

Foreword

You are welcome to join the big family of Xenia owners. As you know, the performance and serviceability of an automobile depend on the maintenance and driving methods. The handbook can help you to learn about all functions of your Xenia automobile. Please read the handbook carefully before driving. You can also refer to the handbook at any time. If you have any question, please contact the special service stores of FAW Jilin Automobile Co., Ltd. We will offer you high-grade services and assistance.

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FAW Jilin Automobile Co., Ltd.

A handbook of your own

- Please read the handbook carefully before you drive your Xenia automobile.

Please observe the instructions given in the handbook in order to protect yourself and extend the service life of your beloved automobile.

Failure of observing those instructions may lead to severe personal injuries and damages to your beloved automobile.

- In the handbook, we will show you the particulars such as **dangers**, **warnings**, and **attentions**.

Danger

Failure of observing the instructions given in the precautions may lead to death or grievous injuries.

Warning

Failure of observing the instructions given in the warning particulars may lead to personal injury, accident or damages to your beloved automobile.

Attention

Please observe the instructions given in the precautions such that you may drive your automobile safely.

Safety symbols



The safety symbols as shown above indicate: “Do not”, “Do not conduct the operation” or “Do not allow the case to occur”.

- By the time when the handbook is put into print, all data and specs contained in it are rated as up-to-date information. The Company reserves the right to alter contents of the handbook at any time without further notice.
- The handbook is applicable to all models, and the performances of all equipment including options are also described herein. Therefore, some configurations covered by the handbook may not apply to the automobile you purchased.
- Please leave the handbook inside the automobile when you sell out your Xenia automobile. The next owner will also need the handbook.

- Engine types described in the handbook are listed below.

Engine	Description
K3-VE3	1,300ml. E FI* ¹ + DVVT* ² engine
3SZ-VE2/3	1,500ml. EFI* ¹ + DVVT* ² engine
CA4GA8/10	1,300ml. electronic multi-port injection gasoline engine
CA4GA9	1,500ml. electronic multi-port injection gasoline engine

*¹Electronic fuel injection

*²Dynamic intellectualized variable valve timing

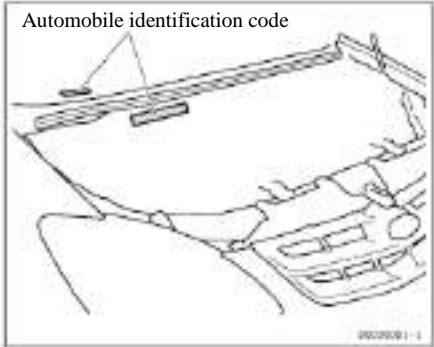
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Note: “3SZ-VE2/3” represents 2 engine models i.e. 3SZ-VE2 (for China-III automobile models) and 3SZ-VE3 (for China-IV automobile models).

Obligation to maintain your automobile

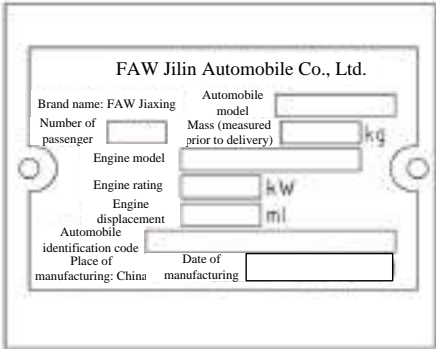
Automobile identification

The owner is in duty bound to subject his automobile to specified maintenance. The requirements of maintenance are detailed in Section 13.



The automobile identification code is marked in the positions shown in the figure.

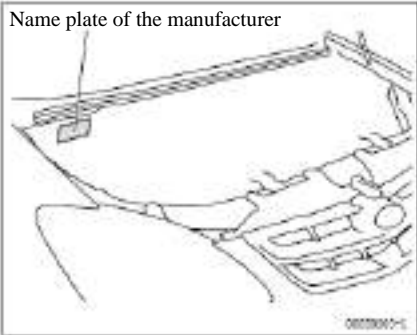
Name plate of the manufacturer



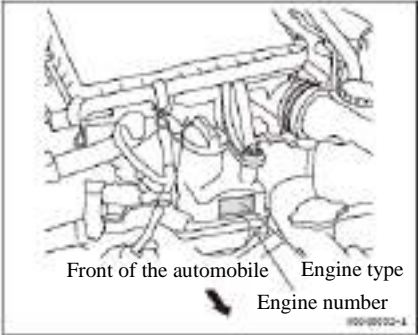
For the convenience of your reference, the place of manufacturing is indicated on the manufacturer's name plate fitted onto the automobile.

Automobile identification

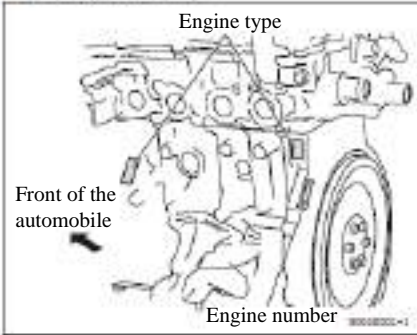
Name plate of the manufacturer



K3-VE3, 3SZ-VE2/3



K3-VE3, 3SZ-VE2/3



CA4GA8/9/10

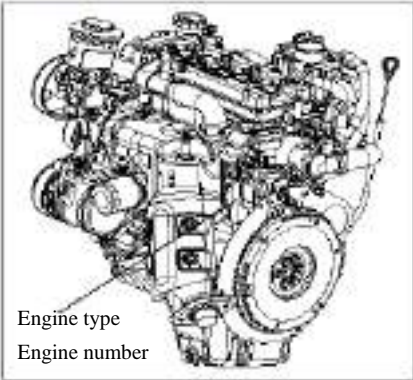


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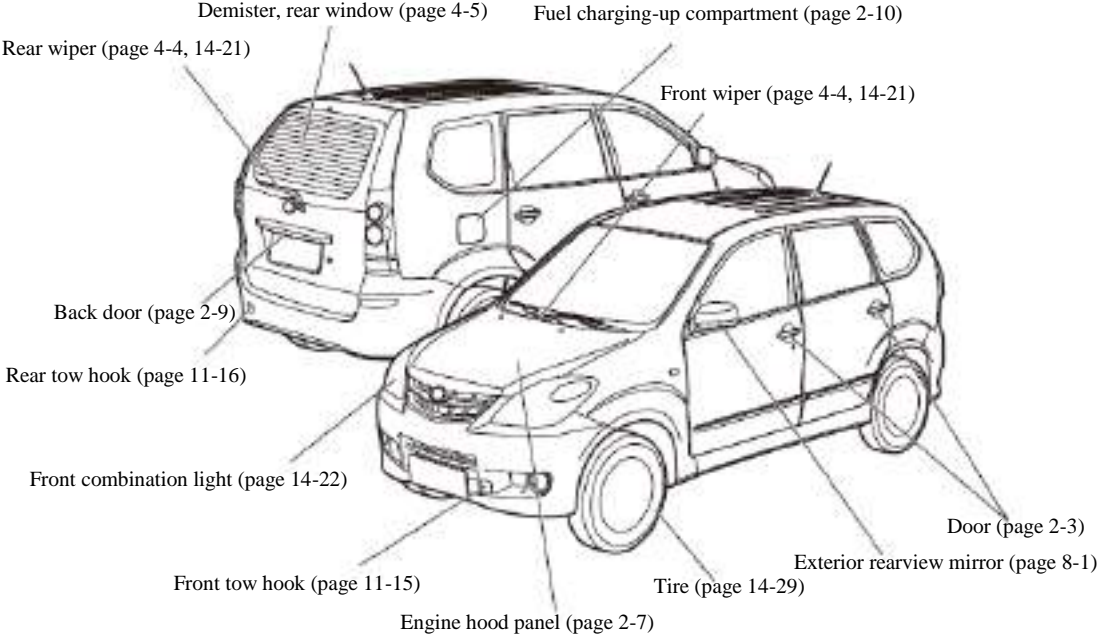
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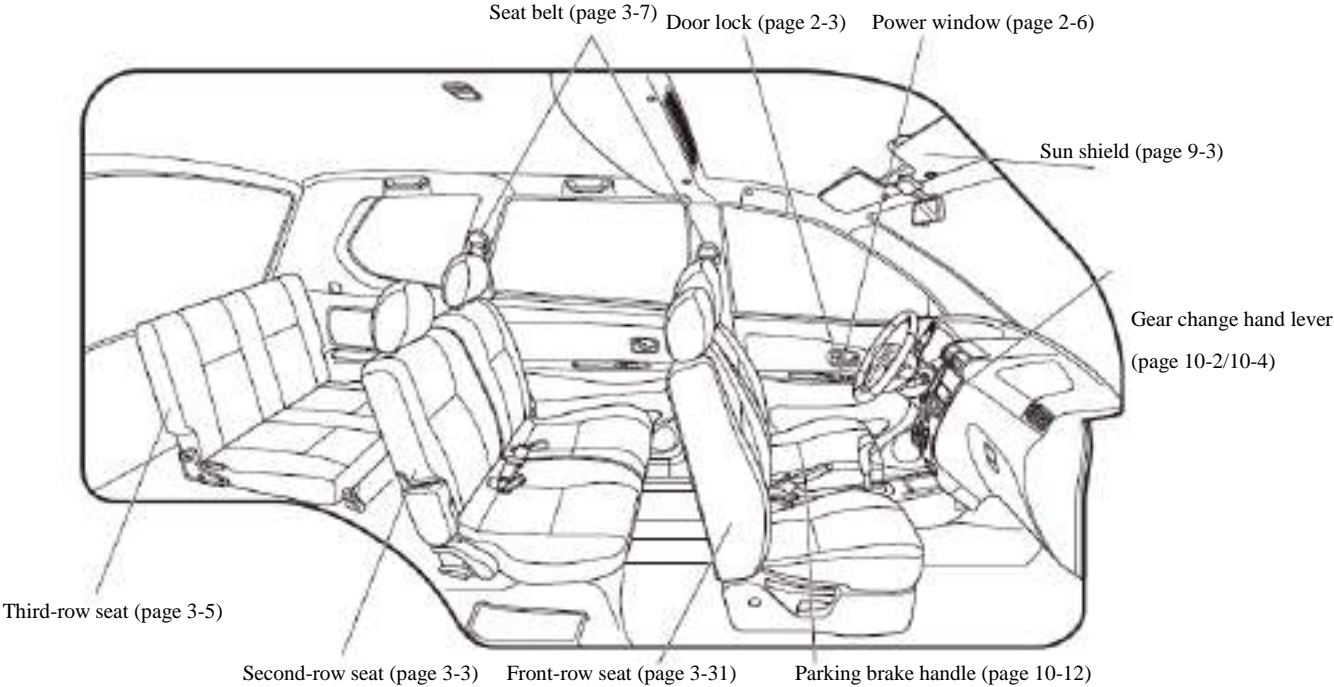
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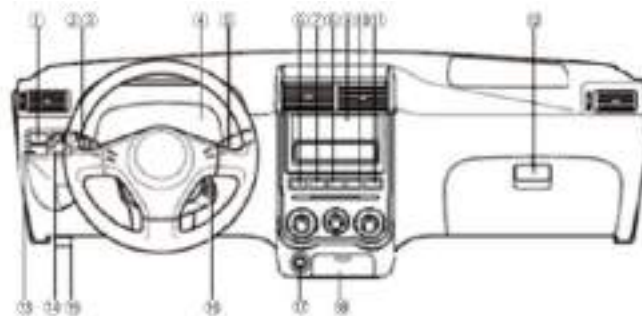
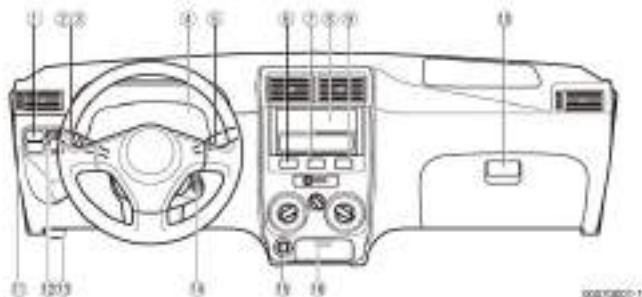
Automobile exterior



Automobile interior



Instrument Panel



- | | | | |
|---|--|--------------------------------------|---|
| ① Rear foglight switch (page 4-6) | ⑩ Glove compartment (page 9-4) | ① Light regulation switch (page 4-7) | ⑩ Air-conditioning internal recycle switch (page 6-4) |
| ② Combination switch (page 4-2) | ⑪ Demister switch, rear window (page 4-5) | ② Combination switch | ⑪ Standby switch |
| ③ Front foglight switch (page 4-5) | ⑫ Rearview mirror switch (page 8-1) | ③ Front foglight switch | ⑫ Glove compartment |
| ④ Combination instrument (page 5-1) | ⑬ Lock lever, engine hood panel (page 2-7) | ④ Combination instrument | ⑬ Demister switch, rear window |
| ⑤ Windshield wiper and washer switch (page 4-4) | ⑭ Ignition switch (page 4-1) | ⑤ Windshield wiper and washer switch | ⑭ Rearview mirror switch |
| ⑥ Air-conditioning switch (page 6-4) | ⑮ Cigarette lighter (page 4-6) | ⑥ Air-conditioning switch | ⑮ Lock lever, engine hood panel |
| ⑦ Emergency warning signal switch (page 4-3) | ⑯ Ash tray (page 9-3) | ⑦ Rear foglight switch | ⑯ Ignition switch |
| ⑧ Radio control panel (page 7-5) | | ⑧ Emergency warning signal switch | ⑰ Cigarette lighter |
| ⑨ Indicator lamp of central locking system (page 2-1) (such as equipment) | | ⑨ Radio control panel | ⑱ Ash tray |



Section 1

Special precautions for the automobile

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Engine exhaust

Danger

Do not inhale effluent gases.

Carbon monoxide contained in effluent gases is a type of colorless, odorless, and toxic gas. Inhalation of carbon monoxide would lead to asphyxia or even death.

Once you doubt that effluent gases might enter into the automobile, please find out the causes, and restore the automobile to its normal state immediately.

If you have to drive the automobile in such a case, open all windows completely.

To avoid accidents caused by effluent gases, please observe the following precautions.

Maintenance

The engine exhaust system, body and ventilation system must be maintained in their normal operation condition. Verify that the exhaust system is free of leaks and the joints are free of looseness. If any of the following states occurs, it is advisable to contact special service stores for overhaul of the exhaust system and body.

- Every time oil is replaced;
- Every time you observe any change in exhaust sound;

- Once the exhaust system is damaged or eroded;
- Every time your automobile crashes up against any object.

Furthermore, the automobile must be subjected to maintenance as per the maintenance plan described in Section 13.

Ventilation system

To ensure that the ventilation system of your automobile may operate normally, you have to verify that the air intake duct before the windshield is not covered by snow, leaves or other obstacles.

Routine operation

When the automobile is parked or stopped, do not allow the engine to run for a long time.

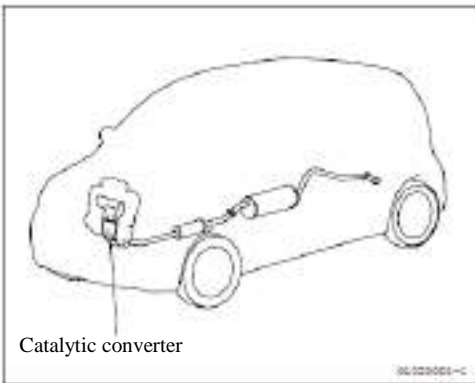
Otherwise, carbon monoxide might enter into the automobile through the exhaust system that was not properly maintained or was already damaged.

Do not allow the engine to run inside a garage or enclosed space except for coming in/going out the garage.

Verify that the tail pipe is free of any snow cover or other object that may allow the effluent gases to build up under the body.



Catalytic converter



Catalytic converter is an emission control device fitted in the exhaust system to reduce emission of pollutants.

Danger

- When engine is running, the exhaust system gets hot, and hot effluent gases are then emitted.
- The automobile shall be parked such that the minimum distance of 30cm from the tail of automobile to the inflammable object (such as wood block or plywood) may be maintained. If the distance is too short, the inflammable object may be discolored, distorted or ignited.
- Do not drive or park the automobile on inflammable substances such as grass, leaves, paper or tatters.
- Human bodies and inflammable objects must also be kept away from the exhaust system.

Warning

If massive unburned gas enters into the catalytic converter, the converter may be overheated and cause a fire.

To avoid these and other damages, please observe the following precautions:

- Do not drive the automobile when fuel level is extremely low;
- Do not allow the engine to run at high idle speed for more than 10 minutes or at idle speed for more than 20 minutes;
- Do not turn off the ignition switch when you drive the automobile;
- Never push and pull the automobile at startup of the engine.
- Avoid engine racing;
- Use lead-free gasoline only.

Perform regular inspections as specified in Xenia maintenance plan so as to guarantee normal operation of the engine body, catalytic converter and the whole emission control system.

If it is hard to start up the engine, the engine is frequently subjected to stalling, or knocking occurs at acceleration, invite a special service store immediately to inspect your automobile.



Safe driving

FAW Jilin Automobile Co., Ltd. heartily hopes that you can enjoy all functions of your new automobile. In addition, she also hopes that you may apply your common safety knowledge and common driving knowledge when you drive your automobile.

Part of the common driving knowledge is to learn about performance and limitation of your automobile, and comprehend that the driving methods of automobiles intended for different applications may diverse from each other.

Read and comprehend all “**Danger**”, “**Warning**” and “**Attention**” particulars described in the handbook.

Danger

- Avoid short-radius turn, sudden operation control or other unsafe operations. Otherwise, you may lose control of your automobile, resulting in accident, automobile overturn and severe personal injuries.
- Do not made an attempt at cross-country running.
- It is recommended that all passengers may buckle up their seat belts (see “Seat belt”).
- Driving while intoxicated or after taking medicine is quite dangerous to you and others.
- Please observe highway codes.
- Do not use any equipment or mechanism from outside the automobile.

Recommended fuel

For China-III automobile models, lead-free gasoline with a research octane number of 90 or higher shall be adopted.

For China-IV automobile models, lead-free gasoline with a research octane number of 93 or higher shall be adopted.

Warning

Your Xenia automobile can only use lead-free gasoline.



Automobile modification

Never modify your Xenia automobile.

Modification would affect the operability, safety and durability of your automobile, or even violates the laws and regulations released by the local government.

No damages to and performance of the automobile caused by modification are covered by warranty.

Moreover, modification of automobile may lead to automobile out-of-control, accident or severe personal injuries.

Install/use electrical equipment on your automobile

Prior to installing or using any electronic equipment (such as duplexing radio system, mobile telephones and computer) that may possibly emit quite intensive electromagnetic waves, do consult the local special service store.

Electromagnetic waves emitted by these electronic equipment would adversely affect the EFI (electronic fuel injection) system, A.B.S(antilock brake system) and SRS air bags etc., and lead to improper operation.

Run-in period

Interior frictional force of a new automobile may be relatively high, and the frictional force may be gradually reduced while all parts and components start operation and are adapted mutually.

In order to enhance future performance and fuel economy of your automobile, it is advisable for you to observe the following precautions within the first 1,600km.

- Do not drive your automobile at a speed higher than 90km/h.
- Do not drive your automobile at an identical speed (either high speed or low speed) for a long time;
- Do not start up your automobile at full throttle;
- Avoid emergency braking except any emergency occurs, especially within the first 300km.



Top antenna

Warning

- The antenna must be removed when any of the conditions listed below occurs:
- Before the automobile is cleaned by auto car washer;
- Antenna bumps against any obstacles fitted on the ceiling when you want to park your automobile into a garage;
- Before a automobile cover is spread;
- Do not lose the antenna when it is removed for automobile washing etc. The antenna must be reinstalled before you drive your automobile.

See Section 7 for details of installation and removal of top antenna.





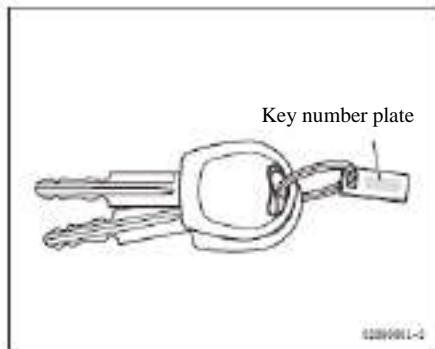
Section 2

Doors and door locks

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Key



Your automobile is provided with 2 keys.

It is recommended that you may store your key number plate in a safe place.

The duplicate key shall be carried about at any time for fear that the door cannot be opened when the key is accidentally locked up inside the automobile.

If the keys are lost, please contact the local special service store.

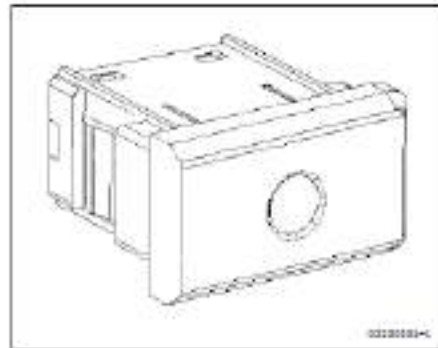
Remote central locking system (if available)

Indicator lamp of central locking system: After the front doors and centre doors are closed and locked up with the remote controller of central locking system, the automobile may give prompts namely turn signal light flickering and horn sounding if any door or engine hood panel is not opened through the remote controller.

Attention

- The function is used to inform peripheral persons of any abnormal condition. The remote central locking system cannot prevent the burglars from entering into the automobile.
- To allow other people to use your automobile while they may not make head or tail of the operation procedure of remote central locking system, please give an exposition of it at large. If the operator has no acquaintance with the operation procedures of remote central locking system and conducts faulty operation, the device may be activated, and the periphery may be disturbed.
- Please do not have cash or valuables left over inside the automobile.

Indicator lamp of central locking system





How to set

Close the front doors and centre doors, and use the remote controller of central locking system to lock up the doors. Here, the indicator lamp of central locking system flickers, and the prompt function of central locking system is activated.

Attention

If the remote controller of central locking system is not used to lock up the doors, the prompt function of central locking system may not be set (If self-locking function is used to lock up the doors, the prompt functions of central locking system may be set).

Operation of remote central locking system remaining in lock-up status

When the remote central locking system remains in its lock-up status, the prompt functions of central locking system may be activated if the doors or engine hood panel are opened by other means other than the remote controller of central locking system.

Prompt functions of central locking system

Indicator lamp of the central locking system goes on.

Turn signal light flickers for 10 seconds.

In 5 seconds, the horn may sound once every other 5 seconds. Once the engine hood panel is opened, the horn will sound.

How to reset

Open doors by remote controller of the central locking system or turn the ignition switch to the position “ON”, the prompt functions of central locking system is reset.

Stopping the prompt functions of central locking system

Lock up the doors with remote controller of central locking system

Verify the activation record of prompt functions of central locking system

You may verify whether or not the prompt functions are activated after the remote central locking system is set to its lock-up status.

Turn the ignition switch to the position “ON”. The indicator lamp of central locking system may flicker, and the flickering times equals to the activation times.

Attention

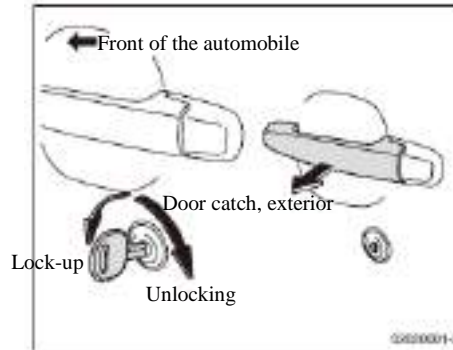
The activation record of prompt functions of central locking system may be verified once only.



Door locks

Danger

- Before you open any door, the peripheral safety must be verified.
- All doors must be closed tightly before you drive your automobile.
In this way, unexpected opening of doors or passenger falling-out may be avoided.
- When it is hot, never have an infant or pet left over inside the automobile separately. The internal temperature of car compartment may rise sharply.



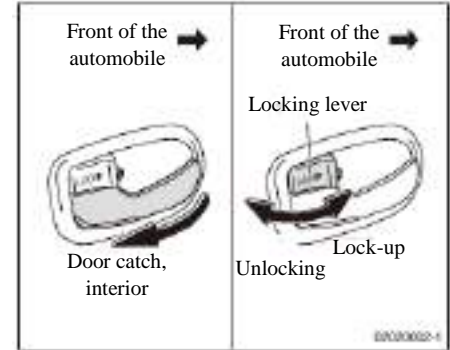
Lock up/unlock doors with a key

Turn the key toward the foreside of automobile for lock-up; turn the key toward the backside of automobile for unlocking.

Pull the exterior door catch to open a door.

(for automobiles equipped with central locking system)

When the driver-side door is locked up or unlocked, the front door and centre doors may also be locked up or unlocked automatically.



Lock up/unlock doors with the locking lever

Lock up the doors by pushing or pressing the front of locking lever. Unlock the doors by pushing or pressing the rear of locking lever.

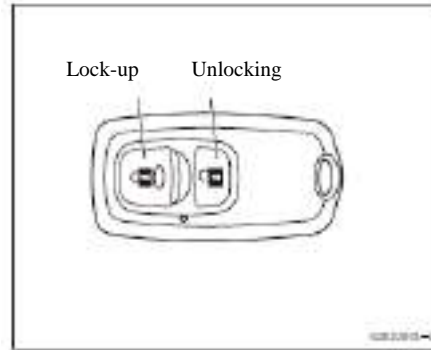
A door may be opened by pulling the interior door catch inward.

Push down front of locking lever, close the doors, and pull the exterior door catch to lock the doors.

The back door may only be unlocked and locked up by key.



Remote controller of central locking system



You may lock up and unlock the doors without the key.

You may lock up and unlock the front doors and centre doors by pushing the button switch “LOCK”/“UNLOCK” on the emitter.

The emitter is provided with a key ring. Therefore, it may be hung by with the ignition key.

Warning

- When the center distance from emitter to the automobile exceeds 3m, the emitter may not function normally.

- The emitter may also fail to work normally due to peripheral status (For example, if facility releasing high-intensity electric waves such as power plants, high-voltage lines, broadcasting stations and television towers are available).
- The emitter is provided with extremely precise built-in electronic elements. Therefore, the following particulars must be observed; otherwise the emitter may fail to work.
- Never pound the emitter or exert pressure onto it;
- Never expose the emitter to direct sunlight or hot environment;
- Do not allow water to attach to the emitter.

Use the emitter to lock up the doors

Verify that front doors and centre doors are closed, lock up and unlock the front doors and centre doors by pushing the button switch “LOCK” on the transmitter.

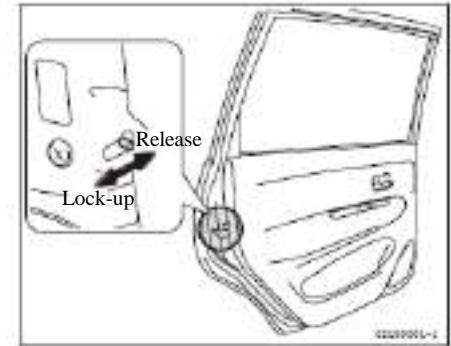
Here the turn signal light flickers once, indicating that the doors are already locked up.

Attention

Do not have the key locked up inside the automobile.



Children safety lock switch



Children safety lock switch is used to avoid unexpected opening of doors when the interior door catch is pulled.

Turn the children safety lock switch to its lock-up position, and close and lock up the doors. Here, the doors may only be opened from outside.

It is advisable to use the children safety lock switch if any child is seated inside the automobile.

Use the emitter to unlock the doors

When the emitter is used to unlock the doors, the turn signal light flickers twice and the room light goes on for 15 seconds, indicating that the doors are already unlocked.

⚠ Warning

- If any front door and centre door or engine hood panel is slightly opened or fully opened, the emitter cannot be operated.
- Before leaving from your automobile, you may pull the door catch by hand once to verify that the doors are already securely locked up.
- The emitter cannot be operated if the key is still inserted inside the key hole of the ignition switch, prompting you that the key is still inserted there.
- If you use the emitter to unlock the doors while the doors are not opened in 30 seconds, all doors may be locked up over again.
- However, the function may not work if the key is still inserted inside the key hole of the ignition switch.

Replace battery

If the locking-up/unlocking functions are implemented 10 times / day, the built-in battery of emitter may work for 2 years.

(However, the lifespan of emitter battery may be shorter if the automobile is a new one.)

When the emitter works unsteadily or cannot work, the electrical quantity of battery is very probably exhausted. In such a case, consult the local special service store.

Specs

- Frequency range... $\leq 315\text{-}316\text{ mhz}$
- Emission power... $\leq 86.98\text{ dB } \mu\text{V}$ (0.01 mW)
- Stray emission limit... $\leq 116.98\text{ dB } \mu\text{V}$ (10 mW)
- Occupied bandwidth... $\leq 400\text{ khz}$



Power windows

Danger

The following danger precautions must be observed so as to avoid severe personal injuries.

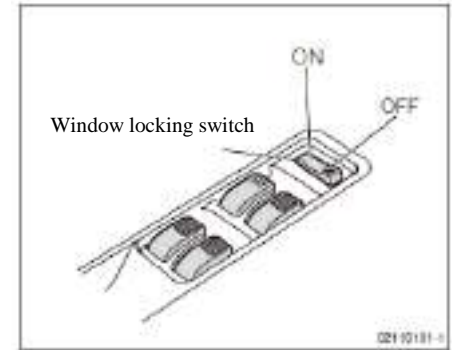
- Before you close the power windows, you must verify that the heads, hands and body positions of all passengers are kept inside the automobile. If the neck, head or hand of a certain passenger is jammed when you close the window, the passenger may be subjected to severe personal injuries.

Therefore, you must verify whether or not safe operation may be implemented before you close the power windows.

- If a child is seated inside the automobile, do not keep it in unattended state and allow it to operate the power window switch. The window lock switch must be used to prevent the child from operating the window switch accidentally.

- Never have an infant left over inside your automobile, especially when the ignition key is still inserted inside the keyhole of the ignition switch. If a child operates the power window switch, it may be nipped by windows, and serious accident may take place if the child is not accompanied by an adult.

Window locking switch



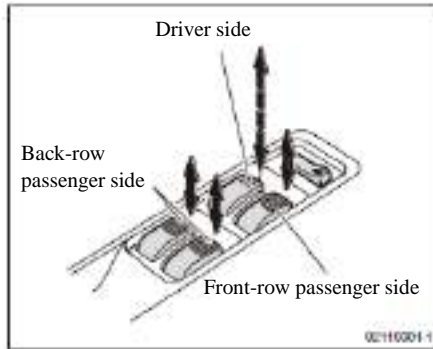
The power windows may be operated when the ignition switch is turned to the position “ON”.

All windows may be operated through the main switch fitted on the driver-side door. When the window locking switch is set to the position “OFF”, no window glass may be raised or lowered except for the driver-side window.



Engine hood panel

Main switch

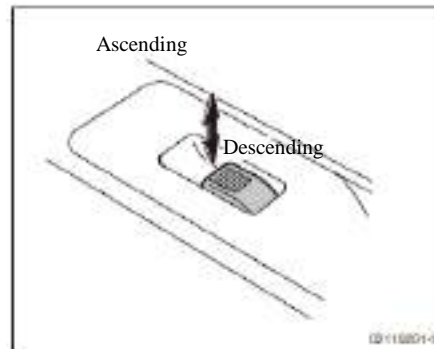


Pull up the switch to raise the window glass. Push the switch to lower the window glass. Window glass may move up and down when the switch is operated.

If the switch is fully pulled up or pushed down, the driver-side window glass may ascend or descend automatically.

Pull up the switch gently to stop the window glass midway.

