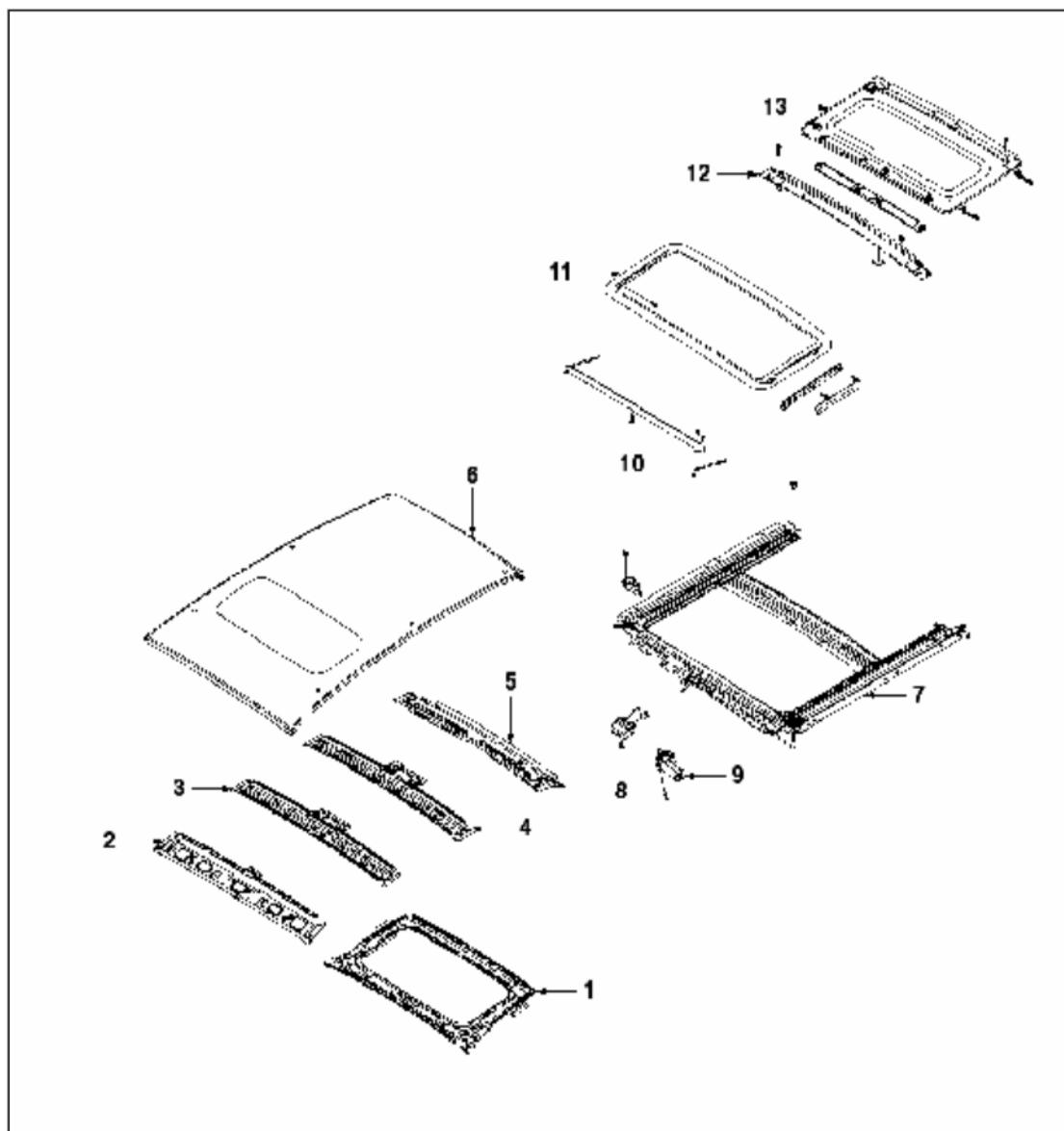


CHAPTER FIVE DISASSEMBLING AND INSTALLATING THE SUN ROOF

1. STRUCTURAL DIAGRAM



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|--------------------------|---------------------|-----------------------------|
| 1) Sun roof frame | 2) Windshield frame | 3) Sun roof central bracket |
| 4) Sun roof back bracket | 5) Rear roof frame | 6) Car lining |
| 7) Sun roof track | 8) Sun roof module | 9) Sun roof motor |
| 10) Sun roof deflector | 11) Sun roof glass | 12) Guiding gutter |
| 13) Sun visor | | |

