

Precautions for High Voltage

Basic Requirements

Basic requirements for related precautions for high voltage in vehicle are as follows:

- Unrelated personnel are forbidden to come into contact with the vehicle during vehicle repairing.
- DO NOT touch the components with the high-voltage warning sign at will.
- If it is necessary to disassemble the relevant high-voltage components, the dismantling personnel need to undergo high voltage safety training.
- When operating high-voltage components, the operator needs to wear protective equipment and must also use insulated gloves.
- When operating exposed high-voltage system components, the operator must use a multimeter to measure if there is high voltage, and don't do anything before making sure that there is no high voltage.
- When the driving is over, turn off the ignition switch. If there is a need to disassemble the high-voltage system, wait for 5 minutes before proceeding.
- When disassembling or assembling electrical components, the 12V power supply and the manual service switch on the high-voltage battery pack must be disconnected.
- After removing the high-voltage components, it is necessary to check the assembling and connection of all high-voltage components and ensure their reliability before reconnecting the high-voltage power.
- All high-voltage components should be grounded well.

Warning: *Make sure the maintenance man of the high-voltage system have the special operation permit of electrician produced by the safety supervision bureau.*

Warning: *Maintenance persons who were not trained in high voltage system knowledge of the vehicle are prohibited from dismantling the high voltage components (including ESS, EDS, high voltage harness, EACP, charger, charge socket, etc).*

Warning: *Make sure the maintenance man wears the high-voltage protective clothing: insulated gloves and shoes. Also should confirm insulated gloves in good conditions without any damage.*

Caution: *In the removing or fixing process, avoid any liquid such as brake fluids , washing or cooling liquid entering or spattering into the parts of the high voltage system.*

Environmental Precautions

Overview

This section provides general information which can help to reduce the environmental impacts from the activities carried out in workshops.

Emissions to Air

Many of the activities that are carried out in workshops emit gases and fumes which contribute to global warming, depletion of the ozone layer and/or the formation of photochemical smog at ground level. By considering how the workshop activities are carried out, these gases and fumes can be minimised, thus reducing the impact on the environment.

Solvents

Some of the cleaning agents used are solvent based and will evaporate to atmosphere if used improperly, or if cans are left unsealed. All solvent containers should be firmly closed when not needed and solvent should be used sparingly. Suitable alternative materials may be available to replace some of the commonly used solvents. Similarly, many paints are solvent based and the spray should be minimised to reduce solvent emissions.

Refrigerant

Discharge and replacement of refrigerant from air conditioning units should only be carried out by using the correct equipment.

Diluent:

- Keep lids on containers of solvents;
- Only use the minimum quantity;
- Consider alternative materials;
- Minimise over-spray when painting.

Gases:

- Use the correct equipment for collecting refrigerants;
- Don't burn rubbish on site.

Discharges to Water

Lubricating oil, solvent, acids, hydraulic oil, antifreeze and other such substances should never be poured down the drain and every precaution must be taken to prevent spillage reaching the drains.

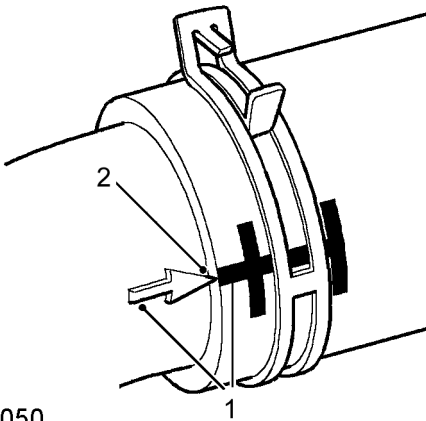
Handling of such materials must take place well away from the drains and preferably in an area with a kerb or wall around it, to prevent discharge into the drain. If a spillage occurs, it should be soaked up immediately. Having a spill kit available will make this easier.

Checklist

Always adhere to the following disposal and spillage prevention instructions.

General Information

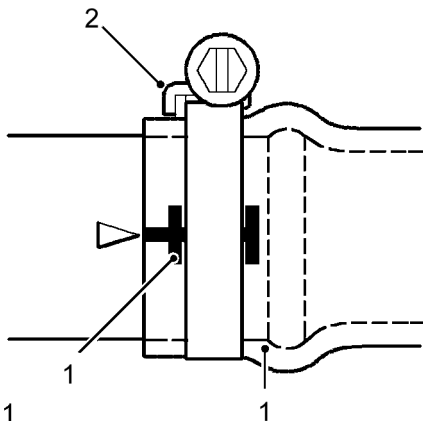
Hose Direction and Connection



S003050

Correct direction of the cooling pipe is very crucial, which ensures that there is no scratch or damage when the hose contacts the nearby part. A TIMING mark (1) is indicated on the hose and the corresponding connection, which can ensure a correct direction. The hose shall be completely pushed at the connection point. Normally, make a mark (2) at end of the tube to indicate correct position.

Hose Clip



S003051

The mark (1) on the hose normally indicates a correct clamp position. If no mark, directly place the clamp on the position shown by the above figure. Tighten the screw-type clamp on the clamp bracket (2) according to the direction of the thread, press it into the end of the tube or secure the hose between the clamp and the tube. Tighten the screw clamp to 3Nm unless otherwise stated, ensure the hose clamp will not affect the adjacent parts.

Heat Protection

Ensure the heat shield and protective cover are in good state. If visible damage occurs, replace it immediately. Be careful when the pipe is close to the hot component. Heated hose may loose and deform, which shall be taken into consideration for hose arrangement and installation.

Electrical Precautions

Overview

The following instructions are intended to guarantee the safety of operators and protect the electrical and electronic components on the vehicle from damage. When necessary, please refer to the specific precautions described herein.

Equipments

Before starting any test on the vehicle, ensure that the related test equipments work properly and all harnesses and connectors are in good state. In particular, check the wire and plug of the operating equipment.

Polarity

Do not reverse the battery polarity and always ensure the correct polarity is connected when testing.

High-voltage Circuit

Use insulating pliers to disconnect live circuits, do not allow the exposed wire to contact any components.