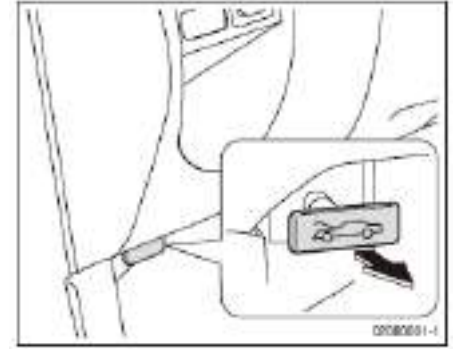
Window switch



Front-row passenger/back-row passenger side

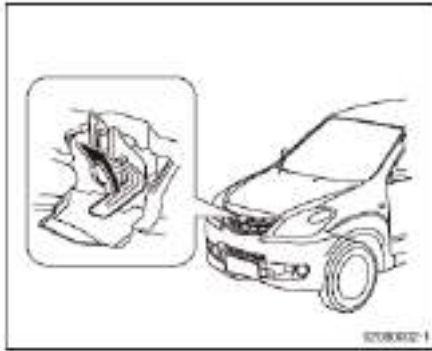
Pulls up the switch to raise the window glass. Push the switch to lower the window glass.

Window glass may move up and down when the switch is operated.



Open the engine hood panel

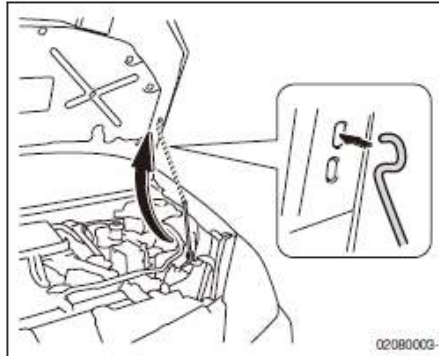
1 Pull the lock-up lever of engine hood panel beneath the driver-side dashboard to the puller.



2. Stand in front of the automobile, pull the auxiliary hook with your fingers, and lift up the engine hood panel.

⚠Warning

- When the wiper arms and blades are lifted up, never open the engine hood panel. Otherwise, the engine hood panel may be scored, or the wiper arms and blades may be damaged.
- Do not use a tool to open the engine hood panel since the tool may damage the lock hooks.

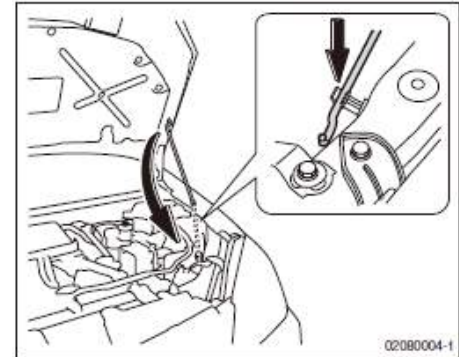


Strut the engine hood panel

Insert the brace strut of engine hood panel into the slot in the engine hood panel.

⚠Danger

Verify that the brace strut of engine hood panel already struts the engine hood panel securely. Failure to verify the condition may lead to sliding and closing of the engine hood panel, resulting in severe personal injuries.



Close the engine hood panel

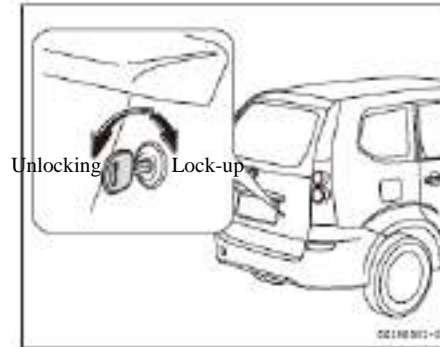
1. Strut the engine hood panel by hand, and set back the brace strut at the same time.
2. Lower the engine hood panel slowly.

⚠Danger

- Prior to driving your automobile, verify that the engine hood panel is already securely closed and locked up. Otherwise, the engine hood panel might be accidentally opened in process of driving and block off the vision of driver.



Back door

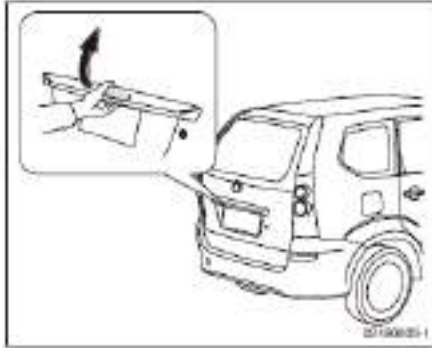


- If you find that the engine hood panel is not securely locked up in process of driving, drive your automobile safely away from the lane and stop it immediately, and lock up the engine hood panel securely.

Lock-up / back door

Turn clockwise the key to lock up the doors

Turn anticlockwise the key to unlock the back door.



Fuel charging-up compartment

Danger

- To avoid a fire during fuel charging-up, do shut down the engine prior to oil charge. In addition, do not smoke or use any open fire nearby the filling station.
- Never put any fuel inside the automobile.
Fuel may leak from the container and cause explosion or fire.

Open the back door

Pull the back door catch fitted on the inner side of exterior ornament, and lift up the back door.

Danger

Never open the back door when the rear wipers are lifted up.

Wiper blades may injure you.

Close the back door

Verify that no luggage may interfere the back door.
Push down the back door from a height of 20-30cm.

Attention

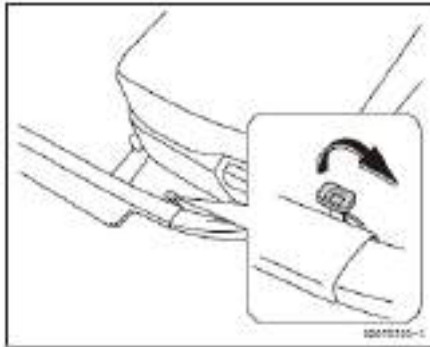
Do not have the key locked up inside the automobile.

Danger

The doors must be constantly closed during driving.
Otherwise toxic gases and effluent gases may enter into the automobile and cause death of passengers.



Door opener of fuel charging-up compartment Fuel tank cap compartment



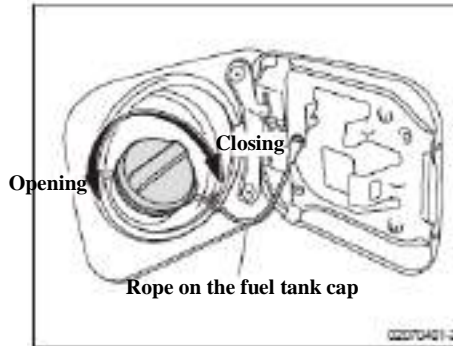
Open/close the fuel charging-up compartment door

Opening:

Pull up the door opener of fuel filling compartment fitted between the driver's seat and door.

Closing:

Close the fuel filling compartment door from outside the automobile.



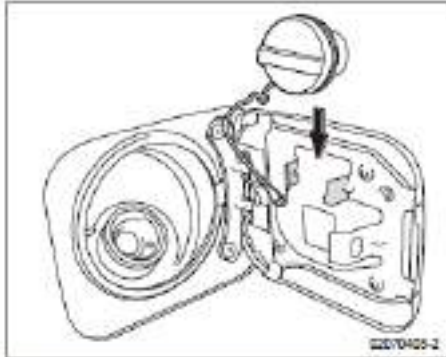
Danger

- Open the fuel tank cap gently, and release the pressure gradually. Doing so may prevent the overflow fuel from injuring the lacquer finish and your skin.
- To avoid over-flood, do verify that the fuel tank cap is securely closed.
- It is required to use the fuel tank cap provided by the manufacturer so as to avoid fuel leakage.



Warning

- The fuel information label is affixed on the back side of fuel charging-up compartment door. Fuel meeting the charging-up instruction must be adopted.
- Do be extremely careful to remove/fit on the fuel tank cap. Do not apply excessive force onto the rope fitted on the fuel tank cap.



Open the fuel tank cap

1. Turn anticlockwise the fuel tank cap to open it.
2. The removed fuel tank cap may be put onto the back side of the fuel charging-up compartment door.

Close the fuel tank cap

Turn clockwise the fuel tank cap till a crack sound is heard so as to verify that the fuel tank cap is securely closed.



Section 3

Seats and seat belts

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Seat

Prior to driving your automobile, verify that all passengers are properly seated and their seat belts are correctly buckled up.

Danger

If any passengers are not properly seated or their seat belts are not correctly buckled up, never drive the automobile. If any passengers are seated on the foldable cushion or inside the boot compartment, never drive your automobile.

Failure to observe the instructions given in the danger precautions may lead to severe personal injuries in case the automobile is suddenly stopped or collision takes place.

Front seat



Regulate the position of a seat

Lift up the seat regulating lever, allow your body to apply slight pressure to slide the seat so as to regulate it to the desired position, and then release the regulating lever.

Danger

- After the seat position is regulated, try to slide the seat back and forth to verify that the seat is securely locked up.
- If the seat is not locked up, unexpected movement may take place such that you lose control of the automobile.

- Never try to regulate the position of driver's seat during driving. Doing so may cause out-of-control of the automobile, resulting in an accident.



Regulate the angle of backrest

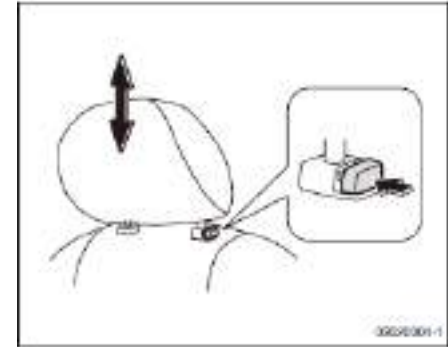
Bend forward slightly, and pull up the backrest regulating handle. Incline the backrest gradually till it reaches the desired angle.

Then release the backrest regulating handle.

⚠ Danger

- After the angle of backrest is regulated, allow your body to apply a pressure onto the backrest to verify that the backrest is securely locked up. Doing so may prevent the unexpected movement of backrest, such that you may not lose control of your automobile.

Headrest



Regulate the height

To raise the height of headrest, just pull it up vertically.

To lower the height of the headrest, just push the locking button and press down the headrest.

Regulate the center of the headrest such that it may approach the centers of your ears to the maximum extent.

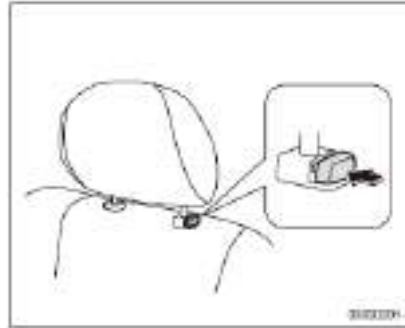
Remove the headrest

To remove a headrest, just push the locking button and pull up the headrest vertically.



Second-row seat

Headrest



Danger

- After the headrest is regulated, do verify that the headrest is securely locked up. Doing so may prevent the unexpected movement of headrest, such that you may not lose control of your automobile.
- If the headrest is removed or before it is regulated properly, do not drive your automobile. Headrest may effectively protect the heads and necks from being shocked in case an unexpected accident takes place.
- The headrest may be brought into the maximum protective action when it is closest to your head. Therefore, it is inadvisable to use a back cushion on the backrest.
- Do not regulate the driver headrest during driving. Doing so may cause out-of-control of the automobile, resulting in an accident.
- Do not insert the headrest in an incorrect direction. The headrest may not be locked up if the insertion direction is incorrect.

Regulate the height

To raise the height of headrest, just pull it up vertically. To lower the height of the headrest, just push the locking button and press down the headrest.

Regulate the center of the headrest such that it may approach the centers of your ears to the maximum extent.

Remove the headrest

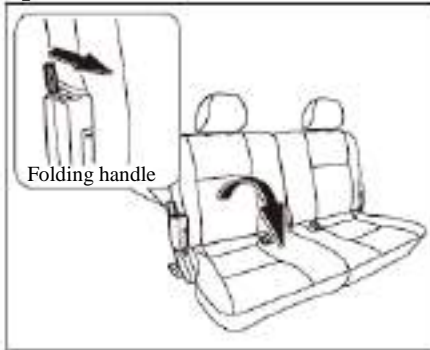
To remove a headrest, just push the locking button and pull up the headrest vertically.

Danger

- After the headrest is regulated, do verify that the headrest is securely locked up. Doing so may prevent the unexpected movement of headrest, such that you may not lose control of your automobile.
- If the headrest is removed or before it is regulated properly, do not drive your automobile. Headrest may effectively protect the heads and necks from being shocked in case an unexpected accident takes place.
- The headrest may be brought into the maximum protective action when it is closest to your head. Therefore, it is inadvisable to use a back cushion on the backrest.
- Do not regulate the driver headrest during driving. Doing so may cause out-of-control of the automobile, resulting in an accident.
- Do not insert the headrest in an incorrect direction. The headrest may not be locked up if the insertion direction is incorrect.



Flap-seat backrest



1. Regulate the position of the front seat, and prevent the backrest of second row contact the front seat.
2. Pull forward the folding handle, incline the backrest, and release the folding handle.



3. To retract the seat, pull up the folding handle, and lift up the seat.

Set back the second-row seat

1. Lift up the seat backwards.
2. Lift up the backrest.

Danger

In order to reduce danger and personal injury in case an accident takes place:

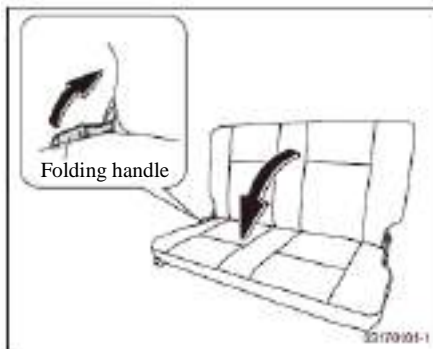
- Never allow anybody to seat inside the boot compartment. The boot compartment is not designed for passengers.

- The height of articles piled inside the boot compartment shall not exceed that of the backrest.
- Verify that the backrest second-row seat is set back to its vertical position and securely locked up, and the seat belts may be observed quite clearly.



Third-row seat

Flap-seat backrest



1. Pull up the folding handle, incline the backrest slowly, and release the folding handle.



2. To retract the seat, pull up the handle, and lift up the seat.

Set back the third-row seat

1. Lift up the seat legs.
2. Lift up the seat backwards.
3. Lift up the backrest.

Danger

2. In order to reduce danger and personal injury in case an accident takes place:

- Never allow anybody to seat inside the boot compartment. The boot compartment is not designed for passengers.
- The height of articles piled inside the boot compartment shall not exceed that of the backrest.
- Please verify that the third-row seat is set back to its vertical position and securely locked up.



Instructions for the seat belts

It is advisable for all passenger to buckle up seat belts correctly.

Observe the following precautions so as to use the functions of seat belts correctly. Failure to observe these precautions may lead to severe personal injury in case an accident happens or sudden braking is applied. Regularly check the safety belt systems. If any seat belt cannot function normally, invite the local special service store immediately for inspection of the safety belt systems.

Children:

It is advisable to seat the children into the second row and have them fixed by seat belts. In accordance with accident statistics, children seated in second row for proper protection are much more safe than those who are seated in the front seat.

- Do not allow children to stand or sit on heels on their seats.
- Do not carry a child by arms. In case an accident takes place, the children carried in your arms may be nipped between the car compartment and you.

Dwarfish passengers and teen agers:

If the shoulder buckling tape passes through the neck and face of the front-row passenger, move the seat back and forth such that the seat belts may tie down the passengers closely.

Pregnant woman:

It is advisable for pregnant woman to use seat belt. Fasten the waist buckling tape at the buttock in so far as possible instead of the waist. Please consult the doctor.

Physically handicapped person:

It is advisable for physically handicapped persons to use seat belts.

Please consult the doctor.

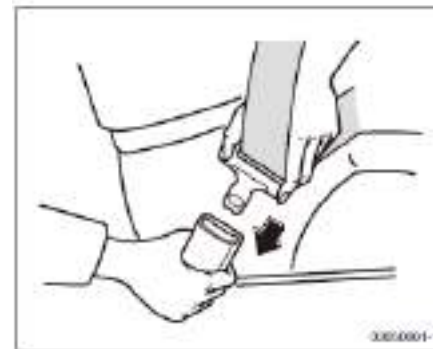
Danger

- Seat belts are designed as per skeleton of human body. The safety belt shall pass the body through the front of pelvis or exactly the pelvis, chest and shoulders; never buckle up the waist buckling tape through the stomach.
- Give attention to comfortableness, tie down the seat belts in so far as possible such that they may protect the passengers, which is exactly its design goal. The protection functions of relaxant safety belts may be severely affected.

- Prevent polishing agents, liquid oil or chemicals, especially acidic liquid of battery from contaminating the assist straps of safety belts with care. Use mild soap lye or water to clean the safety belts safely. If the assist straps of safety belts are worn, contaminated or damaged, replace them with new ones.
- It is especially important that, the whole seat belt assemblies shall be replaced even though their extent of damage is not so obvious after your automobile is violently collided.
- Do not buckle up twisty safety belts.
- A seat belt assembly may only be used by 1 passenger. It is extremely dangerous to buckle up a safety belt onto a child seated on the knees of a passenger.
- The users must not modify the safety belts of fitted any articles onto them; otherwise, regulation of safety belt assemblies by seat-belt regulating device may be adversely affected, such that the relaxant safety belts may not be tighten.
- Do not allow a shoulder buckling tape to pass through the upper part of chest, neck or nearby the face of the passenger.



Three-point emergency locking retractor-type seat belts



Fasten the seat belts

Draw out the seat belt from retractor, and insert the lug into the locking buckle till a "crack " sound is heard.

Danger

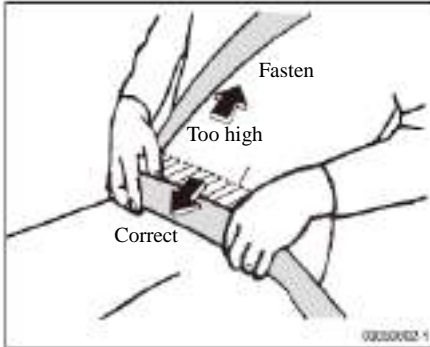
In order to obtain the best protection, verify that the safety belt is securely fixed without twisting after the lug is inserted.

- Never buckle up the shoulder buckling tape through beneath your outer-side arm or behind your back.
- Do not incline the backrest excessively.
- Do not buckle up a seat belt onto rigid or fragile articles such as spectacles, jewelry, pens and key.
- Do not wear thick clothes when seat belt is buckled up. In that case, you cannot fix your seat belts correctly.
- Do not modify or break down the seat belt systems.
- The total system shall be replaced at local special service store even though the extent of damage is not so obvious after your seat belt systems are violently collided.

Warning

- Be careful not to allow the assist straps or hardware of seat belts to be nipped by seats or doors for fear of damages.

- Use mild soap lye or warm water to clean the safety belts safely.
Never use bleacher, dye stuff or abrasive detergents. These liquids may severely damage the safety belts. Do not remove safety belts when cleaning. When safety belts are thoroughly air-dried, allow them to retract.

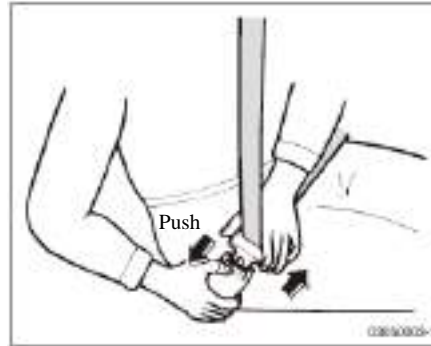


Regulate a safety belt

The waist buckling tape must be regulated downwards till the buttocks, and it must not be buckled at the waist.

Pull the shoulder buckling tape toward the retractor, and take up the safety belt.

Safety belt is designed such that it may stretch or retract as human body moves under normal conditions, and it may be locked up in case of any emergency (such as emergency braking, collision), therefore it is unnecessary to regulate the length of seat belts.



Unfasten a safety belt

Push and press the release button of locking buckle. Allow the retractor to take up the safety belt completely.

Verify that the safety belt is retracted free of twisting.

Two-point seat belts



Fasten the seat belts

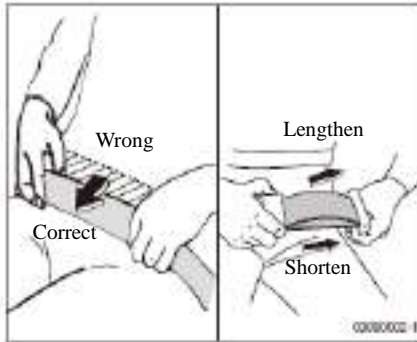
Insert the lug into the locking buckle till a "crack" sound is heard.

Danger

In order to obtain the best protection, verify that the safety belt is securely fixed without twisting after the lug is inserted.



Safety belt pretensioner of the front seat



Regulate the position of a safety belt

The waist buckling tape must be regulated downwards till the buttocks, and it must not be buckled at the waist.

Ensure that the lug is perpendicular to the safety belt, and pull the safety belt to regulate its length.



Unfasten a safety belt

Push and press the release button of locking buckle.

Insert the lug into locking buckle when the seat belt is not used.

Warning

To avoid damage to seat belts, verify that the assist strap of seat belt is not nipped by door lock or backrest.



Pretensioner mechanism may be activated once a sharp pounding comes from the foreside. The pretensioner may immediately take up the seat belt such that the upper part of passenger may be securely fixed and the functions of seat belts and SRS air bags may be enhanced.

When seat belt pretensioner is activated, work noises and odor may be given out.

When your automobile is subjected to a sharp pounding coming from foreside, the pretensioner still may be activated even if the seat belt is not fastened.

See Section “Air Bag” for details.



Attention

If the seat belt pretensioner of your automobile is already activated, it must be replaced with a new one at the local special service store.

Danger

- Do not modify or replace seat belt retractors, other parts and components related to seat belts and the suspension system; Otherwise, the protective results of seat belt pretensioner may be deteriorated.
- Please consult the local special service store before you conduct the following operations:
 - Scrap your automobile;
 - Remove safety belts of front seats;
 - Electric welding;
 - Repair plate work;
 - Repair spray paint;
 - Alter front end structure;
 - Mount any equipment (such as grill protection device, snowplow and windlass) to the front end of your automobile.

- Remember well that your automobile is equipped with seat belt pretensioners. When you sell your automobile to other people, you must tell the buyer that your automobile is equipped with seat belt pretensioners.

Bind-force limiter mechanism

The seat belts of driver and front-row passengers are equipped with binding-force limiter mechanisms. The binding-force limiters may be activated only when your automobile is subjected to a sharp pounding coming from foreside and the binding force exceeds a certain extent. The bind-force limiter mechanism may reduce the forces applied to the chests of the driver and front-row passengers.

Attention

In certain cases, even if the pretensioner mechanism is activated, the bind-force limiter mechanism may not be activated.



Child protection device

Precautions of child protection

We strongly recommend that you may use child protection devices for adequately underage children. If the size of a child is relatively bigger and child protection device is unsuitable for it, do seat it into the second-row seat, and seat belt must be fastened properly for protection. See “Three-point emergency locking retractor-type seat belts”.

Danger

- In case an accident or emergency braking happens, the seat belt child protection devices shall be correctly used as per the ages and figures of children in order to effectively protect them. Carrying a child in arms cannot substitute the child protection device. If an accident happens, the child may crash up against windshield or may be nipped between the passenger and the car compartment.
- We strongly recommend that child protection devices suitable for the figures of children may be adopted, and may be mounted onto the second-row seats. In accordance with accident statistics, children seated in second row for proper protection are much more safe than those who are seated in the front seat.

- Do not use an infant hand-basket or infant seat on the front seat; Otherwise grievous injury or even death may be caused in case an accident takes place.

When an accident happens, the impulse force generated by quick inflation of air bags for front-row passengers may grievously injure or even kill the child.

- Take care to follow the mounting list provided by the manufacturer of child protection devices, and verify that the device is correctly fixed.

Child protection device

Child protection devices intended for infants or children must be correctly mounted onto seats provided with waist /shoulder buckling tapes. Please read the operating instruction manual of child protection devices carefully.

To provide correct protection, the child protection devices must be correctly used as per the instructions given by the manufacturer for applicable ages and figures of children.

Correctly mount the child protection devices as per the specification sheets provided by the manufacturer. General instructions are given in the following diagrammatic representation.

Child protection devices must be mounted onto the second-row seats. In accordance with accident statistics, children seated in second row for proper protection are much more safe than those who are seated in the front seat.



Types of child protection seats

⚠ Danger

- Do not use an infant hand-basket or infant seat on the front seat; Otherwise grievous injury or even death may be caused in case an accident takes place. When an accident happens, the impulse force generated by quick inflation of air bags for front-row passengers may grievously injure or even kill the child.
- When the child protection devices are mounted, verify that it may safely bind the passengers; Otherwise, the children may be grievously injured or even killed in case emergency braking or an accident happens.

When the child protection device is not used, it must be fixed by seat belt or put into a place other than the passenger compartment. Doing so may protect the passengers from being injured in case emergency braking or an accident happens.



(1) Infant seat



(2) Child seat



Install seat belt



(3) Older children seat



(1) Mount an infant seat

Infant seat must be mounted backwards.



⚠ Danger

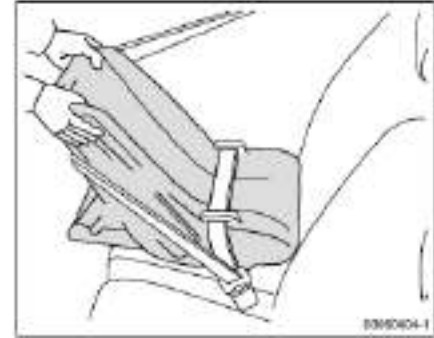
- If the child protection device interfere with the locking mechanism of front seats, it must not be mounted onto the second-row seat. Otherwise the child front-row passengers may be seriously injured or even killed in case emergency braking or an accident happens.
- If the position of driver's seat cannot provide adequate space for mounting the child protection device onto the seat behind the driver's seat, the child protection device shall be mounted onto the right-hand second-row seat.



1. According to the specification sheets provided by the manufacturer, pass the shoulder buckling tapes through or around the infant seat, and then insert the lug into the locking buckle. Be careful not to twist the safety belt. The waist buckling tape must be fastened.

⚠ Danger

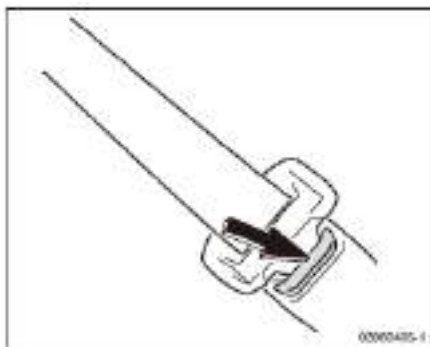
- When the lug is inserted, you must verify that the lug and locking buckle are locked up, and that the waist and shoulder buckling tapes are free of twisting.



- Do not insert articles such as coin or paper clip into the locking buckles; Otherwise the lugs and locking buckles may not be fastened.
- If the seat belt cannot be normally buckled up, the safety of child cannot be guarantee. Contact the local special service store immediately. Do not use the child protection devices before the seat belts may be fastened.

⚠ Danger

Push and pull the child protection device in all directions so as to verify that the child protection device is securely mounted. Please observe all mounting instructions provided by the manufacturer.



2. To remove the infant seat, just push the release button of locking buckle such that the safety belt may be completely retracted. In this way, the safety belt may stretch out and draw back freely and may be used by passengers (including adult or older children).

(2) Mount a child seat

Forward or backward child seat must be adopted as per the ages and figures of children. The child seat must be mounted as per the instructions given by manufacturer for ages and figures of children, and the mounting list of child protection device.

Danger

- If the child protection device interfere with the locking mechanism of front seats, it must not be mounted onto the second-row seat. Otherwise the child front-row passengers may be seriously injured or even killed in case emergency braking or an accident happens.
- If the position of driver's seat cannot provide adequate space for mounting the child protection device onto the seat behind the driver's seat, the child protection device shall be mounted onto the right-hand second-row seat.



1. According to the specification sheets provided by the manufacturer, pass the shoulder buckling tapes through or around the child seat, and then insert the lug into the locking buckle. Be careful not to twist the safety belt. The waist buckling tape must be fastened.

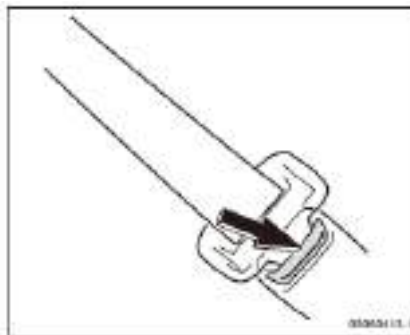
⚠ Danger

- When the lug is inserted, you must verify that the lug and locking buckle are locked up, and that the waist and shoulder buckling tapes are free of twisting.



⚠ Danger

- Push and pull the child protection device in all directions so as to verify that the child protection device is securely mounted. Please observe all mounting instructions provided by the manufacturer.



2. To remove the child seat, just push the release button of locking buckle such that the safety belt may be completely retracted. In this way, the safety belt may stretch out and draw back freely and may be used by passengers (including adult or older children).

(3) Mount an aged child seat
Older child seat must be mounted forward.

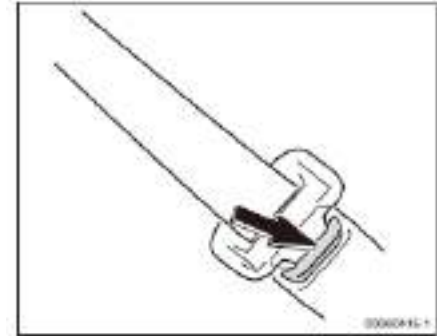
1. Seat a child into the aged child seat. According to the specification sheets provided by the manufacturer, pass the shoulder buckling tapes through or around the aged child seat and child, and then insert the lug into the locking buckle. Be careful not to twist the safety belt.
2. Verify that the shoulder buckling tape is correctly passed round the child's shoulder, and that the waist buckling tape is passed round the child's buttocks as low as possible. See "Three-point emergency locking retractor-type seat belts".



⚠ Danger

- Do verify that the shoulder buckling tape is passed through the center of the child's shoulder. Safety belt must not be passed round the neck of a child, or passed below its shoulders; otherwise the protection performance would be deteriorated in case emergency braking or an accident happens, resulting in serious injury or even death.
- If the position of waist buckling tape is too high and the seat belt is too loose, the passenger may slide out of his seat from beneath the waist buckling tape in case collision or other unexpected accident happens, resulting in grievous injuries. The waist buckling tape must be adjusted downwards in so far as possible to the child's buttocks.
- To guarantee the child's safety, do not pass the shoulder buckling tape through below his arm.
- When the lug is inserted, you must verify that the lug and locking buckle are locked up, and that the waist and shoulder buckling tapes are free of twisting.
- Do not insert coins and paper clips into the locking buckles, for fear that the lugs and locking buckles cannot be fastened.

- If the seat belt cannot be normally buckled up, the safety of child cannot be guarantee. Contact the local special service store immediately. Take care to fix the seat belt before child protection device is used.



3. To remove the older child seat, just push the release button of locking buckle such that the safety belt may be completely retracted.

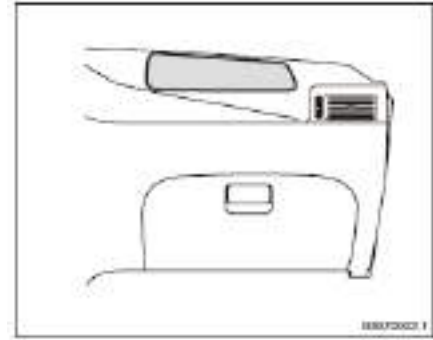


SRS (auxiliary restraint device) air bag

- When the front of your automobile is subjected to severe impact and the transducer of SRS air bag detects an impact force higher than the setting value (sharp pounding capable of leading to grievous injuries), the SRS air bag may be immediately triggered off.
- The seat belt bind the bodies of the driver and front-row passengers, and the SRS air bags and the said function may function jointly so as to reduce the impact force applied onto the cheeks, heads, chests and other positions of the driver and the passengers.



