
I47-14	0.30 Br/B	Anti-theft identification coil signal -
I47-15	0.30 Y/B	Right front position light actived signal
I47-16	0.30 G/W	Left front position light actived signal
I47-17	0.30 G	Right front daytime lamp actived signal
I47-18	0.30 G/O	Left front daytime lamp actived signal
I47-19	0.30 Br/R	Sensor power supply
I47-20	0.30 Y	Rear fog lamp drive output
I47-21	0.30 Bl/Gr	Front fog lamp control signal
I47-22	0.30 P/B	Speaker actived output
B14-01	0.30 G/Y	-
B14-02	-	-
B14-03	0.50 Y/Gr	Central switch unlocking signal
B14-04	0.50 Y/Bl	Front left door glass lift signal
B14-05	0.50 Y/Br	Rear left door glass lift signal
B14-06	0.50 Y/R	Front right door glass lift signal
B14-07	0.30 G/O	Ambient light sensor analog signal
B14-08	0.30 Y/B	Trunk status signal
B14-09	0.30 Br	Key locking/locking signal
B14-10	0.30 G/W	Exterior rearview mirror deployment signal input
B14-11	0.30 G/B	Exterior rearview mirror folding signal input
B14-12	0.30 B/W	Front left door status signal
B14-13	0.30 B/P	Rear left door status signal
B14-14	0.50 Y	Window locking signal
B14-15	-	-
B14-16	-	-
B14-17	0.30 V/W	-
B14-18	0.30 Br/R	-
B14-19	0.30 Br/Y	-

Terminal No.	Wire diameter/color	Terminal description
B14-20	0.30 Br	-
B14-21	0.30 Bl/R	Rear left turn lamp power
B14-22	0.30 Bl/Y	Rear right turn lamp power
B14-23	0.30 G/O	Glass lift working indicator lamp
B14-24	0.50 Y/G	Front right door glass lift signal
B14-25	0.50 Y/O	Rear right door glass lift signal
B14-26	0.50 Y/W	Rear left door glass lift signal
B14-27	0.50 Y/V	Rear right door glass lift signal
B14-28	0.30 G/Bl	Hatch inching switch status signal
B14-29	0.50Y/P	Central switch locking signal
B14-30	0.30 Br	-
B14-31	-	-
B14-32	0.30 B/O	Front right door status signal
B14-33	0.30 B/G	Rear right door status signal
B14-34	0.30 G	-
B14-35	0.50B/Y	Window simulation ground
B14-36	-	-
B14-37	0.30 V/G	-
B14-38	0.30 Br/O	-
B14-39	0.30 Br/B	-
B14-40	0.30 Br/W	-

DTC list

DTC	DTC information
B100016	The voltage is too low
B100017	The voltage is too high
B102015	Front left turn lamp open circuit
B102011	Front left turn lamp short circuit
B102115	Front right turn lamp open circuit
B102111	Front right turn lamp short circuit
B102215	Rear left turn lamp open circuit
B102211	Rear left turn lamp short circuit
B102315	Rear right turn lamp open circuit
B102311	Rear right turn lamp short circuit
B102415	Front left clearance lamp open circuit
B102411	Front left clearance lamp short circuit
B102515	Front right clearance lamp open circuit
B102511	Front right clearance lamp short circuit
B102615	Rear clearance lamp open circuit
B102611	Rear clearance lamp short circuit
B102715	Left daytime running lamp open circuit
B102711	Left daytime running lamp short circuit
B102815	Right daytime running lamp open circuit
B102811	Right daytime running lamp short circuit
B104011	Front left door window motor short circuit
B104015	Front left door window motor open circuit
B104111	Front right door window motor short circuit
B104115	Front right door window motor open circuit
B104211	Rear left door window motor short circuit
B104215	Rear left door window motor open circuit
B104311	Rear right door window motor short circuit
B104315	Rear right door window motor open circuit
B105015	Immobilizer coil open circuit
B103A96	Immobilizer coil short to the ground
U016403	Engine immobilizer authentication fail

DTC diagnosis flow index

DTC	Description	Diagnostic process
B100016	The voltage is too low	**Refer to: DTC B100016, B100017**
B100017	The voltage is too high	
B102015	Front left turn lamp open circuit	**Refer to: DTC B102015, B102011, B102115, B102111, B102215, B102211, B102315, B102311**
B102011	Front left turn lamp short circuit	
B102115	Front right turn lamp open circuit	
B102111	Front right turn lamp short circuit	
B102215	Rear left turn lamp open circuit	
B102211	Rear left turn lamp short circuit	
B102315	Rear right turn lamp open circuit	
B102311	Rear right turn lamp short circuit	
B102415	Front left clearance lamp open circuit	**Refer to: DTC B102415, B102411, B102515, B102511, B102615, B102611**
B102411	Front left clearance lamp short circuit	
B102515	Front right clearance lamp open circuit	
B102511	Front right clearance lamp short circuit	
B102615	Rear clearance lamp open circuit	
B102611	Rear clearance lamp short circuit	
B102715	Left daytime running lamp open circuit	**Refer to: DTC B102715, B102711, B102815, B102811**
B102711	Left daytime running lamp short circuit	
B102815	Right daytime running lamp open circuit	
B102811	Right daytime running lamp short circuit	
B104011	Front left door window motor short circuit	**Refer to: DTC B104011, B104015, B104111, B104115, B104211, B104215, B104311, B104315**
B104015	Front left door window motor open circuit	
B104111	Front right door window motor short circuit	
B104115	Front right door window motor open circuit	
B104211	Rear left door window motor short circuit	
B104215	Rear left door window motor open circuit	
B104311	Rear right door window motor short circuit	
B104315	Rear right door window motor open circuit	
B105015	Immobilizer coil open circuit	**Refer to: DTC U016403, B105015, B103A96**
B103A96	Immobilizer coil short to the ground	
U016403	Engine immobilizer authentication fail	

DTC	Description	Diagnostic process
U002088	CAN bus OFF	**Refer to: DTC U002088, U016487, U015187, U015587**
U016487	Unable to communicate with EMS	
U015187	Unable to communicate with SDM	
U015587	Unable to communicate with IC	

DTC B100016, B100017

DTC description

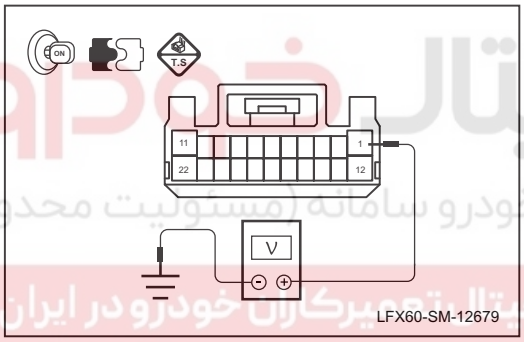
DTC	Description	Definition
B100016	The voltage is too low	BCM control unit monitors the system operating voltage abnormity
B100017	The voltage is too high	

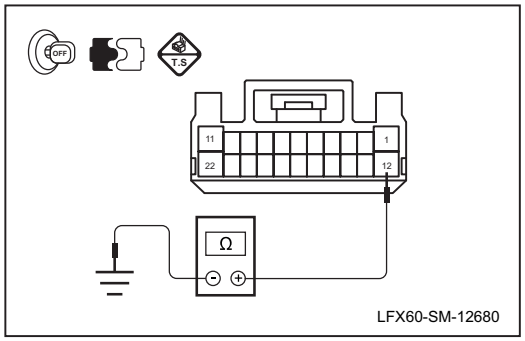
Possible reasons

DTC	Check the strategy	Set the condition (control strategy)	Define the fault location
B100016	Check the hardware and line	Voltage exceeds 18 V and maintains 10s	• Charging system • BCM control unit or its line fault
B100017		Voltage is less than 9V and maintains 10s	

Diagnostic process

Test condition	Details/results/measures
1. General inspection.	
	A. Check the related harness plugs for breakage, loose contact, aging or looseness. Is it OK after checking? →**Yes** To step 2. →**No** Repair the fault position.
2. Read the DTC with the diagnostic meter.	
	A. Connect the diagnostic meter and check the system for the other relevant DTCs. Is it OK after checking? →**Yes** To step 3. →**No** Carry out the relevant fault diagnosis according to the DTCs.
3. Check whether the DTC can be cleared.	
	A. Connect the diagnostic meter and clear BCM DTC. B. Start the engine and check whether the DTC occurs again. Does DTC occur? →**Yes** To step 4. →**No** System normal.