2. NECESSARY TOOLS

Cross screwdriver, internal spline wrench, ratchet gear and ratchet rod

3. REPLACING THE SUN ROOF GLASS

3.1 Disassembling the sun roof glass

- 1) Turn on the power switch to lift up the sun roof in full tilt.
- 2) Push the inner trim strip (SIDE COVER INNER LH/RH) backwards to make it off.
- 3) Slowly unscrew the four screws and bolts fixing the glass.(Be sure not to make the glass off)
- 4) Simply take off the glass



3.2 Installing the sun roof glass

- 1) Turn on the power switch to operate the sliding mechanism without glass to the full open position, and then place the glass in the middle of the support bar of the sliding mechanism.



- 2) Reinforce slightly with four bolts. And then pull the glass forward lightly to reinforce other bolts slightly from the middle one by one.



- 3) Turn on the power switch to operate the sun roof to the full close position.
- 4) Began to adjust the four glass fastening screws while pulling the glass slightly forward.



- 5) Turn on the power switch to test if the on/off operation of the sun roof is normal. (Note: check and adjust the height/start-up noise/collision of the glass)
- 6) Turn on the power supply switch to lift up the glass to the full open position again, and then stick the inner trim strip to the support bar of the sliding mechanism.
- 7) Test the on/off operation, starting and running operation as well as the noise of the sun roof after installation to make sure that no abnormal condition existing.

4. REPLACING THE SUN VISOR

4.1 Disassembling the sun visor

- 1) Remove the roof. (See the disassembling methods in Body Accessories for detailed disassembling procedures.)
- 2) Remove the locating clip as shown in the figure. (Each at left and right)
- 3) Draw out the sun visor backwards.



4.2 Installation

The installing steps are reverse to those for removal.

5. REPLACING THE SUN ROOF MOTOR

5.1 Disassembling the sun roof motor

- 1) Turn on the power to run the sun roof to the full close position before disassembling. (i.e. the initial position of the sun roof)
- 2) Remove the roof interior trim/ceiling light. (See Service Manual for the Body Accessories for detailed disassembling methods.)

- 3) Disconnect the power supply control line and the connecting wire between the motor and the sun roof control unit (SCU), and then cut off the band fixing the motor harness.



- 4) Remove the fixing bolts of the sun roof motor to detach the sun roof motor.



5.2 Installing the sun roof motor

The installing steps are reverse to those for removal.

6. REPLACING THE SUN ROOF CONTROL MODULE

6.1 Disassembling the sun roof control module

- 1) Turn on the power to run the sun roof to the full close position before disassembling. (i.e. the initial position of the sun roof)
- 2) Remove the roof interior trim/ceiling light. (See Service Manual for the Body Accessories for detailed disassembling methods.)
- 3) Disconnect the power supply control line and the connecting wire between the motor and the sun roof control unit

(SCU).

- 4) Remove the connecting screws that attach the module to the roof to detach the sun roof module.

6.2 Installing the sun roof control module

The installing steps are reverse to those for removal.