Air bag for the driver



Air bag for the front-row passenger



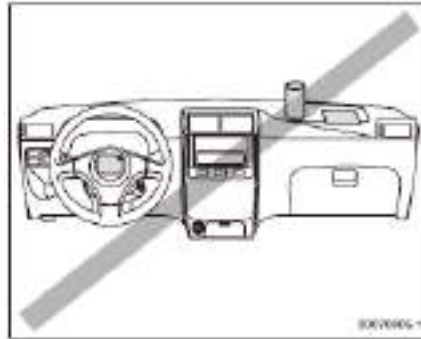
⚠ Danger

- The seat belts must be fastened. SRS air bag is an auxiliary apparatus and cannot serve as a substitute for seat belt in any case. If each seat belt is not correctly buckled up, the possibility of grievous injury or death may still get higher in case an accident happens even if your automobile is equipped with SRS air bags.
- The seat cushions and backrests must be regulated to their optimum positions. Failure to regulate the seats to their optimum positions may lead to dangers since the effect SRS air bags may be affected, and the passengers may be seriously injured in case collision takes place.

- Do seat your body into your seat correctly and completely, such that the distance from the steering wheel to your body and the distance from the dashboard to the front-row passenger may not get too short. Furthermore, do not rely on a position adjacent to the front door. If the danger precautions are not observed, the passengers may be subjected to serious injuries or even death in case front side collision takes place even if your automobile is equipped with SRS air bags.
- Do not remove the steering wheel, dashboard or relevant parts and components, and do not apply excessively high forces onto these positions. Failure to observe the danger precautions may lead to invalidation of SRS air bags.
- Never modify or disassemble the SRS air bags.
- Do not touch the air charging system of SRS air bags within 30 minutes after the air bags are inflated. The air charging system of SRS air bags may get extremely hot, and you may be severely scalded if you touch the said position.



- Do not seat your body at the edge of a seat. Do not lean over the dashboard, do not allow a child to stand in front of a SRS air bag, and do not carry a child by seating it on your knees. The SRS air bag for front-row passenger may be triggered off immediately inward the car compartment; therefore, the strong impact force generated by inflation of SRS air bags may give rise to potential risk of serious injuries of the passengers.
- Seat the child into the second-row seat, and do buckle up its seat belt.



- For a child for whom the seat belt cannot be correctly buckled up, seat it into the child seat mounted on the second-row seat.
- Do not mount a child protection device onto the front seat. It is extremely unsafe to use rearward-facing child protection device in the said position since the back of infant seat or seat may get too close to the SRS air bags and the sharp pounding generated by inflation of SRS air bags may seriously injured the infant /child.

- Never affix sealant, stickers and other articles onto the upper cover surface of steering wheel /dashboard. Failure of observing the danger precautions may disturb the correct inflation of air bags.

- Do not put articles onto the dashboard or allow objects such as umbrella to lean on the dashboard, and do not mount any attachment onto the window glass or interior rearview mirror. Failure of observing the danger precautions may lead to improper triggering-off or cause these articles to fly about inside the car compartment such that the passengers may be injured.
- Do not apply too high forces onto the following parts and components; for example, violently knock the triggering-off position (such as surface of steering wheel and dashboard) of SRS air bags. Failure to observe the danger precautions may be extremely dangerous, and may possibly lead to improper operation of SRS air bags and serious injuries of the passengers.
- To guarantee that the SRS air bags are completely triggered off according to the designed performance, the following key points must be observed.
- Do not modify or replace the steering wheel, other parts and components related to the SRS air bag, and the suspension system;



- Do not mount any equipment (such as grill protection device, snowplow and windlass) to the front end of your automobile.
- Radio wave emitted by radio setups may adversely impact the computer controlling the SRS air bags. Please consult the local special service store if you want to mount radio setups or similar devices.
- The triggering-off speed of SRS air bags may be extremely high; Therefore, scratches, heat injury or bruise may occur on the bodies of passengers when a SRS air bag is triggered off.

 **Warning**

- The gas filled into the air bags contains a small amount of stimulators; however, the content of stimulators may not injure the healthy people. However, the stimulators may injure people suffered from respiratory diseases and hypersensitivity. Therefore, once an air bag is triggered off, open the windows to allow fresh air to enter into the automobile, or walk out of the automobile on the premise that the safety may be guaranteed. If your skin, eyes, nose or throat are irritated, flush them with cold water. If your nose or throat is irritated, have a breath of fresh air. If the irritation symptom is not eliminated, please consult your doctor.
- In case an accident such as collision takes place, the triggering-off of the SRS air bag for the front-row passenger may lead to the rupture of front windshield of your automobile.
- Triggered-off SRS air bags cannot be reused. the triggered-off SRS air bags must be replaced with new ones at the local special service store.

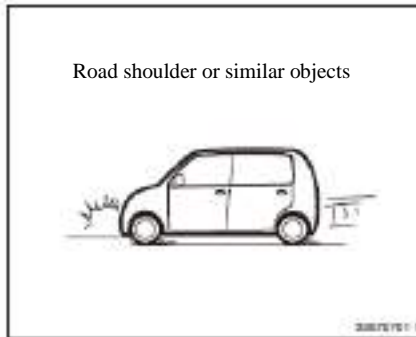
- If any of the following cases occur, you must consult the local special service store. Your operation without authorization may cause unexpected operation of the SRS air bags, and lead to faults or accidents.
- Remove the steering wheel;
- Front of your automobile requires repair;
- Mount radio equipment;
- Discard an air bag;
- Scrap your automobile.
- Before you discard your automobile or SRS air bags, you must consult the local special service store. Failure of observing the above-mentioned warning particulars may lead to unexpected operation of SRS air bags and personal injuries.
- Do not neglect any score marks or cracks occurring on the upper cover surface of steering wheel with built-in SRS air bags. Contact the local special service store for replacement of the problematic parts and components. Otherwise, the SRS air bags may not normally operate when collision takes place, resulting in personal injuries.



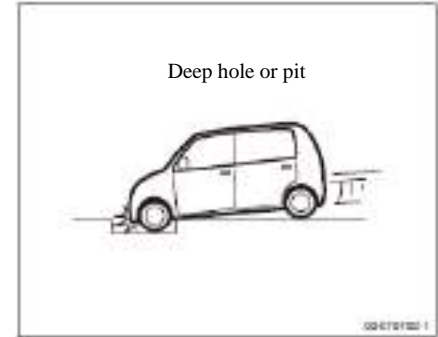
Example of triggering-off of air bags

When the front bumper bar of your automobile is subjected to sharp pounding coming from foreshore, the air bags may be triggered off. In addition, the pretensioner system may also be activated.

As an exception, the SRS air bags may also be triggered off if the bottom of your automobile is subjected to sharp pounding coming from pavement.



- When your automobile crash up against road shoulder or similar object at a high speed;

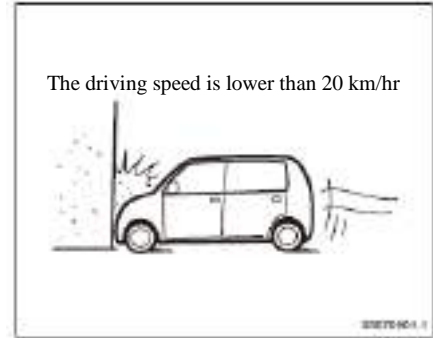
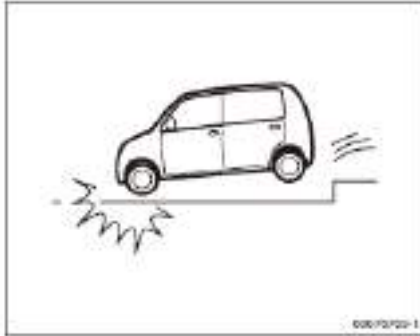


- When your automobile drops into a deep hole or pit;



Example of triggering-off failure of air bags

Air bags may not be triggered off in the following cases, including the cases in which the impact force coming from foreside is relatively low or the impact force is completely absorbed by the body of your automobile, and the air bags may not be triggered off no matter whether your automobile is severely damaged.

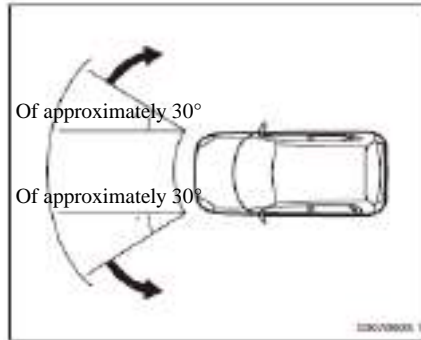


- When your automobile bounces impact against the ground surface.

- When your automobile collides with a concrete wall in central collision mode at a driving speed lower than 20 km/hr.



- When your automobile collides with the objects such as electric line poles and trees;



- When the front of your automobile crash up against concrete wall or guardrails at an angle of or greater than 30°;



- When warning light of SRS air bags goes on;



- When your automobile penetrates into the rear bottom of a heavy-duty truck;



- When other automobile impacts against your automobile edgewise or from behind;



- When one side of your automobile is turned up or turned over;



SRS air bag device

Air bag warning light



In the following cases, the air bag may not be triggered off, and the expected purpose may not be reached.

- If the ignition switch of your automobile is set to the “LOCK” or “ACC” position when collision takes place;



When any fault is detected, the warning light may go on to warn the driver of a system fault.

When SRS air bags are kept normal, the warning light may go on for 6 seconds when the ignition switch is set to the “ON” position.

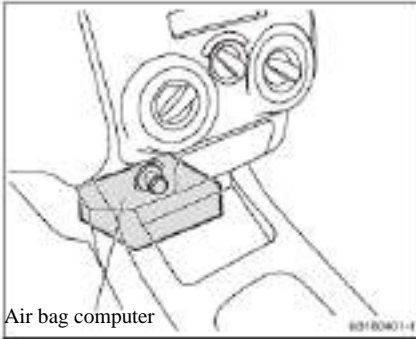
Warning

- When one of the following conditions occurs, contact the local special service store immediately for inspection of the conditions of the system.

- Warning light fails to go on when the ignition switch is set to the “ON” position;
- Warning light goes on when engine is running;
- The warning light does not go off when 6 seconds expire after the ignition switch is set to the “ON” position;
- The warning light flickers when 6 seconds expire after the ignition switch is set to the “ON” position;
- The warning light of air bag may go on when any exception of the pretensioner mechanism takes place.



Air bag computer



The device is used to control the SRS air bags.

Warning

- In any case, the air bag computer must not be removed or disassembled. Failure to observe the warning particulars may lead to incorrect triggering off of air bags or failure of triggering-off in contingency situations.
- Be careful not to splash water, fruit juice or similar materials onto the air bag computer.
- Never violently knock or kick at the air bag computer or its peripheral positions.
- Triggered-off SRS air bags cannot be reused. The computer must be replaced with new one at the local special service store.



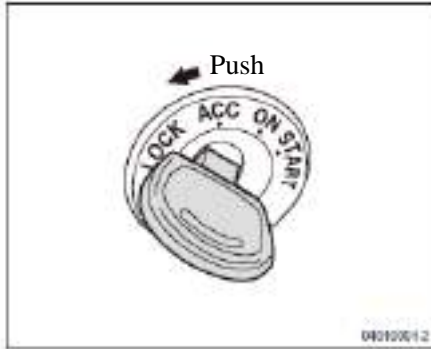
Section 4

Instruments and controllers

Ignition switch.....	4-1
Combination switch	4-2
Emergency warning signal switch	4-3
Wiper and washer switch.....	4-4
Demister switch, rear window	4-5
Foglight switch.....	4-5
Cigarette lighter.....	4-6
Light regulation switch.....	4-7



Ignition switch



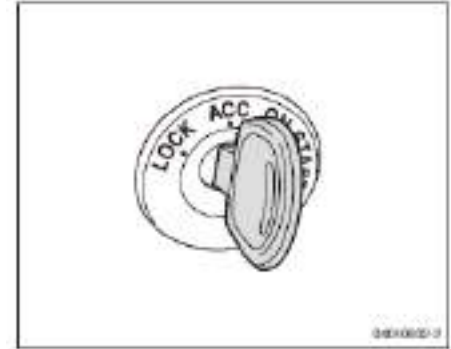
Lock.....

Key in the position may be inserted or pulled out. If the key cannot be turned in the position, you may turn the steering wheel from side to side and turn the key once again.

You may turn the ignition switch from ACC to LOCK position by pushing and holding the ignition switch and turning the key.

⚠ Danger

- Do not turn the key to the “LOCK” position during driving; otherwise the key may accidentally drop off from the ignition switch, resulting in steering locking and an accident.



ACC (attachment)

When the key is kept in the position, the attachments such as radio may be operated after the engine is shut down.



Combination switch

Headlight control

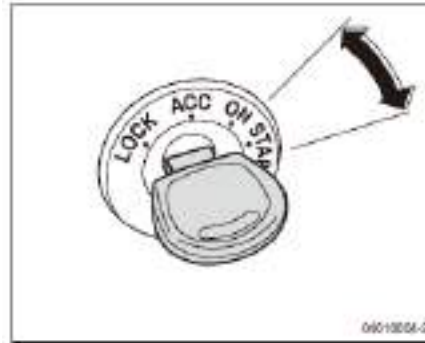


ON

When the key is set to the position, the engine runs.

Warning

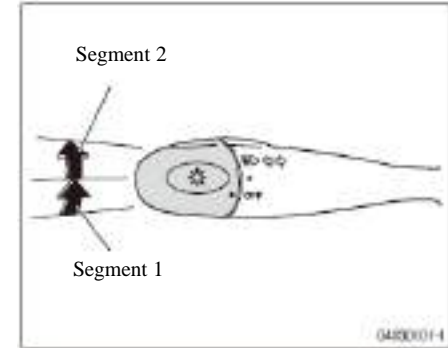
After the engine is shut down, never set the ignition switch to the position. Failure to observe the warning particulars may lead to thorough electric discharge of the battery.



START.....


When the key is set to the position, the engine is started up. When the key is released after the engine is started up, the key may automatically return to the "ON" position.

See Section 10 for starting-up method. .



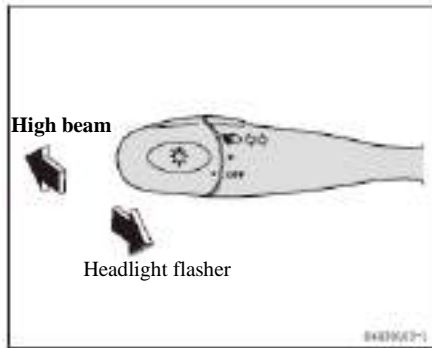
Turn the combination switch knob to turn on the headlight.

Switch position

Position	● 	
	Segment 1	Segment 2
Lights	Segment 1	Segment 2
Headlight	[OFF]	On
Width light	On	On
Taillight	On	On
License plate light	On	On
Dash light	On	On



Turn signal light control



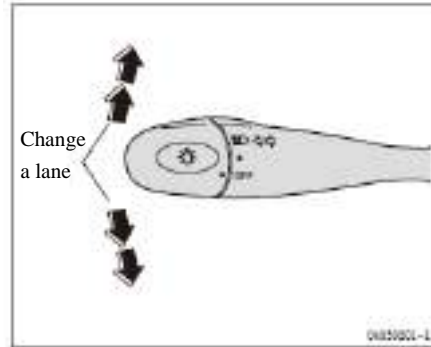
Turn on/off high beam

When the headlights are turned on, push outward the lever to turn on the high beam, or pull it back to return to lower beam. When high beam headlights are turned on, the indicator light goes on.

Allow the headlights to flicker

Pull the lever gently and then release it.

The headlight flasher may work when the headlights are turned on/off.



When the ignition switch is set to its “ON” position, the turn signal lights flicker.

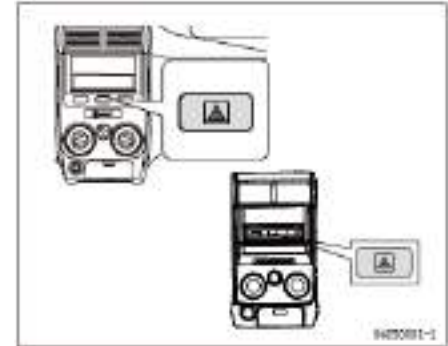
Toggle the combination switch to indicate steering. Here, indicator lights on the dashboard may start flickering.

Or toggle gently the combination switch and keep in any position (either upper or lower) to indicate lane changing.

Attention

If the flickering rate is higher than that in normal condition, bulb of the indicator light may be damaged.

Emergency warning signal switch



Push the switch to allow all turn signal lights to flicker.

Here, indicator lights on the dashboard may start flickering.

Push it once again to turn off the switch.

The direction indicator switch does not work when the emergency warning signal switch is turned on.

Do not operate the switch except for emergency.

Danger

Drive your automobile away from the lane to avoid accident if any emergency occurs.



Wiper and washer switch

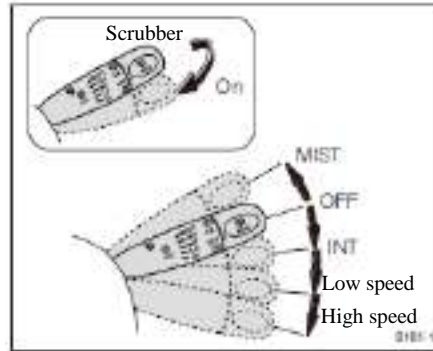
Danger

- To operate the wipers in frigid weather, use a defroster or demister to heat up the heating-up so as to prevent the cleaning fluid from icing up and obstructing the vision.
- Abraded or dirty wiper blades may impact your vision. Do maintain and replace the wiper blades when necessary.

Warning

- The washing solution reservoir may be charged up with cleaning solution only.
- When there is snow cover, icing occurs on the window glass or the window glass is dry, do not use the wipers; otherwise the wiper blades may be damaged.
- If there is no cleaning solution inside the reservoir, do not operate the wipers; Otherwise the motors may be damaged.

Windshield wiper and washer switch

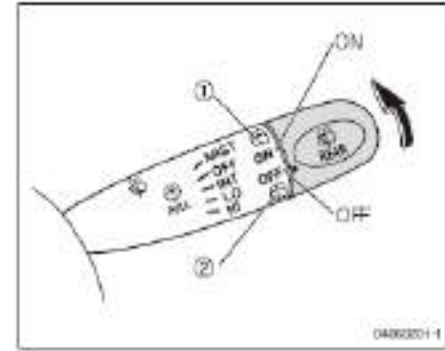


When the ignition switch is set to the “ON” position, the wipers and washer may be operated. Push the wiper switch drawbar down to the bottom to turn on the wiper.

When the wiper switch is set to its “INT” position, the wiper works in intermittent operation mode. When the wiper switch is pushed up to the “MIST” position from the “OFF” position, the wiper may work at low speed. When you release the drawbar, the wiper switch returns to the “OFF” position. Pull the drawbar to the operator to activate the washer.

Here the wipers and washer are linked up and work at low speed.

Rear wiper and scrubber switch

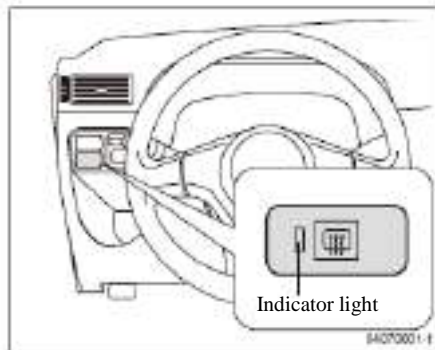


When the ignition switch is set to the “ON” position, the rear wipers and washer may be operated. When the knob is set to the “ON” position, the rear wiper works.

To spray cleaning solution while the rear wiper works, turn the knob from the “ON” position to the uppermost “①” position. Moreover, when the knob is set to the lower “②” position from the “OFF” position, cleaning solution may be sprayed.



Demister switch, rear window



The rear window demister may be operated when the ignition switch is set to the “ON” position . Push the demister switch to demist the rear window. When the demister is turned on, the indicator light goes on.

The demister is not designed for snow melting or rainwater drying.

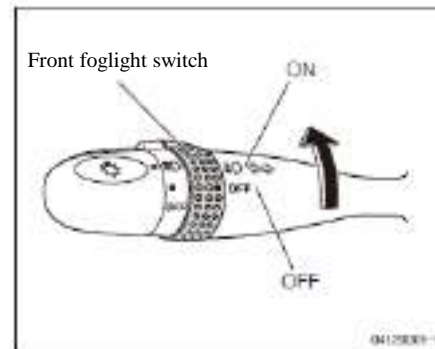
When the combination switch is set to segment 1 or segment 2, the sign of demister may go on.

Warning

- To avoid battery discharge, turn off the demister once the window glass gets clear.

- **Never scrape the heating wire at any time.**

Foglight switch Front foglight



When the combination switch is set to segment 1 or segment 2 and the front foglight switch is set to the “ON” position, the front foglights go on.

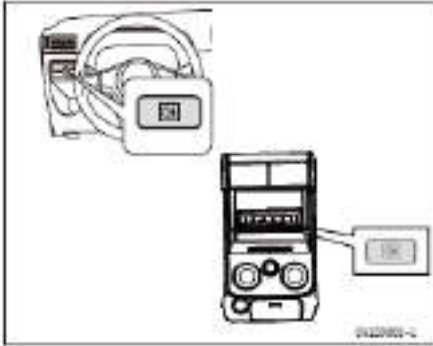
When the front foglights are turned on, the indicator light goes on.

Attention

If the combination switch is set to the “OFF” position when the front foglights go on, the front foglights may go out.



Rear foglight



When the combination switch is set to segment 1 or segment 2 and the rear foglight switch is pushed, the rear foglights go on.

When the rear foglights are turned on, the indicator light goes on.

When the combination switch is set to segment 1 or segment 2, the sign of rear foglights may go on.

Attention

If the combination switch is set to the “OFF” position when the rear foglights go on, the rear foglights may go out.

Cigarette lighter



Set the ignition switch the “ACC” position or “ON” position, and push down the cigarette lighter completely.

When cigarette lighter may be used, it may return to the original position automatically.

Pull out the cigarette lighter.

Store it properly for future requirements.

Danger

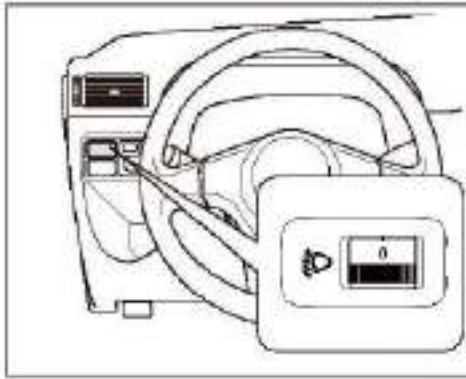
Do not touch the thermal coil for fear of heat injury.

Warning

- If the cigarette lighter fails to automatically return to the original position in 20 seconds, pull it out immediately. Do not push the cigarette lighter forcibly. Contact the local special service store immediately for inspection of the cigarette lighter system.
- You must not insert any other parts or attachments into it except for the specified objects. These objects may damage the cigarette lighter system.



Light regulation switch



To change the beams, toggle the light regulation switch to regulate the upper and lower positions of dipped headlights among the front combination light so as to change the beam height of the dipped headlights.

The light regulation switch has 5 positions in all, of which, “0” position is the initial position and is also intended for the highest beam of dipped headlights.

The “4” position is intended for the lowest beam of the dipped headlights.



Section 5

Instruments and meters

Combination instrument.....	5-1
Warning light.....	5-2
Indicator light.....	5-7
Fuel gauge.....	5-9
Water thermometer.....	5-9
Speedometer takeoff, odometer /trip meter	5-9
Tachometer.....	5-10

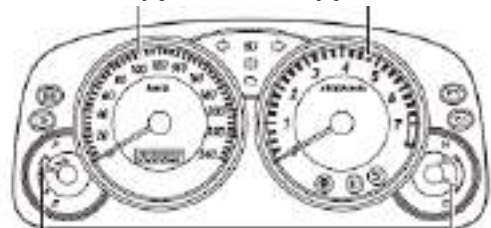


Combination instrument

M/T automobile

Speedometer
takeoff (page 5-9)

Tachometer
(page 5-10)



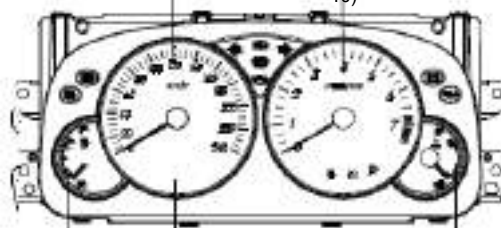
Fuel gauge
(page 5-9)

Water thermometer
(page 5-9)

M/T automobile

Speedometer
takeoff (page 5-9)

Tachometer
(page 5-10)



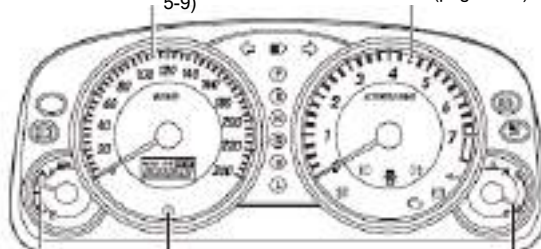
Fuel gauge (page 5-9)

Odometer/trip meter
selector switch (page 5-10)

Water
thermometer
(page 5-9)

Speedometer takeoff (page 5-9)

Tachometer (page 5-10)



Fuel gauge
(page 5-9)

Odometer/trip meter
selector switch (page 5-10)

Water
thermometer
(page 5-9)



Warning light

The warning light may indicate the exceptions occurring in relevant systems.

⚠ Danger

- To shut down the engine or park your automobile in contingency situations, drive your automobile to a safe roadside position. Shut down the engine and turn on the warning lights.
- To check any components inside the engine compartment, do wait till the engine gets cool so as to avoid heat injury.
- Keep your hands, clothes and other objects away from the running parts and components inside the engine compartment for fear of severe personal injuries.

Check all warning lights

1. Pull up the parking brake handle.
2. Set the ignition switch to the “ON” position, but do not start up the engine. Here, all warning lights shall be on.

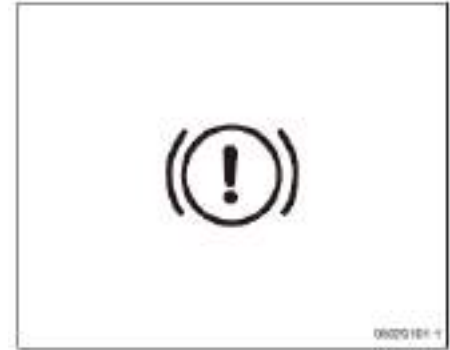
ABS(antilock brake system) warning lights may in several seconds.

Air bag warning light may go out in 6 seconds.

3. When the engine is started up and the parking brake handle is put down, all warning lights shall go out.

If any warning light fails to work, contact the local special service store as soon as possible for inspections.

Brake warning lights



When the engine is running, the brake warning lights may go on if the parking brake handle is pulled up or the brake fluid level drops below the “MIN” (minimum) graduation line marked on the brake fluid reservoir.

If necessary, add brake fluid and check for brake fluid leak.

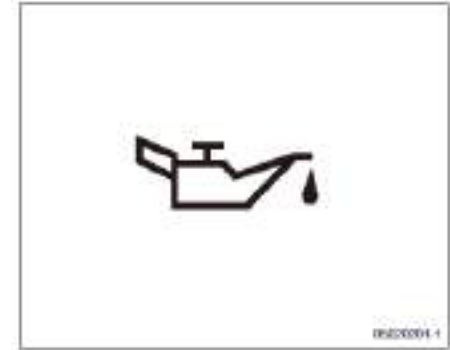
If the warning lights go on, higher braking force shall be applied to the braking system, and the braking length may be increased.

Brake warning lights may also indicate the exceptions of E. B. D. (electronic braking force distribution).

When E. B. D. control develops a fault, the brake warning lights go on.



Warning light for inadequate oil pressure



If the lubrication system develops a fault when the engine is running, the warning light goes on.

Warning

Once the warning light goes on, shut down the engine; Otherwise the engine may be severely damaged. Contact the local special service store immediately for inspection of the system.

Under normal conditions, brake warning lights may go on when the ignition switch is set to the “ON” position and the parking brake handle is pulled up. When the parking brake is released after the engine is started up, the brake warning lights go out.

Danger

Do not continue driving your automobile once the brake warning lights go on; Otherwise an accident may take place.

Contact the local special service store immediately for inspection of the braking system.

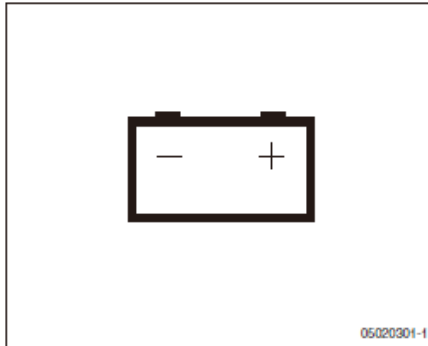
Warning

- If the warning lights fail to go out after the parking brake is released, or the warning lights fail to go out when the engine is running, it is very probable that the brake fluid level is too low, such that the brake performance is deteriorated. In case the braking effect is deteriorated, depress the brake pedal forcibly at once, park your automobile in a safe place, and contact the local special service store.

- If both the brake warning lights and warning lights of antilock brake system go on simultaneously, the antilock brake system may develop a fault. Moreover, emergency braking you applied may also cause your automobile to get unstable. Park your automobile in a safe place immediately, and contact the local special service store.
- If abnormal noises (zing) are always given out when you apply brakes, it is very probable that the brake shoes are already worn. Contact immediately the local special service store for inspection of your automobile.



Battery charge warning light



If the charge system develops a fault when the engine is running, the warning light goes on. Shut down the attachments and engine.

Check the driving belt for slackness or fracture.

Danger

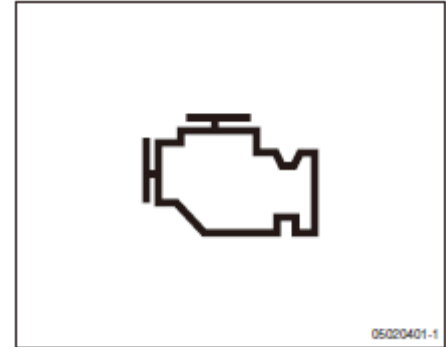
To check or regulate the driving belt, do shut down the engine and wait till it gets cool; otherwise the human body may be grievously injured.

Warning

If driving belt shows fracture or slackness, do not continue driving your automobile; otherwise engine overheat may be caused.

Contact the local special service store immediately for inspection of the system.

Malfunction indicating light (MIL)



If the electronic control system develops a fault when the engine is running, the MIL goes on.

Warning

If MIL goes on, contact immediately the local special service store for inspection of your automobile.



ABS (antilock brake system) warning light



When the system works normally, the warning lamp may go on for several seconds when the ignition switch is set to the “ON” position.

The following conditions indicate that the ABS (antilock brake system) may have developed a fault. Contact the local special service store immediately for inspection of the system.

- Warning lamp fails to go on or is kept normally on when the ignition switch is set to the “ON” position;
- Warning light goes out and goes on again.
- The warning light goes on when your automobile is traveling

Warning

- If both the ABS warning light and brake warning light are kept normally on and may not go out, the braking force may be significantly deteriorated. Park your automobile in a safe place immediately, and contact the local special service store.

Warning

- If both the said warning light and brake warning light go on simultaneously, the antilock brake system may develop a fault. Moreover, emergency braking you applied may also cause your automobile to get unstable. Park your automobile in a safe place immediately, and contact the local special service store.

Attention

- If the warning light goes on and may not go out after the engine is started up or during your automobile is traveling, you shall contact immediately the local special service store for inspection of your automobile even if the brake performance your automobile is still normal (the ABS function of braking system is unavailable).
- The warning light may go on for several seconds when the engine is started up. If the warning light goes out immediately and may not go on during traveling again, the system works fine.



