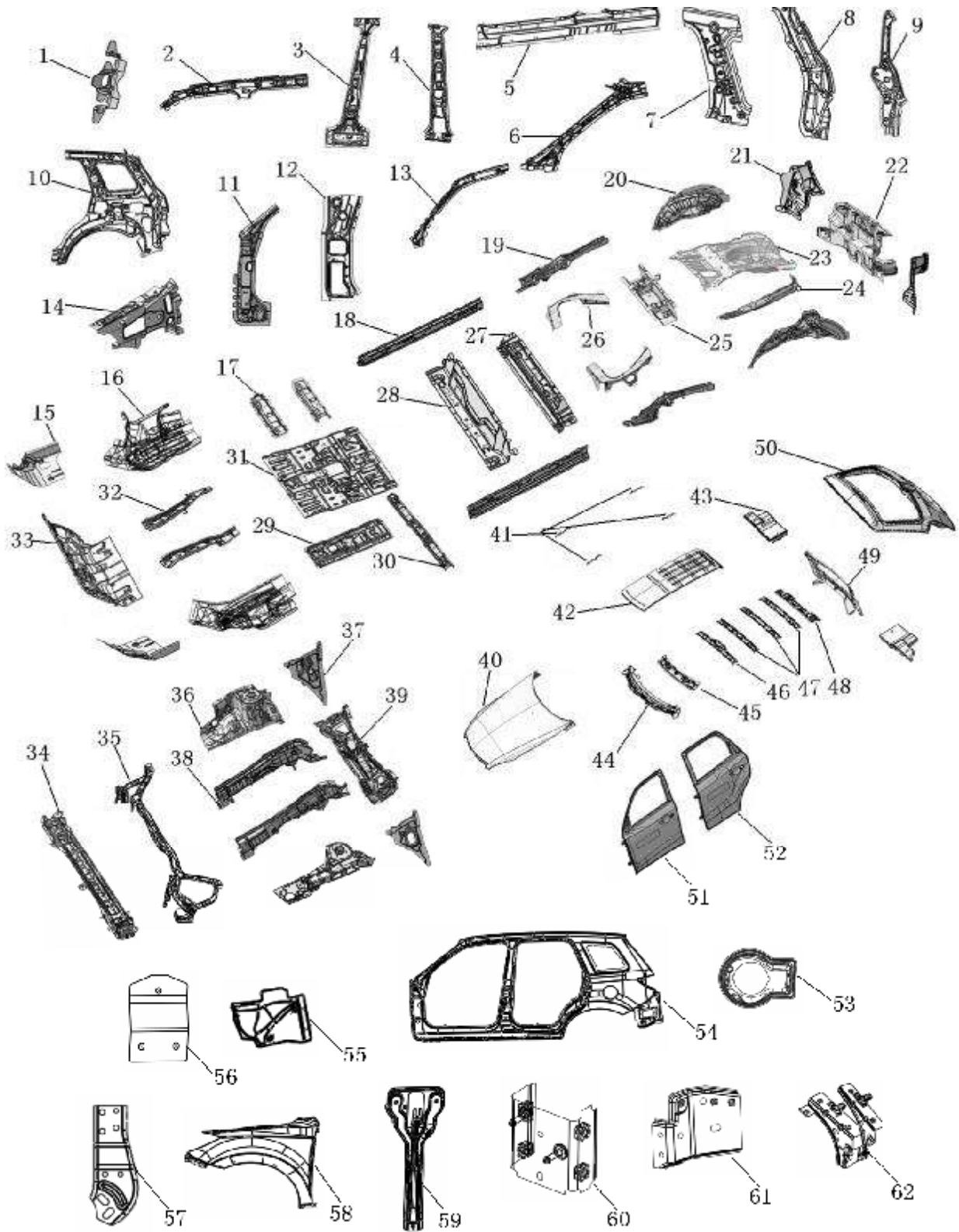


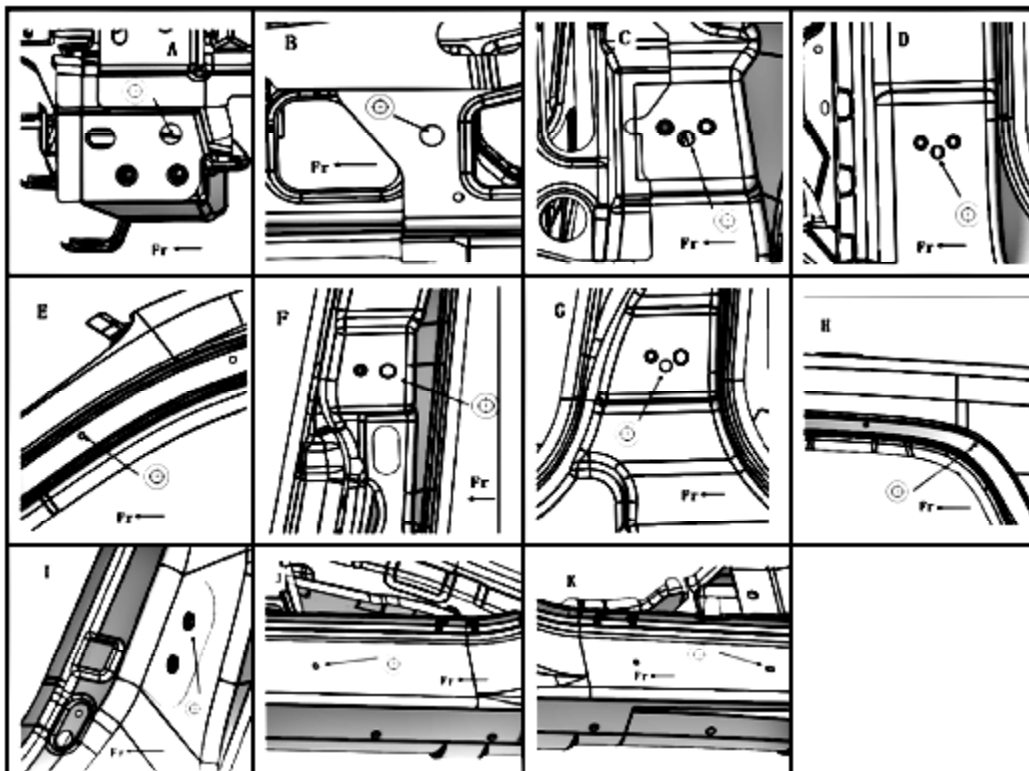