Connector and Harnesses

For electrical components and connectors, the operating environment in the front compartment is awfully harsh:

- Before disconnecting and connecting the test equipment, make sure that the relevant electrical component is dry and oil-free.
- Ensure the disconnected multi-plugs and sensors are free of oil, coolant or other liquids. Contamination may impair working performance or result in catastrophic failures.
- Never force connectors apart by using tools or by pulling the harness.
- Before disconnecting the connector, ensure that the locking mechanism is unlocked and in the right position for reconnection.
- Ensure that all the protective devices (cap, insulating material, etc) are in good condition. Once damaged, replace it immediately.

In case of failure:

- Turn off the START/STOP Switch , and disconnect the battery negative.
- Remove the component, and fix the disconnected harness.
- When replacing the assembly, keep greasy hands away from the electrical connection area. Push the connector all the way down until it is locked.

Disconnecting the Battery

Before disconnecting the battery, turn off the alarm system and all the electrical equipments.

Service Procedures-General

Odour Removal

1. When the A/C is started under hot and humid conditions, the smell may be blown out from air vents. The components that may produce the smell include:
 - Foreign objects or breeding micro-organism in the A/C filter;
 - Breeding micro-organism on the A/C box housing;
 - Breeding micro-organism on the evaporator;
 - Breeding micro-organism on the air duct;
2. In case of any smell, please observe the following steps for odour removal:
 - Replace the A/C filter;



A/C Filter Element Replacement

- Clean the A/C box housing;
 - Clean the evaporator;
 - Clean the A/C air ducts.
3. The relevant cleaning fluid may be used during cleaning:
 - The solution containing 40% vinegar and 60% water;
 - Proper cleanser, etc.

Refrigerant Recovery and Recharging

Refrigerant Recycle

1. Connect the high pressure-side hose with a quick-disconnection connector to the high-pressure side maintenance connector of A/C system.

Tip: Use refrigerant tank designed only for service station. Overcharging restraint system is designed based on this kind of refrigerant tank. The tank valve is also designed for the restraint system.

2. Open the connector valve.
3. Connect the low pressure-side hose with a quick-disconnection connector to the low-pressure side maintenance connector of A/C system.
4. Open the connector valve.
5. Check the high pressure-side and low pressure-side gauges on the filling station control panel and ensure the A/C system is with pressure. There will be no recyclable refrigerant in the system if there is no pressure.
6. Open the high pressure-side and low pressure-side valves.
7. Open the gas and liquid valves on the refrigerant tank.
8. Drain refrigerant oil from the oil separator.
9. Close the oil drain valve.
10. Connect the filling station to a proper power outlet.
11. Connect the main power switch.

Caution: Reuse the recycled lubrication is prohibited. The recycled lubrication will damage the equipment.

Caution: Part of A/C lubrication (PAG) could be recycled together with refrigerant but service station can separate lubrication from refrigerant to calculate the quantity of lubrication.

12. Start the recycle process. For more information about the filling station, refer to manufacturer's instructions.
13. Wait 5 minutes, and then check the low pressure-side pressure gauge on the control panel. If the A/C system keeps vacuum, it is shown that recycle is completed.

Warning: If warning indicator illuminates, it means the tank is overfull and service station will stop, install a new empty tank to continue this process. The different type of tank is prohibited using.

14. If the pressure of low side rises from zero, it is shown that there is still refrigerant in the system. Recycle the rest refrigerant. Repeat this step till the system can keep vacuum for 2min.

Drain

1. Check if the high pressure-side and low pressure-side hoses are connected to the A/C system. Open the high

Service Procedures-Conditioner

A/C Box Assembly

Remove

1. Disconnect the negative battery cable.
2. Remove the manual service switch.

Manual Service Switch Remove

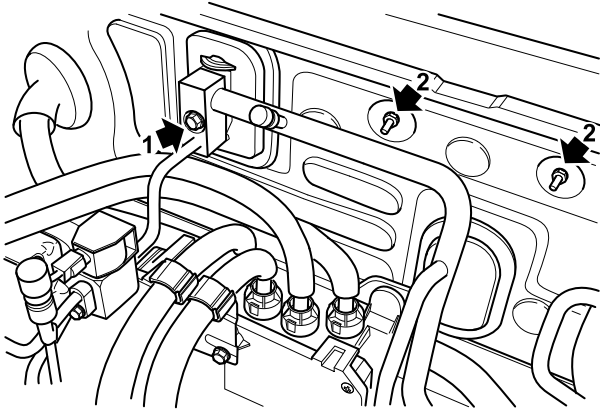
3. Recover the A/C system refrigerant.

Refrigerant Recovery and Refill

4. Remove 1 bolt (2) fixing the evaporator pipe assembly to the expansion valve, disconnect the pipeline, and discard the seal ring.

Caution: Protect open connections to prevent contamination.

5. Remove 2 nuts (2) fixing the A/C box assembly to the body.

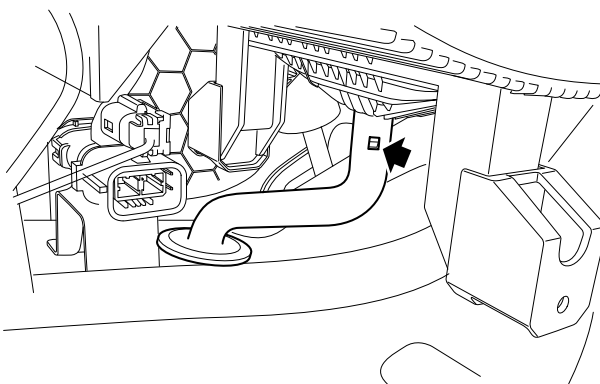


S3211101

6. Remove the instrument panel beam assembly.

Instrument Panel Beam Assembly Remove

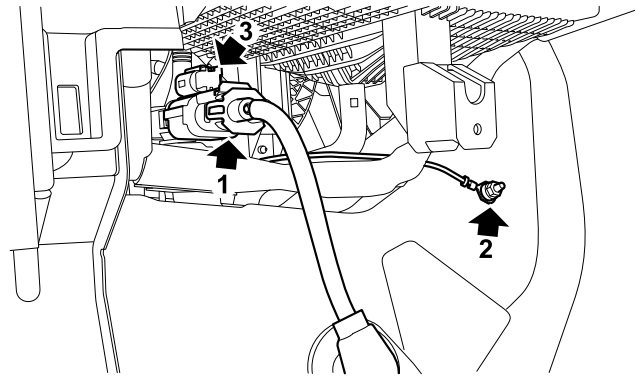
7. Disconnect the A/C drain pipe.