Air bag warning light



When any fault is detected, the warning lamp may go on to warn the driver of a system fault.

When the system works normally, the warning lamp may go on for 6 seconds when the ignition switch is set to the “ON” position.

Warning

- When one of the following conditions occurs, contact the local special service store immediately for inspection of the conditions of the system.
- Warning lamp fails to go on when the ignition switch is turned to the “ON” position;

- Warning lamp goes on when engine is running;
- The warning light does not go off when 6 seconds expire after the ignition switch is set to the “ON” position;
- The warning lamp flickers when 6 seconds expire after the ignition switch is turned to “ON” position;
- The warning lamp of air bag may go on when any exception of the safety belt pretensioner mechanism takes place.

Door unlocking warning light



The warning light goes on when door is opened or is not safely locked up.

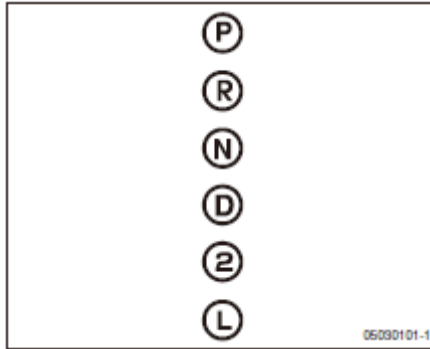
If the warning light still may not go out after the doors are closed, the doors are not closed or not completely closed. Ensure that all doors are closed securely.



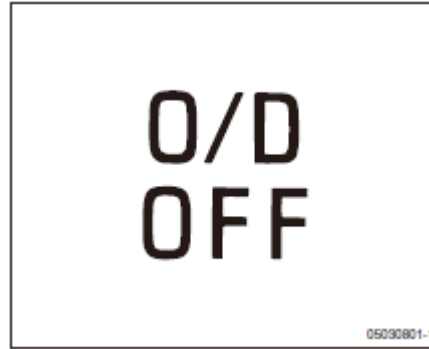
Indicator light

Automatic transmission gearshift O/D OFF Indicator light

High-beam indicator light



The indicator light may display the current gear when ignition switch is set to the “ON” position.



When overgear is turned off, the indicator light goes on.

Warning

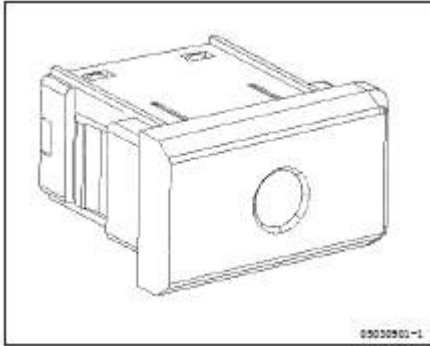
If the O/D OFF indicator light flickers during your automobile is traveling, the automatic transmission may have developed a fault. Contact the local special service store immediately for inspection of the transmission.



When high beam and flashlights are turned on, the indicator light goes on.



Indicator lamp of central locking system



When all doors are closed and locked up by remote controller of central locking system, the indicator light of central locking system begins to flicker.

Front foglight indicator light



When the foglights are turned on, the indicator light goes on.

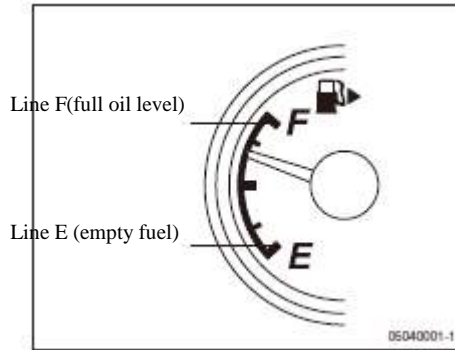
Rear foglight indicator light



When rear foglights are turned on, the indicator light goes on.



Fuel gauge



The fuel gauge may always display the approximate fuel level of the fuel tank.

⚠ Danger

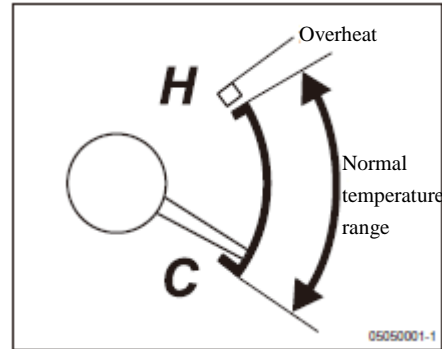
When fuel level is lower than line (empty fuel), do not drive your automobile; otherwise engine misfire and damage to catalytic converter may take place.

Moreover, stalling or retarding occurring during driving may lead to an accident.

⚠ Warning

It is advisable for you to form a habit of maintaining fuel level above 1/4 position.

Water thermometer

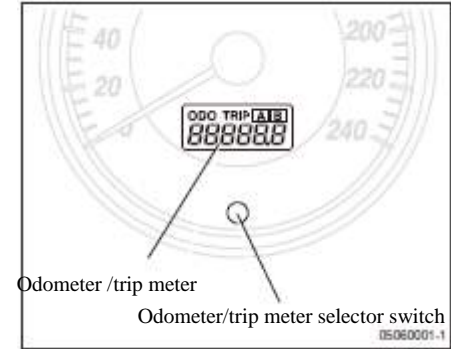


Water thermometer may indicate the temperature of engine cooling system after the ignition switch is set to the “ON” position.

⚠ Warning

If thermometer displays engine overheat, do not continue driving your automobile (see “Engine overheat”).

Speedometer takeoff, odometer /trip meter



Speedometer takeoff

Pointer inside speedometer take off may indicate the driving speed of your automobile.

Odometer

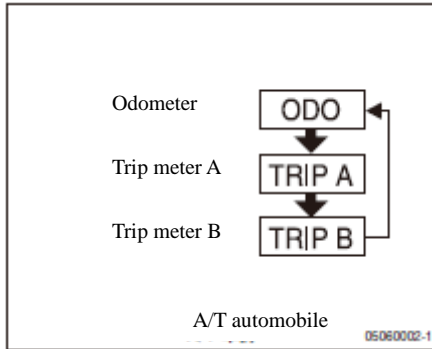
Odometer may indicate the finished traveling distance.

Trip meter

Trip meter may indicate the traveling distance finished within each section of travel.



Tachometer



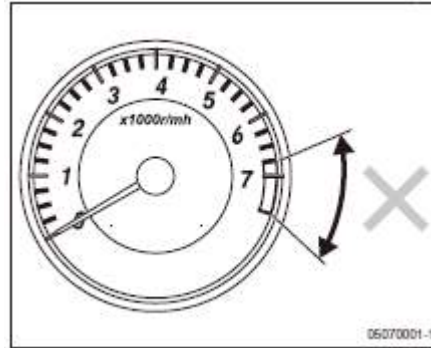
Odometer/trip meter selector switch

(M/T automobile)

The display may be changed every time the switch is pushed. To clear the trip meter, just push and hold the switch for 1 second.

(A/T automobile)

The display may be changed every time the switch is pushed. Two classes of trip meters are available: A and B. To clear the trip meter, just push and hold the switch for 1 second.



Tachometer may indicate the revolutions per minute of engine.

The red area indicates that the engine speed is too high.

Warning

Do not allow the engine to work at too high speed for fear of damages to the engine.



Section 6

Air-conditioning control system

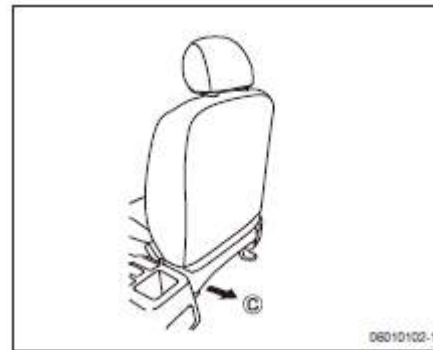
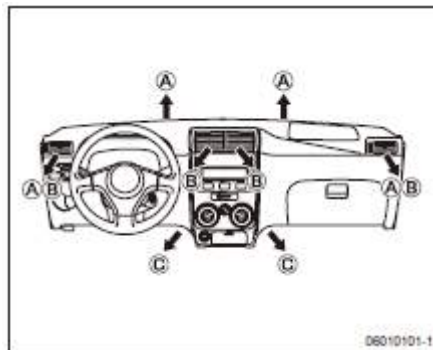
Heater unit, air conditioner	6-1
Central air conditioning.....	6-8



Heater unit, air conditioner

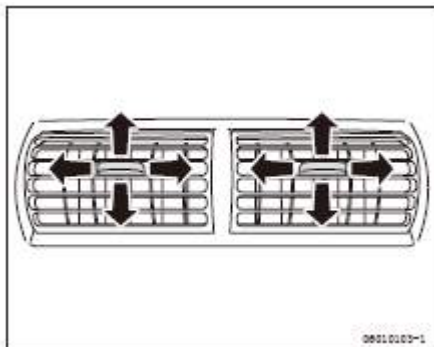
When the ignition switch is set to the “ON” position, heater unit or air conditioner may be operated.

Air outlet



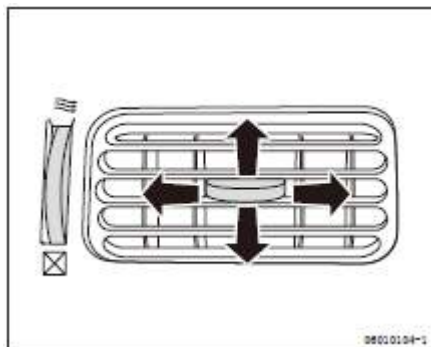


Air outlet control panel



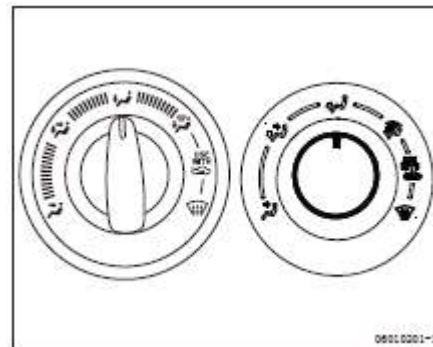
Central air outlet

The direction of air output from the central air outlet may be controlled by the knob.



Right-hand and left-hand air outlets

The direction of air output from the right-hand and left-hand air outlets may be controlled by the knobs.



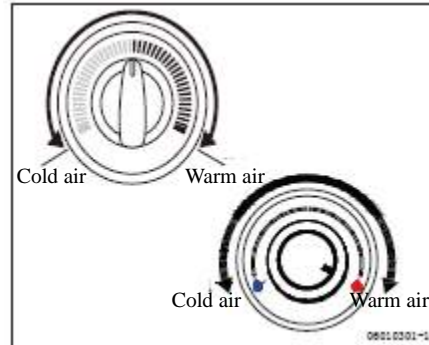
The control panel is used to change the position of air outlet.

Position of control panel					
Air outlet	(B)	(B) (C)	(C) (A)	(A) (C)	(A)

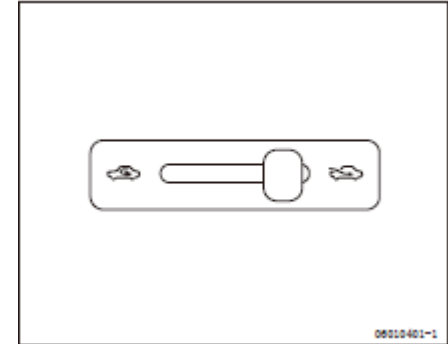
The bracketed positions indicate the air outlet with smaller air output.



Temperature control panel



Air-in control lever



Attention

- The sign indicates the air circulation modes of positions "☁" and "🌀" to be used when glass fogging takes place. When the control panel is set to these positions, the extraneous air flows into the inside of the automobile. If internal air circulation is selected, it may be relatively hard to remove the mist.
- Use the air-in control lever to introduce extraneous air.
- Or turn off the internal circulation switch to

- Control air temperature by the control panel.
- When warm air is not required, turn the control panel to the leftmost end.

- ☁ Internal air circulation.
- ☁ Introduce extraneous air.

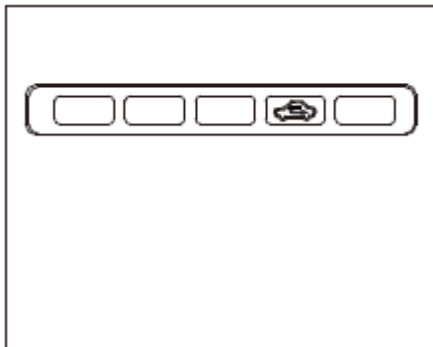
Attention


If the extraneous air is dirty, move the control lever to "☁". However, the control lever must be intermittently moved to position "🌀" to avoid window glass fogging; otherwise air inside the automobile may get thick. Under normal conditions, the control lever shall be set to the position "☁".

introduce extraneous air.



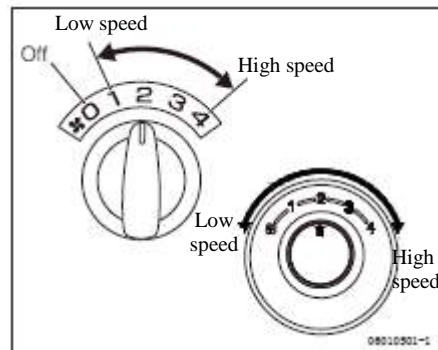
Internal recycle switch of air conditioner



 Push the switch to start internal air circulation

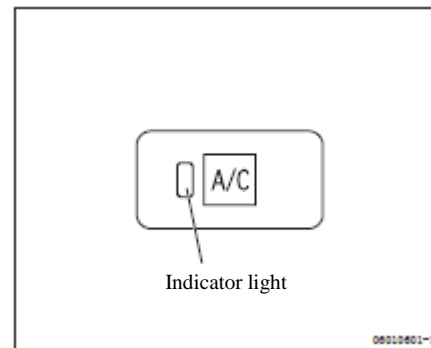
Attention

- If the extraneous air is dirty, push the switch. To avoid window glass fogging, the switch must be turn off/on intermittently; otherwise, air inside the automobile may get thick.



The switch is used to control air flow.

Air-conditioning switch



Turn on the air-conditioning switch to conduct cooling or dehumidification of air inside the automobile. To turn on the air conditioner, just turn on the blower fan and push the switch simultaneously. To turn off the air conditioner, push it once again. When the air conditioner is turned on, the indicator light goes on.

Attention

- When ambient temperature is close to 0°C, the dehumidification function cannot work.
- The quickly cooled air might cause air-outlet fogging, which is not a fault.










- For some specific automobile models, the air conditioner may automatically shut down if the engine coolant temperature sharply rises when the automobile runs on inclined ramps for a long time while the air conditioner is working.
- For some specific automobile models, the compressor of air conditioner may be temporarily shut down when accelerator pedal is fully depressed for high acceleration of the automobile in order to enhance the acceleration performance.

Danger

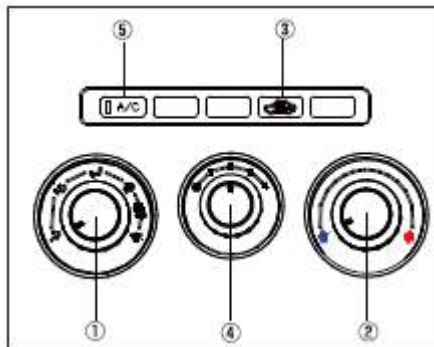
- The engine is equipped with a quick idling device. The idling speed of engine may be slightly raised if air conditioner is turned on when your automobile works at idle speed. Special attention shall be paid to at startup or stoppage of your automobile.

Operation tip

- Do verify that the air inlet pipeline in front of the windshield is not jammed with leaves or other obstacles.
 - In extremely moist weather, do not set the temperature control panel to the coldest position when the air-outlet control panel is already set to position " " or " " and the air conditioner is working. The temperature difference between extraneous air and windshield might lead to windscreen fogging such that your vision may be blocked off.
 - When air-outlet control panel is set to position " ", " " or " ", do not move the air-in control lever to " ". Such a setting may lead to window fogging.
 - If the ambient humidity is quite high, do not use " " for air cooling for fear of windshield fogging. The inside automobile temperature may get extremely high after your automobile is parked in strong sunlight for a long time; in such a case, open all windows and then turn on the air conditioner.
 - When the inside-automobile temperature drops, close the windows, and set relevant devices to the desired status.
- Window glass fogging may easily occur in rainy days, resulting in dim vision. In such a case, set the air conditioner to cooling or demisting mode.



Cold air



The setting positions of all control panels, control levers and switches.

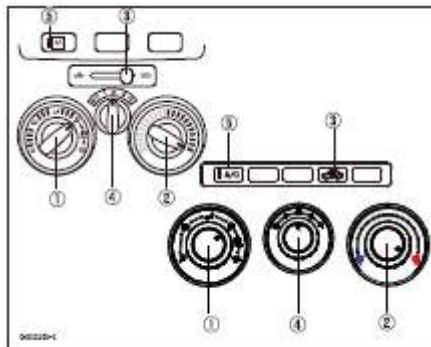
- ①
- ② Low temperature side
- ③ OFF
- ④ Positions to be set
- ⑤ ON

If quick cooling is required, turn the control panel ② to the leftmost end, push switch ③, and turn control panel ④ to the rightmost end.

Attention

To avoid window glass fogging, the switch ③ must be turned off/on intermittently; otherwise, air inside the automobile may get thick.

Heating and demisting

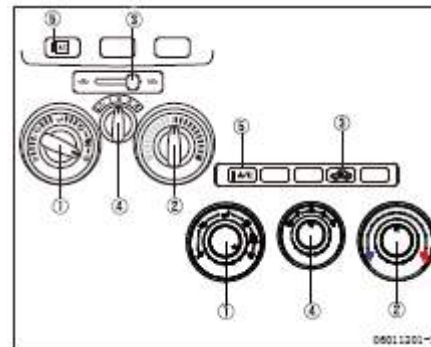


The setting positions of all control panels, control levers and switches.

- ①
- ② High temperature side
- ③ or OFF
- ④ Positions to be set
- ⑤ ON or OFF

Turn on the air conditioner switch to start dehumidification.

Demisting



The setting positions of all control panels, control levers and switches.

- ①
- ② Positions to be set
- ③ or OFF
- ④ Positions to be set
- ⑤ ON or OFF

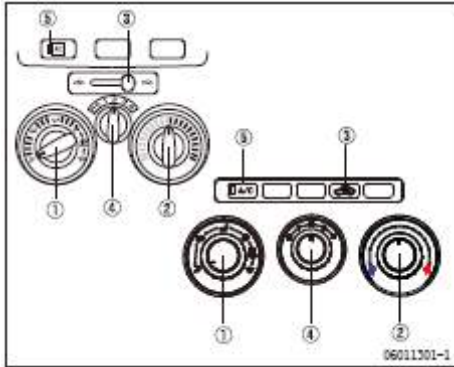
Attention

To defrost the opposite window glass, push the right-hand and left-hand air outlets to the side windows.



Central air conditioning

Ventilated

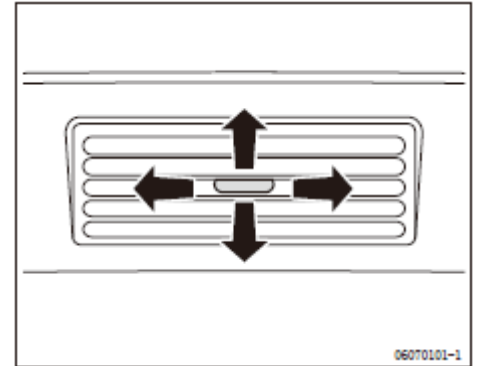


The setting positions of all control panels, control levers and switches.

- ①
- ② Positions to be set or OFF
- ④ Positions to be set
- ⑤ OFF

When the ignition switch is set to the “ON” position, heater unit or air conditioner may be operated.

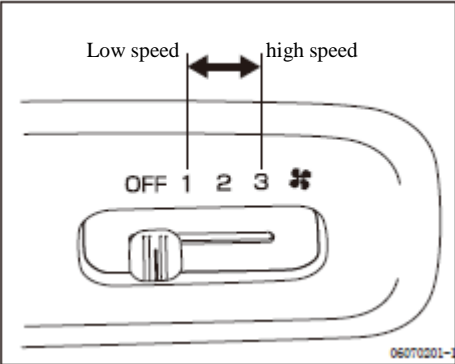
Air outlet



The direction of air output from the central air outlet may be controlled by the knob.



Blower fan switch



The switch is used to control air flow.



Section 7

Audio system

Operation tip	7-1
AM/FM radio recorder player 1 (with USB port).....	7-5
AM/FM radio recorder player 2 (with USB port).....	7-9
CD player 1	7-15
CD player 2	7-19
CD player 3 (capable of MP3 data CD playback)	7-26
MP3 file	7-34
FM broadcast.....	7-37



Operation tip

When ignition switch is set to the “ON” Or “ACC” position, the audio system may be operated.

Attention

To avoid battery discharge, do not use the audio system when the engine is not working.

CD player



07010002-1



- (For automobiles equipped with CD player AM/FM radio)
Please use CD (optical CD-DA) with the above-mentioned symbols
- (For automobiles equipped with CD player AM/FM radio)
Incapable of playing back music data on CD-R(CD - recordable) and CD -RW (CD Rewritable).
- (For automobiles equipped with CD player AM/FM radio)
Incompatible with CDs or CD-ROMs recorded in MP3 and WMA formats or CDs under copyright protection



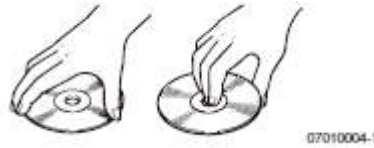
07010003-1

- (For automobiles equipped with MP3 CD player AM/FM radio)
Please use CD (optical CD-DA) with the above-mentioned symbols

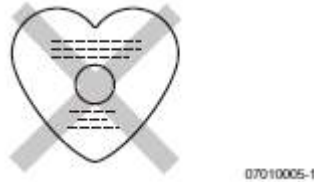


- (For automobiles equipped with MP3 CD player AM/FM radio)
Capable of playing back music data recorded on CD-R(CD - recordable) and CD-RW (CD Rewritable). However, those data also cannot be played back due to CD quality, score marks or blemishes.
- CDs also cannot be played back sometimes due to the causes such as CD status (recording environment, data contents).
- The CD player cannot play back the CDs under copyright protection.
- The system is not designed for dual-format CDs. Do not use dual-format CD; otherwise, the player may be damaged.
- Never put magnetic irons, screwdriver or other similar objects aside the insertion slot of CD player and CDs.

- Be careful not to touch the CD reading side when you pick up a CD. You should hold the edge of a CD or the central pore and edge of a CD.

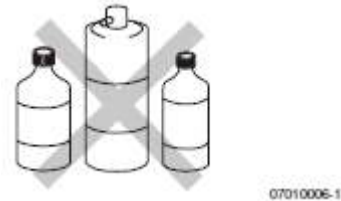


- CD has to rotate at high speed inside the player; therefore, do not use CDs of special shapes (irregularly shaped CDs such as heart-shape, broken or warped CDs).



- Do not affix paper or stickers onto the labeled side of CD (printed side), and do not scrape the CDs.

- Fingerprints or dust on CDs may not directly influence the signals recorded on them. However, dust may reduce the reflection brightness of recording side of a CD, so the sound quality may be deteriorated or skipped.
- If a CD gets dirty, use a piece of soft cloth to wipe it circumferentially from inner to outer side.
- Do not use spraying agent or anti-electrostatic solvent for CDs cleaning. Moreover, please do not use volatile chemicals such as benzene or thinner that may erode the CDs.



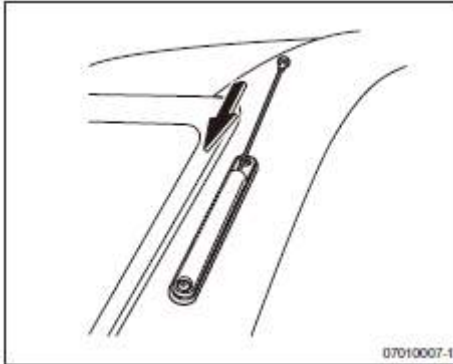


-
- (For automobiles equipped with MP3 CD player/ AM/FM radio)
When 8cm CD is ejected, do not drive your automobile; otherwise, the CD may drop off due to vibration during driving.
 - (For automobiles equipped with CD player, AM/FM radio)
CD player cannot use a 8cm CD.
 - When CD is not played back, eject the CD out of the player and put it into the optical disk cartridge. Store the CDs in a place without direct sunlight and dust.
 - Driving on bumpy pavement may cause sharp pounding and tone skipping.
 - In frigid weather, the inside of car compartment may get extremely cold. If you turn on the heater unit and use the audio system immediately in such a weather, CD or optical elements (prism or lens etc.) may be subjected to fogging, such that the CD cannot be normally played back.
 - If CD is subjected to fogging, use soft cloth to wipe off the fogging.
 - Fogging on the optical elements may evaporate naturally in 1 hour, and then normal play-back may be conducted.



Antenna

Upright antenna



When antenna is to be used:

Pull up the antenna to optional position.

When antenna is not used:

Retract the antenna.

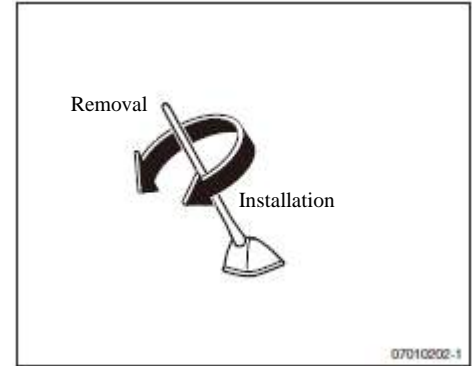
Attention

- To clean your automobile by an auto car washer, the antenna must be retracted.
- Form a habit of retracting the antenna when the radio is not working.

Top antenna

⚠ Warning

- The antenna must be removed when any of the conditions listed below occurs.
- Before the automobile is cleaned by auto car washer;
- Antenna bumps against any obstacles fitted on the ceiling when you want to park your automobile into a garage;
- Before an automobile cover is spread;
- Do not lose the antenna when it is removed for automobile washing etc. The antenna must be reinstalled before you drive your automobile.



To remove the antenna pole:

Turn anticlockwise the antenna pole and remove it.

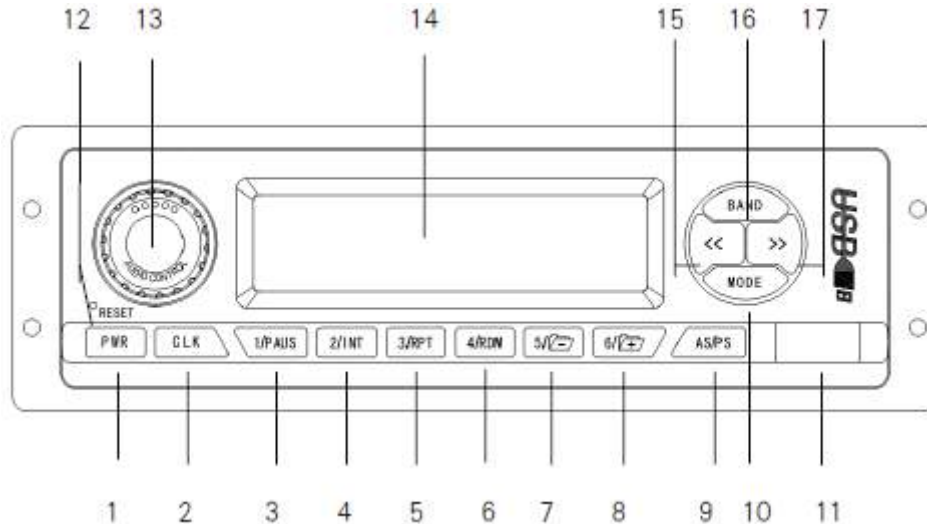
To mount the antenna pole:

Turn clockwise the antenna pole and tighten it up.



AM/FM radio recorder player 1 (with USB ports)(if available)

Operation of panel functions.



1. Power switch
2. Clock key
3. Preset key 1/pause play-back
4. Preset key 2/browse play-back
5. Preset key 3/repeated play-back
6. Preset key 4/random play-back
7. Preset key 5/file folder-
8. Preset key 6/file folder+
9. Auto scanning memory key/USB track setup key
10. Mode conversion key
11. USB port
12. Reset hole
13. Volume/sound effect selector key
14. Display screen
15. Upward station search/previous track
16. Waveband switching key
17. Downward station search/posterior track



1. Power switch





Push the key to turn power on. Push it again to turn power off.

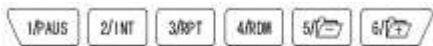
2. Clock key (CLK)



Push gently the key once to read clock;

In clock display status, push and hold the key for 2 seconds or more, the clock may automatically flicker; here, turn clockwise the code potentiometer  to regulate the hour; or turn anticlockwise the code potentiometer  to regulate the minute. When regulation is over, push the key or wait for several seconds, time setup is finished.

3-8. Preset key (1-6)



3. key

① In radio reception mode:

Push it to call out preset station 1 of current waveband. Or push and hold it to write the currently displayed frequency into the preset station 1.

② In USB mode:

Push gently the key to pause the currently played-back track, and push it once more to restore play-back.

4. key

① In radio reception mode:

Push it to call out preset station 2 of current waveband, or push and hold it to write the currently displayed frequency into the preset station 2.

② In USB mode:

Push gently the key to browse the tracks inside the current file folder at a rate of 10 seconds/track.

5. key

① In radio reception mode:

Push it to call out preset station 3 of current waveband, or push and hold it to write the currently displayed frequency into the preset station 3.

② In USB mode::

Push gently the key to repeatedly play back the currently played-back track.

6. key

① In radio reception mode:

Push it to call out preset station 4 of current waveband, or push and hold it to write the currently displayed frequency into the preset station 4.

② In USB mode::

Push gently the key to randomly select and play back tracks inside the current file folder.

7. key

① In radio reception mode::

Push it to call out preset station 5 of current waveband, or push and hold it to write the currently displayed frequency into the preset station 5.

② In USB mode:

Push gently the key to select a previous file folder (null file folders may be directly jumped over).



8. key

① In radio reception mode:

Push it to call out preset station 6 of current waveband, or push and hold it to write the currently displayed frequency into the preset station 6.

② In USB mode::




Push gently the key to select a posterior file folder (null file folders may be directly jumped over).

9. Auto scanning storage key

① In radio reception mode:

Push gently the key to browse 6 preset stations. Push and hold the key for 2 seconds or more to automatically scan the stored stations, and to store the top-6 stations with relatively intensive signals in sequence in preset keys #1 to #6. Twelve AM stations may be stored, and 18 FM stations may be stored.

① In USB mode:

Push gently the key, the units places of track numbers in the current file folder flicker; push gently the code potentiometer , the tens places, hundreds places and thousands places flicker in sequence; turn the code potentiometer  while the places flicker to regulate the numeric values and select track numbers. When the tracks are selected, push and hold the code potentiometer  to start playing back the selected tracks.

Push and hold the key to display currently played-back track number and play-back time.

10. Mode conversion key

① In radio reception mode:

Insert a U disc and push gently the key to change into USB playback mode.

② In USB mode:

Push gently the key to change into radio reception mode.

11. USB port

It allows U disk plugging/unplugging.

12..Reset hole (RESET)

Push gently the key to restore the factory settings.

13. Volume/sound effect selector key

① Volume add-subtract key

Turn it clockwise to increase volume, or turn it anticlockwise to decrease volume.

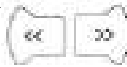
② Sound effect selector key

Push gently the key to select bass (BAS), treble (TRE) balance (BAL) and volume (VOL) in sequence; turn the button in the different above-mentioned modes to implement status regulating.





14. Display screen



Display all kinds of operating information.




15. 17. Scan tuning keyboard


① In radio reception mode:

Push and hold the  key for 2S to auto scan stations upward, and push gently the  key to manually scan stations upward.

Push and hold the  key for 2S to auto scan stations downwards. Push gently the  key to manually scan stations downwards.