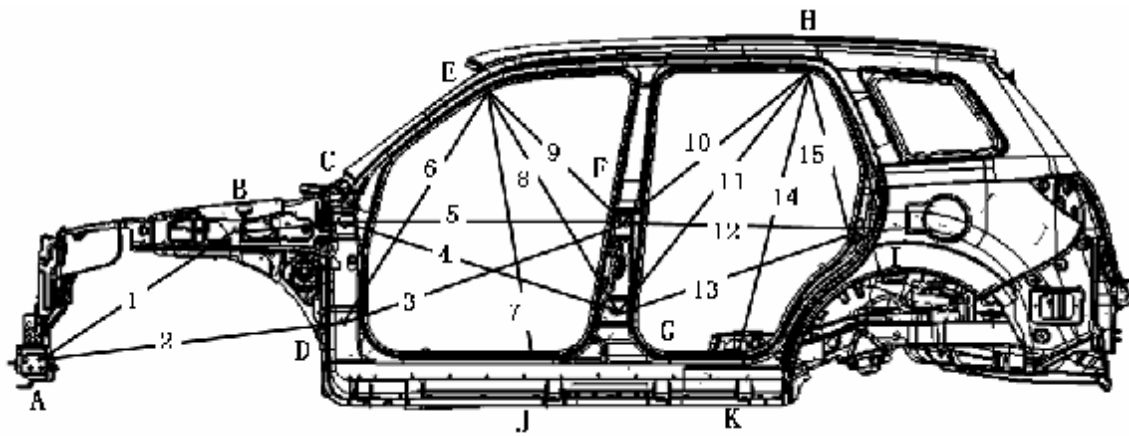
Vehicle Body Parts