S3110605

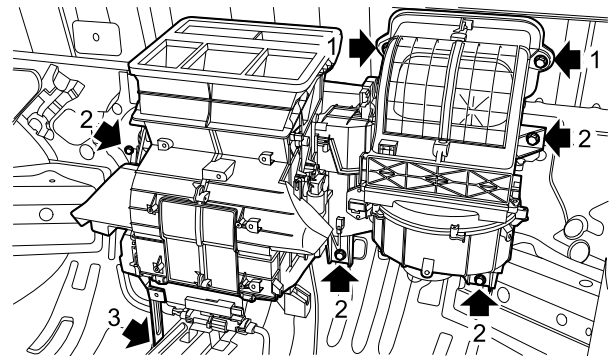
8. Disconnect the connector (3) of electric heater low-voltage harness first, and then the connector (1) of electric heater high-voltage harness.
9. Remove 1 nut (2) fixing the electric heater grounding

wire to the floor.



S3110600

10. Remove 2 bolts (1) and 4 nuts (2) fixing the A/C box to the dash panel.
11. Remove 1 bolt (3) fixing the A/C box to the body.



S3110601

12. Disconnect the harness connector, loosen the retaining clip and remove the A/C box assembly.

Refit

1. Fit the A/C box assembly and secure it with clips.
2. Connect the connector of the A/C box.
3. Fix the A/C box to the body, fit 1 bolt, tighten it to **19-25Nm**, and check the torque.
4. Fix the A/C box to the dash panel, fit 2 bolts, tighten them to **4-6Nm**, and check the torque.
5. Fix the A/C box to the dash panel, fit 4 nuts, tighten them to **4-6Nm**, and check the torque.
6. Fix the electric heater grounding wire to the floor, fit and tighten 1 nut.
7. Connect the connector of electric heater high-voltage harness first, and then the connector of electric heater low-voltage harness.
8. Connect the A/C drain pipe.
9. Fit the instrument panel beam assembly.

Instrument Panel Beam Assembly Refit

10. Remove the plug, fit a new seal ring to the A/C pipe,

Service Procedures

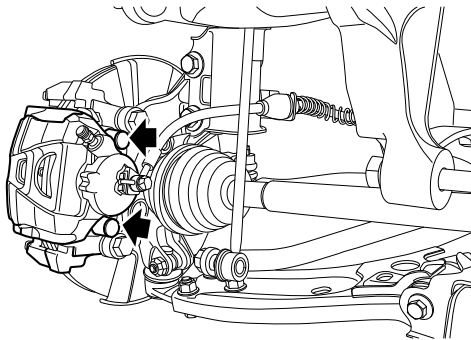
Front Brake Pad

Remove

1. Remove the front wheels.

Wheels Remove

2. Remove the stop spring of the front brake caliper.
3. Remove the guide pin caps of the front brake caliper.
4. Remove and discard 2 guide pin bolts fixing the brake caliper housing assembly to the front brake caliper bracket.



front brake pad in place.

Tip: Pedal travel may be longer than normal during first brake applications.

S2413540

5. Remove the front brake caliper housing assembly from the front brake caliper bracket, and find the appropriate position to fix it.

Caution: Do not tie or allow caliper to hang on brake hose.

6. Remove the front brake pad from the brake caliper bracket.

Refit

1. Clean up all dirt and corrosion contents from the edge of the front brake disc.
2. Clean the front brake caliper housing and the front brake caliper bracket, and check the front brake caliper and seals for damage.
3. Locate the new front brake pad to the front brake caliper bracket.
4. Use a tool to press the piston back into the brake caliper housing.
5. Locate the front brake caliper housing assembly to the front brake caliper bracket, fit 2 new guide pin bolts, and tighten them to **25–30Nm**.
6. Fit the guide pin caps of front brake caliper.
7. Fit the stop spring of front brake caliper.
8. Fit the front wheels.

Wheels Refit

9. Depress the brake pedal for several times to fit the

- Carefully pull the rear left brake hard pipe out of the vehicle.

Refit

- Locate the rear left brake hard pipe to the clips on the body and fasten it.
- Locate the rear left brake hard pipe fitting to the rear left brake hose, and tighten the fitting nut to **15–19Nm**.
- Remove the plug from the pipeline, fix the connecting pipe between the brake modulator and the rear brake hard pipe to the rear left brake hard pipe, and tighten the fitting nut to **13–15Nm**.
- Take the container for collecting brake fluid away, and clean it.
- Fit the high-voltage battery pack.

High-voltage Battery Pack Refit

- Drain the brake system.

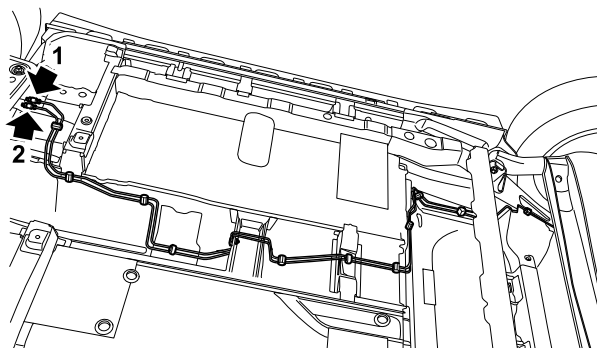
Brake System Drain**Rear Right Brake Hard Pipe****Remove**

- Remove the high-voltage battery pack.

High-voltage Battery Pack Remove

- Prepare a proper container to collect the spilled brake fluid.
- Remove the fitting nut (2) fixing the connecting pipe between the brake modulator and the rear brake hard pipe to the rear right brake hard pipe.