7. DETECTING AND MAINTENANCE METHODS FOR FAILURES

	Distribution pipe blocks or folds	Check the distribution pipe
Water leakage	The distance between the sun roof glass and the roof hole is too big or the height of the glass is incorrect	Adjust the relative position of the glass
Wind noise	The distance between the sun roof glass and the roof hole is too big or the height of the glass is incorrect or the spoiler fails to work	Adjust the relative incorrect position of the glass
Abnormal starting and running	Connecting, fuse and ground wire incorrect	Check the connection, fuse and ground wire
	SCU, sun roof motor incorrect	Check and replace the SCU and sun roof motor
	Sun visor runs off the slide rail or trim strip breaks	Re-adjust the sun visor and install or replace the trim strip
	Foreign material on the slide rail	Inspect and clear the foreign material
Starting in error	The sun visor runs off the slide rail or the broken trim strip rubs the slide rail	Adjust and install the sun visor again and re-install the trim strip (also replace the broken parts)
	Anti stick (A.T.S.) function fails to work normally	Check for collision between the body and the spoiler, relax the stressed spring, inspect and clear the foreign material on the slide rail
	The sun roof motor incorrect	Replace the motor
Noise during starting and running	The sun visor runs off the slide rail or the broken trim strip hinders the running	Adjust and install the sun visor again and re-install the trim strip (also replace the broken parts)
	Distribution pipe collides with the body	Adhere the sponge buffer to around the distribution pipe
	Collision between the roof cover and the sun roof frame	Apply glass cement or plastic glue in the middle of the roof cover and the sun roof bracket
	The distance between the sun roof glass and	Re-adjust the height between the

	the roof hole is too big or the height of the glass is incorrect	glasses and their relative positions
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8. TROUBLESHOOTING WHEN THE SUN ROOF IS OUT OF CONTROL

- 1) The sun roof module could not control the sun roof's status
 - a) The full open function key fails to work, or pressing the power switch (One Touch) could not run the unit.
 - b) The sun roof could not be opened, or could not be fully closed and opened.
- 2) Analysis for the basic reasons
 - a) This occurs after replacing the battery when the sun roof is not at its initial position.
 - b) After the sun roof module is powered on and its plug is pulled out when the sun roof is running.
 - c) The sun roof unit controller could not restore to its normal position.
 - d) The power supply plug of the sun roof is pulled out when the sun roof is running.
- 3) Troubleshooting: Restart the sun roof module to restore its initial memory
 - a) Run the sun roof glass to the full tilt position and then keep pressing the tilt button continually over 15 seconds to restore.
 - b) Make sure that when the full open function key could normally start, the SCU controller could also normally start and restore its initial position.

9. DETAILED SOLUTIONS FOR THE PROBLEMS

9.1 The sun roof loses its initial position:

Definition: When the sun roof could not be opened or closed normally or closed to the normal position as well as the sun roof could not perform its original movement course. When the failure of sun roof is like this, its movement procedure of it will become disorder.

See “**8. Troubleshooting when the sun roof is out of control**” for analyzing, detecting and disposal methods

9.2 The sun roof assembly leaks water:

Definition: Whenever water is present in the interior trim of the vehicle.

Analyze and detect: Check the clearance between the sun roof glass and the roof hole, and check the status of flow guiding water pipe and the water guiding system.

- Solutions:
1. Refer to the procedures in “**replacing the sun roof glass**” to re-install the sun roof glass and make sure the clearance between the sun roof glass and the roof hole is in its normal range.
 2. Re-adjust the connecting status of the four distribution pipes to make sure they are water-tight.
 3. Check the water guiding system for damages and replace it.

9.3 The sun roof produces abnormal sounds:

Definition: Whenever the sun roof produces abnormal sounds when running.

Analyze and detect: Check the sun roof for misalignment produced by the manual assembly and the clearance between the glass and the roof hole, check if the sun roof motor produces abnormal sounds, check if the mouldings damage and rub the rail, and then determine the reasons producing abnormal sounds.

- Solutions:
1. Refer to the procedures in “**replacing the sun roof glass**” to re-install the sun roof glass and make sure the clearance between the sun roof glass and the roof hole is in its normal range.
 2. Replacing the motor producing abnormal sounds.
 3. Replacing with new mouldings.