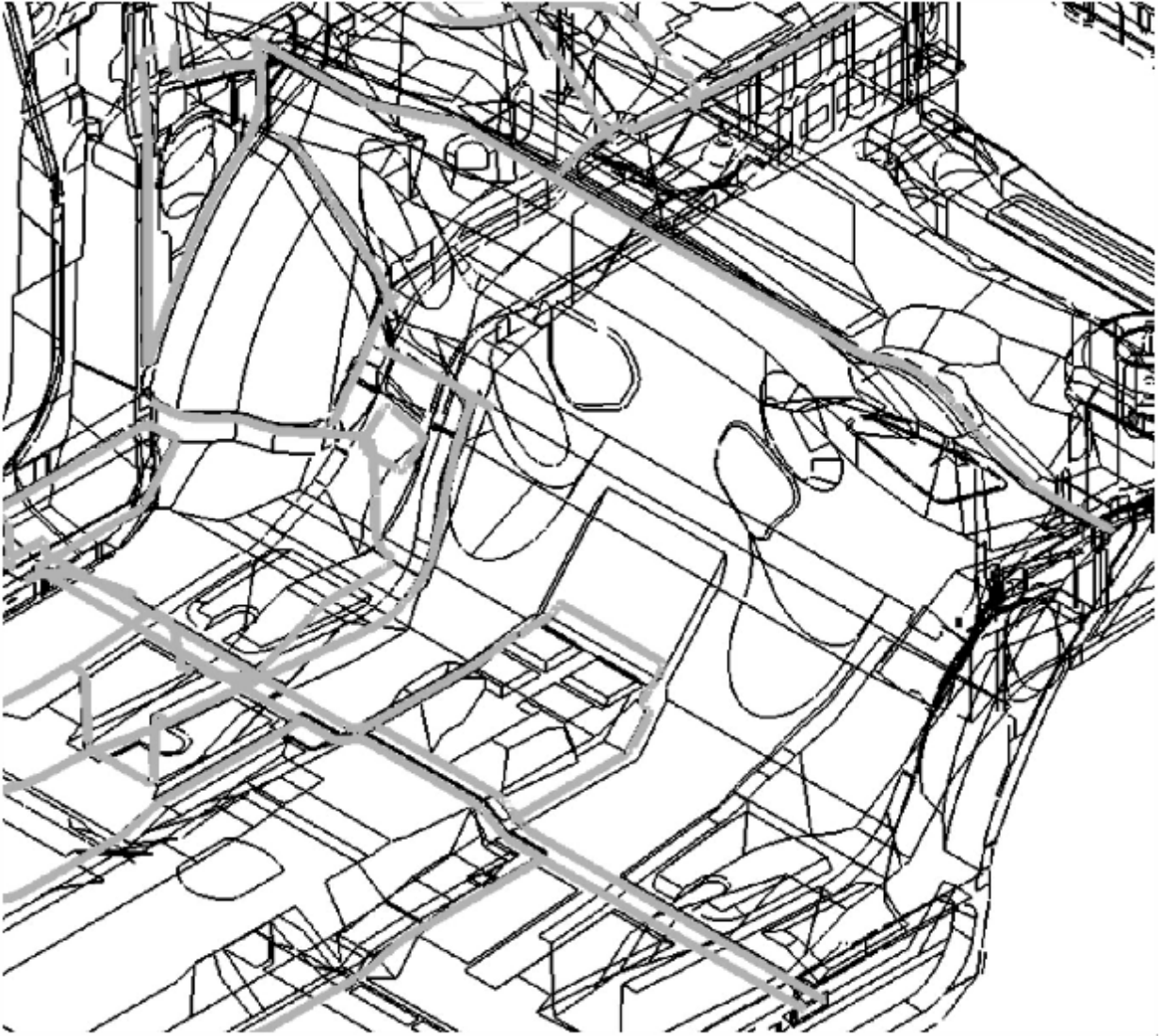


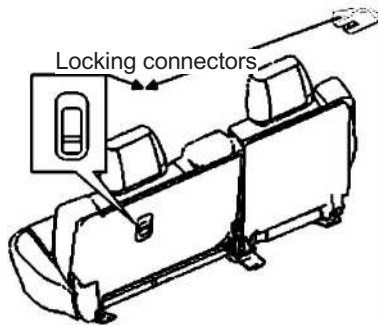
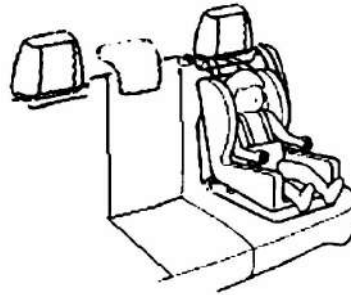
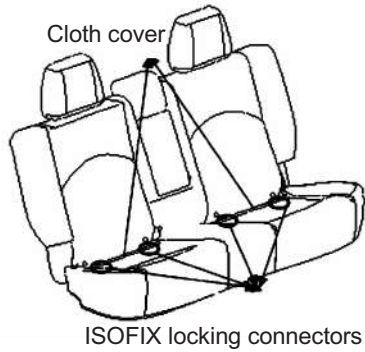
Dimension

Measured position	Dimension mm(in)	Measured position	Dimension mm(in)
1	1034 (40.74)	7	1206 (47.52)
2	705 (27.78)	8	370 (14.58)
3	1205 (47.48)	9	1421 (55.99)
4	830 (32.70)	10	1348 (53.11)
5	826 (32.54)	11	1307 (51.50)
6	465 (18.32)	12	720 (28.37)

Side Frame of Cab







Usage of seat belts

For safety of the driver and occupants, all seats on your vehicle are equipped with a seat belt. The seat belts can provide best protection during all types of collisions.

Seat belts help decrease the possibility and reduce the severity of injury of persons on board during vehicle accidents and sudden braking.

To make use of maximum protection of seat belts, it is required that occupants hold correct seating position and always wear seat belts properly.