Test condition	Details/results/measures
4. Check the power supply system of vehicle.	
	A. Check whether the power supply system of vehicle is normal. Is it OK after checking? →**Yes** To step 5. →**No** Check the power supply system for fault.
5. Inspect BCM fuse.	
	A. Inspect the fuse FS23. **Rated fuse capacity is 5A.** Is the fuse normal? →**Yes** To step 6. →**No** Repair the fuse line and replace the fuse of rated capacity.
6. Check the BCM power line.	
	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I47. C. Connect the battery negative terminal and operate the start switch to turn the power to ON state. D. Measure the voltage between the BCM harness plug I47 terminal 1 and the fixed ground point. **Standard value: 11 ~ 14 V** Is it OK after checking? →**Yes** To step 7. →**No** Repair the BCM power line open circuit fault and replace the harness if necessary.

Test condition	Details/results/measures
7. Check the BCM control module ground line.	
 LFX60-SM-12680	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I47. C. Measure the resistance between the BCM harness plug I47 terminal 12 and the fixed ground point. **Standard value: Less than 5Ω** Is it OK after checking? →**Yes** To step 8. →**No** Repair the BCM ground line open circuit fault and replace the harness if necessary.
8. Replace the BCM.	
	A. Replace BCM. **Refer to: Replacement of BCM** Confirm the system is normal.

DTC B102015, B102011, B102115, B102111, B102215, B102211, B102315, B102311

DTC description

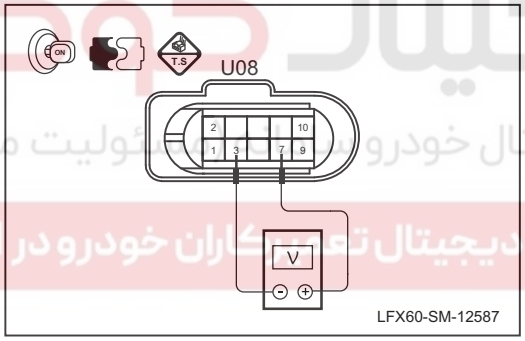
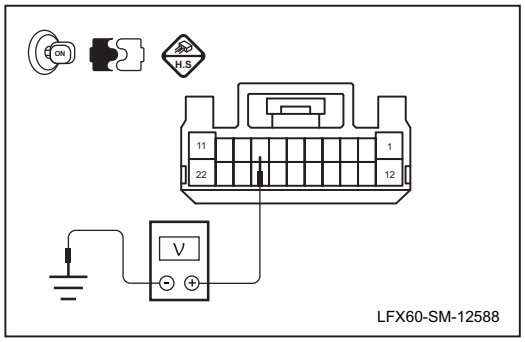
DTC	Description
B102015	Front left turn lamp open circuit
B102011	Front left turn lamp short circuit
B102115	Front right turn lamp open circuit
B102111	Front right turn lamp short circuit
B102215	Rear left turn lamp open circuit
B102211	Rear left turn lamp short circuit
B102315	Rear right turn lamp open circuit
B102311	Rear right turn lamp short circuit

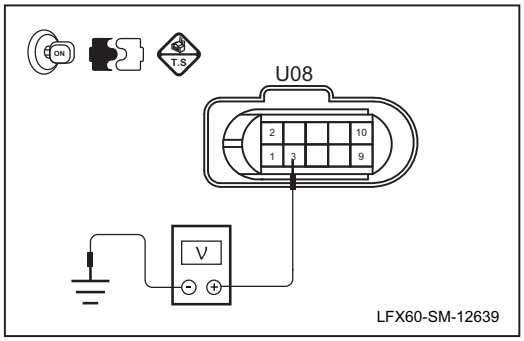
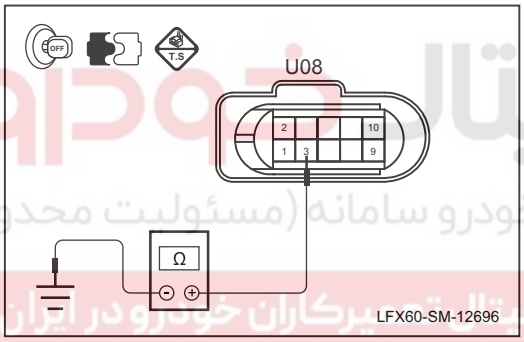
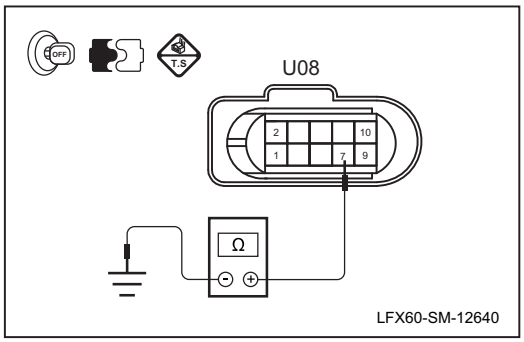
Possible reasons

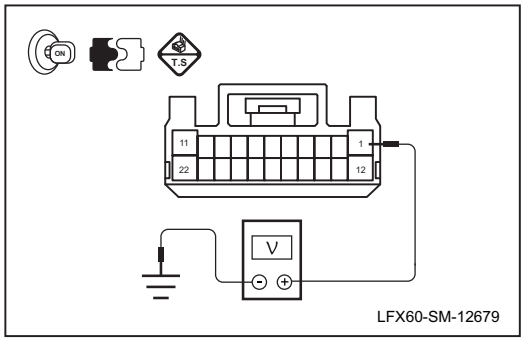
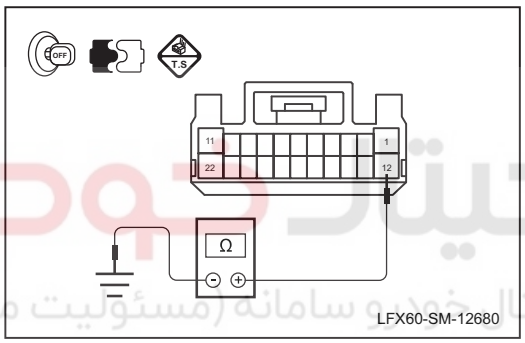
DTC	Check the strategy	Set the condition (control strategy)	Define the fault location
B102015	Check the hardware and line	Left front turn signal open circuit load	• Left front marker light • Harness line fault • BCM module power and ground • BCM
B102011		Left front turn signal short circuit load	
B102115		Right front turn signal open circuit load	
B102111		Right front turn signal short circuit load	
B102215		Left rear turn signal open circuit load	
B102211		Left rear turn signal short circuit load	
B102315		Right rear turn signal open circuit load	
B102311		Right rear turn signal short circuit load	

Diagnostic process

Test condition	Details/results/measures
1. General inspection.	
	A. Check the related harness plugs for breakage, loose contact, aging or looseness. Is it OK after checking? →**Yes** To step 2. →**No** Repair the fault position.