② In USB mode:

Push gently the  key to select a previous track;

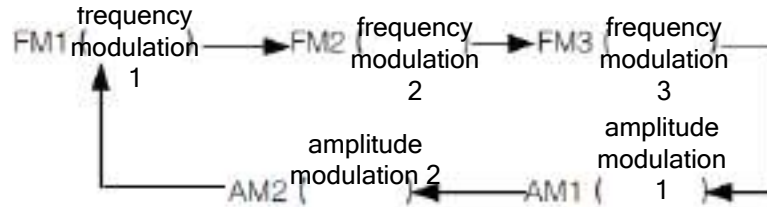
Push gently the  key to select a next track;

16. Waveband switching key



① In radio reception mode:

Push the key to change over the radio reception wavebands in the following order:

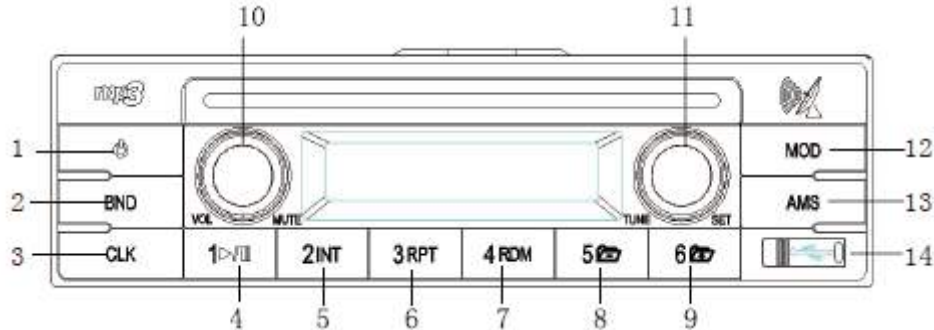


② In playback mode:

Push it to view file folders, file names, and ID3 information item by item; Push and hold it to change over auto/manual file folder, file name and ID3 information displaying.



AM/FM radio recorder player 2(with USB ports)(if available)



1. Power switch key
2. Band selection key
3. Time display/regulating key
4. Preset key 1/pause play-back key
5. Preset key 2/browse play-back
6. Preset key 3/Repeated play-back
7. Preset key 4/random play-back
8. Preset key 5/folder-
9. Preset key 6/folder+
10. Volume regulation/mute key
11. Radio reception tuning key/sound effect and sound field control selector key
12. Mode conversion key
13. Auto station scanning and storage
14. USB port



Basic operation

1. Power switch

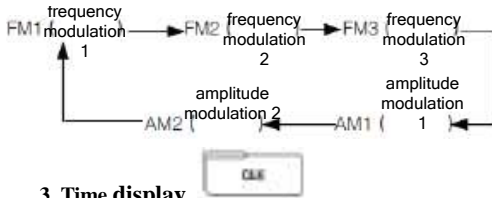


- Push the key to turn on/turn off the automobile audio.

2. Band selection



- In radio reception mode, push the key to recurrently select in sequence the following:



3. Time display



- Push the key to display time; push and hold the key for 2 seconds, the hour numerals flicker, and turn the left-hand encoder to regulate the hour numerals. Push the CLK key, the minute numerals flicker; here, turn the left-hand encoder to regulate the minute numerals; when regulating is over, push and hold the key or wait for 5 seconds, time setup is finished.

4. Preset key 1/Pause play-back



- ✧ Station selection

Select wavebands and push the key, stations stored by the key may be received, and the wavebands, frequencies and station numbers may be displayed in the screen.

- ✧ Station storage

Select the wavebands you like, such as FM 1; push the auto station search or manual station search key to receive the desired station frequencies. Push and hold the key (more than 2 seconds), and the stations is already stored onto the said key when the preset key number "1" is displayed in the display screen. Corresponding stored numbers may also be displayed for other preset keys. In addition, once new stations are stored into the key, the originally stored stations may be superseded.

- ✧ Pause play-back

In USB play-back mode, push gently the key to display "PAUSE" in the display screen, and the currently played-back track is suspended. Push the key once more to continue playing back the current track.

5. Preset key 2/browse play-back



- ✧ Station selection/station storage

Repeat the station selection/station storage steps for preset key 1.

- ✧ Browse play-back

In USB play-back mode, push gently the key to display "SCN" in the screen, all tracks may be browsed for 10 seconds each. Push the key once more to cancel browse play-back function.

6. Preset key 3/Repeated play-back





✧ Station selection/station storage
Repeat the station selection/station storage steps for preset key 1.

✧ Repeated play-back
In USB play-back mode, push gently the key to display “RPT” in the screen, and the current track may be repeatedly played back. Push the key once more to cancel the repeated play-back function.



7. Preset key 4/random play-back

✧ Station selection/station storage
Repeat the station selection/station storage steps for preset key 1.

✧ Random play-back
In USB play-back mode, push gently the key to display "RDM" in the screen, and the tracks stored on the U disk may be randomly played back. Push the key once more to cancel the random play-back function.



8. Preset key 5/file folder

✧ Station selection/station storage
Repeat the station selection/station storage steps for preset key 1.

✧ In USB play-back mode, push gently the key to select a file folder upward, and corresponding display may be given.



9. Preset key 6/file folder+

✧ Station selection/station storage
Repeat the station selection/station storage steps for preset key 1.

✧ In USB play-back mode, push gently the key to select a file folder downward, and corresponding display may be given



10. Volume regulation and mute

Volume regulation

➤ Turn the key to regulate the volume. Turn it clockwise to increase the volume, and “VOL 40” may be displayed in the display screen when the maximum volume is reached

Turn it anticlockwise to decrease the volume, and “VOL 0” may be displayed in the display screen when the minimum volume is reached.

Mute

- In radio reception and playback modes, the key serves as a mute switch when it is pushed.
- Push the key to display “MUTE” in the display screen, and the player gets mute. Push the key once more or turn clockwise the encoder to cancel mute and restore normal play-back.

11. self-tuning key, sound effect, and sound

field control selector



Manual station search

- In radio reception mode, turn clockwise the knob for 45 degrees to implement upward manual station search; turn anticlockwise the knob for 45 degrees to implement downward manual station search; every time the knob is turned, the frequency may be increased or decreased for 1 level.



AM:9KHz

FM:0.05MHz

Auto station search

- In radio reception mode, turn clockwise the knob for 45 degrees and dwell for 2 seconds to implement upward automatic station search; or turn anticlockwise the knob for 45 degrees and dwell for 2 seconds to implement downward automatic station search.

Selection of tracks

- Turn the knob to select forward or backward to select and play back any assigned tracks.
- In USB play-back mode, turn the knob to select tracks upward/downward; if the knob is turned anticlockwise for 45 degrees and the play-back time of the current track exceeds 2 seconds, the player may return to intro play of the said track; otherwise it may skip to and play back a previous track. Turn clockwise the knob for 45 degrees, the player skips to and plays back a next track.

- Track selection operation may cancel the functions such as pause/browse play-back.

Fast forward/fast backward

- Turn the knob leftward or rightward for 45 degrees and dwell for 2 seconds to start fast forward/backward play-back.
- Turn the knob leftward or rightward for 45 degrees and dwell for 2 seconds to access the fast forward/fast backward mode. Once the knob is released, the player exits from the fast forward/fast backward mode, and starts normal play-back from the time point at which the knob is released.
- Fast forward/fast backward operation may cancel the functions such as pause, repeated, random, and browse play-back.

Selection of sound effect control

- Push gently the key to select in sequence the bass (BAS), treble (TRE), balance (BAL), front and rear (FAD) and Digital Signal Processing OFF (DSP OFF). After you select a certain mode, you may turn the left-hand encoder to conduct regulation: bass: -7 —+ 7; treble : -7 —+7; balance : L9—R9; front/rear: **F9~R9**; when DSP OFF is displayed, turn clockwise the left-hand encoder to recurrently select in

sequence the Digital Signal Processing such as DSP OFF → FLAT (hi)→ ROCK (rock roll style)→ CLAS (classicism) → JAZZ (jazz style)→DSP OFF (Digital Signal Processing OFF). User may select one of them and enjoy music as per your own hobby. In the above-mentioned regulation status, auto exit may be conducted if the key is not operated within 5 seconds.

- Note: Treble and bass may be regulated only in DSP OFF status.



12. Mode conversion

- Push the key to change over between RADIO and USB modes.



13. Auto station scanning and storage



In radio reception mode:

- Push gently the key to browse preset stations;
- Push and hold the key for 2 seconds or more to automatically store the top-6 stations with relatively intensive signals among the whole wavebands in sequence into the preset keys #1 to #6. Twelve (12) AM stations may be stored, and 18 FM stations may be stored.

14. USB port



- When a U disk with stored MP3 music is inserted while the player is powered off, the player may be automatically powered on and access the USB play-back mode, and the word "USB", track number and play-back time may be displayed in the screen.

- When a U disk with stored MP3 music is inserted while the player is powered on, the player may be automatically access the USB play-back mode, and the word "USB", track number and play-back time may be displayed in the screen.
- Turn clockwise the "TUNE" knob for 45 degrees to select a next track; or turn anticlockwise the "TUNE" knob for 45 degrees to select a previous track. If USB play-back mode is selected, it is advisable to put the MP3 tracks under the USB root directory or add them to one file folder.
- When the player is turned on and access the USB mode for the first time, the player may begin play-back from the 1st track; when the player accesses the USB mode a second time, the player may memorize the track it played back when it exited last time.
- When the player is powered on and the current mode is not USB mode, push "MOD" key to select U disk play-back.

Important tips:

- Owing to the fact that the compression quality of MP3 tracks available on the market is unsteady, the system may be subjected to information readout errors. If you find the MP3 playback comes to a standstill and the player is always reading information, just unplug and plug again the U disk to allow the U disk decoding module to conduct automatic reset, and then normal play-back may be realized.

Precautions

- Please verify whether or not there are MP3 tracks on the U disk. If no MP3 tracks are available, the player may not read out anything.
- If no MP3 tracks are available in the on U disk, auto skip-over may be conducted during file folder changeover.
- Check whether or not the U disk is plugged inversely and the contact is good; otherwise, no tracks may be read out.



-
- Please directly unplug your U disk during U disk playback; otherwise, the U disk may be damaged.
 - When U disk is not plugged for musical enjoyment, please cover the U disk port with a cap. If the U disk port gets dusty, the contact between U disk and the player may get poor and music enjoyment may be affected to a certain extent.

Audio file formats for playback:

1. Coding: MPEG 1/2/2.5 Audio Layer 2/3
2. Frequency: 8k-48kH
3. Code rate: 32k-320kbps

Audio file carrier: USB2.0

File system: FAT16/FAT32





FAT format sector: 512Bytes








CD player 1 (if available)











Key	Push	Push and hold (for more than 2 seconds)	Turn
	Disk ejection	/	/
	ON/OFF	/	Clockwise and anticlockwise, regulation of volume
	Access the setup interface	/	Select relevant items and conduct regulation. Audio control selection: Bass (bass control)/Treble (treble control)/Balance (left/right balance control)/Fader (front/rear loudspeaker control)/sound effect mode selection, manual tuning in radio reception mode
	Mute function ON/OFF	/	/



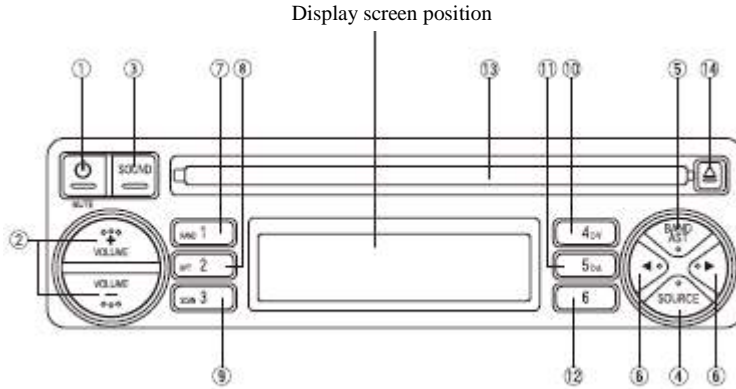
	In radio reception mode: Call out the station frequency stored into the key before In CD and USB playback mode: Turn on/off repeated playback function	Store the current station frequency into the key,	/
	In radio reception mode: Call out the station frequency stored into the key before In CD and USB playback mode: Turn on/off random playback function	Store the current station frequency into the key	/
	In radio reception mode: Call out the station frequency stored into the key before In CD and USB playback mode: Turn on/off track browse function	Store the current station frequency into the key	/
	Call out the station frequency stored into the key before	Store the current station frequency into the key	/
	In radio reception mode: Call out the station frequency stored into the key before In MP3 and USB playback mode: Select a previous file folder	Store the current station frequency into the key	/



	In radio reception mode: Call out the station frequency stored into the key before In MP3 and USB playback mode: Select the next folder	Store the current station frequency into the key	/
	Access the radio reception mode	/	/
	Changeover between CD and USB playback modes	/	/
	In radio reception mode: Conduct automatic tuning and select a station with low-side frequency. In CD and USB playback mode: Select a previous track.	In CD playback mode: Turn on fast backward function	/
	In radio reception mode: Conduct automatic tuning and select a station with high-side frequency. In CD and USB playback mode: Select a next track.	In CD playback mode: Turn on fast forward function	/
	Auto station storage	Access/exit the sound effect selection mode	/



CD player 2 (if available)



- ① Power switch/mute button
- ② Volume and sound effect control button
- ③ Audio button
- ④ Tone source button time adjusting knob
- ⑤ Waveband button
- ⑥ Tuning button/track button
- ⑦ Preset station selection button 1/random button
- ⑧ Preset station selection button 2/repeat knob
- ⑨ Preset station selection button 3/scan button
- ⑩ Preset station selection button 4
- ⑪ Preset station selection button 5
- ⑫ Preset station selection button 6
- ⑬ CD insertion slot
- ⑭ Ejection button

<Display screen position>

Preset station selection indicator





① Power switch

Push the switch to turn power on. Push and hold the switch for 2 seconds or more to turn power off.

Attention

- **The player may still be powered on even if the ignition switch was already set to the "LOCK" position.**
- **If the ignition switch is set to the "LOCK" position, the power supply will be automatically shut down in 1 hour after it is turned on.**

① Mute button

Push the mute button, and the audio unit may not produce a sound.

While no sound is produced, a word "MUTE" may be displayed in the display screen.

② Volume control button

Push the button to regulate the volume.

+ side ... Increase the volume

- side ... Decrease the volume

② Sound effect control button

Push the sound effect control button, and select a mode listed in the table below. Then, push the button to regulate the mode.

• DSP(BASS-TRE)

Every time the sound effect control button is pushed, the mode switch may be changed over as per the following sequence:

"FLAT (flat)→JAZZ (jazz)→VOCAL (voice)→POP (popular)→CLASSIC (classic)→ROCK (rock roll)".

• BASS, TREBLE, BAL, FADER

Mode	- button	+ button
BASS (bass)	Decrease	Increase
TREBLE (treble)	Decrease	Increase
BAL (balance)	Rear side increases	Front side increases
FADER (fading)	Left side increases	Right side increases

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Attention

If volume is set to a position where no speaker is available, the audio unit may not produce a sound. Therefore, the volume must be set to a position where speaker is available.

• LOUD (increase)

Every time the sound effect control button is pushed, the mode may be changed over as per the following sequence:

"LOW (low)→MID (medium)→HI (high)→OFF (off)".

③ Audio button

Push the button to select modes (DSP, bass, treble, fader, balance or LOUD).

④ Tone source button

Push the button to change over each regulation mode in sequence. Push and hold the button for more than 2 seconds, the display screen may be changed over to the "clock" regulation mode.

④ Time regulation button

Push the button to regulate the time.

See "Time regulation".

⑤ Waveband button

Every time the waveband button is pushed, the mode may be changed over as per the following sequence: "AM1→AM

AST→FM1→FM2→FM AST".

Push and hold the button for 2 seconds or more to automatically memorize the station.

See "Auto memory".



⑥ Tuning button

When radio is receiving broadcast, push the button to set the frequency to the desired one.

⑥ Track button

In CD playback mode, push the button to set the desired track.

⑦-⑫ Preset station selection buttons

When radio is receiving broadcast, push the buttons to call out the preset stations. See “Tuning” and “How to preset radio station”.

⑦ Random button

During CD playback, push the button to access the random playback mode.

⑧ Repeat button

During CD playback, push the button to access the repeated playback mode.

⑨ Scan button

During CD playback, push the button to access the scan mode.

⑬ CD insertion slot

Insert a CD into the slot.

See “operating procedures of CD player”.

⑭ Ejection button

Push the button to eject a CD



Operating procedures of radio

Tuning

- Push the waveband button to select a waveband.
When FM stereo broadcast is received, the radio may automatically change over to the stereo mode.
- If stereo broadcast is deteriorated due to static interference, the radio may automatically change over to the monophonic reception mode.
- Stations may be selected in 3 ways:

① Manual tuning

1. Push and hold the tuning button for more than 2 seconds.
2. Push gently the tuning button to set the frequency to the desired one.

Every time the button is pushed, the frequency may be changed step by step.

- ►Side ... higher frequency
- ◀Side ... lower frequency

The frequency being received is shown in the display screen.

Attention

The manual tuning mode may be released in 5 seconds.

② Search tuning

Push gently the tuning button to set the frequency to the desired one. Radio search radio stations from the current frequency to higher frequencies or lower frequencies. When a station is received, search tuning is automatically stopped.

- ►Side ... higher frequency
- ◀Side ... lower frequency

Push the button once again to stop automatic tuning midway. The frequency being received is shown in the display screen.

③ Preset tuning

Push the preset station selection button to call out the preset stations.

The frequency being received and channel number are shown in the display screen.

How to preset radio stations

- Six (6) AM stations may be preset.
- For FM waveband, at most 6 stations may be preset for FM1 and FM2 each, totaling 12 stations.

1. Push the waveband button to select a desired waveband.
2. Push gently the tuning button to set the frequency to the desired one.
3. Push and hold the desired preset station selection button for 2 seconds or more to store the desired frequency.

Attention

If battery is cut off or the fuse is blown, stations memorized by the preset station selection buttons may be eliminated, and the stations must be stored over again.

Auto memory (AST)

- Auto station memory function is propitious for long-term travels while you are unfamiliar with local station frequencies. The radio stations with receivable frequencies may be automatically stored into the preset station selection buttons.
- When automatic storage is activated, the player may automatically change over to AST (AM or FM) mode, and the stations stored into the preset station selection button in AST mode may be overlapped.



1. Push the waveband button to select AM waveband or FM waveband.
2. Push and hold the waveband button you selected for 2 seconds or more to activate the automatic storage function.

Attention

- Each automatic storage operation may memorize up to 6 stations whose currently received frequencies are kept in good condition.
 - If AM1, FM1 or FM2 mode is selected, the memory stored into preset station selection buttons in AM, FM1 or FM2 mode will not be overlapped.
 - If the number of receivable frequencies is less than 6, the radio unit may only store all frequencies it can receive.
 - If the signals at all frequencies are extremely poor due to local conditions or exposure of your automobile etc., the radio unit may not automatically store the frequencies.
 - Even for one station, the frequency stored through station selection buttons and stations stored through automatic storage function may also be different with each other.
- Even when identical preset procedures are repeated through automatic storage function in the same place, the frequency stored every time may be different due to different receiving status.

Operation procedures of CD player

Enjoy music stored on CD

- Insert a CD into the insertion slot with the labeled side facing up.
- When the CD is completely inserted, music playback is started.
- If a CD is inserted during radio reception, the audio unit may automatically change over to CD playback mode.
- If a CD is already inserted into the slot, push the tone source button to playback the CD.

Upward or downward track selection

Push gently the track button to set the player to the desired track.

Every time the button is pushed, the play may go forward to a next track or go back to a previous track.

- ►Side ... Forward track skipping
- ◀Side ... Backward track skipping

The frequency being received is shown in the display screen.

Fast forward or fast backward

Push and hold the track selection button.

- ►Side ... **Fast forward**
- ◀Side ... **Fast backward**



When you push and hold the button, the audio unit may conduct fast forward/fast backward consecutively.

When the desired track is reached and the button is released, the audio unit may start playback from the track.

Eject a CD

Push the ejection button.

Repeatedly play back a CD

In the repeated playback mode, the selected track may be repeatedly played back.

Push the repeat button to select the repeated playback mode.

If the repeated playback mode is turned off at this point, "RPT ON" (repeated pattern ON) may be displayed in the display screen when the button is pushed. If the repeated playback mode is turned on at this point, "RPT OFF" (repeated pattern OFF) may be displayed in the display screen when the button is pushed.

Random CD playback

In random playback mode, the tracks may be randomly played back. Push the random button to select the random playback mode.

If the random playback mode is turned off at this point, "RAND ON" (random pattern ON) may be displayed in the display screen when the button is pushed. If the random playback mode is turned on at this point, "RAND OFF" (random pattern OFF) may be displayed in the display screen when the button is pushed.

Scan a CD

Each track on the CD may be played back for 10 seconds in sequence. Push the scan button to select the scan mode.

If the scan mode is turned off at this point, "SCAN ON" (scan pattern ON) may be displayed in the display screen when the button is pushed. If the scan mode is turned on at this point, "SCAN OFF" (scan pattern OFF) may be displayed in the display screen when the button is pushed.

When the desired track is played back, push the button once again.

Error message

CD ERROR	The message may be displayed when CD gets dirty or is inserted in opposite direction. Check the CD.
NO CD NO DISC	Verify that a CD is already inserted into the CD player.

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If the error message is displayed in the display screen, refer to the above table and take corrective measures.

If the error message still occurs or functions are still invalid after corrective measures are taken, contact the local special service store.



Digital clock

Time regulation

Attention

If the audio power supply is cut off during replacement of the parts and components such as battery and fuse, the clock may be restored to the initial setting. In such a case, the clock shall be readjusted.

1. Push and hold the tone source button for more than 2 seconds, the display screen may be changed over to the “clock” regulation mode.
2. Push the tuning button “▶”, and the display screen may be changed over to the “clock style” regulation mode.
3. Push the tone source button to select the clock display style or to turn it off. Every time the tone source button is pushed, the mode may be changed over as per the following sequence: “off (OFF)→ 12h (12-hour system)→ 24h (24-hour system)”.
4. After the clock display style is selected (if the clock is not turned off), push the tuning button “▶”, and the display screen may be changed over to the “hour” regulation mode.

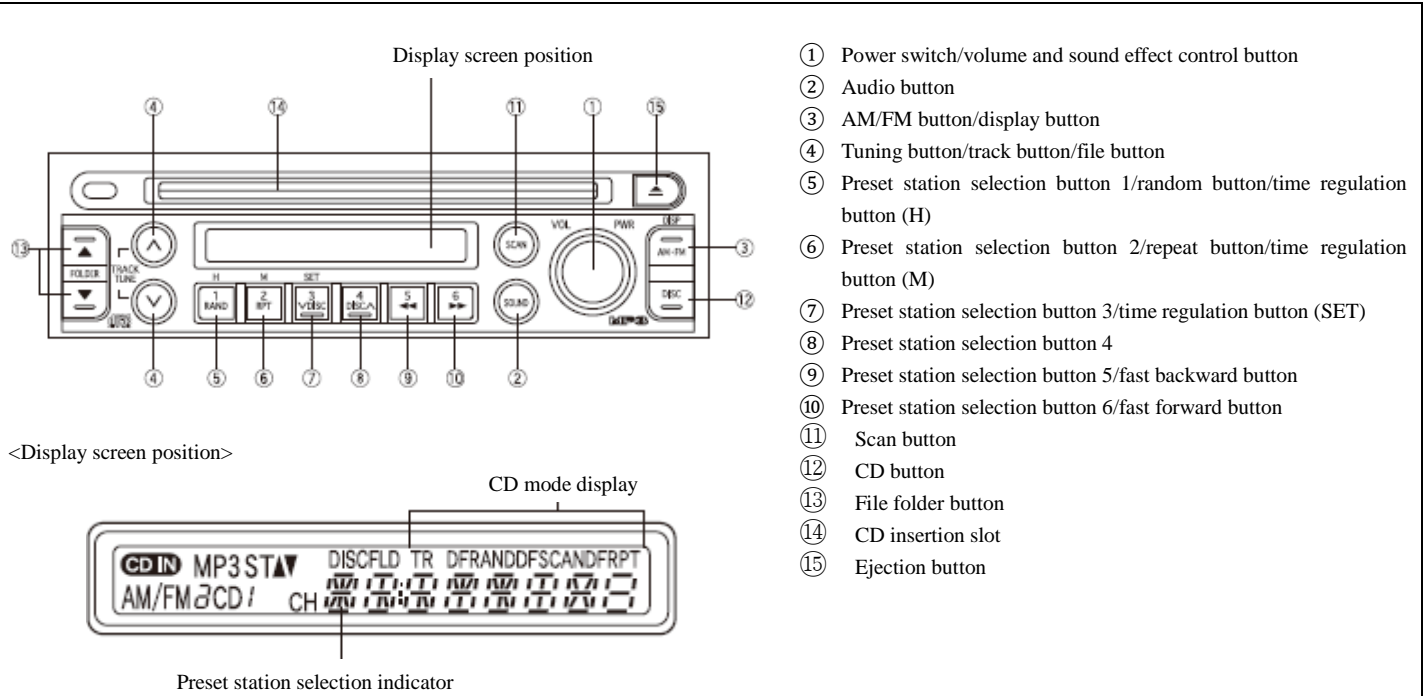
5. Push the tone source button to realize progressive increase in hour numerals.
6. When the hour setting is over, push the tuning button “▶”, and the display screen may be changed over to the “minute style” regulation mode.
7. Push the tone source button to realize progressive increase in minute numerals.
8. When minute setting is over, push and hold the tone source button for 2 seconds or more to release the regulation mode.

Attention

- **Every time the button is pushed, a numeral will be progressively increased.**
- **If you push and hold the button, the numeral may be increased consecutively.**
- **50 seconds later, the regulation mode may be released.**



CD player 3 (capable of MP3 data CD playback) (if available)





① Power switch

Push the switch to turn power on.

Push the switch once more to turn power off.

① Volume control knob

Turn the knob to regulate the volume.

Clockwise Increase

Anticlockwise..... Decrease

① Sound effect control knob

Push the audio button and select a mode listed in the table below. Then, turn the knob to regulate the mode.

Mode	Anticlockwise	Clockwise
BAS (bass)	Decrease	Increase
TRE (treble)	Decrease	Increase
FAD (fading)	Rear side increases	Front side increases
BAL (balance)	Left side increases	Right side increases

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② Audio button

Push the button to select modes (bass, treble, fader, balance or balance).

③ AM/FM button

Every the AM/FM button is pushed, the mode may be changed over as per the following sequence: “AM1→ FM1→ FM2”.

③ Display button

Push and hold the button for 5 seconds or more, and the information (clock/audio status) displayed on the display screen may be changed over.

④ Tuning button

When radio is receiving broadcast, push the buttons to set the frequency to the desired one. See “Tuning”.

④ Track/file button

In CD playback mode, push the button to set the desired track/file.

⑤ ⑩ Preset station selection buttons

When radio is receiving broadcast, push the buttons to call out the preset stations. See “Tuning” and “How to preset radio station”.

⑤ ⑦ Time regulation buttons

Push the button and the display screen button to regulate the time. See “Time regulation” .

⑤ Random button

During CD playback, push the button to access the random playback mode.

⑥ Repeat button

During CD playback, push the button to access the repeated playback mode.

⑨ Fast backward button

When you push and hold the button, the audio unit may conduct fast backward consecutively.

⑩ Fast forward button

When you push and hold the button, the audio unit may conduct fast forward consecutively.

⑪ Scan button

If you push the button when the radio is receiving broadcast, receivable stations may be received in sequence every other 5 seconds approximately.

During CD playback, push the button to access the scan mode.

⑫ CD button

Push the button to play back a CD

⑬ Folder button

In CD playback mode, push the button to set the desired folders.



⑭ CD insertion slot

Insert a CD into the slot.

See “Operating procedures of CD player”.

⑮ Ejection button

Push the button to eject a CD



Operating procedures of radio

Tuning

- Push the AM/FM button to select a waveband.
- When FM stereo broadcast is received, the radio may automatically change over to the stereo mode.
- If stereo broadcast is deteriorated due to static interference, the radio may automatically change over to the monophonic reception mode.
- Stations may be selected in 3 ways:

①Manual tuning

Push gently the tuning button to set the frequency to the desired one. Every time the button is pushed, the frequency may be changed step by step.

- \wedge Side ... higher frequency
- \vee Side ... lower frequency

The frequency being received is shown in the display screen.

②Search tuning

Tuning button

Push and hold the tuning button for 1 second or more.

Radio search radio stations from the current frequency to higher frequencies or lower frequencies. When a station is received, search tuning is automatically stopped.

- \wedge Side ... higher frequency
- \vee Side ... lower frequency

Push the button once again to stop automatic tuning midway

The frequency being received is shown in the display screen

Attention

When you push and hold the button, the frequency may increase (or decrease) consecutively.

Scan button

1. Push the scan button, and receivable stations may be received every other 5 seconds approximately.
2. If the desired station is received, push the button once more.

The frequency being received is shown in the display screen.

③Preset tuning

- Push the preset station selection button to call out the preset stations.

- Push the selected scan button for 1 second or more, only the radio stations memorized by the preset buttons may be received in progression every other 5 seconds. If the desired station is received, push the button once more.

The frequency being received and channel number are shown in the display screen.

How to preset radio stations

- Six (6) AM stations may be preset.
 - For FM waveband, up to 6 stations may be preset for FM1 and FM2 each, totaling 12 stations.
1. Push the AM/FM button to select a waveband.
 2. Push gently the tuning button to set the frequency to the desired one.
 3. Push and hold the desired preset station selection button for 2 seconds or more to store the desired frequency, and a “Beep” sound may be given when storage occurs.



Attention

If battery is cut off or the fuse is blown, stations memorized by the preset station selection buttons may be eliminated, and the stations must be stored over again.

Operation procedures of CD player



Enjoy music stored on CD

- Insert a CD into the insertion slot with the labeled side facing up.
- When the CD is completely inserted, music playback is started.
- If a CD is inserted during radio reception, the audio unit may automatically change over to CD playback mode.
- If a CD is already inserted into the slot, push the CD button to playback the CD.

Upward or downward track selection

Push gently the track button to set the player to the desired track.

Every time the button is pushed, the play may go forward to a next track or go back to a previous track.

-  Side ... Forward track skipping
-  Side ... Backward track skipping

Number of the currently played-back track is displayed in the display screen.

Fast forward or fast backward

Push and hold the fast forward or fast backward button.

- Button “6” ... Fast forward
- Button “5” ... Fast backward

When you push and hold the button, the audio unit may conduct fast forward /backward consecutively.

When the desired track is reached and the button is released, the audio unit may start playback from the track.

Eject a CD

Push the ejection button.

Attention

CD cannot be inserted or ejected when ignition switch is turned off. Therefore, the ejection button must be pushed to eject the CD before ignition switch is set to the “LOCK” position.

Repeatedly play back a CD

In the repeated playback mode, the selected track may be repeatedly played back.

Push the repeat button to select the repeated playback mode. Select the repeated playback mode, “RPT” may be displayed in the display screen.



Random CD playback

In random playback mode, the tracks may be randomly played back. Push the random button to select the random playback mode. Select the random playback mode, “RAND” may be displayed in the display screen.

Scan a CD

Each track on the CD may be played back for 10 seconds in sequence. Select the scan mode, “SCAN” is displayed in the display screen. When the desired track is played back, push the button once again.

Error message

ERROR1	The message may be displayed when CD gets dirty or is inserted in opposite direction. Check the CD.
ERROR3	The message may be displayed when CD player cannot work due to a certain cause. Eject the inserted CD.
ERROR4	The message indicates that CD player is subjected to overcurrent such that it cannot work. Eject the inserted CD.
WAIT	The message indicates that the temperature rise of CD player is too high such that it cannot work. Wait till it cools down.