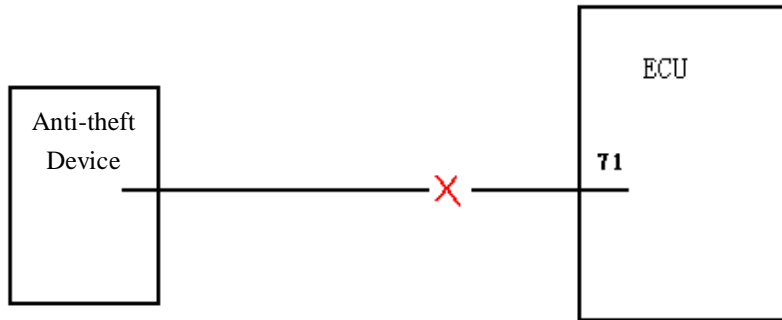
Driving and Operation

Prior to driving

Before driving, a vehicle check is necessary to ensure road safety and comfort and to eliminate potential hazards, which are essential for the driver and passengers. The items to be checked include:

- Visually check the tire. If the tires are of lower pressure, test the tire pressure with a barometer and inflate it in time to ensure the tire pressure under 210 ~ 230kpa;
- Check whether the wheel nuts are loosened, fallen off and tighten them if necessary;
- Check whether there are oil traces under the car, whether there is pipeline leakage;
- Check oils/fluids, such as brake fluid, engine oil, coolant, washer fluid, and steering fluid, for proper volume.
- Check all window glasses, outside rear-view mirrors, front and rear lights, etc. for normal operation; clear snow, dust deposit, dead leaves, etc. of the vehicle.
- Check whether the instrument, indicators lights, warning lamps are working properly;
- Check whether the engine cover and the tail door have been tightly closed, whether the tool kit complete, the air pressure of spare-tire normal, whether the baggage inside the car set in good place;
- Check whether the steering wheel, seats, safety belt are properly adjusted and the doors are closed tightly.

General Precautions of EFI System Maintenance



Malfunction Diagnostic Guide:

Required Equipment: (Diagnostic Instrument with EOBD Diagnostic Function)

Step I: Use diagnostic instrument to read the malfunction information			
Read Result I		Read Result II	
SVS lamp flickers	P-CODE Present	SVS lamp Off	P-CODE Present
	P1613		P1613
Maintenance tips: The malfunction has been confirmed, and the following problems may possibly exist		Maintenance tips: The malfunction is not ultimately confirmed and it may possibly be a random malfunction. Inspect the following items:	
4. The communication line between the anti-theft device and the Pin 71# of ECU in open circuit 5. The communication line between the anti-theft device and the Pin 71# of ECU in bad contact 6. The Pin 71# of ECU in bad contact		1. The communication line between the anti-theft device and the Pin 71# of ECU 2. The contact of the Pin 71# of ECU.	

115. P1614 Malfunction of Chip Inside Anti-theft Key

Description about Malfunction Cause:

After engine has been started, when the circuit control module inside ECU performs diagnosis for anti-theft key, this malfunction will appear when chip malfunction of the anti-theft key is detected.

Malfunction Diagnostic Guide:

Required Equipment: (Diagnostic Instrument with EOBD Diagnostic Function)

Step I: Use diagnostic instrument to read the malfunction information			
Read Result I		Read Result II	
SVS lamp flickers	P-CODE Present	SVS lamp Off	P-CODE Present
	P1614		P1614
Maintenance tips: The malfunction has been confirmed, and the following problems may possibly exist		Maintenance tips: The malfunction is not ultimately confirmed and it may possibly be a random malfunction. Inspect the following items:	
1) The Chip inside the anti-theft key damaged		1) Whether or not the chip inside the anti-theft key is damaged	

Anti-lock brake system (ABS control unit)

6	Disconnect the control modular joint of ABS control unit, connect the SST only at the harness side of vehicle. Use the SST joint and connect the lead of alarm light to the bodywork grounding. Whether the alarm light of ABS control unit goes off when the ignition switch in the ON position turned.	Yes	Check and maintain the harnesses between the modular PS and grounding of ABS control unit
		No	Check and repair the harness break-circuit and the alarm light circuit in the instrument between the modular and alarm light of ABS control unit

3	When parking or driving in the vehicle, the alarm light of ABS control unit is lightened up and goes off until the ignition switch is turned in the OFF position.		
Tips of troubleshooting	The control modular of ABS control unit detected the faults, but the normal operation of control modular of ABS control unit will be detected when the ignition switch is turned on again; The ABS control unit detected the low battery voltage, but it will detect that the control modular of ABS control unit is in normal operation when the ignition switch is turned on again,		
Steps	Test items		Operation
1	Carry out the DTC test. See—— OBD function, Check of ABS control unit/TCS, Whether the DTC has been saved in the memory?	Yes	Carry out the inspection as per the corresponding DTC.
		No	Go to the next step
2	Whether the battery voltage is normal?	Yes	Go to the next step
		No	Check the battery and charge system.
3	Whether the battery voltage is normal when the engine runs idle and has electric load?	Yes	Check and repair the harnesses between the power lead of control modular of ABS control unit and grounding 1
		No	Check charge system