Test condition	Details/results/measures
2. Read the DTC with the diagnostic meter.	
	A. Connect the diagnostic meter and check the system for the other relevant DTCs. Is it OK after checking? →**Yes** To step 3. →**No** Carry out the relevant fault diagnosis according to the DTCs.
3. Check whether the DTC can be cleared.	
	A. Connect the diagnostic meter and access the BCM to clear DTC. B. Start the engine and check whether the DTC occurs again. Does DTC occur? →**Yes** To step 4. →**No** System normal.
4. Check the front left turn lamp power voltage (with this lamp as example).	
	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the front left combination lamp harness plug U08. C. Connect the battery negative terminal and operate the start switch to turn the power to ON state. D. Turn on the left front turn signal and measure the voltage between Terminals 3 and 7 of the left front combination light wiring harness connector U08. **Standard value: 11 ~ 14 V** Is it OK after checking? →**No** To step 5. →**Yes** Replace the front left turn lamp bulb.
5. Check the output voltage of BCM terminal 8.	
	A. Operate the start switch to turn the power to ON state. B. Turn on the left front turn signal and measure the voltage between Terminal 8 of BCM wiring harness connector I47 and the reliable grounding point. **Standard value: 11 ~ 14 V** Is it OK after checking? →**Yes** To step 6. →**No** To step 9.

Test condition	Details/results/measures
6. Inspect the left front turn signal operating voltage.	
	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the front left combination lamp harness plug U08. C. Connect the battery negative terminal and operate the start switch to turn the power to ON state. D. Turn on the left front turn signal and measure the voltage between Terminal 3 of the left front combination light wiring harness connector U08 and the reliable grounding point. **Standard value: 11 ~ 14 V** Is it OK after checking? →**Yes** To step 7. →**No** Inspect and repair the left front turn signal power line fault; if necessary, replace the wiring harness.
7. Inspect the left front turn signal power line for short circuit to the grounding point.	
	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the front left combination lamp harness plug U08. C. Measure the resistance between the front left combination lamp harness plug U08 terminal 3 and the fixed ground point. **Standard value: 10MΩ or higher** Is it OK after checking? →**Yes** To step 8. →**No** Inspect and repair the left front turn signal power line short circuit fault; if necessary, replace the wiring harness.
8. Check the front left turn lamp ground line.	
	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the front left combination lamp harness plug U08. C. Measure the resistance between the front left combination lamp harness plug U08 terminal 7 and the fixed ground point. **Standard value: Less than 5Ω** Is it OK after checking? →**Yes** To step 9. →**No** Inspect and repair the left front turn signal grounding point open circuit fault; if necessary, replace the wiring harness.

Test condition	Details/results/measures
9. Check the BCM power line.	
 LFX60-SM-12679	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I47. C. Connect the battery negative terminal and operate the start switch to turn the power to ON state. D. Measure the voltage between the BCM harness plug I47 terminal 1 and the fixed ground point. **Standard value: 11 ~ 14 V** Is it OK after checking? →**Yes** To step 10. →**No** Repair the BCM power line open circuit fault and replace the harness if necessary.
10. Check the BCM control module ground line.	
 LFX60-SM-12680	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I47. C. Measure the resistance between the BCM harness plug I47 terminal 12 and the fixed ground point. **Standard value: Less than 5Ω** Is it OK after checking? →**Yes** To step 11. →**No** Repair the BCM ground line open circuit fault and replace the harness if necessary.
11. Replace the BCM.	
	A. Replace BCM. **Refer to: Replacement of BCM** Confirm the system is normal.

DTC B102415, B102411, B102515, B102511, B102615, B102611

DTC description

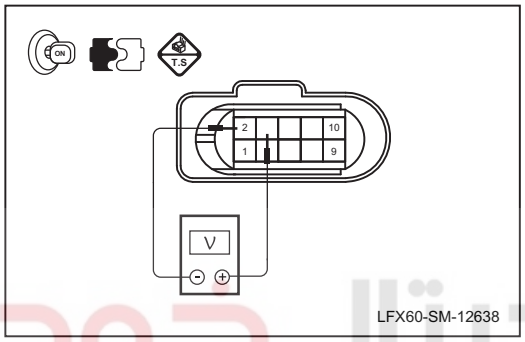
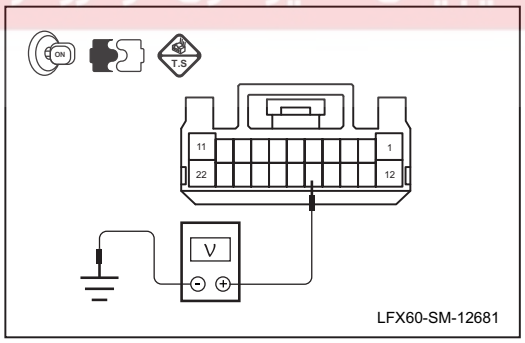
DTC	Description
B102415	Front left clearance lamp open circuit
B102411	Front left clearance lamp short circuit
B102515	Front right clearance lamp open circuit
B102511	Front right clearance lamp short circuit
B102615	Rear clearance lamp open circuit
B102611	Rear clearance lamp short circuit

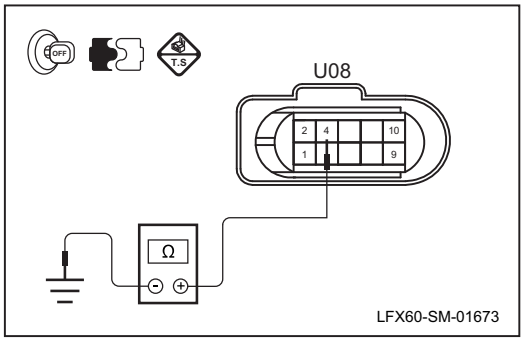
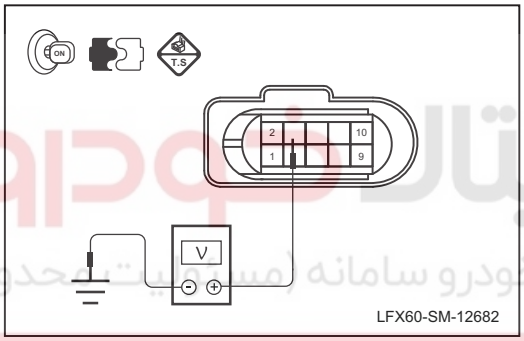
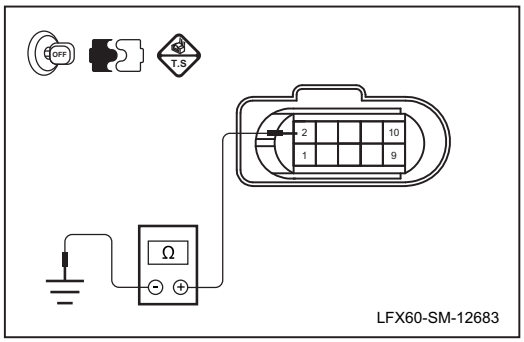
Possible reasons