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If the error message is displayed in the display screen, refer to the above table and take corrective measures.

If the error message still occurs or functions are still invalid after corrective measures are taken, contact the local special service store.

Operating procedures of MP3

Enjoy music stored on CD

- Insert a CD into the insertion slot with the labeled side facing up.
- When the CD is completely inserted, music playback is started.
- If a CD is inserted during radio reception, the audio unit may automatically change over to CD playback mode.
- If a CD is already inserted into the slot, push the CD button to playback the CD.

Select a file folder upward or downward

Push the file folder button.

- ▲Side ... Select forward
- ▼Side ... Select backward

Attention

If you push and hold the lower part of the button, the file folder corresponding to the first number may be selected.



Number of the currently played-back file folder may be displayed in the display screen.



Select a file upward or downward

Push gently the file button to select a desired file.

Every time you push the button, you may access a next file or return to a previous file.

-  Side ... Access a next file
-  Side ... Return to the previous file

Number of the currently played-back file may be displayed in the display screen.

Fast forward or fast backward

Push and hold the fast forward or fast backward button.

- Button “6” ... Fast forward
- Button “5” ... Fast backward

When you push and hold the button, the audio unit may conduct fast forward/backward consecutively.

When the desired position is reached and the button is released, the audio unit may start playback from the position.

Eject a CD

Push the ejection button.

Attention

CD cannot be inserted or ejected when ignition switch is turned off. Therefore, the ejection button must be pushed to eject the CD before ignition switch is set to the “LOCK” position.

Repeatedly play back a CD

- **Repeatedly play back a file**

In the repeated playback mode, the selected file may be repeatedly played back.

Push the repeat button to select the repeated playback mode. “RPT” may be displayed in the display screen.

- **Repeatedly play back a file folder**

In the repeated playback mode, the selected file folder may be repeatedly played back.

Push and hold the repeat button for 1 second or more.

Select the repeated file folder playback mode, “F-RPT” may be displayed in the display screen.

Random CD playback

- **Random playback of files of a file folder**

In the said mode, files may be selected from the current file folder and played back randomly.

In random playback mode, the files may be randomly played back.

Push the random button to select the random playback mode. Select the random playback mode, “RAND” may be displayed in the display screen.

- **Random playback of files stored on a CD**

In the said mode, files may be selected from the CD and played back randomly.

Push and hold the random button for 1 second or more.

Select the random file folder playback mode, “F-RAND” may be displayed in the display screen.

Scan a CD

- **Scan files of a file folder**

Each file of the file folder may be played back for 10 seconds in sequence.

Push the scan button to select the scan mode. Select the scan mode, “SCAN” may be displayed in the display screen.



When the desired track is being played back, push the button once again.

- **Scan files stored on a CD**

In the scan mode, the 1st file of each file folder stored on a CD may be played back for 10 seconds in sequence.

Push and hold the scan button for 1 second or more. Select the file folder scan mode, “F-SCAN” may be displayed in the display screen. When the desired track is being played back, push the button once again.

Error message

ERROR1	The message may be displayed when CD gets dirty or is inserted in opposite direction. Check the CD.
ERROR3	The message may be displayed when CD player cannot work due to a certain cause. Eject the inserted CD.
ERROR4	The message indicates that CD player is subjected to overcurrent such that it cannot work. Eject the inserted CD.
WAIT	The message indicates that the temperature rise of CD player is too high such that it cannot work. Wait till it cools down.
NO MUSIC	The message indicates that no playable files are available on the CD.

If the error message still occurs or functions are still invalid after corrective measures are taken, contact the local special service store.

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If the error message is displayed in the display screen, refer to the above table and take corrective measures.



Digital clock

Switch time display to audio mode display

Push and hold the button for 5 seconds or more, and the information (clock/audio status) displayed on the display screen may be changed over.

Time regulation

When time display appears in the display screen, push and hold the display button, and simultaneously push the “time” and “minute” buttons in sequence to regulate time.

Attention

If the audio power supply is cut off during replacement of the parts and components such as battery and fuse, the clock may be restored to the initial setting. In such a case, the clock shall be readjusted.

1. The “hour” display of the clock may be regulated. Push the display button, and push the time regulation button “H” simultaneously.
2. The “minute” display of the clock may be regulated.
Push the display button, and push the time regulation button “M” simultaneously.

Attention

- **Every time the button is pushed, a numeral will be progressively increased.**
- **If you push and hold the button, the numeral may be increased consecutively.**

How to set integral point time

The “minute” display may be set as “: 00” as per time signals etc.

Push the display button, and push the time regulation button “SET” simultaneously.

Attention

- **When “minute” display is smaller than “30”, the “hour” display may not change.
For example “10: 20” may be changed into “10: 00”.**
- **When “minute” display is equal to or greater than “30”, the “hour” display may be increased by 1 hour.
For example “10: 45” may be changed into “11: 00” .**

MP3 files

- MP3 (abbreviation of MPEG Audio Layer 3) is a type of technical standard for audio compression.
- MP3 player may play back the MP3 files recorded on CD -ROMs, CD-Rs and CD-RWs. It may play back CDs that conform to ISO 9660 levels 1 and 2 and recorded as per Romeo and Joliet file systems.
- The extension of MP3 files is designated as “.MP3”.
- MP3 player may play back the files designated with extension “.MP3” as MP3 files. To avoid noises and failure, the extension must not be used for non-MP3 files.
- The player is capable of playing back compatible multi-sector recorded CDs.
- To play back CDs and audio data (CD -DA) such as CDEXTRA and MIXED-MODE CDs containing recorded MP3 files, 2 types of CDs may be played back only if changeover between MP 3 and CD-DA is performed. To play back CDs containing recorded CD-DA and MP3 tracks, the CD-DA tracks will be played back first.



- The highlight function may work only when MP3 files with sampling rates 32, 44.1 and 48khz are played back (files with sampling rates of 16, 22.05 and 24 khz may be played back).
- As a rule, higher bit rate of MP3 files means higher sound quality. The product may play back recorded files with bit rates ranging from 8kbps to 320kbps. However, it is advisable to use CDs recorded with bit rate not lower than 128kbps in order that you may enjoy better sound quality.
- The MP3 player cannot play back MP3 files recorded as per packet data transmission mode (UDF format). You'd better adopt "pre-mastering" (preprocessing) software instead of packet software to record CDs.
- The player is not compatible with m3u play list.
- The player is not compatible with MP3i (interactive MP3) or MP3 PRO format.
- The MP3 player is compatible with VBR (variable bit rate).
- When a file recorded as per VBR (variable bit rate) is being played back, the playback time cannot be displayed correctly if fast forward or fast backward operation is performed.
- Incapable of checking file folders containing no files.
- Capable of playing back MP3 files stored in 8-hierarchy file folders at most. However, if the number of file hierarchies is too high, delay may take place at the beginning of playback. Therefore, it is advisable that the number of directory hierarchies must not exceed 2 when you have CDs recorded.
- Capable of playing back at most 255 files on each CD.
- Capable of playing back at most 255 folders on each CD.
- Due to different PCs and MP3 coding software, the playback sequence may also vary.

CD-Rs and CD-RWs

- Incapable of playing back CD-Rs/CD-RWs that which are not subjected to "final processing" (a type of processing that may enable playback of CD-Rs/CD-RWs in conventional CD players).
- The characteristics of CD-Rs/CD-RWs recorded by music-CD recorders or personal computers, score marks or contamination appearing on CDs, and contamination or fogging on lens of players may possibly cause playback failure of CD-Rs/CD-RWs.
- Due to different program setups and environments, CDs recorded by personal computers cannot be played back in some cases. Please record CDs in correct formats (contact program manufacturers for details).
- If CD-Rs/CD-RWs are exposed to direct sunlight, high temperature or stored inside your automobile, the CD-Rs/CD-RWs cannot be played back in some cases.
- The MP3 player may be unable to display the headings and other text information (in case of audio data [CD-DA]) recorded on the CD-Rs/CD-RWs.



- The MP3 player is capable of track skipping for CD-Rs/CD-RWs.
- The load time for CD-RWs may be longer than that for ordinary CDs or CD-Rs.
- Prior to usage, read the precautions delivered with the CD-Rs/CD-RWs.
- Incapable of playing back CD-Rs/CD-RWs with DDCD (double-density CDs) system.

Terms

Packet

The term refers to a type of method for recording files onto carriers such as CD-Rs, just as write data into floppy discs or hard disks.

Bit rate

Bit rate refers to the data volume recorded per second or bps (bits per second). Higher bit rate means higher data volume necessary for sound playback. On the premise that identical encoding method (such as MP3) is adopted, higher bit rate means better sound quality.

Multi-sector

Multi-sector recording method allows you to additionally record other data later. When data are recorded on CD-ROMs, CD-Rs or CD-RWs, all data are processed as a unit or a sector from beginning to end. While, the multi-sector method allows you to record 2 or more sectors on 1 CD.

CD-DA

CD-DA (abbreviation of CD digital audio) is an uncompressed format for ordinary CDs.

ID3 label

The label cannot be displayed.

ISO9660 format

The format is worked out as an international standard for CD-ROM file folders and file format logic, and the ISO9660 format is provided with 2 levels listed below.

- Level 1:

File name of 8.3 format (the file name is composed of at most 8 characters [half-byte English uppercases and half-byte digits and “_”] and 3-character extension).

- Level 2:

A file name may contain 31 characters (including separation dot“.” and filename extension). Each file folder may include at most 8 levels.



- **Expansion format**

- Joliet:

A file name may contain at most 64 characters.

- Romeo:

A file name may contain at most 128 characters.

m3u

It is the filename extension (.m3u) of play list created by “WINAMP” software.

MP3

MP3 (abbreviation of MPEG-1 and MPEG-2 Audio Layer 3) is an audio compression standard established by work group (MPEG) of ISO (international standards organization). MP3 may be used to compress audio data to 1/10 of ordinary CDs.

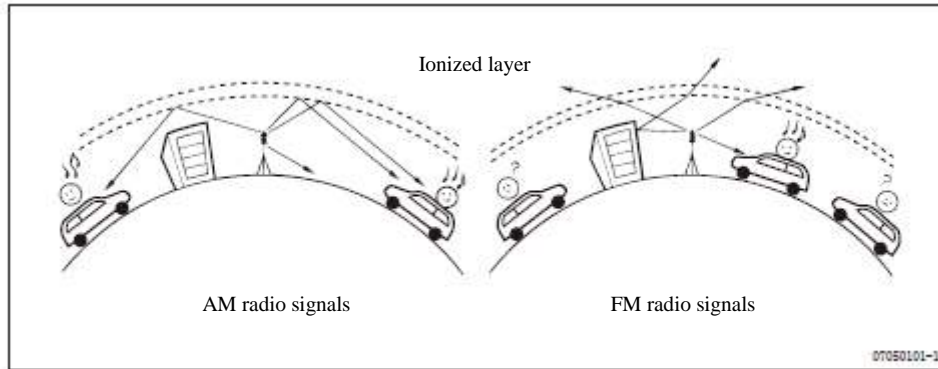
FM broadcast

As compared with ordinary radio broadcast (AM), FM broadcast may offer still more high-class tones. Moreover, stereo may also be received.

However, some problems may take place when FM broadcast is received on a running automobile due to the built-in property of FM.



Characteristics of linear propagation based on FM radio signals

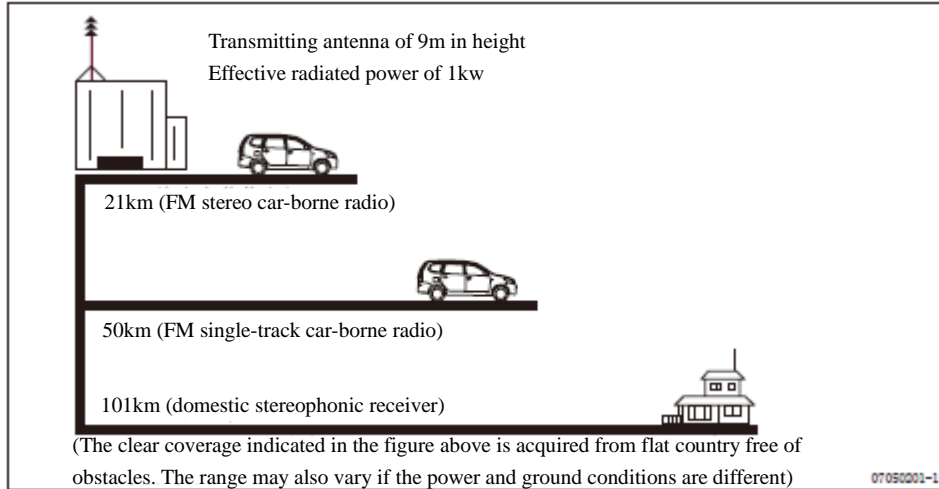


The frequency of FM radio signals are higher than that of AM radio signals, and the characteristics of FM radio signal are similar to those of light. Therefore, radio signals might be blocked off by buildings or mountains in some cases, such that the FM broadcast cannot be received.

So, the coverage of FM broadcast may be narrow than that of AM.



Service coverage of FM broadcast



Fade

FM radio signals may be suddenly deteriorated in some places, which is referred to as "fading".

Fading refers to a type of radio-signal loss phenomena. For example, radio signals behind the obstacles such as buildings and columns may be extremely minor. The antenna may fail to receive radio signals when your automobile pass through those places, and interference sound "cheep cheep" may be given. That is exactly the inherent characteristics of FM radio signals, which is caused by the unique transmittal mode. That phenomenon cannot be avoided.

When you receive FM broadcast at home, you may still listen to gem-pure FM broadcast if you extend the antenna to a higher position or use antenna with high sensitivity even if the radio signals were extremely minor.

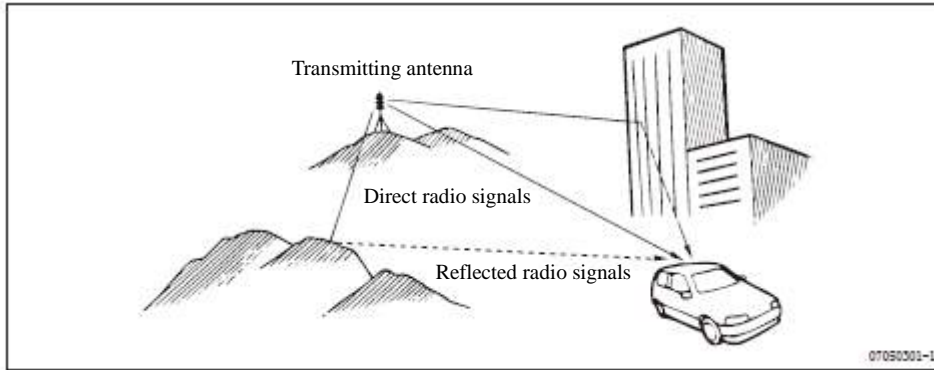
On the other hand, if you use the car-borne radio to receive FM broadcast when you drive your

automobile, a lot of limiting factors such as shape and mounting position of antenna, and the engine noises etc. may have adverse impact upon the broadcasting reception.

Therefore, as compared with listening to broadcast at home, the area allowing you to receive clear broadcast may get narrow.



Multi-path



FM radio signals may be reflected when they impact against buildings or mountains.

When the antenna of automobile captures simultaneously direct radio signals and reflected radio signals, “hoot hoot” sounds may be heard, or the voice of narratress may get hoarse.

That phenomenon is referred to “multi-path” distortion.

Comparatively speaking, that type of phenomena may seldom take place. To avoid that phenomenon, your automobile must be driven out of the areas.

How to receive radio signals in case of noise interference

When noise interference occurs, treble control shall be adopted to reduce the treble. In this way, the intension of noises may be reduced, such that the voice may get harmonic.

The radio is equipped with an ASC (auto sound track separation control) electric circuit. When your automobile reaches areas with minor radio signals, the circuit may automatically reduce the degree of separation of stereo so as to raise the S/N(sign/noise) ratio.

When your automobile reaches an area where intensive radio signals may be received, the degree of separation of stereo may be increased.



Section 8

Rearview Mirror

Exterior rearview mirrors.....	8-1
Interior rearview mirrors.....	8-2



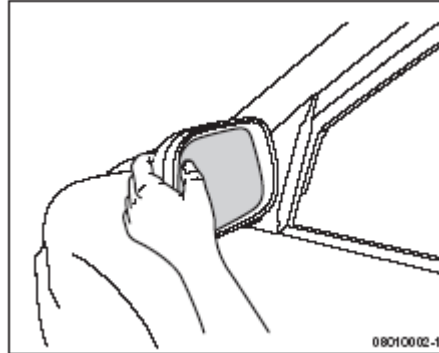
Exterior rearview mirrors

Danger

- Prior to driving, do return the exterior rearview mirrors to their original positions. Never drive your automobile with the exterior rearview mirrors folded.
- Do not regulate the rearview mirrors during driving so as not to lose control of your automobile.

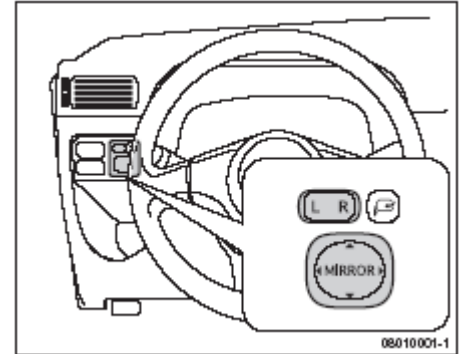
Warning

Be careful not to scrape the rearview mirrors when you remove the ice and snow cover.



Manual regulation of rearview mirrors

Regulate the rearview mirrors such that the sides of your automobile may be just seen in the rearview mirrors.



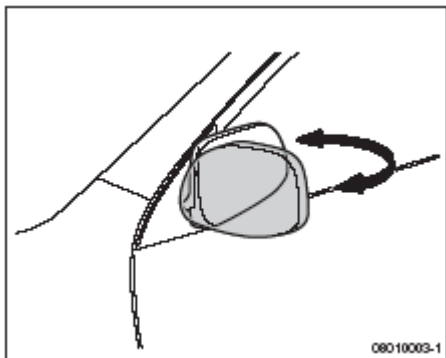
Regulate rearview mirrors by rearview mirror switch

When ignition switch is set to “ACC” or “ON” position, the rearview mirror switches may be operated.

1. Set the main switch leftwards or rightwards as required.
2. Push the control switch, and regulate the rearview mirrors such that the sides of your automobile may be just seen in the rearview mirrors.
3. The main switch shall be returned to the central (OFF) position when it is not used.

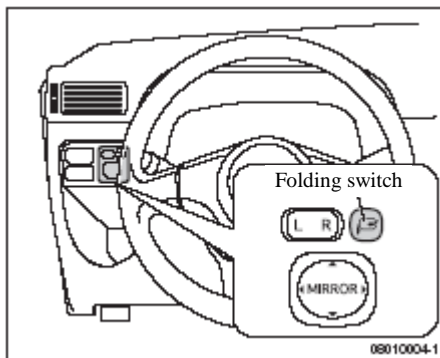


Interior rearview mirrors



Fold the rearview mirrors

Push backward the rearview mirrors so as to fold them.



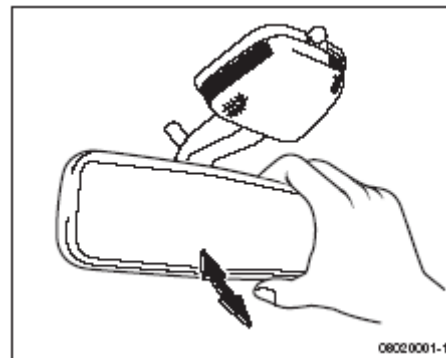
Use the remote folding switch (if available)

To fold the rearview mirrors, just push the rearview mirror folding switch.

To unfold the rearview mirrors, push the switch once more. Do not unfold the rearview mirrors before you drive your automobile.

Warning

When you operate the rearview mirrors, be careful not to have your fingers nipped by the doors and



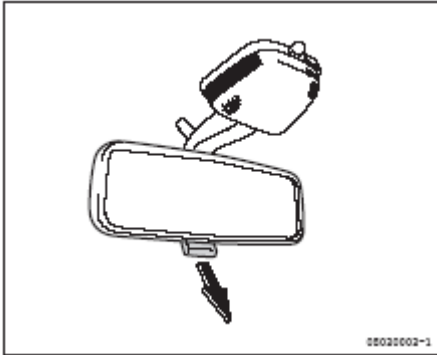
Regulate the interior rearview mirrors

Regulate the interior rearview mirrors by hand, such that you may clearly see the posterior visual field.

Danger

Do not regulate the rearview mirrors during driving so as not to lose control of your automobile.

rearview mirrors.



**Set the right positions
(anti-glare type) (if available)**

Prior to driving during the night, turn the regulating lever so as to protect yourself from being glared by the lights following your automobile.

⚠ Danger

When it is unnecessary to prevent glaring caused by follow-up automobiles, set the rearview mirrors to their daytime positions. When the rearview mirrors are set to their nighttime positions, the resolution of back-view vision may be reduced.





Section 9

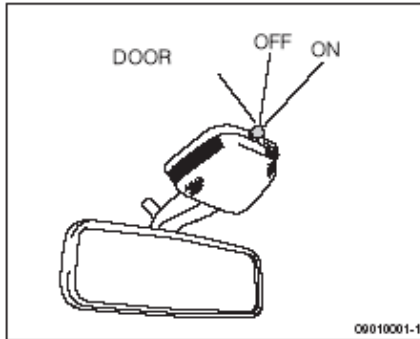
Onboard equipment

Room light	9-1
Horn	9-2
Auxiliary lever	9-2
Ash tray	9-3
Sun shield	9-3
Glove compartment	9-4



Room light

Roof light



When the roof lighting switch is set to the “ON” position, the roof light may be turned on, and the roof light may be turned off when the switch is set to the “OFF” position.

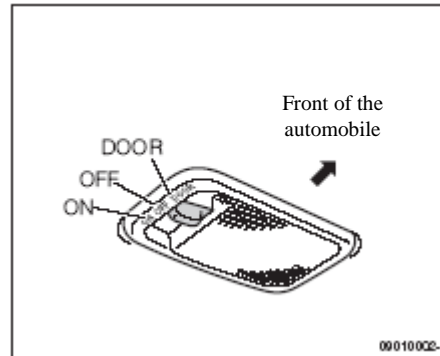
(for automobiles equipped with central locking system)

When the switch is set to the "DOOR" position, roof light may be turned on/off through the room light timer.

(excluded the automobiles equipped with central locking system)

When the switch is set to the "DOOR" position, the roof light may go on if the front door or centre door is opened or is not securely closed.

Boot compartment light



Room light timer

When the room light switch is set to the "DOOR" position, the following operations may be performed.

Open/close a door

- When front door centre door is open, the room light goes on.
- When ignition switch is set to a position other than the “ON” position, the room light goes out in 15 seconds after front door and centre door are closed.
- When ignition switch is set to the “ON” position, the room light goes out immediately after front door and centre door are closed.

Lock up/unlock the doors with remote controller of central locking system

- When front door and centre door are locked up, the room light dims out and then goes out.
- When a door is unlocked, the room light may be kept on within 15 seconds.

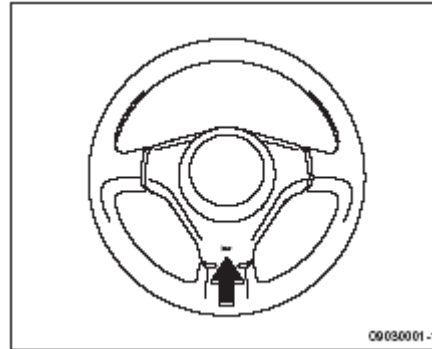


Horn

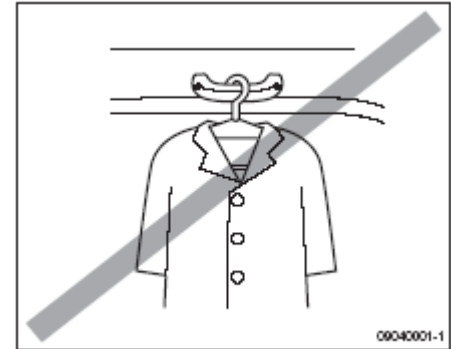
Auxiliary lever

Functions for battery discharge prevention

When the ignition switch is set to the "LOCK" or "ACC" position, the room light may go out if the front door or centre door remains unlocked for 10 minutes or more even if the switch was set to the "DOOR" position. This function is used to prevent the battery being discharged.



Push any position on upper cover of steering wheel shown in Figure to sound the horn.



Auxiliary lever may facilitate the passengers.

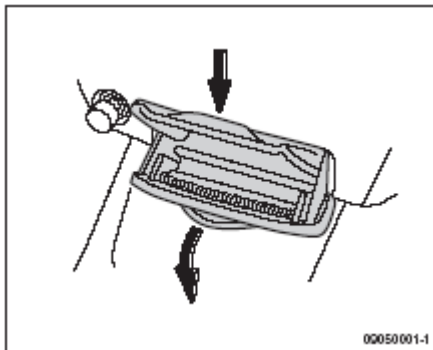
Danger

Do not hang any articles onto the auxiliary lever. The articles might block off the driver's vision.



Ash tray

Front ash tray



(Front)

Draw out the ash tray when using

(Rear)

Push the ash tray when using.

Push back the ash tray after use.

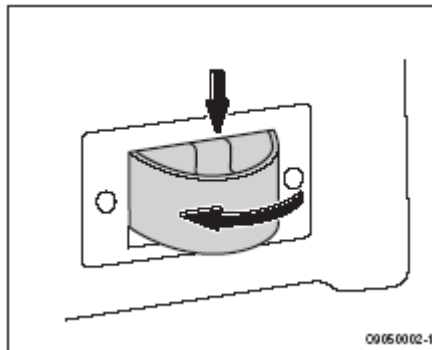
Remove the ash tray

Draw out the ash tray completely. Push down the spring board gently, and remove the ash tray.

Mount the ash tray

Push down the spring board gently, and push the ash tray into the original position.

Rear ash tray (if available)

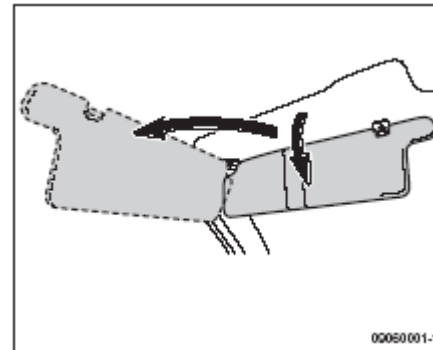


Danger

To avoid fire hazards:

- Do not use the ash tray as garbage box.
- Completely quench the cigarette before you close the ash tray.

Sun shield



Lower the sun shield to protect your eyes from intensive sunlight. The sun shield may also be moved to one side of the door glass.

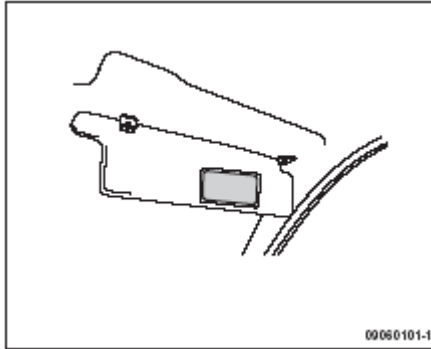
Danger

Push back the sun shield when it is not used. Sun shield might block off your vision.

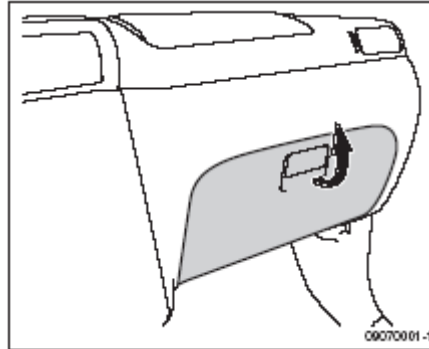


Glove compartment

Cosmetic mirror (if available)



Lower the sun shield, open the cover of sun shield, and use the cosmetic mirror.



Pull the grip on the glove compartment, open the cover of glove compartment, and lock it up securely by pushing the cover of the glove compartment.

Danger

The cover of glove compartment must be closed during driving so as to avoid severe personal injuries that might take place in case of accident or emergency braking.



Section 10

Driving conspectus

Prior to engine start-up	10-1
Start the engine	10-1
Instructions for manual transmission gearshift	10-2
Gearshift points (manual transmission)	10-3
Instructions for automatic transmission gearshift	10-4
Conspectus of normal driving	10-7
Conspectus of energy-saving driving	10-7
Conspectus of driving in winter	10-8
Brake system	10-9
Brakeshoe wear limit indicator	10-11
Conspectus of parking	10-11
Power-assisted steering	10-13



Prior to engine start-up

1. Perform prestarting inspection.
See Section 13.
2. Check the peripheral safety before you enter into your automobile.
3. Ensure that the parking brake handle is pulled up.
4. Regulate the seat positions, backrest angle and headrest height.
5. Regulate the interior and exterior rearview mirrors.
6. Fasten the seat belts.
7. Turn off unwanted lights and attachments.
8. Check the fuel gauge and verify whether or not the fuel is enough for driving.

Start the engine



Warning

- Do not allow the starter to rotate consecutively for 10 seconds or more.
- Do not allow the cold engine to operate at high speed for fear of damages to the engine.
- Maintain a temperate driving speed till engine warming-up is fully finished.

Bridging setup procedures

At start-up of your automobile, the electronic fuel injection system may exercise automatic control so as to maintain an appropriate air fuel ratio.

1. Depress the clutch pedal completely and keep it in that position till the engine is started up (manual transmission).
2. Switch the gear change hand lever to neutral (manual transmission) or "P" gear (automatic transmission).
3. Set the ignition switch to the "ON" position. Ensure that the warning lights go on.
4. Move your foot away from the accelerator pedal, and set the ignition switch to the "START" position and then release it.
5. Check and verify that all warning lights go out except for the brake warning lights.
6. Do not allow a cold engine to operate at high speed.
If the air temperature is below zero, allow the engine to warm up for a few minutes prior to driving.

When ambient temperature is extremely low

When ambient temperature is lower than -20°C, it may take some time to start up the engine after the ignition switch is set to the "START" position.



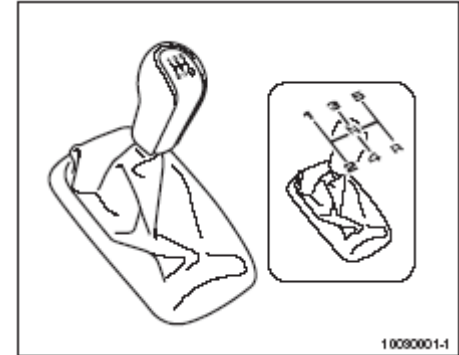
Instructions for manual transmission gearshift

In order to guarantee normal engine startup, the ignition switch shall be kept in the “START” position for another 3 seconds eve if the driver thought that the engine was already started up.

Precautions for automobiles equipped with automatic transmission

For automobiles equipped with automatic transmission, special attention shall be paid to the following items.

- Pull up the parking brake handle, and switch the gear change hand lever to “P” gear before you start up the engine.
 - Engine may also be started up at “N” gear; however, it is advisable to start it up at “P” gear.
 - Based on safety considerations, the gear shift mechanism is designed such that the engine cannot be started up when the gear change hand lever is set to the gears R, D, 2 or L.
 - If engine stall takes place during driving, just switch the transmission to N gear and restart up the engine.
 - Never start up the engine by pushing or towing your automobile.
- Gearshift may be performed only when the engine runs at the idle speed. When the engine operate at high speed, your automobile might suddenly move if the transmission is switched to gears R, D, 2 or L.
 - Depress the brake pedal securely, switch the transmission from “P” or “N” gear to other gears; otherwise, your automobile might move suddenly.



Gearshift mode is shown in the figure above.