4	When parking or driving in the vehicle, the alarm light of ABS control unit alarm light flashes		
Tips of troubleshooting	There are intermittent break-circuit in the alarm light circuit of ABS control unit; The control modular of ABS control unit is repeatedly On and Off(power supply and grounding wire etc are intermittently break-circuited);		
Steps	Test items		Operation
1	Whether the control modular joint of ABS control unit is in good connection?	Yes	Go to the step 3
		No	Connect properly the joint and go to the next step
2	Whether the alarm light of ABS control unit is relit when starting the engine and driving the vehicle with the alarm light On?	Yes	Intermittently poor contact, Check the joint box leadoff control modular in the ABS control unit.
		No	Go to the next step

Steps	Test items	Operation
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Window glass

Removal of front windshield

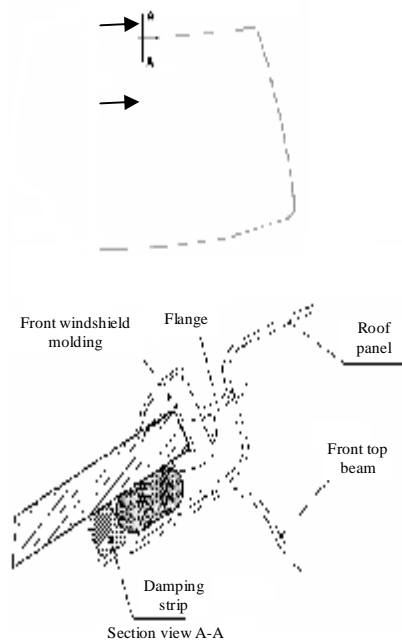
1. Remove the interior rear-view mirror (See—Rear-view mirrors, Removal of Rear-view mirrors)
2. Remove the front wall grille (See—External Accessories, Disassembly/Assembly of Front Wall Grille)
3. Remove the roof (See—Roof, Disassembly/Assembly of Roof)
4. Cover the protective tape on the border of bodywork to prevent scratch.
5. Cover the protective tape on the dashboard to prevent scratch.

Warning:

- Prior to use of a scraper, wear gloves, otherwise it will result in injury.

Attention:

- The windshield molding is replaceable.
6. Cut off with a scraper, the flanges of windshield molding.

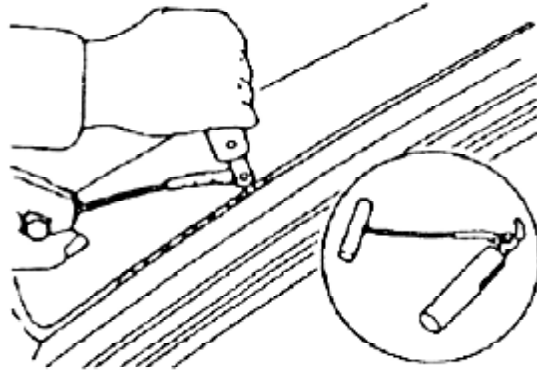


When the windshield is not reused anymore

1. Remove the pedestal (See—Rear-view mirrors, Removal of Pedestal)

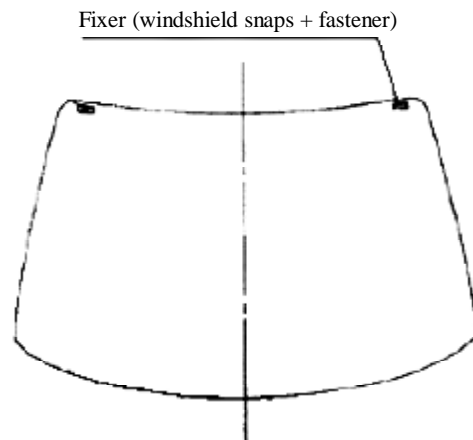
Attention:

- If it is difficult to remove the sealant of a certain component, use a piano string as shown in Fig., according to the steps as indicated “When the Windshield is Reused”.
2. Use the tool as shown in Fig, and insert its lame into the sealant;
 3. Draw the tool along the edge of glass;
 4. Remove the windshield.



When the windshield is reused

1. Pierce through the sealant with an awl from the interior to exterior and drill a small hole (except the fixer)



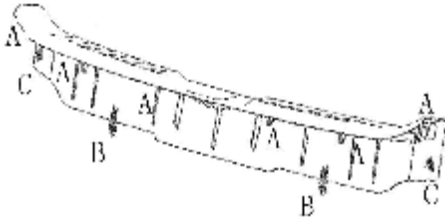
Warning:

- Wear gloves during use of piano string, otherwise it will result in hand injury.
2. Pass the SST (piano string) through the small hole. Bind both ends of piano string on the handle.