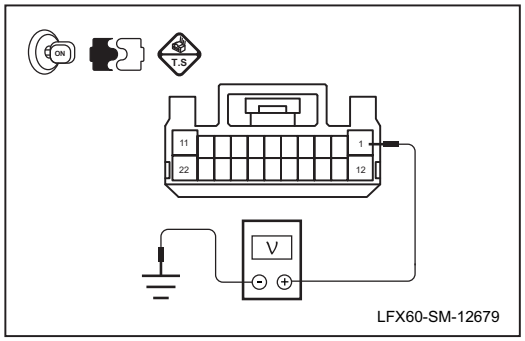
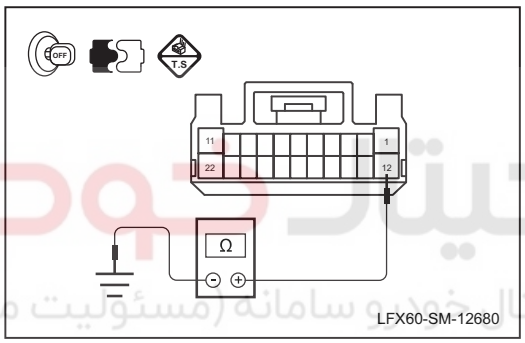
DTC	Check the strategy	Set the condition (control strategy)	Define the fault location
B102415	Check the hardware and line	Left front marker light open circuit load	• Left front marker light • Harness line fault • BCM module power and ground • BCM
B102411		Left front marker light short circuit load	
B102515		Front right clearance lamp open circuit load	
B102511		Front right clearance lamp short circuit load	
B102615		Rear clearance lamp open circuit load	
B102611		Rear clearance lamp short circuit load	

Diagnostic process

Test condition	Details/results/measures
1. General inspection.	
	A. Check the related harness plugs for breakage, loose contact, aging or looseness. Is it OK after checking? →**Yes** To step 2. →**No** Repair the fault position.
2. Read the DTC with the diagnostic meter.	
	A. Connect the diagnostic meter and check the system for the other relevant DTCs. Is it OK after checking? →**Yes** To step 3. →**No** Carry out the relevant fault diagnosis according to the DTCs.

Test condition	Details/results/measures
3. Check whether the DTC can be cleared.	
	A. Connect the diagnostic meter and access the BCM to clear DTC. B. Start the engine and check whether the DTC occurs again. Does DTC occur? →**Yes** To step 4. →**No** Confirm the system is normal.
4. Inspect the voltage between the two terminals of the left front marker light (with the left front marker light as an example).	
 LFX60-SM-12638	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the front left combination lamp harness plug U08. C. Connect the battery negative terminal and operate the start switch to turn the power to ON state. D. Turn on the position light and measure the voltage between Terminals 2 and 4 of the left front combination light wiring harness connector U08. **Standard value: 11 ~ 14 V** Is it OK after checking? →**No** To step 5. →**Yes** Replace the left front marker light. **Refer to: Replacement of front combination lamp**
5. Check the output voltage of BCM terminal 16.	
 LFX60-SM-12681	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I47. C. Connect the battery negative terminal and operate the start switch to turn the power to ON state. D. Turn on the position light and measure the voltage between Terminal 16 of BCM wiring harness connector I47 and the reliable grounding point. **Standard value: 11 ~ 14 V** Is it OK after checking? →**Yes** To step 6. →**No** To step 9.

Test condition	Details/results/measures
6. Inspect the left front marker light power line for short circuit to the grounding point.	
	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the left front marker light wiring harness connector U08. C. Measure the resistance between Terminal 4 of the left front marker light wiring harness connector U08 and the reliable grounding point. **Standard value: 10MΩ or higher** Is it OK after checking? →**Yes** To step 7. →**No** Inspect nad repair the left front marker light power line short circuit fault; if necessary, replace the wiring harness.
7. Inspect the left front marker light operating voltage.	
	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the front left combination lamp harness plug U08. C. Connect the battery negative terminal and operate the start switch to turn the power to ON state. D. Turn on the position light and measure the voltage between Terminal 4 of the left front combination light wiring harness connector U08 and the reliable grounding point. **Standard value: 11 ~ 14 V** Is it OK after checking? →**Yes** To step 8. →**No** Inspect and repair the left front marker light power line open circuit fault; if necessary, replace the wiring harness.
8. Inspect the left front marker light grounding point.	
	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the front left combination lamp harness plug U08. C. Measure the resistance between the front left combination lamp harness plug U08 terminal 2 and the fixed ground point. **Standard value: Less than 5Ω** Is it OK after checking? →**Yes** To step 9. →**No** Inspect and repair the left front marker light grounding point open circuit fault; if necessary, replace the wiring harness.

Test condition	Details/results/measures
9. Check the BCM power line.	
 LFX60-SM-12679	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I47. C. Connect the battery negative terminal and operate the start switch to turn the power to ON state. D. Measure the voltage between the BCM harness plug I47 terminal 1 and the fixed ground point. **Standard value: 11 ~ 14 V** Is it OK after checking? →**Yes** To step 10. →**No** Repair the BCM power line open circuit fault and replace the harness if necessary.
10. Check the BCM control module ground line.	
 LFX60-SM-12680	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I47. C. Measure the resistance between the BCM harness plug I47 terminal 12 and the fixed ground point. **Standard value: Less than 1Ω** Is it OK after checking? →**Yes** To step 11. →**No** Repair the BCM ground line open circuit fault and replace the harness if necessary.
11. Replace the BCM.	
	A. Replace BCM. **Refer to: Replacement of BCM** Confirm the system is normal.

DTC B102715, B102711, B102815, B102811

DTC description

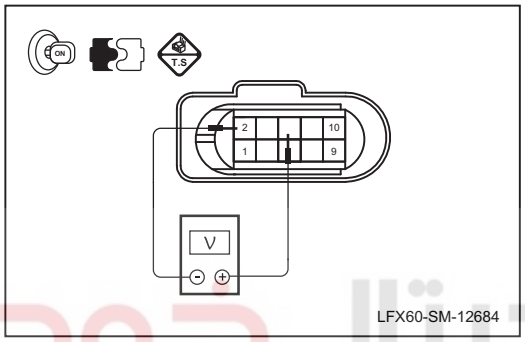
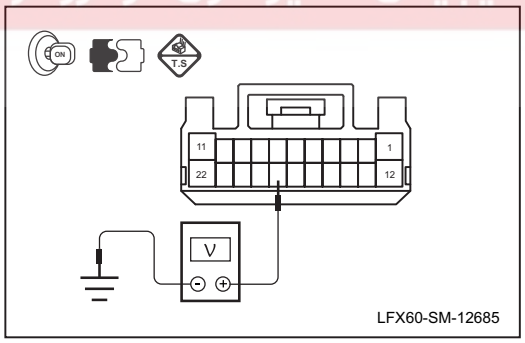
DTC	Description
B102715	Left daytime running lamp open circuit
B102711	Left daytime running lamp short circuit
B102815	Right daytime running lamp open circuit
B102811	Right daytime running lamp short circuit