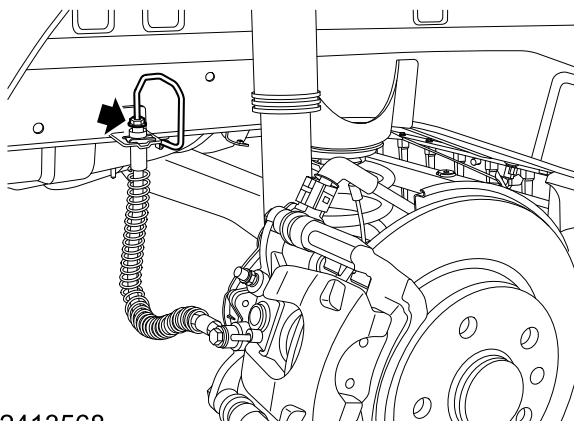
Caution: Before disconnecting or removing components, ensure the immediate area around joint faces and connections are clean. Plug open connections to prevent contamination.



S2413550

- Disconnect the pipeline fitting, plug the opening of the brake hard pipe for the avoidance of brake fluid drain and contamination.
- Remove the fitting nut fixing the rear right brake hard pipe to the rear right brake hose, and disconnect the pipe connection.

Caution: Before disconnecting or removing components, ensure the immediate area around joint faces and connections are clean. Plug open connections to prevent contamination.



S2413568

- Disconnect the clip connecting the rear right brake hard pipe to the body.

Fixed Windows

Service Procedures

Windscreen

Remove

1. Remove the A/C air inlet grille assembly.

A/C Air Inlet Grille Assembly Remove

2. Remove the interior rearview mirror.

Manual Anti-dazzle Interior Rearview Mirror

Remove

3. Remove the A pillar upper trim panel.

A Pillar Upper Trim Panel Remove

4. Put suitable coverings onto the interior moulding and the vehicle body to prevent scratches.
5. Put 2 suction cups symmetrically on both sides of the windscreen (outside).
6. Drill a hole in the adhesive, pass a cutting rope through or use a cutter directly to cut the adhesive on the glass and surroundings.
7. Remove the windscreen with suction cups on both sides aided by an assistant.
8. To refit, clean the adhesive on the original windscreen and the vehicle body.

Refit

1. Thoroughly clean the mounting position of the windscreen on the body and the windscreen with cleaner.
2. Apply glass primer to the body assembly area of the windscreen.
3. Apply adhesive to the windscreen assembly, and press the windscreen into the windscreen frame with suction cups.
4. Fix the windscreen to the windscreen frame with tapes, and let the adhesive dry for 24 hours.
5. Remove the tape.
6. Pour water on the windscreen assembly, and check for leak. If any leak is found, dry the windscreen assembly and block the leaking location with adhesive. If it still leaks, remove the windscreen assembly and repeat all service procedures.
7. Fit the A pillar upper trim panel.

A Pillar Upper Trim Panel Refit

8. Fit the A/C air inlet grille assembly.

A/C Air Inlet Grille Assembly Refit

9. Fit the interior rearview mirror.

Manual Anti-dazzle Interior Rearview Mirror

Refit

Rear Window

Remove

1. Disconnect the negative battery cable.
2. Disconnect the connector of the rear window heating element.
3. Remove the spoiler assembly.

Spoiler Assembly Remove

4. Remove the rear window wiper motor.

Rear Window Wiper Motor Remove

5. Put suitable coverings onto the interior trim and the vehicle body to prevent scratches.
6. Put 2 suction cups symmetrically on both sides of the rear window.
7. Drill a hole in the adhesive, pass a cutting rope through or use a cutter directly to cut the adhesive on the glass and surroundings.
8. Remove the rear window with suction cups on both sides aided by an assistant.
9. To refit, clean the adhesive on the original rear window and the vehicle body.

Refit

1. Thoroughly clean the mounting position of the rear window on the body and the rear window with cleaner.
2. Apply glass primer to the body assembly area of the rear window.
3. Apply adhesive to the rear window assembly, and press the rear window into the rear window frame with suction cups.
4. Fix the rear window to the rear window frame with tapes, and let the adhesive dry for 24 hours.
5. Remove the tape.
6. Pour water on the windscreen assembly, and check for leak. If any leak is found, dry the windscreen assembly and block the leaking location with adhesive. If it still leaks, remove the windscreen assembly and repeat all service procedures.
7. Fit the rear window wiper motor.

Rear Window Wiper Motor Refit

8. Connect the connector of the rear window heating element.
9. Fit the spoiler assembly.

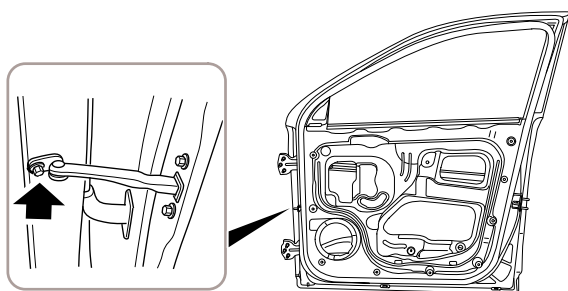
Spoiler Assembly Refit

10. Connect the negative battery cable.

Front Door and Hinge Assembly

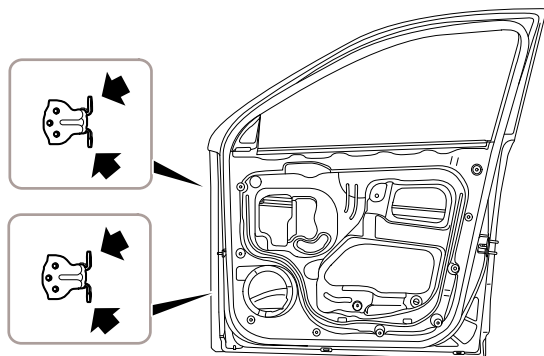
Remove

1. Disconnect the battery negative.
2. Open the front door.
3. Put the wood block on the jack, and put the jack under the door to support the front door.
4. Remove and discard 1 bolt fixing the door check to the body.



SC113361

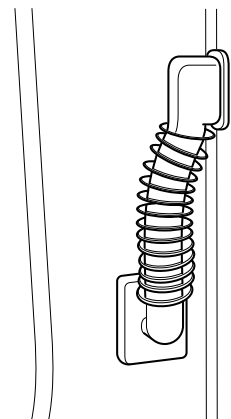
5. With assistance, hold the door, then remove and discard 4 bolts fixing the upper/lower hinges to the door.