Disassembly/assembly of rear trim cover of trunk

1. Take out the trunk carpet and base plate.
2. Dismantle the snaps A and C to remove the trim panel

Rear trim cover of trunk

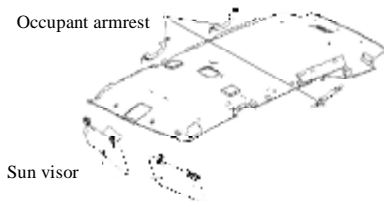


Disassembly/Assembly of roof

- I Disconnect the negative cable of battery;
- I Dismantle connecting gibs and sealing strips;
- I Remove the trim panel of column A (See——Disassembly/Assembly of Trim Panel Column A)

Roof

Occupant armrest



Sun visor

- I Remove the upper trim panel of column B (See——Disassembly/Assembly of Upper Trim Panel of Column B)
- I Remove the trim panel of column C(See——Disassembly/Assembly of Trim Panel of Column C)
- I Remove the trim panel of column D (See——Disassembly/Assembly of Column D)
- I Remove the interior light (See Part T——, Interior Light System, Disassembly/ Assembly of Interior Light)
- I Then remove the sun visor and auxiliary handle;
- I If the vehicle is equipped with a dormer, fold the dormer and molding;
- I Remove the snaps.





Troubleshooting

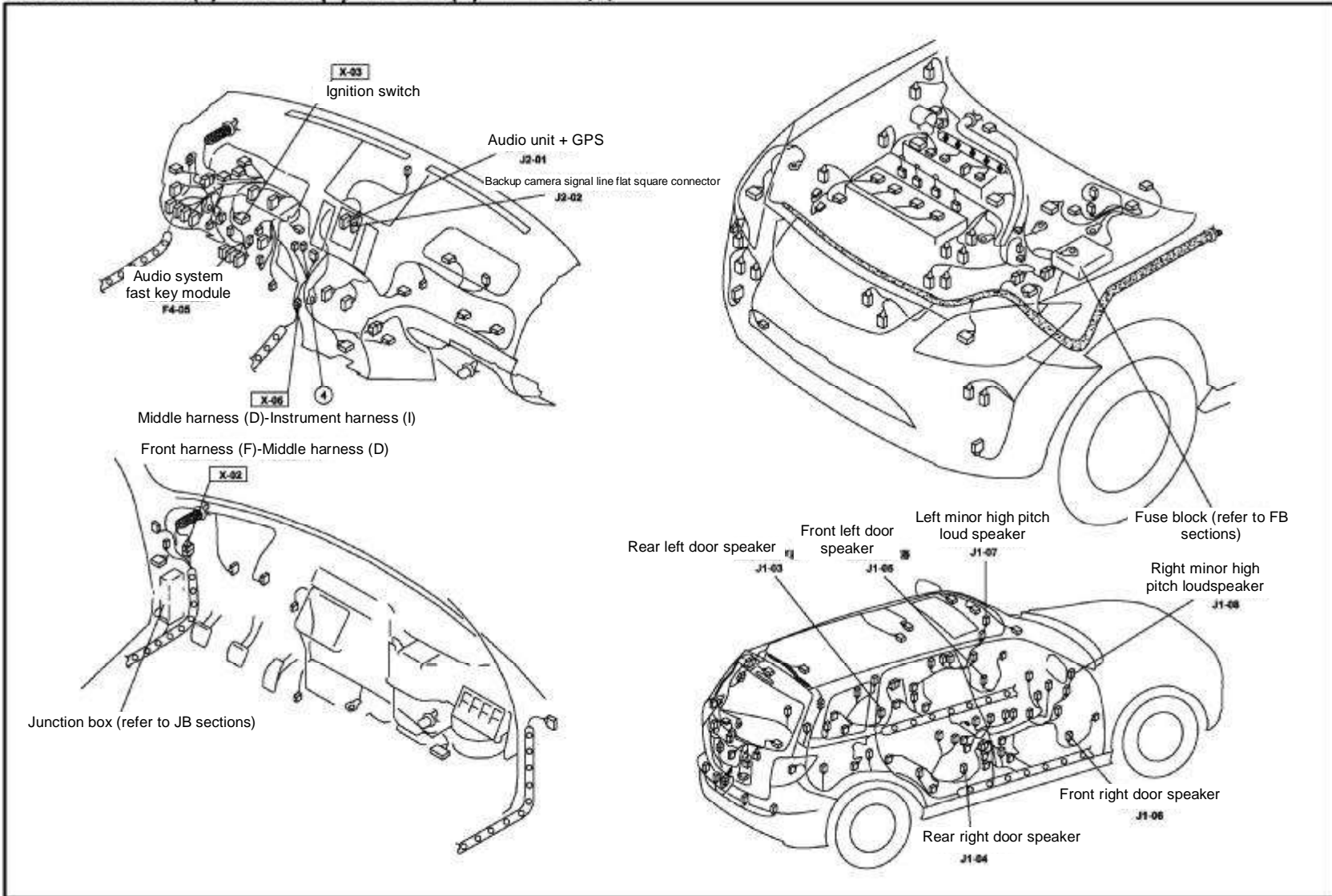
Step	Inspection	Action	
7	Inspect rear a/c unit	Yes	Remove obstruction, go to step 9
	I Is there any foreign material or obstruction in a/c unit airflow mode control valve?	No	Go to next step.
8	Inspect rear a/c unit airflow mode control valve.	Yes	Replace the rear climate control unit, go to next step.
	I Inspect rear a/c unit airflow mode control valve. — Is there any damage or crack at airflow mode valve? — Is airflow mode control valve firmly installed in proper position? I Are all above items normal?	No	Replace airflow mode control valve or install it in proper position, go to next step.
9	Verify whether malfunction symptom occurs after repair.	Yes	Troubleshooting completed. Explain causes to customer.
	I Does airflow mode change?	No	Recheck malfunction symptoms, then repeat from step 1 if malfunction reoccurs.