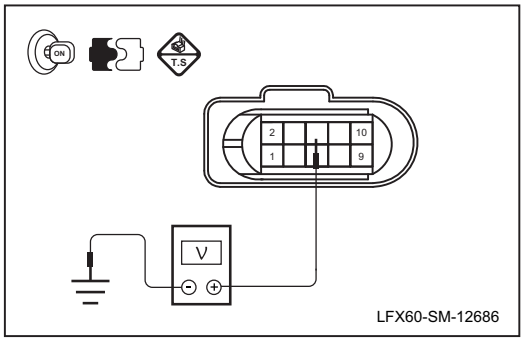
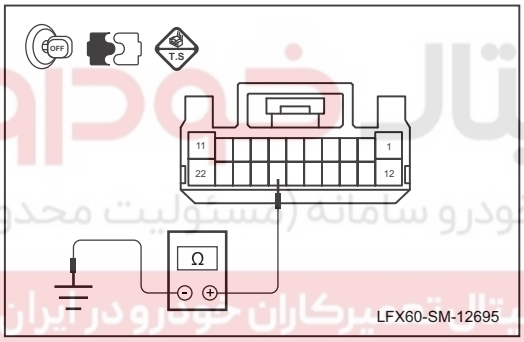
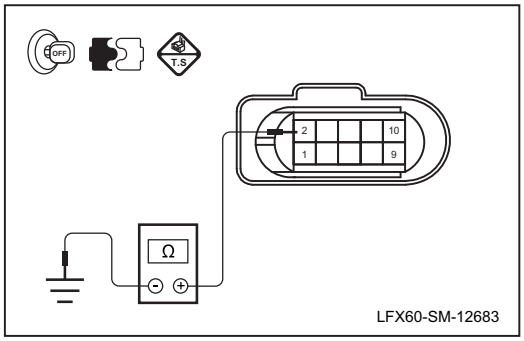
Possible reasons

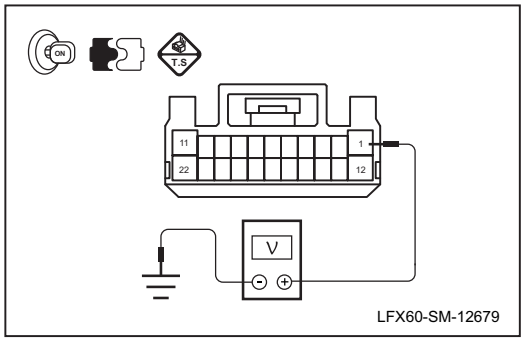
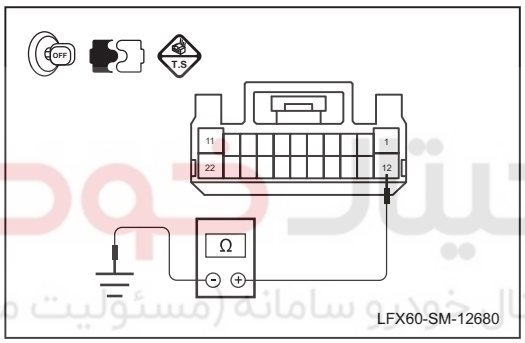
DTC	Check the strategy	Set the condition (control strategy)	Define the fault location
B102715	Check the hardware and line	Left daytime running light open circuit load	• Daytime running light • Harness line fault • BCM module power supply and grounding point • BCM
B102711		Left daytime running light short circuit load	
B102815		Right daytime running light open circuit load	
B102811		Right daytime running light short circuit load	

Diagnostic process

Test condition	Details/results/measures
1. General inspection.	
	A. Check the related harness plugs for breakage, loose contact, aging or looseness. Is it OK after checking? →**Yes** To step 2. →**No** Repair the fault position.
2. Read the DTC with the diagnostic meter.	
	A. Connect the diagnostic meter and check the system for the other relevant DTCs. Is it OK after checking? →**Yes** To step 3. →**No** Carry out the relevant fault diagnosis according to the DTCs.

Test condition	Details/results/measures
3. Check whether the DTC can be cleared.	
	A. Connect the diagnostic meter and access the BCM to clear DTC. B. Start the engine and check whether the DTC occurs again. Does DTC occur? →**Yes** To step 4. →**No** Confirm the system is normal.
4. Inspect the voltage between the two terminals of the left daytime running light (with the lefr daytime running light as an example).	
	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the front left combination lamp harness plug U08. C. Connect the battery negative terminal and operate the start switch to turn the power to ON state. D. Measure the voltage between Terminals 2 and 6 of the left front combination light wiring harness connector U08. **Standard value: 11 ~ 14 V** Is it OK after checking? →**No** To step 5. →**Yes** Replace the left daytime running light. **Refer to: Replacement of front combination lamp**
5. Check the output voltage of BCM terminal 18.	
	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I47. C. Connect the battery negative terminal and operate the start switch to turn the power to ON state. D. Measure the voltage between the BCM harness plug I47 terminal 18 and the fixed ground point. **Standard value: 11 ~ 14 V** Is it OK after checking? →**Yes** To step 6. →**No** To step 9.

Test condition	Details/results/measures
6. Inspect the left daytime running light operating voltag.	
 LFX60-SM-12686	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the front left combination lamp harness plug U08. C. Connect the battery negative terminal and operate the start switch to turn the power to ON state. D. Measure the voltage between Terminal 6 of the left front combination light wiring harness connector U08 and the reliable grounding point. **Standard value: 11 ~ 14 V** Is it OK after checking? →**Yes** To step 7. →**No** Inspect and repair the lefr front daytime running light power line open circuit fault; if necessary, replace the wiring harness.
7. Inspect the left front daytime running light power line for short circuit to the grounding point.	
 LFX60-SM-12695	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I47. C. Measure the resistance between the BCM harness plug I47 terminal 18 and the fixed ground point. **Standard value: 10MΩ or higher** Is it OK after checking? →**Yes** To step 8. →**No** Inspect and repair the left front daytime running light power line short circuit fault; if necessary, replace the wiring harness.
8. Inspect the left front daytime running light grounding point.	
 LFX60-SM-12683	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the front left combination lamp harness plug U08. C. Measure the resistance between the front left combination lamp harness plug U08 terminal 2 and the fixed ground point. **Standard value: Less than 5Ω** Is it OK after checking? →**Yes** To step 9. →**No** Inspect and repair the left front daytime running light grounding point open circuit fault; if necessary, replace the wiring harness.

Test condition	Details/results/measures
9. Check the BCM power line.	
 LFX60-SM-12679	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I47. C. Connect the battery negative terminal and operate the start switch to turn the power to ON state. D. Measure the voltage between the BCM harness plug I47 terminal 1 and the fixed ground point. **Standard value: 11 ~ 14 V** Is it OK after checking? →**Yes** To step 10. →**No** Repair the BCM power line open circuit fault and replace the harness if necessary.
10. Check the BCM control module ground line.	
 LFX60-SM-12680	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I47. C. Measure the resistance between the BCM harness plug I47 terminal 12 and the fixed ground point. **Standard value: Less than 5Ω** Is it OK after checking? →**Yes** To step 11. →**No** Repair the BCM ground line open circuit fault and replace the harness if necessary.
11. Replace BCM	
	A. Replace BCM. **Refer to: Replacement of BCM** Confirm the system is normal.