Depress the clutch pedal completely prior to gearshift. If it is hard to engage a gear, release and depress the clutch pedal, and try again. The transmission is design such that it does not allow you to switch the gear change hand lever directly from the 5th gear to the reverse gear.

To switch from the 5th gear to the reverse gear, the gear change hand lever shall be switched over to the neutral gear, and the switch it over to reverse gear when your automobile is completely stopped.



Gearshift points (manual transmission)

Recommended gearshift speed

In order to improve the fuel economy and extend the service life of engine, it is advisable to shift up/down at the the speeds listed below.

Notice that the gearshift speed may vary as per the factors such as weather and road condition etc.

Recommended gearshift speed

Gear	Driving speed	Km/hr		
		K3-VE3	3SZ-VE2/3	CA4GA8/9/10
1st gear - 2nd gear 2nd gear - 1st gear	15			
2nd gear - 3rd gear 3rd gear- 2nd gear	35			
3rd gear- 4th gear 4th gear - 3rd gear	50			
4th gear - 5th gear 5th gear - 4th gear	70			

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Maximum permissible speed

Warning

If your automobile exceeds the maximum permissible speed given in the table below, do not conduct downshift. If the warning particulars are ignored, the engine may be damaged.

Maximum permissible speed

Gear	Driving speed			km/hr
	K3-VE3	3SZ-VE2/3	CA4GA8/9/10	
1st gear	40	40	40	
2nd gear	75	80	80	
3rd gear	105	110	110	
4th gear	150	155	155	
5th gear	—	—	—	

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Warning

You may switch it over to reverse gear only after your automobile is completely stopped; otherwise, the transmission may be damaged.

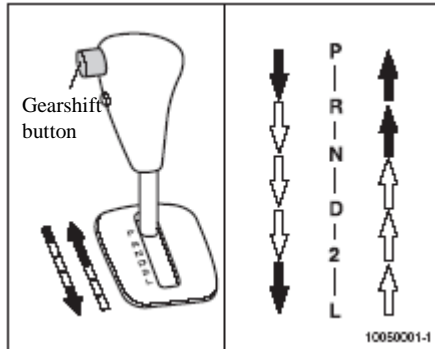
When your automobile runs along a steep slope, engine braking effect may be obtained by downshift as per road condition or driving speed.

Danger

Do be careful to conduct downshift on iced, slipped or damp pavement; otherwise, wheel lockup, skidding, loss of control or accident may take place.



Instructions for automatic transmission gearshift



- ➔: Push the gearshift button, and move the gear change hand lever simultaneously.
- ⇨: When you move the gear change hand lever, it is unnecessary to push the gearshift button simultaneously.

Functions of the gears are listed below:

- P**...Used for parking, starting engine and pulling out the ignition key.
- R**...Used for reversal
- N**...Neutral
 - Engine may be started up in this position.
 - However, to ensure safety, it is advisable to start the engine at “**P**” gear.

D...Used for normal driving.

Automatic shifting may be conducted between 1st gear and overgear as per driving speed.

E...Used for engine braking or high acceleration.

Automatic shifting may be conducted between 1st gear and 2nd gear as per driving speed.

L...Used to obtain effective engine braking.

Transmission will not be shifted up from the 1st gear.

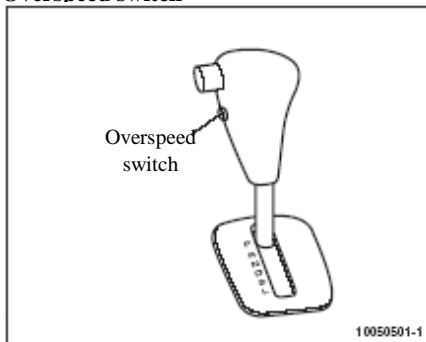
Attention

- Engine may be started up only when the transmission is set to gear **P** or **N**.
- To avoid faulty operation during gear shifting ➔, never move the gear change hand lever before the gearshift button is pushed.
- Check the indicator light to verify the current position of gear change hand lever.

- For automobiles equipped with electronic automatic transmission, the transmission may fail to automatically shift up to 3rd gear or 4th gear when the transmission oil temperature is quite low after the engine is just started up. When transmission oil temperature rises, such upshift may be automatically conducted.



Overspeed switch



The overspeed switch is located in the position during normal driving. Here, the transmission functions as a 4-speed automatic transmission.

Overspeed OFF

Push the switch to turn off the overspeed switch. Indicator light on the dashboard may go on. Push it once more to turn on the overspeed switch.

The overspeed switch shall be set to the position when engine braking is required during going downhill, or when gearshift times is reduced during going up the slope so as to realize smooth driving. Here, the transmission functions as a 3-speed automatic transmission.

Attention

When ignition switch is set to the “ON” position, overspeed switch is automatically turned on.

Automobile starting

Depress the brake pedal securely, switch the gear change hand lever to required gear simultaneously:

For ahead running, switch the gear change hand lever to gear **D**, **2** or **L**; for reversal, switch the gear change hand lever to gear **R**.

After parking brake is completely released, release the brake pedal gradually to start the automobile.

Danger

- When you depress the accelerator pedal, never operate the gear change hand lever; otherwise, your automobile might move suddenly.
- When engine speed is relatively high (For example when engine is just started up, engine is warming up, or the air conditioner switch is turned on), depress the brake pedal securely; otherwise, your automobile might move.



Driving

- Use **[D]** gear for normal driving.
- The gear change hand lever may also be manually switched from **[L]** to **[2]** or **[D]**.
- To realize high acceleration, depress the accelerator pedal completely. Even if the gear change hand lever is set to gear **[D]**, the transmission may also automatically shift down to 2nd gear or 1st gear.
- If engine stall takes place during driving, just switch the transmission to **[N]** and restart up the engine; however, it is advisable to starting engine at gear **[P]**.
- When your automobile runs along a steep slope, engine braking effect may be obtained by downshift as per road condition or driving speed.

Danger

Do be careful to conduct downshift on iced, slipped or damp pavement; otherwise, wheel lockup, skidding, loss of control or accident may take place.

Warning

Completely stop your automobile, then switch the gear to **[P]** or **[R]**. If you switch over gears during the automobile is running, the transmission might be damaged.

Maximum permissible speed

Warning

If your automobile exceeds the maximum permissible speed given in the table below, do not conduct downshift. **If the warning particulars are ignored, the engine may be damaged.**

Maximum permissible speed

Gear	Driving speed
[L]	50
[2]	90
O/D OFF	140
O/D ON	-

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Short-time stoppage

When the gear change hand lever is set to identical gear identical with that for running or is set to gear **[N]**, depress the brake pedal firmly.

If long-term parking is required, pull up the parking brake handle while the gear change hand lever is set to gear **[N]**.

Danger

If you fail to depress the brake pedal firmly and the gear change hand lever is set to **[L]**, **[2]**, **[D]** or **[R]**, your automobile might move.

To prevent your automobile from sudden moving:

- Pull up the parking brake handle on rising gradient.
- When you switch gear change hand lever from **[N]** to other gears, depress the brake pedal consecutively.


Parking or stoppage

When your automobile is completely stopped, pull up the parking brake handle, depress the brake pedal, and switch the gear change hand lever to **[P]** simultaneously.

Danger

To prevent your automobile from unexpected moving, the gear change hand lever shall be completely switched to **[P]**. Do not allow the engine to operate at high speed unnecessarily.



When the key is pulled out, it is advisable to switch the gear change hand lever to , and turn the ignition switch to the “LOCK” position. The operation may guarantee that your automobile can be safely started up next time, and guarantee safe parking.

Conspectus of normal driving

Danger

Gear down in case of crosswind or rugged pavement.

Warning

- Do not lay your foot on the clutch pedal during driving; or, do not use the clutch to maintain the status of your automobile when it is parked on rising gradient; otherwise, the clutch might be overheated.
- Do not drive your automobile while the gear change hand lever is set to neutral; otherwise, the transmission might be overheated.
- Do not place your hand on the gearshift button during driving, for fear that the transmission may be accidentally switched to other gears. Furthermore, the transmission may also be damaged in this way.
- Do not allow the engine to operate at high speed during gearshifting; otherwise, the engine might be overheated.
- Do not drive your automobile through water-logging area where the water depth exceeds the bottom of the felloe. Change down when you drive through water.

Conspectus of energy-saving driving

- Step up speed slowly. Avoid unnecessary abrupt acceleration or braking. Maintain identical driving speed in so far as possible.
- Avoid unnecessary joy ride.
- During joy ride, it is advisable to use the top gear. This may help you to reduce engine noises and fuel consumption.
- The process from stoppage to startup of an automobile need consume much more of fuel; therefore, you'd better avoid emergency start-up or emergency braking by reserving ample time in so far as possible during driving.
- You'd better rationally drive your automobile and maintain an appropriate driving speed (please see Section 13), such that your automobile may maintain her original performance and fuel consumption may be reduced.
- Do not have your automobile overloaded.
- Do not allow the engine to operate at unnecessary idle speed.
- Turn off the air conditioner when it is unneeded.
- Dismantle the luggage rack when it is unneeded.



Conspectus of driving in winter

Battery

Check the batteries and cables for normal condition. In cold seasons, the accumulator capacity may be easily reduced (please see Section 14).

Engine coolant

Add cooling fluid of adequate antifreezing protection grade.

Engine oil


See the *Table of engine oil viscosity* given in Section 15.

Cleaning solution

Adopt antifreezing-type cleaning solution.

Parking

When mechanical mechanisms might be iced up, do not pull up the parking brake handle.

Set the gear change hand lever to 1st gear or reverse gear (manual transmission) or gear  (automatic transmission).

Danger

- Prior to driving your automobile, remove the snow accumulated on the roof. The accumulated snow might drop down and block off your vision.

- Before you get on your automobile, remove the ice and snow attached to your shoes so as to avoid accidental skidding when you operate the pedals by feet.

Tire chains

Tire chains of 12mm or less in thickness shall be adopted.

Warning

To prevent your automobile from being damaged: Conduct operations as per the instructions given by the tire chain manufacturer.

Mount the tire chains onto the rear tires as secure as possible.

Do not mount tire chains onto the front tires.

When an mileage of 0.4 - 0.8km is finished, fasten the tire chain once again.

Danger

- Chains over 12mm in thickness might interfere with the car body, go ill with driving, or even damage the automobile.
- To prevent your automobile from getting out of control or meeting with an accident:
- Mount the tire chains in a safe place.

- The driving speed may not exceed 50km/hr or the restricted speed proposed by the tire chain manufacturer, whichever is lower.
- Regulate the driving speed as per the road condition, and avoid short-radius turns.
- Avoid the rugged, bumpy and rough pavement that might cause your automobile to bounce.
- Avoid emergency braking, and drive your automobile with care.



Brake System

Braking system of tandem-type brake master cylinder

Xenia automobiles are equipped with a braking systems integrated with tandem-type brake master cylinder. Each braking system may independently work.

In case one of the braking system develops a fault, the other may still work. In such a case, the braking system needs much more of braking force for braking, and the braking length may be increased. Moreover, the brake warning lights may also go on.

Danger

Do not continue driving your automobile while the braking systems are faulty; Check the systems immediately.

Vacuum booster

Vacuum booster may assist braking force by utilizing the manifold vacuum of engine.

Danger

If engine stops during driving, a braking force much greater than normal condition is needed, and the braking length may also be increased.

General precautions for braking

Danger

- In case a tire is punctured, do not depress the brake pedal suddenly. Doing so may cause out-of-control of the automobile
- Ensure that the car mat may not interfere with the free travel of pedals.
- Moisture or brine salting may deteriorate the braking effect. Depress the brake pedal gently several times to remove the moisture or brine salting.
- Do not place your feet on the brake pedal during driving; otherwise, the brake may be overheated. During downhill driving, do not depress the brake pedal consecutively. Just shift down to realize engine braking.



ABS (antilock brake system)

ABS (antilock brake system) may prevent wheel lockup in case of emergency braking or braking on wet slippery pavement so as to enhance the vehicle stability and controllability.

When brake pedal is depressed, the pedal might vibrate or give out working sounds. That indicates that the ABS system works fine.


Furthermore, within several seconds when a certain speed is reached after your automobile is started, sounds inside the engine compartment may also be heard.

The sounds are given out when the ABS system performs self diagnosis, and they do not indicate any exceptions.

E. B. D. (electronic braking force distribution)

Based on the E. B. D. (electronic braking force distribution) function, optimum allocation of braking force may be implemented as per the operation and loading status of your automobile. Therefore, the braking effect of an loaded automobile may be guaranteed at any time.

Warning

- Even if ABS system is available, your automobile still need adequate braking length. A safe distance shall be maintained from your automobile to the preceding one.
- Even if ABS system is available, never drive your automobile at ultra high speed. Do drive safely always. Look out for road condition at any time during driving.
- As compared with automobiles that are not equipped with ABS snow-capped systems, the automobile equipped with ABS systems need a longer braking length when they run on rugged, gravel-paved or snow-capped roads. Gear down on such roads.
- In case the ABS develops a fault, the warning light  goes on. In such a case, ABS may not work; however, your automobile is still provided with conventional brake performance. Once the warning light goes on, contact immediately the local special service store for inspection of your automobile.

- If the warning lights of antilock brake system and the E. B. D. warning lights go on and do not go out after the engine is started up or during your automobile is running, the rear wheels might be separately locked up during emergency braking, such that your automobile may be off balance. In such a case, avoid emergency braking, and contact immediately the local special service store for inspection of your automobile.

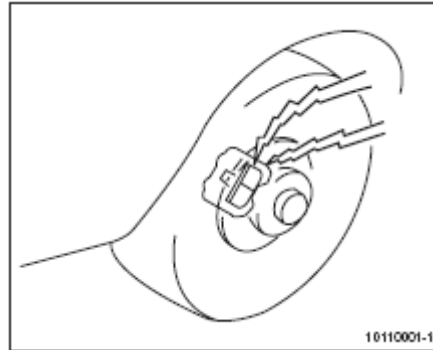
Attention

- When the driving speed is of 10km/hr or lower, ABS system may not work. The system may act as a conventional braking system.
- For emergency braking, forcibly depress and hold the brake pedal. If you release the brake pedal, ABS system may not offer the expected braking effect.



Brakeshoe wear limit indicator

- Never use pumped braking *; otherwise, the braking length may be extended.
- *"Pumped braking" refers to a type of braking method as per which the brake pedal is depressed little by little by stages.
- When the brake pedal is quickly depressed, the braking force generated is extremely high. Therefore, ABS may be activated in some cases.



When braking shoes are worn, the brakeshoe abrasion indicators fitted on the front disk brakes may give warning noises.


Danger

Do not continue using the worn brakeshoes so as not to deteriorate the braking effect and cause accident.

Please immediately check/replace the brakeshoes and rotors.

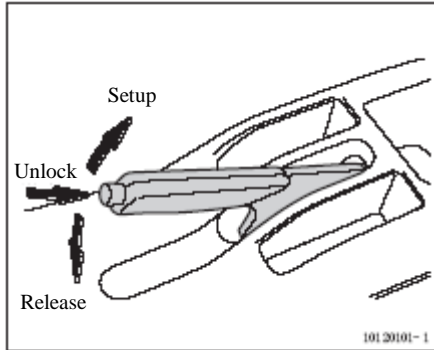
Conspectus of parking

Danger

- To park or stop your automobile, do verify that there are no inflammable substances such as hay and oil around or beneath your automobile.
- The exhaust pipe may get extremely hot and might ignite the peripheral articles.
- When you park your automobile, parking brake handle shall be completely pulled up except that the mechanical mechanisms are iced up. When you drive on rising gradient, switch the manual gear change hand lever to 1st gear; when you drive downhill, switch the manual gear change hand lever to reverse gear, or switch the automatic gear shift to gear .



Parking brake



Pull up the parking brake handle to set the parking brake.

To release the parking brake, slightly pull up the parking brake handle first, and push the button by your thumb. Then, completely lower the parking brake handle.

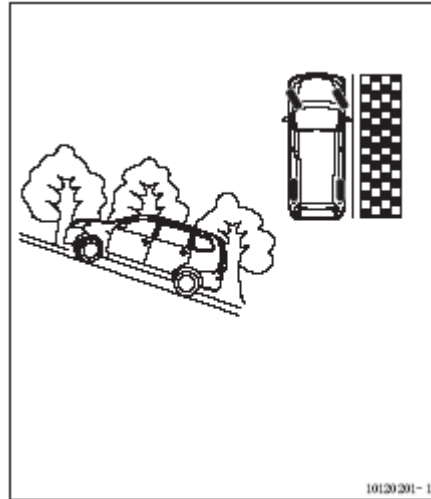
Warning

To drive your automobile, do verify that the parking brake is completely released, and the brake warning lights also go out. If the parking brakes are not completely released, the brakes might be overheated, and the shoes and lining may be worn prematurely.

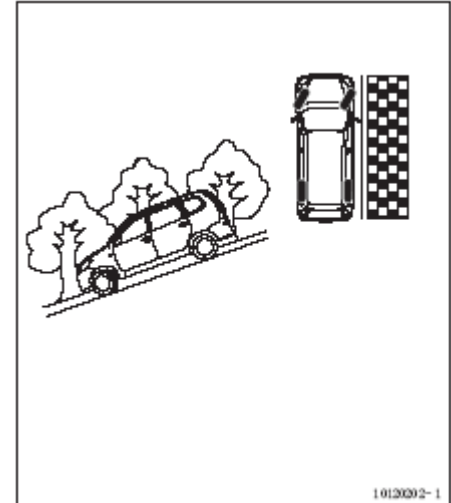
Parking on a slope

To park your automobile on a slope, turn the front wheels as shown in the figure.

Rising gradient with road shoulders



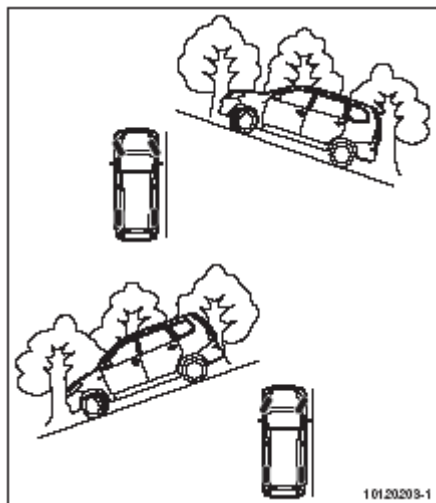
Downramp with road shoulders





Power-assisted steering

Rising gradient or downramp without road shoulders



The automobile is equipped with a hydraulic power-assisted steering system whose power comes from the engine.

Therefore, steering while the engine is already shut down requires higher force.

Warning

If any fault is detected, contact the local special service store for inspection of the system.





Section 11

Emergency processing

Engine cannot be started up.....	11-1
Bridging start-up	11-2
Overheating of Engine.....	11-3
Tools	11-4
Tire burst	11-6
Haulage	11-13
Warning triangles	11-17
Warning tone	11-17



Engine cannot be started up

In case the starter fails to rotate

If horn volume is low or the headlights darkle, check the batteries first.

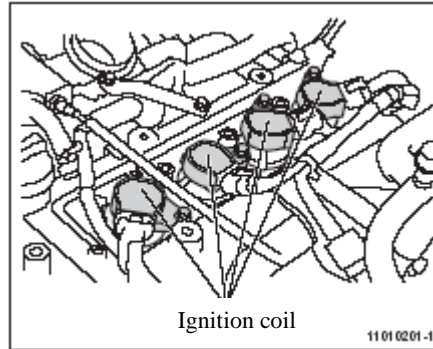
See Section 14.

If the battery is exhausted, perform bridging start-up. If the cause is still not ascertained, contact the local special service store for system inspection.

Danger


Do not conduct start up by pushing or pulling your automobile; otherwise, your automobile may be damaged or subjected to an accident.

In case the starter may rotate



1. Check the fuel gauge. If the pointer points to a position below the "empty fuel " line, the fuel tank may be exhausted. Conduct fuel charging-up.
2. If fuel is available inside the tank, do check whether or not the spark plugs and ignition coil are securely connected, and check whether or not the ignition coil and harness connector are properly connected.

Warning

If the engine cannot be started up still, or the MIL  flickers or goes on, the engine shall be regulated or repaired. Contact the local special service store immediately. If you continue driving in such a case, the catalyst etc. may be severely damaged.



Bridging start-up

Danger

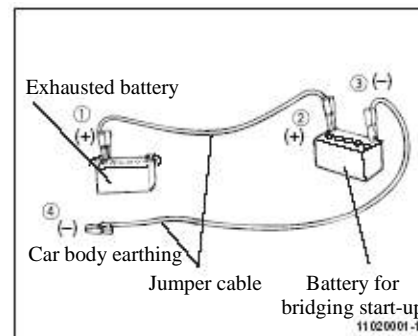
Please follow the following instructions so as not to lead to severe personal injury and damages to your automobile. In addition, please follow the instructions given by jumper cable manufacturer.


- If you are unfamiliar with the bridging setup procedures, contact the local special service store or towing company.
- Prior to bridging start-up, see “Instructions for relevant self maintenance”.
- The batteries contain virulent and corrosive sulfuric acid. You shall wear safety goggles and handle the items with care, such that the electrolyte may not spatter onto your body, clothes and your automobile. If electrolyte spatters onto your skin or into your eyes, take off the contaminated clothes and flush corresponding positions for at least 15 minutes. Then go to a doctor immediately. Use water-soaked foam or fabric wash the eyes on the way to the hospital for medical treatment.
- If electrolyte is swallowed, drink water or milk as much as possible, and go to a doctor immediately.
- Do not lay any ignition sources close to the batteries; otherwise, the batteries might explode.

- Do not charge an iced battery. Prior to bridging, fluid inside the batteries shall be unfrozen; otherwise, the entrained gases might explode.
- Do not conduct bridging start-up using a low-level battery.
- Do not allow children to access the batteries.
- Bridging start-up shall be conducted in a well-ventilated area.

Warning

- A 12V battery shall be adopted for bridging start-up. Applied high voltage might seriously damage the electric apparatus such as relay and radio.
- If the voltage of battery for bridging start-up cannot be ascertained, do not conduct bridging start-up.
- The capacitance (AH value) of battery for bridging start-up must not be lower than that of an exhausted battery.
- In case electrolyte spatters onto the lacquer finish, clean the contaminated area immediately.



1. If the battery for bridging start-up is installed on another vehicle, the two vehicles shall be separated. Turn off all unwanted lights and attachments. Set the gear change hand lever to neutral (manual transmission) or gear  (automatic transmission). Pull up the parking brake handle completely.
2. Remove all vent caps from the battery intended for bridging start-up and the exhauste battery (if any).
3. Start up the engine on the vehicle on which the battery intended for bridging start-up is mounted, and allow it to run at approximately 2,000rpm for several minutes.



Engine overheated

If the engine is overheated, the engine poms and the engine performance may be considerably deteriorated, and the water thermometer may indicate overheat. In such a case, observe the following danger precautions and take the described steps.

Danger

The following measures may help avoid scald or severe personal injuries:

- To check any components inside the engine compartment, do wait till the engine gets cool.
- When engine and radiator are hot, do not try to remove the radiator filler cap.
- If the radiator filler cap falls within pressurized type, hot cooling fluid may spill.
- If steam is bursted out, do not open the engine hood panel.
- When the engine is running, never touch or access the radiator fan blades.

1. Park your automobile in a safe place and turn off the air conditioner.

4. Ensure that the ignition switches fitted on the automobile to be bridged are set to the “LOCK” position.
5. Connect the jumper cables as per the precise sequence shown in the figure. Connect the cable from the negative terminal of bridging start-up battery to a solid unpaintedmetallic point that is far away from the battery.
Do not incline the battery excessively during connection.
Ensure secure connection.

Danger

To prevent short circuit:

- Ensure that the jumper cable is insulated properly.
- Do not connect the cable from negative terminal of bridging start-up battery to the negative terminal of exhausted battery, or connect it to or lay it close to any working parts and components.
- Except for the correct battery terminals and earthing, do not allow the jumper cable or clamping collar to contact any object.
- When you connect the clamping collar, do not allow the jumper cable or clamping collar to contact each other.

6. Start up the engines of automobile to be bridged. Allow the engine to operate at 2,000rpm for several minutes.
7. Disconnect the cable with care in reverse order; disconnect negative-pole cable, and then disconnect the positive-pole cable.
8. Check the electrolyte level of battery. Add distilled water till the level reaches the “UPPER” mark.

Maintenance-free battery requires no water adding.

9. Replace the vent caps (if any), and fasten down them securely.

If the engine cannot be started up still after you had made several attempts, or the causes for battery discharge may not be ascertained, contact the local special service store for inspection of your automobile.



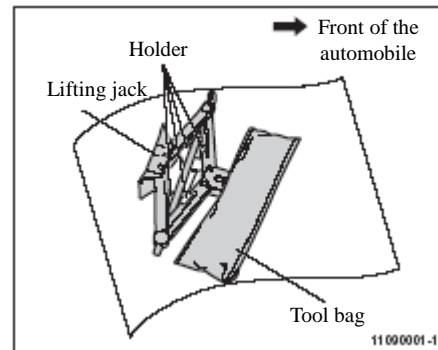
Tools

2. If steam emerges from engine hood panel, shut down the engine, and keep it closed till no steam emerges from the engine hood panel. When no steam emerges, start up the engine, and open the engine hood panel to ventilate the engine inside.
3. If no steam emerges from the engine hood panel, open the engine hood panel for ventilation while the engine is running.
4. Visually check the engine compartment. If any phenomena exist inside the engine compartment, immediately shut down the engine and contact the local special service store.
 - Cooling fan does not rotate;
 - Steam or hot water leaks from positions such as hose;
 - If there is no water inside the radiator reservoir;
 - The fan belt is cut off;
5. When the pointer of water temperature transducer drops to below appropriate temperature, shut down the engine.
6. When the engine is completely cooled down, check the components.
7. Check whether or not the cooling water level is right, check the fan belt for looseness, and check the radiator blade (heat dissipation section) for visible contamination or attached filth.
8. If the cooling fluid level is insufficient, add cooling fluid (see Section 14).
9. Contact the local special service store for inspection as soon as possible.

The engine may be subjected to overheat in summer. The following checks shall be conducted regularly:

 - Leak of cooling system
 - Water level of radiator and reservoir
 - Clogging of radiator blades
 - Tension of driving belt

If the engine is frequently subjected to overheat, contact the local special service store for inspection of the cooling system.



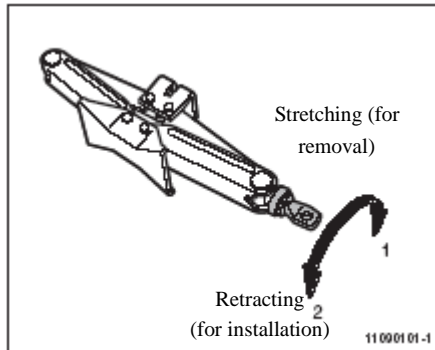
Positions of lifting jack and tools:

Beneath the driver's seat

1. Slide the driver's seat to the frontmost position.
2. Take out the tool bag.



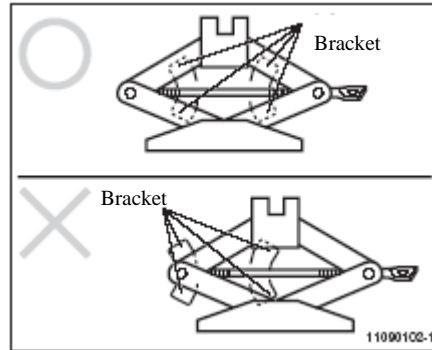
Lifting jack



Use the jack handle provided in the tool bag, and mount/remove the lifting jack by screwing the worm spindle as shown in the figure above.

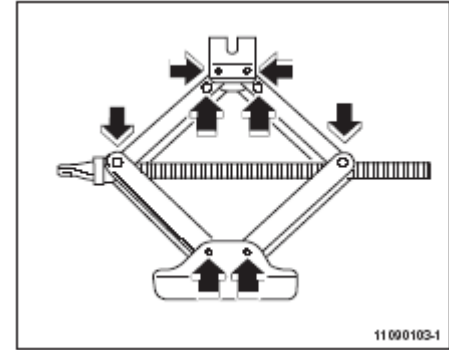
Removal

Remove the lifting jack and remove the lifting jack from the bracket by turning the worm spindle as per the direction shown in the above figure.



Installation

1. Place the lifting jack as shown in the figure above.
2. Turn the worm spindle as per direction 2 as shown in figure above till the arm lifting section (totaling 4 segments) of the lifting jack touches the bracket of lifting jack.
3. Use the jack handle to turn it for another more half turn as per direction 2 shown in the figure above, such that the lifting jack may be securely fixed onto the bracket.



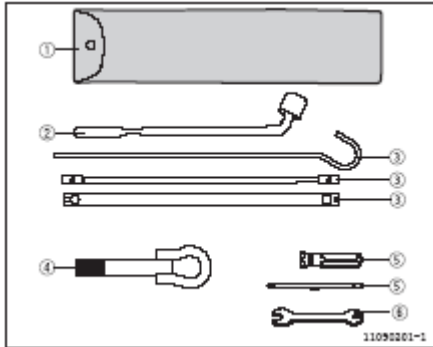
Maintenance instruction

- Apply a fine coat of grease onto all sliding parts/components and screw threads.
- Ensure that the lifting jack is free of distortion or cracks.
If any, the lifting jack shall be replaced by a new one.



Tire burst

Tool bag




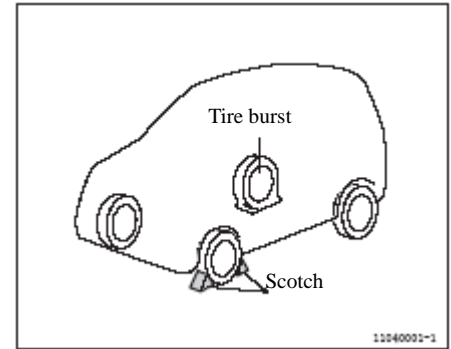
- ① Tool bag
- ② Hub wrench
- ③ Jack handle
- ④ Tow hook
- ⑤ Screw driver
- ⑥ Spanner (10x12)

Attention

Take care to store the tools inside the tool bag as per the direction shown in the figure above.

Danger

- In case a tire burst takes place, drive your automobile away from the lanes.
Avoid replacing a burst tire on a slope.
- Let all passengers get off and stay in a safe place.
- Ensure that the parking brake handle is pulled up, the transmission is set to 1st gear (manual transmission) or reverse gear  (automatic transmission)

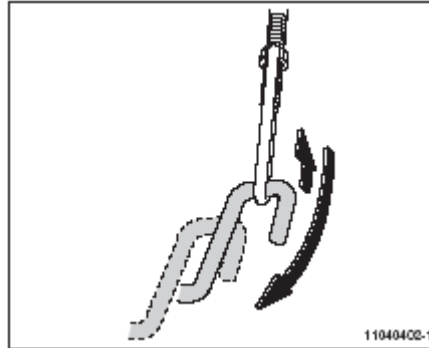
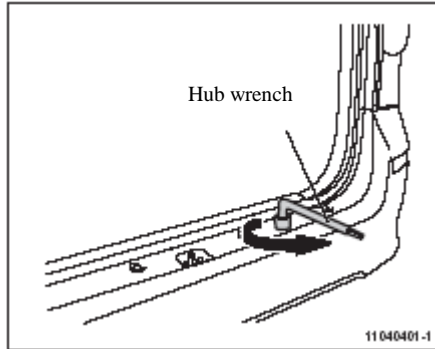


Use a scotch to block off the tire at opposite end of the diagonal tire relative to the burst tire, such that the scotch may be brought into full play.

To enhance the safety, use scotches to block off before and after the tire in so far as possible.