Ix. Temperature control is failed for rear climate control unit.

9	Temperature control is failed to rear climate control unit
Malfunction symptom	Malfunction in air mix system or heater pipeline of rear a/c unit.
Possible causes	<ul style="list-style-type: none"> I Malfunction in air mix actuators' +5v signal circuit. Steps 2-5 I Malfunction in air mix actuators' voltage divider input signal circuit. Steps 6-8 I Malfunction in air mix actuators' gnd signal circuit. Steps 9-11 I Malfunction in air mix actuators' motor driving signal circuit. Steps 12-14 I Malfunction in rear a/c unit air mix control links or rockers. Step 15 I Malfunction in air mix actuator. Step 17 I Malfunction in rear a/c unit air mix control valve. Steps 18, 19 I Malfunction in heater pipeline. Step 20

When performing an asterisked (*) troubleshooting, shake the wiring harness and connectors to verify whether the intermittent malfunctions are caused by poor contact. If there is a problem, check to make sure connectors, terminals and wiring harness are connected correctly and undamaged.

Mark on harness:  (F)  (E)  (D)  (R)



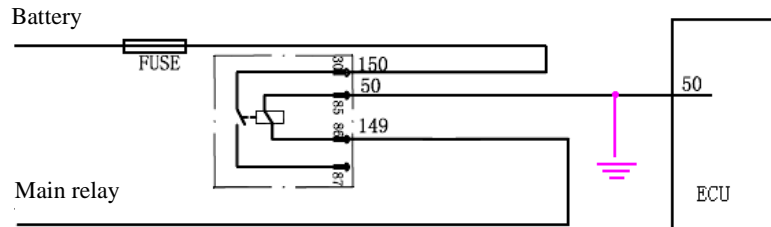
J-1b

97. P0691 Too Low Voltage of Cooling Fan Relay Control Circuit (Short to Ground) (Low Speed)

Description about Malfunction Cause:

After engine has been started, circuit control module of ECU examines voltage of cooling fan; if grounded mode value detected, it is determined to be the malfunction of circuit of fan short to ground.

Schematic Circuit:



Malfunction Diagnostic Guide:

Required Equipment: (Diagnostic Instrument with EOBD Diagnostic Function, Digital Multimeter, and Correct Circuit Diagram)

Step I: Use diagnostic instrument to read the malfunction information			
Read Result I		Read Result II	
MIL Lamp Off	P-CODE Present	MIL Lamp Off	P-CODE Present
SVS Lamp On	P0691	SVS Lamp Off	P0691
Maintenance tips: The malfunction has been confirmed, and the following problems may possibly exist Circuit between ECU Pin 50# and cooling fan relay Pin 85# short to ground		Maintenance tips: The malfunction is not ultimately confirmed and it may possibly be a random malfunction. Inspect the following items Examine resistance of circuit between Pin 50# of ECU and cooling fan relay Pin 85# short to ground	

6.18 OD Solenoids Short/Open-circuited to Battery or Short to Ground (P0765)

Overview

Refer to DTC P0750.

DTC description

TCU inspects OD control signals via monitoring of feedback signals from solenoid valve drive circuit. When unanticipated signals are detected (For example, higher voltage is detected in the case of low anticipated voltage or lower voltage is detected in the case of high anticipated voltage), TCU determines that OD solenoid control circuit operates abnormally and this DTC is generated.

DTC inspection conditions

Item	Inspection Condition and Failure Protection	Possible Cause
DTC strategy	Check voltage range	<ul style="list-style-type: none"> - There are troubles in OD solenoid valve. - Circuit is open or short. - There are troubles in TCU.
Activation conditions	$16\text{ V} > V_B \geq 10\text{ V}$ Maintaining in engagement for 500 msec. after relay power on	
Limit value	Feedback voltage from OD control solenoids $> V_B - 2\text{ V}$ and OD control load is 0% Feedback voltage from OD control solenoids $\leq 5.5\text{ V}$ and OD control load is 100%	
Diagnosis time	More than 320 msec.	
Failure protection	It is locked at the 3 rd gear. Stop line pressure control until IG is turned OFF.	