SC113350

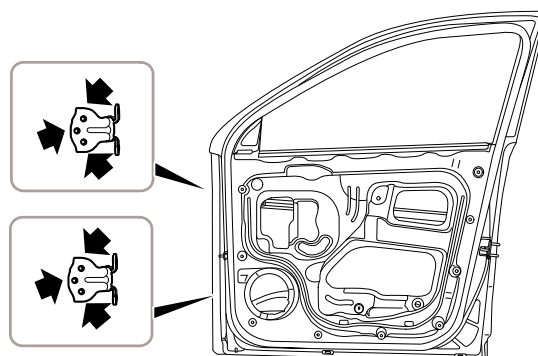
Caution: Please protect paint from scratch when removing or refitting the door assembly.

6. With assistance, hold the door, remove the rubber seal ring on the body, and pull out the connector to disconnect the harness connector.



S4323324

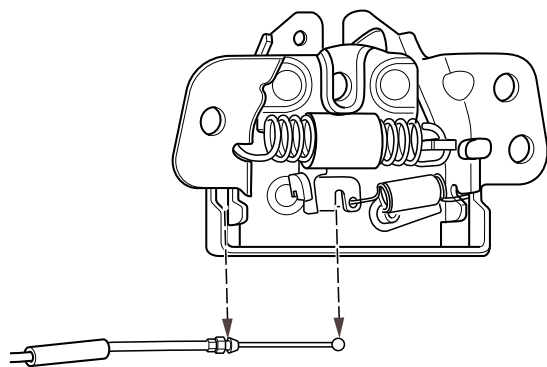
7. Remove the front door assembly.
8. Remove and discard 3 bolts fixing the upper hinge to the body. Remove the front door upper hinge.
9. Remove and discard 3 bolts fixing the lower hinge to the body. Remove the front door lower hinge.



SC113351

Refit

1. Fit 3 new bolts fixing the upper hinge to the body, tighten to **30–36Nm** and check the torque.
2. Fit 3 new bolts fixing the lower hinge to the body, tighten to **30–36Nm** and check the torque.
3. With assistance, locate the door to the vehicle body.
4. Connect the connector port, and embed the rubber ring into the mounting hole of the body.
5. Fit 4 new bolts fixing the upper/lower hinges of the front door to the door, tighten to **22–28Nm** and check the torque.
6. Fit 1 new bolt fixing the door check to the body, tighten to **21–29Nm** and check the torque.
7. Close the door and check if the door can be properly opened or closed.
8. Connect the battery negative.



SC310002

Refit

1. Connect the lock end of the bonnet release cable assembly and the lock assembly firmly, i.e. fit the spherical end of the cable core wire into the hook slot of the bonnet lock, put the core wire into the long slot of the bonnet lock case, and align the circular groove of the main cable pipe connector with the mounting slot of the lock case, then press it hard until it clicks.
2. Locate the bonnet lock assembly to the front-end module, and align it with the position marked when removing.
3. Fit 3 bolts fixing the lock assembly to the front-end module, and do not tighten them to the specified torque at this step.
4. Close the bonnet, observe the relative position of the lock and striker, adjust the lock and allow the striker to enter into the lock tongue.
5. Connect the harness connector of the bonnet lock.
6. After adjustment, tighten the 3 bolts to 7–10Nm, and check the torque.
7. Refit 4 bolts fitting front bumper cover to the front-end module, tighten to 3–4Nm, and check the torque. Refit 4 clips firmly.
8. Refit 2 bolts fitting front bumper cover to the front bumper, tighten to 3–4Nm, and check the torque.
9. Refit 2 bolts fitting front bumper cover to the headlamp, tighten to 3–4Nm, and check the torque.
10. Close the bonnet.

Bonnet Release Cable**Remove**

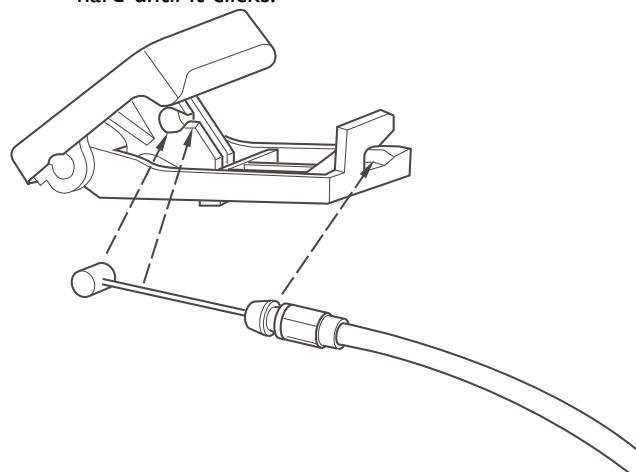
1. Open the bonnet and support it with a rod firmly.
2. Remove the bonnet lock assembly

Bonnet Lock Remove

3. Release the bonnet release cable assembly from the bonnet lock.
4. Loosen the clips fixing the bonnet release cables to the upper mounting panel of left headlamp and the body in sequence.
5. Release the bonnet release cable from the front compartment.
6. Release the bonnet release cable assembly from the release handle.
7. Pull out the bonnet release cable assembly from the front compartment.

Refit

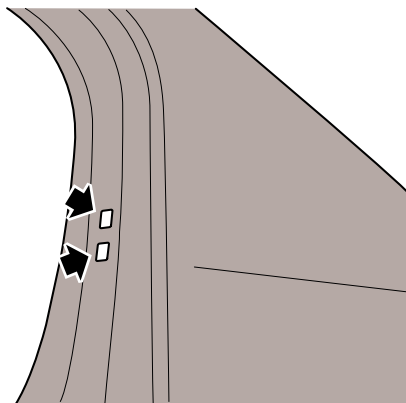
1. Locate the front compartment cover release cable assembly in the front compartment, insert the flat blade end through the hole in the front compartment bulkhead from the front compartment into the driver compartment, and fix it into the bulkhead hole with the rubber seal ring of the cable assembly.
2. Insert the cylindrical end of the front compartment cover release cable assembly into the cylindrical hole in the release handle, place the core wire in the long slot of the handle, and align the cable sleeve connector with the mounting slot of the release handle, then press it hard until it clicks.