DTC B104011, B104015, B104111, B104115, B104211, B104215, B104311, B104315

DTC description

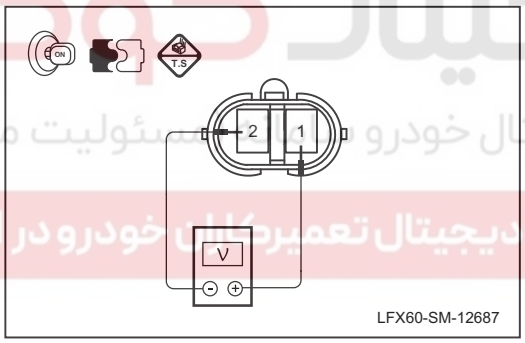
DTC	Description
B104011	Front left door window motor short circuit
B104015	Front left door window motor open circuit
B104111	Front right door window motor short circuit
B104115	Front right door window motor open circuit
B104211	Rear left door window motor short circuit
B104215	Rear left door window motor open circuit
B104311	Rear right door window motor short circuit
B104315	Rear right door window motor open circuit

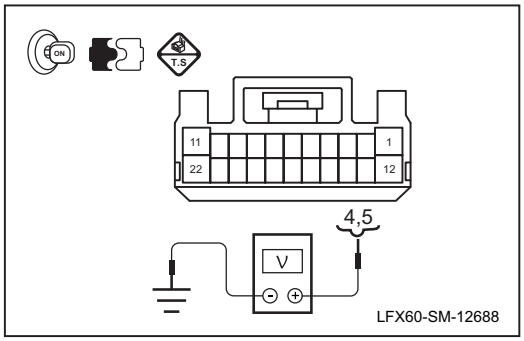
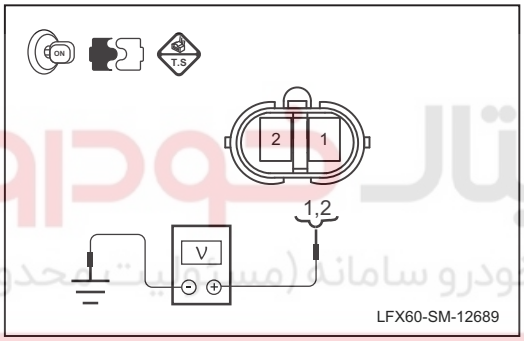
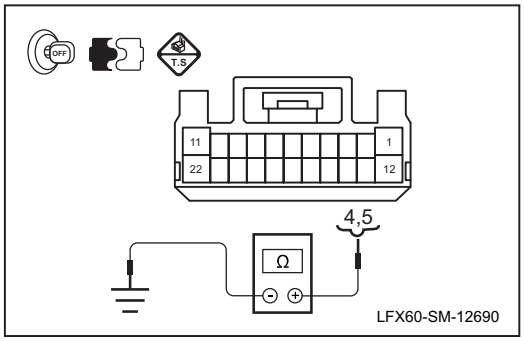
Possible reasons

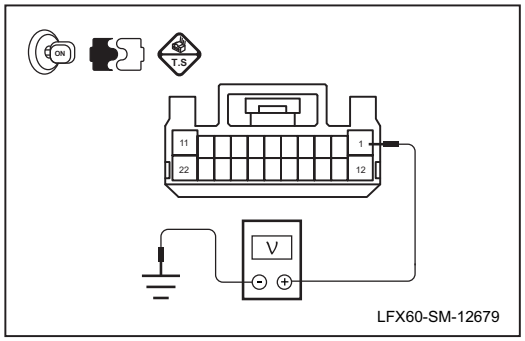
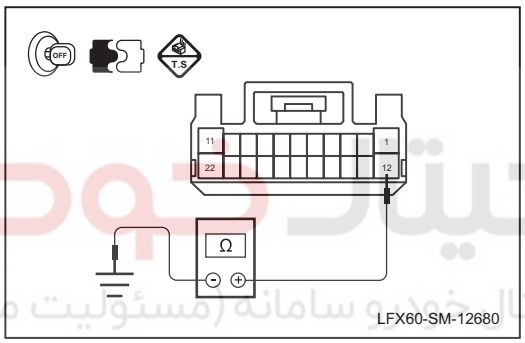
DTC	Check the strategy	Set the condition (control strategy)	Define the fault location
B104011	Check the hardware and line	Front left windows motor short circuit load	• Window motor • Wiring harness fault • BCM module power supply and grounding point • BCM
B104015		Front left windows motor open circuit load	
B104111		Front right door window motor short circuit load	
B104115		Front right door window motor open circuit load	
B104211		Rear left windows motor short circuit load	
B104215		Rear left windows motor open circuit load	
B104311		Rear right windows motor short circuit load	
B104315		Front right door window motor open circuit load	

Diagnostic process

Test condition	Details/results/measures
1. General inspection.	
	A. Check the related harness plugs for breakage, loose contact, aging or looseness. Is it OK after checking? →**Yes** To step 2. →**No** Repair the fault position.

Test condition	Details/results/measures
2. Read the DTC with the diagnostic meter.	
	A. Connect the diagnostic meter and check the system for the other relevant DTCs. Is it OK after checking? →**Yes** To step 3. →**No** Carry out the relevant fault diagnosis according to the DTCs.
3. Check whether the DTC can be cleared.	
	A. Connect the diagnostic meter and access the BCM to clear DTC. B. Start the engine and check whether the DTC occurs again. Does DTC occur? →**Yes** To step 4. →**No** System normal.
4. Inspect the voltage between the two terminals of the left front window motor (with the left front door as an example).	
	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the front left door harness plug D02. C. Connect the battery negative terminal and operate the start switch to turn the power to ON state. D. Operate the glass lifter switch and measure the voltage between Terminals 1 and 2 of the left front window motor wiring harness connector D02. **Standard value: 11 ~ 14 V** Is it OK after checking? →**No** To step 5. →**Yes** Replace left front window motor.

Test condition	Details/results/measures
5. Inspect the output voltage between Terminals 4 and 5 of BCM.	
	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I46. C. Connect the battery negative terminal and operate the start switch to turn the power to ON state. D. Operate the left front glass lifter switch to raise or drop the glass and measure the voltage between Terminals 4 and 5 of BCM wiring harness connector I46 and the reliable grounding point. **Standard value: 11 ~ 14 V** Is it OK after checking? →**Yes** To step 6. →**No** To step 8.
6. Inspect the left front window motor operating voltage.	
	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the front left door harness plug D02. C. Connect the battery negative terminal and operate the start switch to turn the power to ON state. D. Operate the glass lifter switch to raise or drop the glass, and measure the voltage between Terminals 1 and 2 of the left front window motor wiring harness connector D02 and the reliable grounding point. **Standard value: 11 ~ 14 V** Is it OK after checking? →**Yes** To step 7. →**No** Inspect and repair the left front window motor line open circuit fault; if necessary, replace the wiring harness.
7. Inspect the left front window motor line for short circuit to the grounding point.	
	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I46. C. Measure the resistance between Terminals 4 and 5 of BCM wiring harness connector I46 and the reliable grounding point. **Standard value: 10MΩ or higher** Is it OK after checking? →**Yes** To step8. →**No** Repair the BCM power line open circuit fault and replace the harness if necessary.

Test condition	Details/results/measures
8. Check the BCM power line.	
 LFX60-SM-12679	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I47. C. Connect the battery negative terminal and operate the start switch to turn the power to ON state. D. Measure the voltage between the BCM harness plug I47 terminal 1 and the fixed ground point. **Standard value: 11 ~ 14 V** Is it OK after checking? →**Yes** To step 9. →**No** Repair the BCM power line open circuit fault and replace the harness if necessary.
9. Check the BCM control module ground line.	
 LFX60-SM-12680	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I47. C. Measure the resistance between the BCM harness plug I47 terminal 12 and the fixed ground point. **Standard value: Less than 5Ω** Is it OK after checking? →**Yes** To step 10. →**No** Repair the BCM ground line open circuit fault and replace the harness if necessary.
10. Replace BCM	
	A. Replace BCM. **Refer to: Replacement of BCM** Confirm the system is normal.