Scan tool data monitoring

1. Connect scan tool with data link connector (DLC).
2. "Run" the engine.
3. Monitor "OD solenoid valve" parameters on scan tool.
4. Shift to every gear position.
5. Is "OD solenoid load" in accordance with reference data?

YES

- ▶ Trouble occurs from time to time due to poor contact of sensors and/or TCU connectors or existed records in TCU memory after maintenance. Check connector for looseness, poor contact, bending, corrosion, adherent contamination, ageing or damage completely. Repair or replace as needed and carry out "Vehicle maintenance and inspection" procedures.

NO

- ▶ Carry out "Terminal and connector inspection" procedures.

Terminal and connector inspection

Refer to DTC P0743.

Power supply circuit inspection

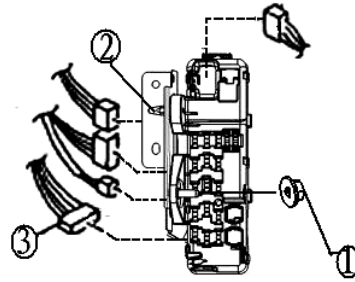
1. Connect "A/T solenoid valve" connector and install relevant equipments for waveform measurement.
2. Start the engine and operate OD solenoid valve.
3. Measure the waveform between terminal "10" of sensor harness connector and chassis ground.

Power supply system

Power supply system

Precautions to fuse use

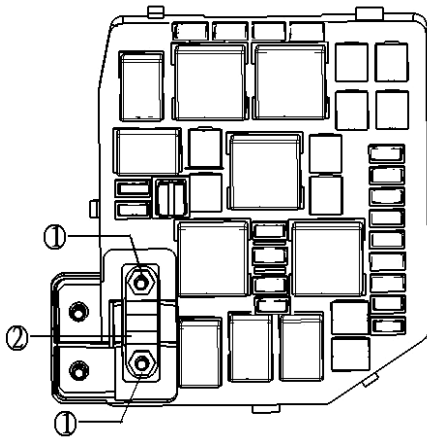
After the burn-out reason identified and troubleshooting performed, replace the burn-out fuse by a specified type of fuse. Failure to troubleshooting prior to replacement may make the fuse be blown again.



Removal/installation of main fuse

1. Remove the negative cable of battery;
2. Remove the cap of main fuse box;
3. Remove as per the order as specified in the table.
4. The installation procedure is in reverse order with that of the removal.

1	Nut
2	Snap
3	Harness connector



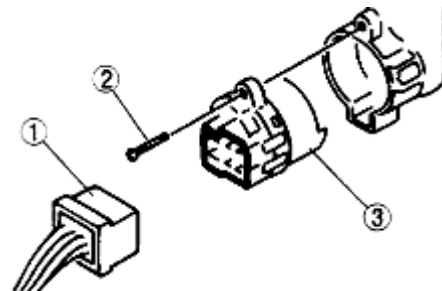
1	Nut
2	Main fuse

Removal/installation indoor fuse box

1. Remove the negative cable of battery;
2. Remove the left front interior trim at the driver side;
3. Remove as per the order indicated in the Table.
4. The installation procedure is in reverse order with that of the removal.

Removal/installation of ignition switch

1. Remove the negative cable of battery;
2. Remove the steering column cover;
3. Remove as per the order indicated in the Table.
4. The installation procedure is in reverse order with that of the removal.



1	Connector
2	Screw
3	Ignition switch

Check of ignition switch

1. Remove the negative cable of battery;
2. Remove steering column cover;
3. Disconnect the connector of ignition switch;
4. Check, with an ohmmeter, the continuity between the terminals of ignition switch. If it fails to meet the technique requirements, replace the ignition switch.

Abbreviations

A/C	Air conditioner	M	Motor
ABDC	After bottom dead center	MAX	Maximum
ABS	Anti-lock brake system	MTX	Manual transmission
ACC	Accessory	O/D	Over-speed driving
ATDC	After top dead center	OFF	Shut off
ATF	Automatic transmission fluid	ON	Turned on
ATX	Automatic transmission	PCM	Power control module
BBDC	Before bottom dead center	P/S	Power steering
BTDC	Before top dead center	P/W CM	Power window control module
CM	Control module	RDS	Radio data system
DSC	Dynamic stability control	REC	Recycling
GPS	Global positioning system	RF	Front right
EX	Exhaust	RH	Right hand
HI	High	R.H.D.	Right hand driving
HU	ASB hydraulic unit	RR	Rear right
IG	Ignition	SAS	Safety airbag system
IN	Air intake	SST	Special service tool
LCD	Liquid crystal display	SW	Switch
LED	Lighting electric dioxide	TCS	Traction control system
LF	Front left	TFT	Thin film semiconductor
LH	Left hand	TNS	Tail lamp and side turn lamp
L.H.D.	Left hand driving	1GR	Gear 1
LO	Low	2GR	Gear 2
LR	Rear left		