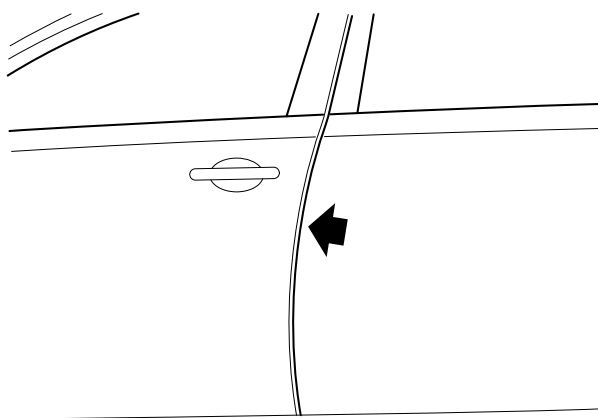
3. Fix the front compartment cover release cable to the front compartment and the upper mounting panel of left headlamp in sequence.
4. Fit the front compartment cover lock assembly.

Front Compartment Cover Lock Assembly Refit

5. Pull the front compartment cover release handle in the driver compartment, and check the opening effect of the front compartment cover.



3. Adjust surrounding clearance;



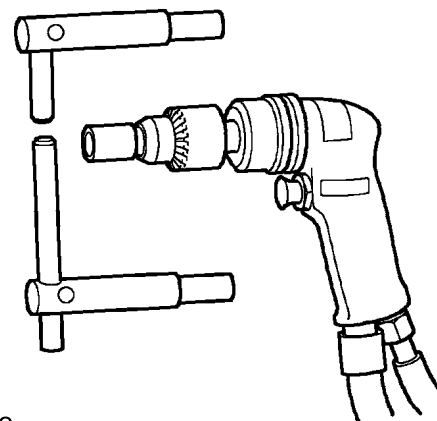
4. Adjust the difference between the high surface and the low surface.

Position of gas shielded welding

1. Select a gas ratio of 80% argon, 20% CO₂.
2. To ensure the accuracy of the position, positioned welding shall be performed on both sides of the ridge instead of on the ridge, and the distance of the positioned welding shall be above 30mm.

Trial Welding before Spot Welding

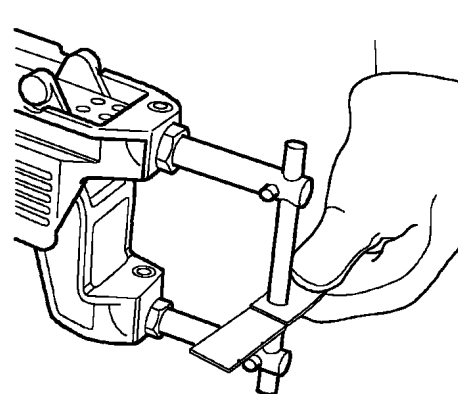
1. Select an electric welding arm for resistance spot welding and shape the electrode head with nozzle finisher. Finish the nozzle, making its diameter equal to 2 times the welding thickness and plus another 3.0mm.



S883042

Caution: Use arms not exceeding 300 mm in length.

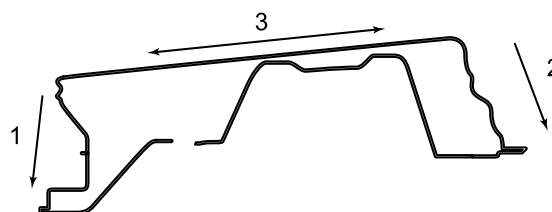
2. Fit the resistance spot welding arm and test equipments with test silicon slice so as to meet the operation requirements. If there is no monitoring device, the weld strength can be tested by checking welding pool pull wires around the metal under tensile force during the stretch.

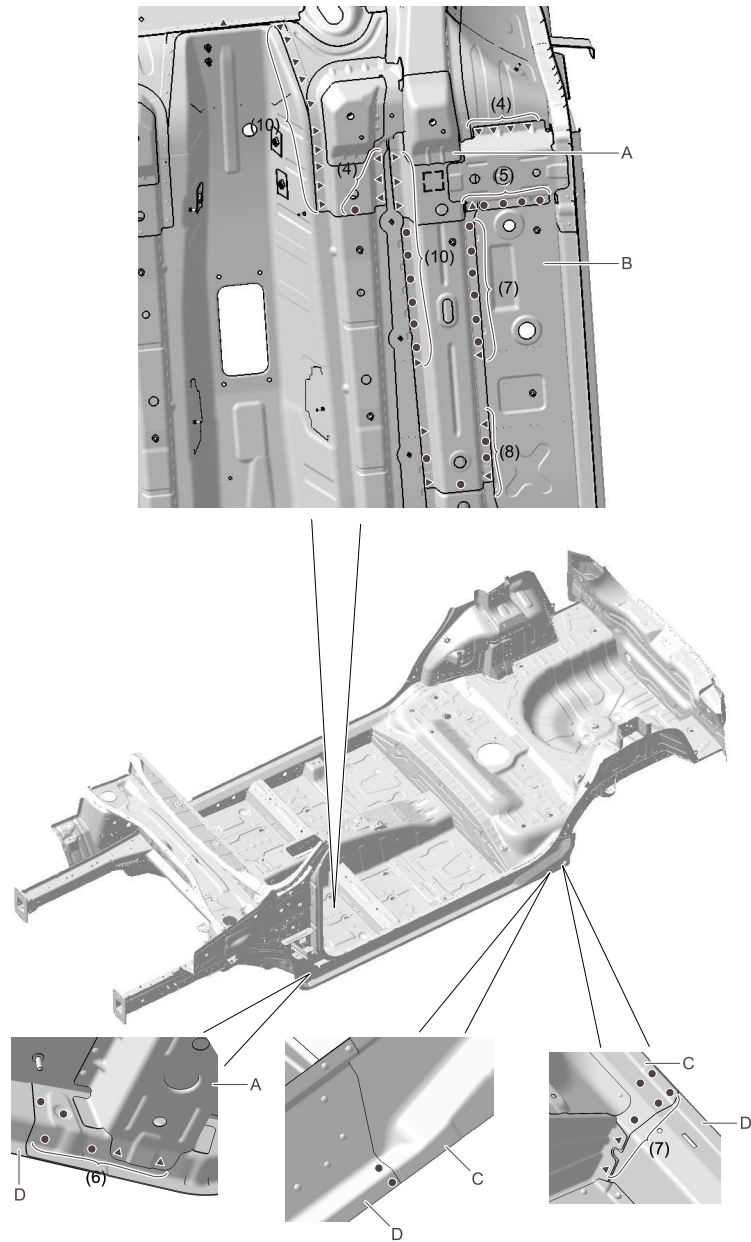


S883043

Welding Sequence

- Welding sequence: to decrease the possibility of strength reduction due to welding shunt, it is recommended that you begin with the direct welding, and follow the sequence shown below, the distance between the welding spots shall be 25mm.