DTC B105015, B103A96, U016403

DTC description

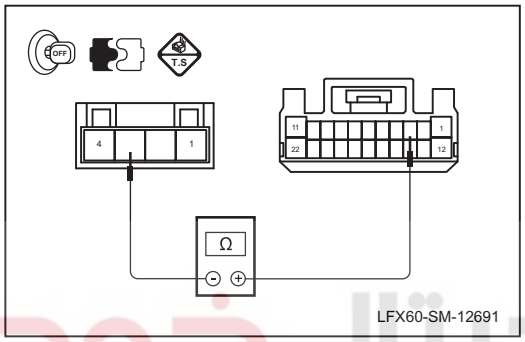
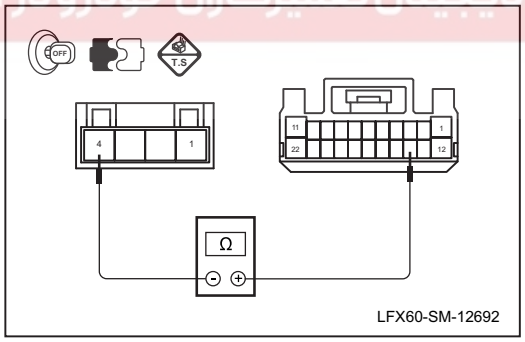
DTC	Description
B105015	Immobilizer coil open circuit
B103A96	Immobilizer coil short to the ground
U016403	Engine immobilizer authentication fail

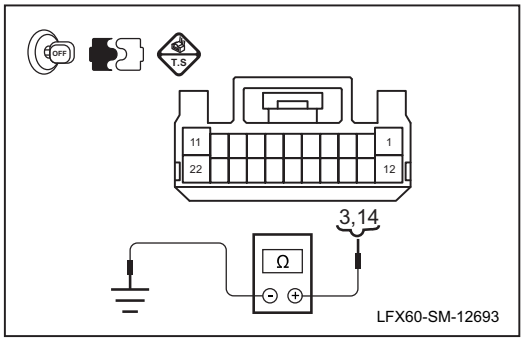
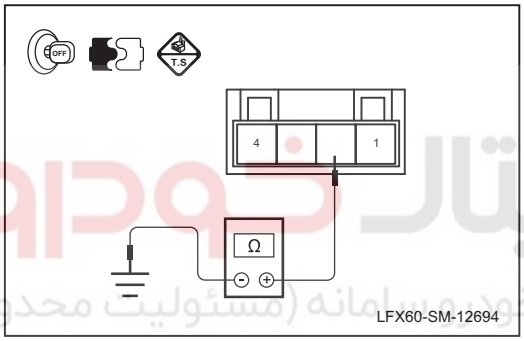
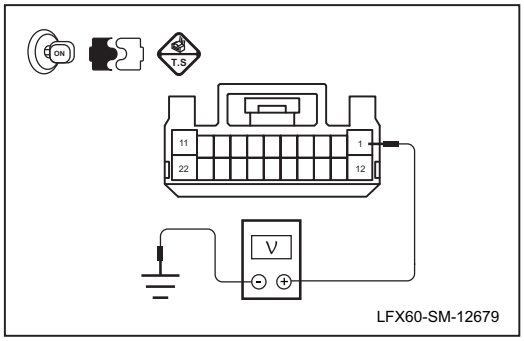
Possible reasons

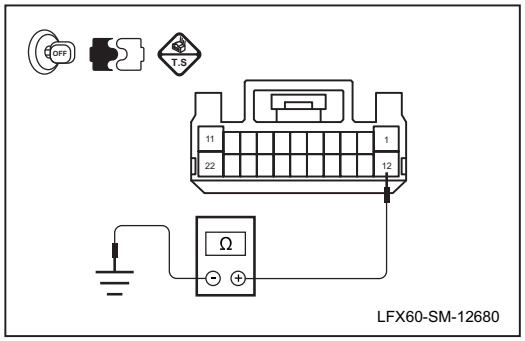
DTC	Check the strategy	Set the condition (control strategy)	Define the fault location
B105015	Check the hardware and line	Immobilizer coil open circuit	• Anti-theft coil • BCM
B103A96		Immobilizer coil short to the ground	
U016403		Engine immobilizer authentication fail	

Diagnostic process

Test condition	Details/results/measures
1. General inspection.	
	A. Check the related harness plugs for breakage, loose contact, aging or looseness. Is it OK after checking? →**Yes** To step 2. →**No** Repair the fault position.
2. Read the DTC with the diagnostic meter.	
	A. Connect the diagnostic meter and check the system for the other relevant DTCs. Is it OK after checking? →**Yes** To step 3. →**No** Carry out the relevant fault diagnosis according to the DTCs.

Test condition	Details/results/measures
3. Check whether the DTC can be cleared.	
	A. Connect the diagnostic meter and access the BCM to clear DTC. B. Start the engine and check whether the DTC occurs again. Does DTC occur? →**Yes** To step 4. →**No** System normal.
4. Inspect the anti-theft identification coil “signal +” continuity.	
 LFX60-SM-12691	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I47. C. Disconnect the anti-theft identification coil harness plug I20. D. Measure the resistance between the BCM harness plug I47 terminal 3 and immobilizer identification coil harness plug I20 terminal 3. **Standard value: Less than 5Ω** Is it OK after checking? →**Yes** To step 5. →**No** Inspect and repair the anti-theft identification coil “signal +” open circuit fault; if necessary, replace the wiring harness.
5. Inspect the anti-theft identification coil “signal -” continuity.	
 LFX60-SM-12692	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I47. C. Disconnect the anti-theft identification coil harness plug I20. D. Measure the resistance between the BCM harness plug I47 terminal 14 and immobilizer identification coil harness plug I20 terminal 4. **Standard value: Less than 5Ω** Is it OK after checking? →**Yes** To step 6. →**No** Inspect and repair the anti-theft identification coil “signal +” short circuit fault; if necessary, replace the wiring harness.

Test condition	Details/results/measures
6. Inspect the anti-theft identification coil for short circuit to the grounding point.	
	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I47. C. Measure the resistance between Terminals 3 and 14 of BCM wiring harness connector I47 and the reliable grounding point seperately. **Standard value: 10MΩ or higher** Is it OK after checking? →**Yes** To step 7. →**No** Inspect and repair the anti-theft identification coil signal line short circuit fault; if necessary, replace the wiring harness.
7. Inspect the anti-theft identification coil grounding point.	
	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the anti-theft identification coil wiring harness connector I20. C. Measure the resistance between Terminal 2 of the anti-theft identification coil wiring harness connector I20 and the reliable grounding point. **Standard value: Less than 5Ω** Is it OK after checking? →**Yes** To step 8. →**No** Inspect and repair the anti-theft identification coil grounding point open circuit fault; if necessary, replace the wiring harness.
8. Check the BCM power line.	
	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I47. C. Connect the battery negative terminal and operate the start switch to turn the power to ON state. D. Measure the voltage between the BCM harness plug I47 terminal 1 and the fixed ground point. **Standard value: 11 ~ 14 V** Is it OK after checking? →**Yes** To step 9. →**No** Repair the BCM power line open circuit fault and replace the harness if necessary.

Test condition	Details/results/measures
9. Check the BCM control module ground line.	
 LFX60-SM-12680	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I47. C. Measure the resistance between the BCM harness plug I47 terminal 12 and the fixed ground point. **Standard value: Less than 5Ω** Is it OK after checking? →**Yes** To step 10. →**No** Repair the BCM ground line open circuit fault and replace the harness if necessary.
10. Replace the anti-theft identification coil.	
	A. Replace the immobilizer identification coil. Is the system normal? →**Yes** The fault is solved and the system is normal. →**No** To step 11.
11. Replace the BCM.	
	A. Replace BCM. **Refer to: Replacement of BCM** Confirm the system is normal.