Rear Drive Assist System

Service Procedures

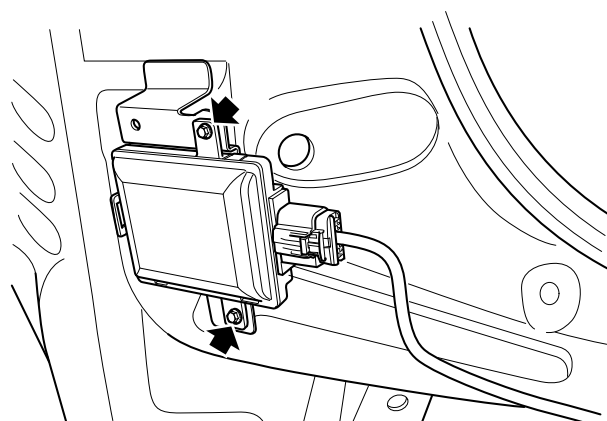
Rear Distant Object Detection Module & Sensor

Remove

1. Disconnect the negative battery cable.
2. Remove the rear bumper.

Rear Bumper Remove

3. Disconnect the harness connector.
4. Remove 2 screws fixing the left or right module to the body.



S8113317

5. Remove the rear driver assistance module.

Refit

1. Connect the harness connector.
2. Connect the negative battery cable.
3. Perform a self-learning for the rear driver assistance module. Refer to Module Self-learning and Programming Manual, "Rear Driver Assistance System Self-learning".
4. Fix the rear driver assistance module to the body, fit and tighten screws to **3-4Nm**.
5. Fit the rear bumper.

Rear Bumper Refit

pass the test.

7. Connect water inlet/outlet hoses to **PEB**.
8. Connect water inlet/outlet hoses to motor.
9. Refill the coolant.

Coolant Drain and Refill

10. Fit the manual service disconnect.

Manual Service Disconnect Refit

Sealing Test of Dry Chamber

Warning: Non qualified staff are NOT permitted to dismantle high voltage systems or components (including, ESS, Electric Drive Transmission, PEB, EAC, HV harnesses, OBC, DCDC, Charging sockets etc).

Warning: Prior to opening any high voltage circuits the systems **MUST** be checked using a suitable multi meter to ensure they carry no high voltage current. Where there is need to work with the high voltage system is essential that the correct 'make safe' procedure is followed - see Manual Service Disconnect procedure in the Service Repair manual. After disconnecting the Manual Service Disconnect (MSD), always wait 5 minutes prior to commencing any checks for residual voltage etc.

Warning: Any qualified personnel working on high voltage systems or components **MUST** wear the correct insulated personal protective equipment (PPE). All PPE must be regularly checked and tested for condition and integrity.

Caution: When removing or servicing any parts of the high voltage system it is essential that no liquids enter, contaminate or are spilled on components, harnesses or connectors.

1. Switch off the vehicle power/ignition and wait 5 minutes before proceeding.

Caution: Please wait 5 minutes after the vehicle power system has been switched off to allow any power stored within the PEB capacitors to have been discharged.

2. Disconnect the negative battery cable.
3. Remove the manual service disconnect.

Manual Service Disconnect Remove

4. Remove high voltage interlock cover plate.

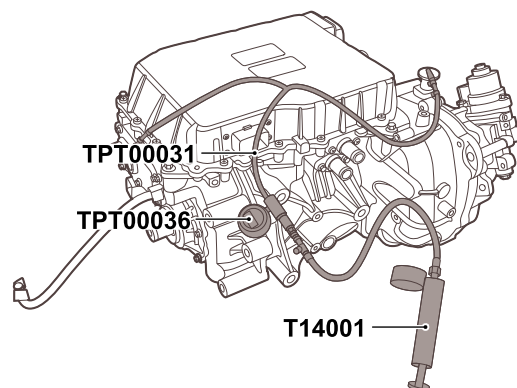
High Voltage Interlock Cover Plate Remove

5. Remove ventilation plug from the plate.
6. Refit high voltage interlock cover plate.

High Voltage Interlock Cover Plate Refit

7. Remove ventilation plug from the retarder housing.
8. Use the white plug in special tool **TPT00301** plug up one hole in the plate.
9. Use special tool **TPT00301** , **TEL00036** and **T14001**,

plug the other hole in the plate and the hole at retarder housing. Use hand pressure to hold these in position.



S1214456

10. Operate the pressure tester to apply a pressure of 0.25 bar (25kPa). The pressure should be monitored over 30 seconds, if the pressure drop is less than 80Pa then the integrity is acceptable. Carry out any necessary repairs until the test is successful.
11. Remove special tools.
12. Refit plugs to retarder housing and high voltage interlock cover plate.
13. Fit the manual service disconnect.

Manual Service Disconnect Refit

14. Connect the negative battery cable.

Upper Steering Column Assembly

Remove

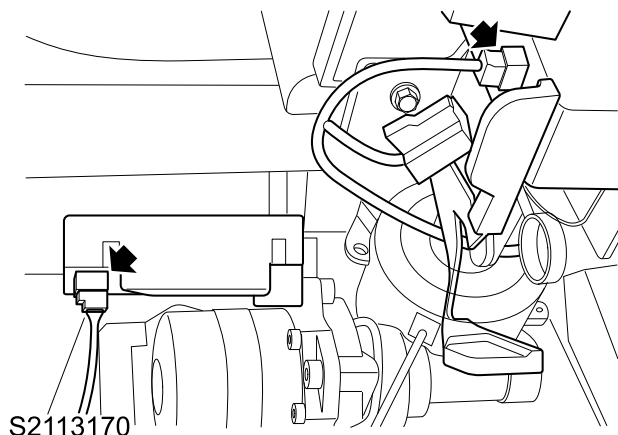
1. Disconnect the battery negative.
2. Remove the steering wheel combination switch.

 Steering Wheel Combination Switch Remove

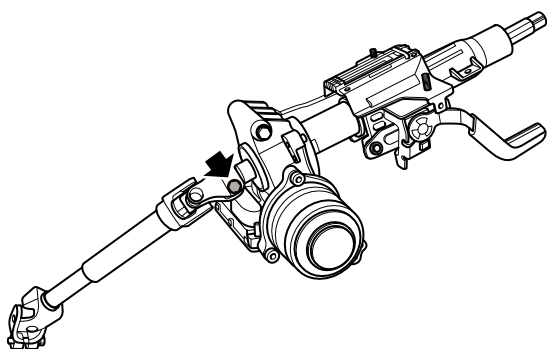
3. Remove the driver instrument panel lower trim panel.

 Driver Instrument Panel Lower Trim Panel Remove

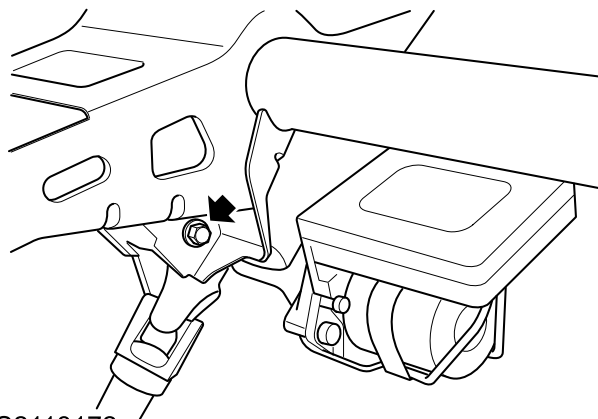
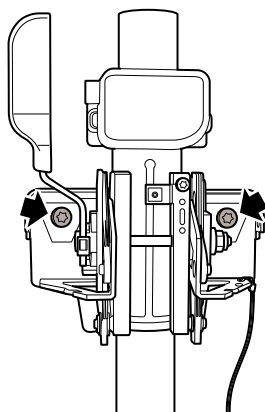
4. Disconnect the **EPS** module connector.



5. Remove 1 bolt fixing the intermediate shaft on upper steering column, and dispose it.



6. Remove 3 bolts fitting the steering column to the instrument panel beam assembly.



7. Remove the upper steering column assembly.
8. Fix the upper steering column to the drilling machine, drill a small hole in the retaining screw head of the steering column lock, choose a broken screw extractor with an appropriate diameter to rotate the screw out, and do not damage adjacent parts.
9. Separate steering column lock and upper steering column.

Refit

1. Fix the electronic steering column lock module on steering column, refit 2 new bolts, tighten to **13-15Nm** and twist off the bolt head.
2. Fix the upper steering column assembly on instrument panel cross beam, refit 3 bolts in the order of "below-left-right", tighten the top two bolts to **19-25Nm** and the bottom bolt to **22Nm+45°**.
3. Fix the intermediate shaft on upper steering column, refit 1 new bolt, and tighten it to **20Nm+120°**.
4. Connect the **EPS** module connector.
5. Connect the electronic steering column lock module connector.
6. Refit the driver instrument panel lower trim panel.

 Driver Instrument Panel Lower Trim Panel Refit

7. Refit the steering wheel combination switch.

 Steering Wheel Combination Switch Refit

8. Connect the battery negative.
9. Learn the electric power steering module. Refer to Module Self-learning and Programming Manual - Electric Power Steering (**EPS**) Module.

Service Procedures

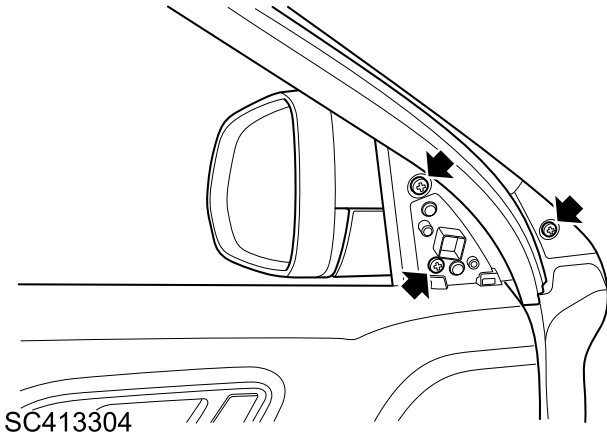
Exterior Mirror Assembly

Remove

1. Disconnect the battery negative.
2. Remove the interior trim panel and waterproof membrane from the driver door.

Front Door Interior Trim Panel and Waterproof Membrane Refit

3. Remove the interior quarter trim panel from the front door and uplift the front door sealing strip around this trim panel.
4. Disconnect the exterior mirror assembly harness connector.
5. Remove 3 bolts fixing the exterior mirror assembly onto the door, and remove the exterior mirror assembly.



Refit

1. Locate this assembly into the corresponding locating hole on the door in virtue of the locating pin on the exterior mirror assembly, and flap the clips. Install 3 bolts, tighten to **7–10Nm** and check the torque.
2. Connect the exterior mirror assembly harness connector.
3. Refit the interior quarter trim panel and sealing strip of front door.
4. Fit the interior trim panel and waterproof membrane of the driver door.

Front Door Interior Trim Panel and Waterproof Membrane Refit

5. Connect the battery negative.

Exterior Rearview Mirror Glass

Remove

1. Push the upper end of an exterior mirror a little hard to make it tilt.
2. Grasp the back of mirror, and separate the rearview mirror glass from the rearview mirror motor hard.
3. Uplift the back of rearview mirror and disconnect the electrical connector. Then remove the exterior mirror glass.

Refit

1. Connect the electrical connector.
2. Refit the exterior mirror glass and check whether it is refitted in place.