DTC U002088, U016487, U015187, U015587

DTC description

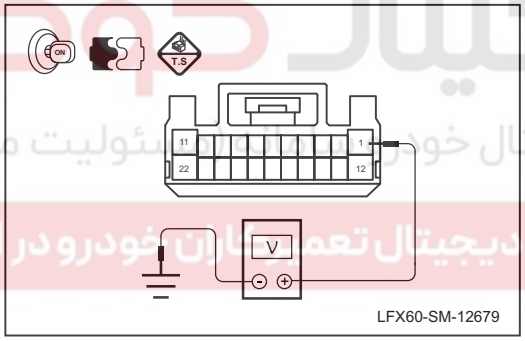
DTC	Description
U002088	CAN bus OFF
U016487	Unable to communicate with EMS
U015187	Unable to communicate with SDM
U015587	Unable to communicate with IC

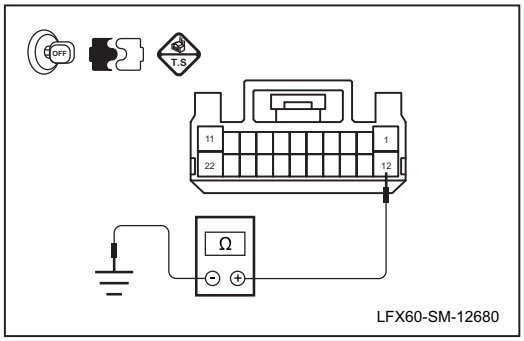
Possible reasons

DTC	Check the strategy	Set the condition (control strategy)	Define the fault location
U002088	Check the hardware and line	CAN bus closure in 2 consecutive times	• CAN communication fault • Module fault
U016487		No EMS information (within the period of more than 4.5 cycles)	
U015187		No SDM information (within the period of more than 4.5 cycles)	
U015587		No receive IC information (within the period of more than 4.5 cycles)	

Diagnostic process

Test condition	Details/results/measures
1. General inspection.	
	A. Check the related harness plugs for breakage, loose contact, aging or looseness. Is it OK after checking? →**Yes** To step 2. →**No** Repair the fault position.
2. Read the DTC with the diagnostic meter.	
	A. Connect the diagnostic meter and check the system for the other relevant DTCs. Is it OK after checking? →**Yes** To step 3. →**No** Carry out the relevant fault diagnosis according to the DTCs.

Test condition	Details/results/measures
3. Check whether the DTC can be cleared.	
	A. Connect the diagnostic meter and access the BCM to clear DTC. B. Start the engine and check whether the DTC occurs again. Does DTC occur? →**Yes** To step 4. →**No** System normal.
4. Check the CAN communication network.	
	A. Check whether the CAN communication network is normal. **Refer to: CAN Bus Integrity Inspection** Is it OK after checking? →**Yes** To step 5. →**No** Repair the CAN communication network fault.
5. Check the BCM power line.	
 LFX60-SM-12679	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I47. C. Connect the battery negative terminal and operate the start switch to turn the power to ON state. D. Measure the voltage between the BCM harness plug I47 terminal 1 and the fixed ground point. **Standard value: 11 ~ 14 V** Is it OK after checking? →**Yes** To step 6. →**No** Repair the BCM power line open circuit fault and replace the harness if necessary.

Test condition	Details/results/measures
6. Check the BCM control module ground line.	
 LFX60-SM-12680	A. Operate the start switch to turn the power to OFF state and disconnect the battery negative connector. B. Disconnect the BCM harness plug I47. C. Measure the resistance between the BCM harness plug I47 terminal 12 and the fixed ground point. **Standard value: Less than 5Ω** Is it OK after checking? →**Yes** To step 7. →**No** Repair the BCM ground line open circuit fault and replace the harness if necessary.
7. Replace the BCM.	
	A. Replace BCM. **Refer to: Replacement of BCM** Is the system normal? →**Yes** The fault is solved and the system is normal. →**No** To step 8.
8. Replace the ECM (with ECM as example).	
	A. Replace ECM. **Refer to: Replacement of BCM** Confirm the system is normal.

Removal and installation

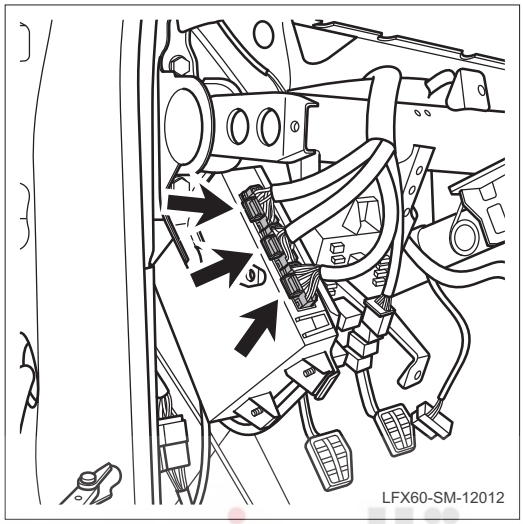
Replacement of Body Controller (BCM)

Removal

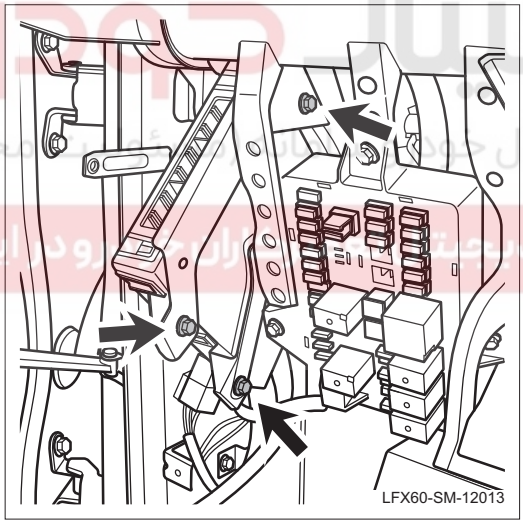
1. Remove the body controller (BCM).

(a). Disconnect the battery negative connector.

(b). Remove the dashboard. **Refer to the replacement of dashboard assembly.**

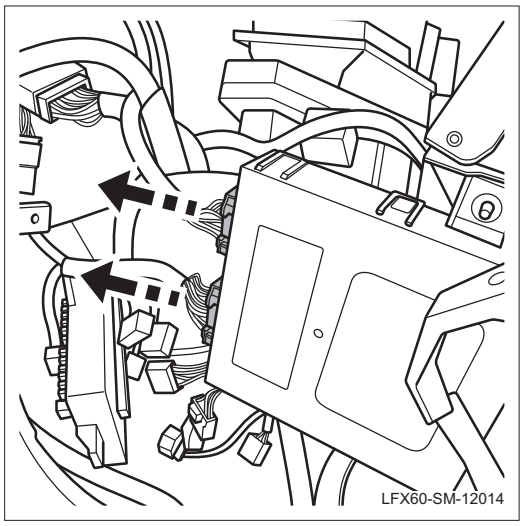


(c). Disconnect the body controller (BCM) wiring harness connector.



(d). Remove the body controller (BCM) fixing bracket bolts.

(e). Remove the body controller (BCM).



(f). Remove the body controller (BCM) inner wiring harness connector.
(g). Remove the body controller (BCM).

Installation

1. Install the body controller (BCM).
(a). The installation sequence is the reverse of the disassembly order.