Spare tire



Remove/install a spare tire

1. Open the back door.
2. Use a hub wrench to unfasten the set bolts till the spare tire bracket is loosened.

3. Lift up the spare tire bracket gently, and remove it from the trip.
4. Store a spare tire in reverse order.

Danger

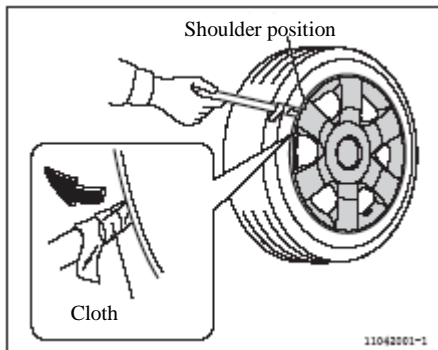
Ensure that the spare tire is securely fixed. If the spare tire is installed unsteadily, it drop down during driving and lead to an unexpected accident.

Attention

- When you install a burst tire onto the spare tire bracket, do verify that the wheel surface (index surface) faces up.



Remove/install a tire



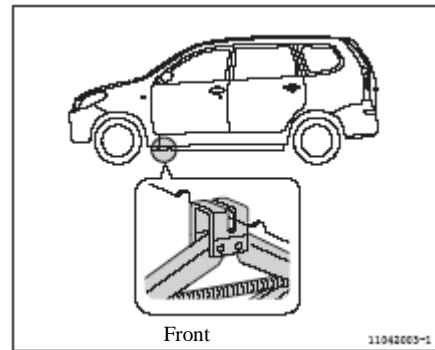
1. Use the flat part of a screw driver wrapped by cloth or similar materials into beneath the wheel ornament cap. Insert into the shoulder position instead of the opening of the wheel ornament cap. Conduct prizing with the screw driver to remove the wheel ornament cap.



2. Use a hub wrench to unscrew the hub nuts. Do not remove the hub nuts.

⚠ Danger

Be careful not to be injured by hub wrench sliding away from the hub nuts.

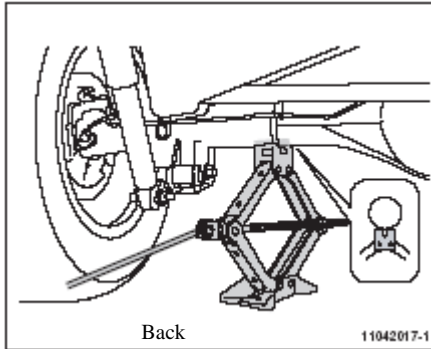


3. As shown in the figure, totaling 4 lifting jack positioning points are available, with 2 points on each side. Position the lifting jack at a jacking point closest to the burst tire.

⚠ Danger

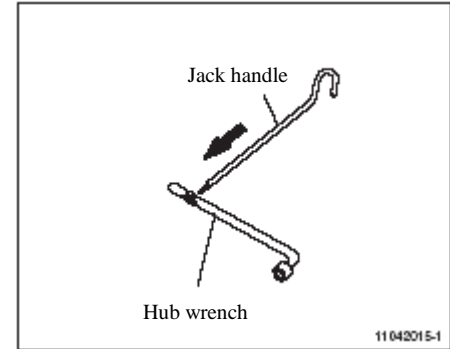
To avoid severe personal injury caused by accidental sliding of the lifting jack:

- Use the lifting jack only on solid level ground in so far as possible. When necessary, put a piece of flat and wide plate beneath the lifting jack to stabilize the lifting jack.



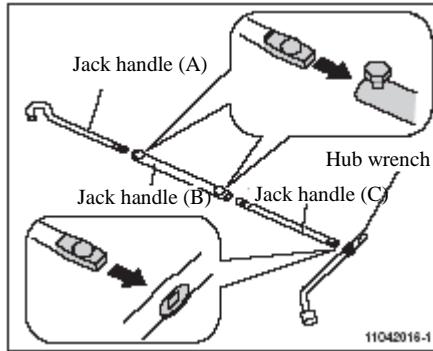
- It is advisable to block off the wheels with scotches, and no people shall be allowed to stay inside the jacked-up automobile.
- No one is allowed to place his body beneath the jacked-up automobile; please use automobile supports.
- Never put any positions of your body beneath the jacked-up automobile.
- The lifting jack delivered with your automobile is for wheel-changing only.
- Never use it to lift up other vehicle or to support heavy objects.

- Put the lifting jack at a specified jacking point.
- Do not shake or push a jacked-up automobile.
- Do not run the engine when an automobile is jacked up.
- Carry away heavy baggage from the automobile in so far as possible.

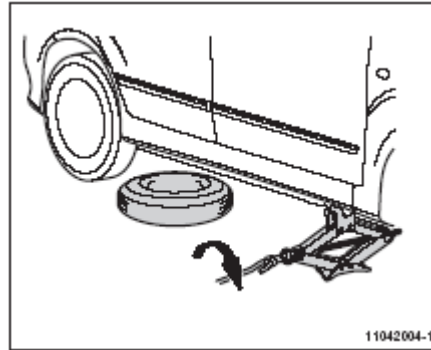


4. (front)

To use the jack handle, do conduct assembling as shown in the figure above.



(rear)
Align it to the dish of jack handles (A) , (B) and (C) , fix it by bolts, and insert it into the hole in the hub wrench so as to fit in the jack handles.



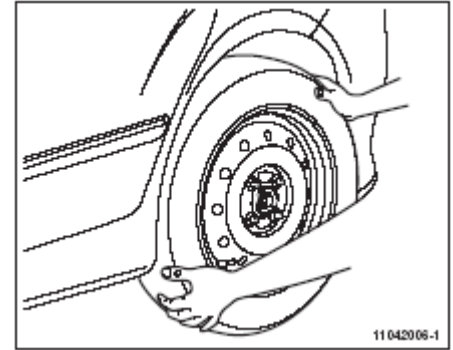
5. Insert the jack handle into the worm spindle of lifting jack and turn it clockwise to lift up your automobile.

Jack up your automobile gradually till the tires get clear away ground surface, and the distance from the tire to ground surface is OK if tire removal/mounting may be performed smoothly.

⚠ Danger

Put the spare tire at a point beneath the car body nearby the tire to be replaced.

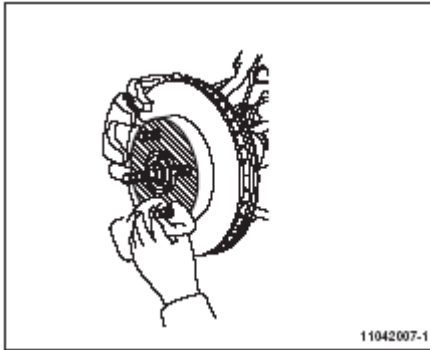
That is a preventive measure taken to prevent any danger in case the lifting jack is disengaged.



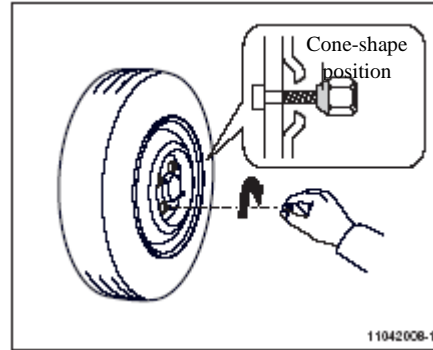
6. Remove the hub nuts, and replace the burst tire with the spare tire.

⚠ Danger

- Lay flat the removed burst tire so as to prevent it from accidental falling.
- It is advisable to wear gloves.
The tire might be very hot still after tire burst takes place.



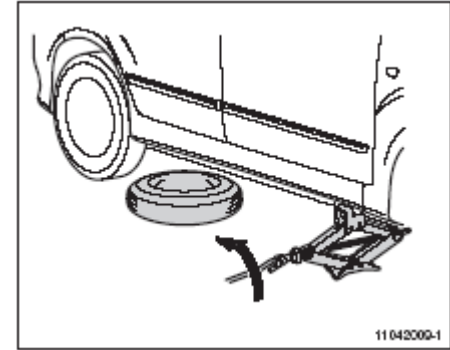
- Prior to installation of the spare tire, use waste cloth to remove the erosion and foreign materials occurring on the surfaces of brake drum, brake disc and hub nuts. If the metal fitting surfaces are not tightly fitted during wheel installation, hub nut looseness and traffic vibration may occur during driving.



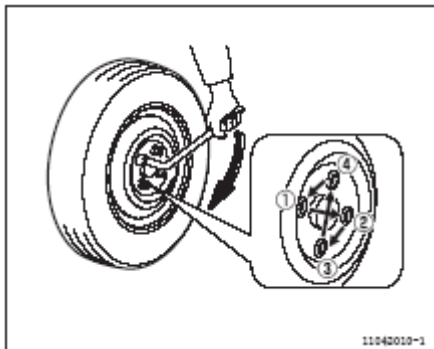
7. Reinstall all hub nuts, and tighten them up till the wheel is tightened up. Ensure that the conic sections of hub nuts are securely mounting inside the holes. Do not tighten them up forcibly first.

 **Warning**

Do not oil the hub nuts. The hub nuts may get loose during driving.



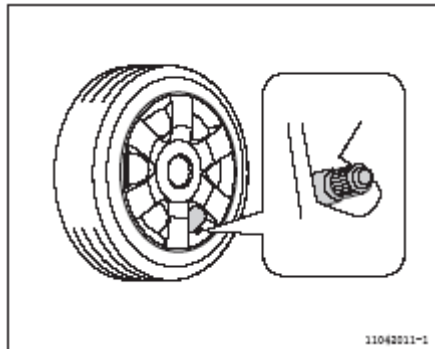
8. Insert the jack handle into the worm spindle of lifting jack and turn it anticlockwise to lower your automobile.



9. Tighten up the hub nuts in diagonal sequence.
Tightening torque: 88.2-117.6 Newton ·m (9.0 - 12.0kilogram force ·m)

⚠ Warning

Do not use other tools or you feet to tighten up the hub nuts so as not to damage the screw threads.
Check the hub nuts for tightening after a road mileage 1,000km is finished.



10. To install the wheel ornament cap, just tap the cap and align the notch to the air valve.
11. When tire replacement is finished, check the pressure of new tire, and regulate the tire pressure as per relevant stipulations.
Tighten up the cap of inflating valve.

⚠ Warning

The tire pressure of installed spare tire shall be higher than the specified air pressure.
It must be regulated when installation is finished.
12. Store all tools, jack handles and the burst tire properly.

⚠ Danger

If nay vibration or abnormal sounds are detected after wheel-changing, contact the local special service store immediately for inspection.



Haulage

Precautions for aluminum wheels

Aluminum wheels are prone to scratches or damages. Handle them with care so as to maintain their appearance, performance and safety.

- Check the hub nuts for tightening after the first road mileage 1,600km is finished.
- If a tire was transpositioned, repaired or replaced, do check the hub nuts for tightness when a road mileage 1,600km is finished.
- When tire chains are used, be careful not to damage the aluminum wheels.
- Use the standard-brand hub nuts specially designed for aluminum wheels.
- Only plastic tip hammer or rubber hammer may be used to mount weight equalizers onto an aluminum wheel. Check the aluminum wheels for damages regularly. In case any damage is found out, replace the damaged aluminum wheel immediately.

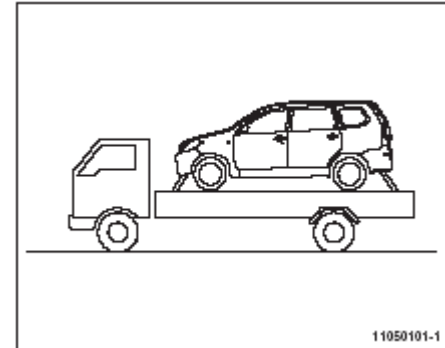
It is advisable to call the local special service store or towing cCompany for towing services.

If wheels or axles are damaged, towing trolley must be adopted.

Warning

Never use suspensory equipment to perform towing; otherwise, the car body may be severely damaged.

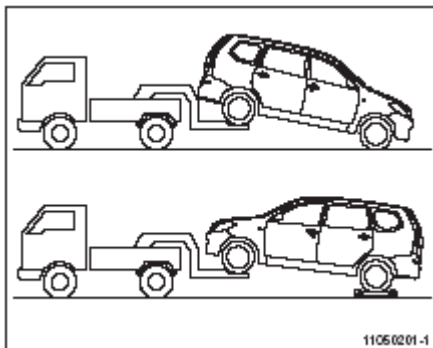
Platform type



This may be rated as the most rational towing method.



Wheel lifting type



Danger

To ensure safety, nobody is allowed to stay inside an automobile to be towed.

Tow an automobile with front wheels touching down:

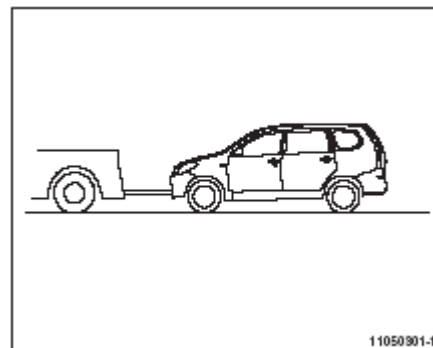
Release the parking brakes.

Tow an automobile with rear wheels touching down:

Towing trolley shall be adopted.

If towing trolley is unavailable, set the gear change hand lever to the neutral position, and set the ignition switch to the “ACC” position (for automobiles equipped with manual transmission).

Emergency towing



Warning

- Do not tow an automobile equipped with automatic transmission in this way.
- Do not tow an automobile in this way unless the wheels, axles, power train, steering gear or brakes are kept in good condition.

The tow hook shall be fitted with stout ropes, towing belts or cables.

The driver must stay inside the automobile to be towed and exercise control over it.

Release the parking brakes, and set the gear change hand lever to the neutral position. Turn the ignition switch to the position “ACC”.



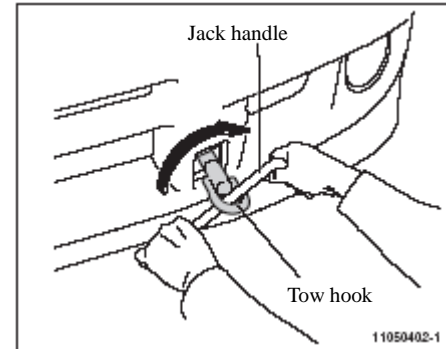
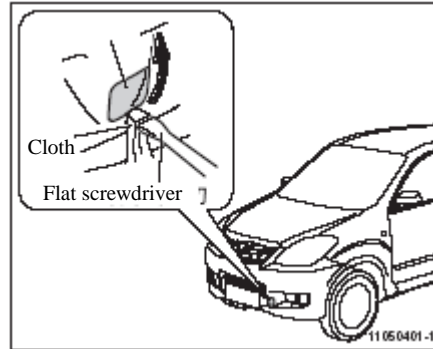
⚠ Danger

- When the engine is not running, the vacuum booster may not operate. Therefore, higher braking force is required.
- To ensure safety, do not use tow hooks if automobile towing is not performed on solid pavement.
- When your automobile is being towed, do not pull out the ignition key, and do not set it to the "LOCK" position.
- The automobile being towed might lose the steering capacity and cause an accident.

⚠ Warning

- Tow hook must be towed right ahead so as not to damage the tow hooks. Do not apply pulling forces edgewise or vertically. In addition, towing must not be performed violently.
- If ropes or cables are attached to axles or any other positions, those components might be damaged.
- Check whether or not the tow hooks are securely fixed.

Tow hook



1. Wrap the flat screwdriver with cloth or similar materials, and insert the screwdriver into the slot in the cap. Remove the cap.
2. Turn the tow hooks as indicated by the arrow, and insert it. Use a hub wrench to tighten up the tow hook.
See the tools described in page 11-6.



Instructions for towing

The driver must stay inside the automobile to be towed and exercise control over it.

Danger

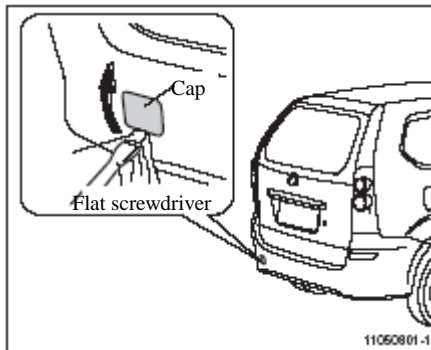
- When the engine is not running, the vacuum booster may not operate. Therefore, higher braking force is required.
- To ensure safety, do not use tow hooks if automobile towing is not performed on solid pavement.
- When your automobile is being towed, do not pull out the ignition key, and do not set it to the "LOCK" position.

The automobile being towed might lose the steering capacity and cause an accident.

Automobile towing

1. Release the parking brakes, and set the transmission to the neutral position.
2. When the engine is shut down, set the ignition switch to the "ACC" position; or set the ignition switch to the "ON" position while the engine is running.

Towing other automobile



The rear tow hook used for towing other automobile is located on the left side of the car body.

1. Wrap the flat screwdriver with cloth or similar materials, and insert the screwdriver into the slot in the cap. Remove the cap.
2. Turn the tow hooks as indicated by the arrow, and insert it. Use a hub wrench to tighten up the tow hook.

Danger

Do not exceed the maximum towing speed locally specified.

Warning

- It is prohibited to tow an automobile heavier than that of your own automobile so as not to deteriorate the transmission system or damage the tow hooks fitted on the car body.
- Do not use the hook as a holdup hook. The car body might be damaged if you fail to observe the warning. The tow hook is designed only for towing other automobile.
- Tow hook must be towed right ahead so as not to damage the tow hooks. Do not apply pulling forces edgewise or vertically. In addition, towing must not be performed violently.



Warning triangles

The Warning triangles are stored inside the boot compartment.

Precautions for parking on public roads

When you have to park your automobile on the road shoulder of a public road, a warning triangle shall be set up at a position whose distance to the automobile is rational, so as to warn the drivers of approaching automobiles.

Warning tone

Warning tones may indicate the exceptions or current state of the systems.

When the following sounds are heard, refer the following sections and take necessary steps.

Squelches are given during braking.

-See the brakeshoe wear limit indicator described in Section 10.





Section 12

Appearance maintenance

Exterior cleaning of your automobile 12-1

Exterior cleaning of your automobile 12-2

Rust prevention treatment 12-2



Exterior cleaning of your automobile

Cleaning

1. Park parking vehicle your automobile in an well-ventilated area free of direct sunlight. Shut down the engine.
2. Clean the surfaces with water uniformly, and use a fountain brush to brush the surfaces gently. If necessary, automobile washing solution or neutral detergent may be used.
3. Spray pressurized water to the body bottom.
4. Clean the surfaces thoroughly to remove any residual solution.
5. Wipe off the accumulated water with foam or chamois.
6. Dry the braking system.

Danger

- Do not allow children to access the cleaning solution.
- To clean the body bottom and suspensions, wear a pair of rubber gloves and wear a long sleeve shirt. Be careful not to be injured (such as incised wound).

Warning

- Be careful not to sprinkle water onto the electrical system inside the engine compartment; otherwise, short circuit might occur.
- Observe the instructions for cleaning solution. It is inadvisable to use petrol or highly toxic solvents so as to protect the lacquer finish.
- Do not spill hot water onto your automobile; otherwise, the lacquer finish might be damaged. In addition, do not wipe off filth or dust when the surface of car body is dry.

Waxing

Wax your automobile regularly to protect the lacquer finish. Prior to waxing, clean and towel off the car body.

If the lacquer finish is relatively hot, move your automobile to a shade, and wait till the surface gets cool.

Warning

To protect the lacquer finish:

- Do not wipe the surfaces forcibly or with hard cloth.
- Do not use steel wool or cleaning agent containing abrasives.
- Follow the instructions given by wax manufacturer.



Interior cleaning of your automobile Rust prevention treatment

Clean the interior with a vacuum cleaner.

Warning

It is inadvisable to use petrol or high toxic solvents; otherwise, the materials be damaged.

High-quality automobiles manufactured by FAW Jilin Automobile Co., Ltd. are provided with advanced rust prevention design and structures.

However, that is only a part of the whole rust prevention procedures. To guarantee good long-term rust prevention quality, you must learn about the particulars for yourself:

Danger

Do not coat rust-resisting material onto the components of exhaust system; otherwise, overheat and fire hazards might be caused.

Causes of rust Common

causes of rust corrosion are listed below:

- Salt content of the roads and air
- Filth and water
- Metallic scaling, notches, scratches or dents are still exposed to air
- Chemical substances and industrial pollution

Rust prevention treatment measures

Keep your Xenia automobile clean;

If you live in a region where rusting is common because roads are spread with salt or close to the coast, or industrial contaminants are diffused, pay special attention to the rust corrosion.

We recommend that you'd better clean the bottom of your automobile at least once in winter.

When wintertime is over, conduct thorough cleaning once again.

Clean the fender guards and other concealed sections.

Wet mud may expedite the generation of rust corrosion; therefore, the sludge on the car body must be thoroughly removed. Cleaning by high pressure steam may be quite effective.

To clean the bottoms of doors, threshold boards and frame members, do verify that the discharge holes are not clogged.

Keep the garage dry;

Moisture (especially when air temperature is higher than 0°C) is harmful to your automobile;

Therefore, do not park your automobile in an area with high moisture and poor ventilation.

Do not clean your automobile inside a garage, and do not allow your automobile to stay in a damp place or to be covered by snow.



Keep the lacquer finish and ornaments in good condition;

Any scratches or fractures on the lacquer finish must be repaired as soon as possible. Bare steel sheets may be repaired at specialized plate-work repair workshop or the local special service store.

Pay attention to the interior of your automobile;

Check the inferior of cushion and carpet for dryness regularly.

Do not wash the interior of your automobile.

Moreover, suitable containers shall be used when chemical substances, cleaning agent, fertilizer and salt are transported.

In the event of splash or leakage, please clean and dry the affected area immediately.





Section 13

Automobile maintenance

Maintenance requirements 13-1

Maintenance plan 13-3



Maintenance requirements

Maintenance operation is of great importance for fault-free operation, safety and energy conservation. Improper maintenance of automobile might lead to accident or damage to your automobile.

Prestarting inspection

Prestarting inspection shall be performed to ensure safe and cozy driving.

Quality and level of engine oil

Level of engine coolant

Level of brake fluid

- Level of cleaning solution
- Driving belts
- Level of battery electrolyte
- Tire pressure and abrasion
- Liquid oil leak
- Service condition of the lights
- Steering wheel
- Brakes

Accelerator pedal

During low-speed driving:

- Speedometer takeoff and water-temperature warning light
- Steering force of steering wheel
- Braking function
- Other abnormal service conditions

- Check whether or not your automobile is subjected to lateral wandering during straight-line driving or when brakes are applied.

Take a close look at your Xenia automobile

Keep your eyes open any changes in performances, sounds and appearance of your Xenia automobile, and the changes indicate that your automobile should be maintained.

Some important clues are listed as follows:

- Pause, instability or poming of engine
- Obvious loss of power
- Abnormal engine noises
- Leak of any oil/fluid (air-conditioning drainage is normal)
- Exhaust sound is changed Tire appearance seems to be empty/shrivelled; very high squealing may be given during turning or braking; tire wear is non-uniform
- Your automobile wanders to one side during straight-line driving on level pavement
- The brake efficiency is inferior; “weakness” may be felt when you depress the brake pedal or clutch pedal, the pedals almost rub up against the floor , and your automobile wanders to one side when brakes are applied.
- Engine coolant is consecutively higher than the normal temperature

If one of those conditions are detected, contact the local special service store for inspection of your automobile.

Maintenance record

A copy of the work order for any maintenance operations performed at the local special service store shall be kept.

The copy may testify that all maintenance operations covered by warranty had been fulfilled.

Self-maintenance

If you have some mechanical knowledge and automotive tools, you may carry out some maintenance items by yourself.

The procedures of self maintenance are described in Section 14.

Notice that self maintenance might affect your range of warranty.

For specific contents of warranty statement, refer to the warranty handbook.

Scheduled maintenance

Scheduled maintenance items specified in this section shall be performed regularly. Observe the maintenance schedule recommended in the handbook.



Notice that user shall pay the costs of all maintenance items.

The maintenance intervals shall be reduced if the driving conditions are harsh. In such a case, you may consult the local special service store.



Maintenance plan

Maintenance plan for normal driving conditions

If no further notice is received, the road mileage or driving hours of your automobile shall prevail, whichever is reached first.

Maintenance may be carried on as per the maintenance plan when a road mileage of 80,000 km is finished.

Engine section:

(J - inspection, G - replacement)

Position	Item	Maintenance measures	(J - inspection, G - replacement)								
		X1,000km	10	20	30	40	50	60	70	80	
Interval between inspections		Year	1	2	3	4	5	6	7	8	
KV-EV3, 3SZ-VE2/3	Engine oil & oil filter	Replacement (use API: SG or higher)	To be replaced once every 5,000km/0.5 year (whichever is reached first)								
	Driving belts (dynamo, water pump, air conditioner, power-assisted steering)	Inspection <ul style="list-style-type: none"> • Tension • Crack • Damage 	J	J	J	J	J	J	J	J	
	Valve clearance *	Inspection <ul style="list-style-type: none"> • Damage 								J	
	Spark plug	Replacement		G		G		G		G	

* Check the tappet noises and engine vibration, and regulate them if necessary.

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(J - inspection B - replenishment T - regulation R - lubrication Q - washing N - tightening G - replacement)

Position	Item	Maintenance measures	X1000km	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	
		Interval between inspections	MONTH	6	12	18	24	30	36	42	48	54	60	
CA4GA8/9/10	oil & oil filter	Replacement	Oil and oil filter must be replaced when a new automobile finishes the breaking-in mileage of 2,500km. They shall be replaced once every 7,500km/0.5 year (whichever is reached first)											
	Spark plug	Replacement			G			G				G		
	Belt tension	Inspection Adjustment	Belt tension shall be checked when a new automobile finishes the breaking in mileage 1000km or every time it finishes in normal driving mode a road mileage of 15,000km, and the belts shall be replaced once every time a road mileage of 600,000km is finished.											
	Thermosistor	Adjustment Replacement				J or G					J or G			
	PVC valve	Cleaning Adjustment Replacement		Q·J		G:		Q·J		G			Q·J	
	Cylinder pressure	Inspection			J		J		J		J		J	
	Safety bolts of cylinder cover hood: tightness	Inspection Tighten		J·N		J·N		J·N		J·N		J·N		J·N
	Mounting bolts of oil sump: tightness	Inspection Tighten		J·N		J·N		J·N		J·N		J·N		J·N
	Mounting bolts of chain chamber cover: tightness	Inspection Tighten		J·N		J·N		J·N		J·N		J·N		J·N



The rest:

(J - inspection, G - replacement)

Position	Item	Maintenance measures Interval between inspections	X1000km	10	20	30	40	50	60	70	80
			Year	1	2	3	4	5	6	7	8
Intake system	Element, air filter	Cleaning Inspection • Damage Replacement			J		G		J		G
	Battery	Cleaning Inspection • Tightness • Battery electrolyte		J	J	J	J	J	J	J	J
Cooling System	Cooling & heating system	Inspection * • Crack • Damage					J				J
	Coolant (long-acting coolant)	Replacement	To be replaced once every 40,000km/2 years (whichever is reached first)								
Fuel System	Fuel filter	Replacement	To be replaced once every 40,000km/2 years (whichever is reached first)								
	Fuel tank cap, fuel pipe connector (including fuel hose)	Inspection • Crack • Tightness • Leak • Damage	To be replaced once every 40,000km/2 years (whichever is reached first)								
Exhaust emission control system	Onboard carbon canister	Inspection • Function • Damage				J					J
	Exhaust pipe & muffler pedestal	Inspection • Tightness • Damage	Once every 20,000 km/1 year (whichever is reached first)								

*After road mileage of 80,000km/4 years is finished, and inspection shall be performed once every 20,000 km/1 year.



(J - inspection, G - replacement)

Position	Item	Maintenance measures Interval between inspections	X1000km	10	20	30	40	50	60	70	80
			Year	1	2	3	4	5	6	7	8
Power driven system	Clutch	Inspection • Free path • Path allowance • Damage (K3-VE3, CA4GA8/10)		J	J	J	J	J	J	J	J
		• Check/replace • Clutch fluid (3SZ-VE2/3, CA4GA9)	J	G	J	G	J	G	J	G	
	Manual transmission	Check/replace Manual transmission oil				J					G
	Automatic transmission	Check/replace Automatic transmission oil	Once every 40,000 km/1 year (whichever is reached first) To be replaced once every 80,000km/4 years (whichever is reached first)								
	Rear axle (rear)	Check/replace Oil of rear axle		J		G		J			G
Suspension System	Suspension arm (front) Control arm (rear) Dust boot Spring [STABILIZER] Damper	Inspection • Tightness • Cackle • Damage			J		J		J		J
Steering system	Steering link Steering gear Dust boot	Inspection • Tightness • Cackle • Damage			J		J		J		J
	Wheel alignment	Inspection • Toe in			J		J		J		J



(J - inspection , G - replacement)

Part	Item	Maintenance measures X1000km	10	20	30	40	50	60	70	80
		Inspection interval year	1	2	3	4	5	6	7	8
Brake System	Brake pedal & parking brake handle	Inspection • Free path (brake pedal) • Path allowance (brake pedal) • Working path (brake pedal) • Tightness • Cackle • Damage	J	J	J	J	J	J	J	J
	Brake disc & brake disc gasket	Inspection • Wear • Damage		J or G		J or G		J or G		J or G
	Brake hose and brake line	Inspection • Leak (brake fluid level, connection) • Looseness of clamping collar • Damage		J		J		J		J
	Brake fluid	Inspection and replacement	J	G	J		J	G	J	G
	Brake drum & brake lining	Inspection • Wear • Damage		J		J		J		J
	Master cylinder & wheel cylinder	Inspection • Leak	To inspected once every 30,000km/2 years (whichever is reached first)							
Chassis & car body	Hub nuts, other bolts & nuts	Inspection • Tightness	J	J	J	J	J	J	J	J
	Lights, horn, wipers, windshield washers	Inspection • Operation	J	J	J	J	J	J	J	J
	Volume of refrigerant for air conditioner	Inspection • Operation:		J		J		J		J



Maintenance plan for harsh driving conditions*

If no further notice is received, the road mileage or driving hours of your automobile shall prevail, whichever is reached first.

Maintenance may be carried on as per the maintenance plan when a road mileage 40,000 km is finished.

*Harsh driving conditions 1: hauling and towing 2: repeated short-distance driving 3: rough pavement 4: dusty pavement 5: extremely cold climatic condition and/or alkaline roads.

Engine section:

(Q - washing G - replacement)

Part	Item	Maintenance measures X1000km	5	10	15	20	25	30	35	40
		Interval between inspections months	0.5	1	1.5	2	2.5	3	3.5	4
Engine	Oil & oil filter	Replacement (use API : SG or higher)	To be replaced once every 2,500km/0.25 year (whichever is reached first)							
Intake system	Element, air filter	Cleaning Inspection • Damage Replacement	To be inspected once every 2,500km/0.25 year (whichever is reached first)							G



(J - inspection , G - replacement)

Part	Item	Maintenance measures X1000km Interval between inspections year	5	10	15	20	25	30	35	40
			0.5	1	1.5	2	2.5	3	3.5	4
Power driven system	Manual transmission	Replacement • Manual transmission oil								G
	Automatic transmission	Inspection and replacement • Automatic transmission oil	Once every 20,000 km/1 year (whichever is reached first) To be replaced once every 40,000km/2 years (whichever is reached first)							
	Suspension arm (front) Control arm (rear) Dust boot Spring [Stabilizer]	Inspection • Tightness • Cackle • Damage		J		J		J		J
Steering system	Steering link Steering gear Dust boot	Inspection • Tightness • Cackle • Damage	J	J	J	J	J	J	J	J
Brake System	Brake disc & brake disc gasket	Inspection • Wear • Damage		J		J		J		J
	Brake hose and brake line	Inspection • Leak (brake fluid level, connection) • Looseness of clamping collar • Damage		J		J		J		J
	Brake drum & brake lining	Inspection • Wear • Damage		J		J		J		J
Chassis & car body	Hub nuts, other bolts & nuts	Inspection • Tightness		J		J		J		J





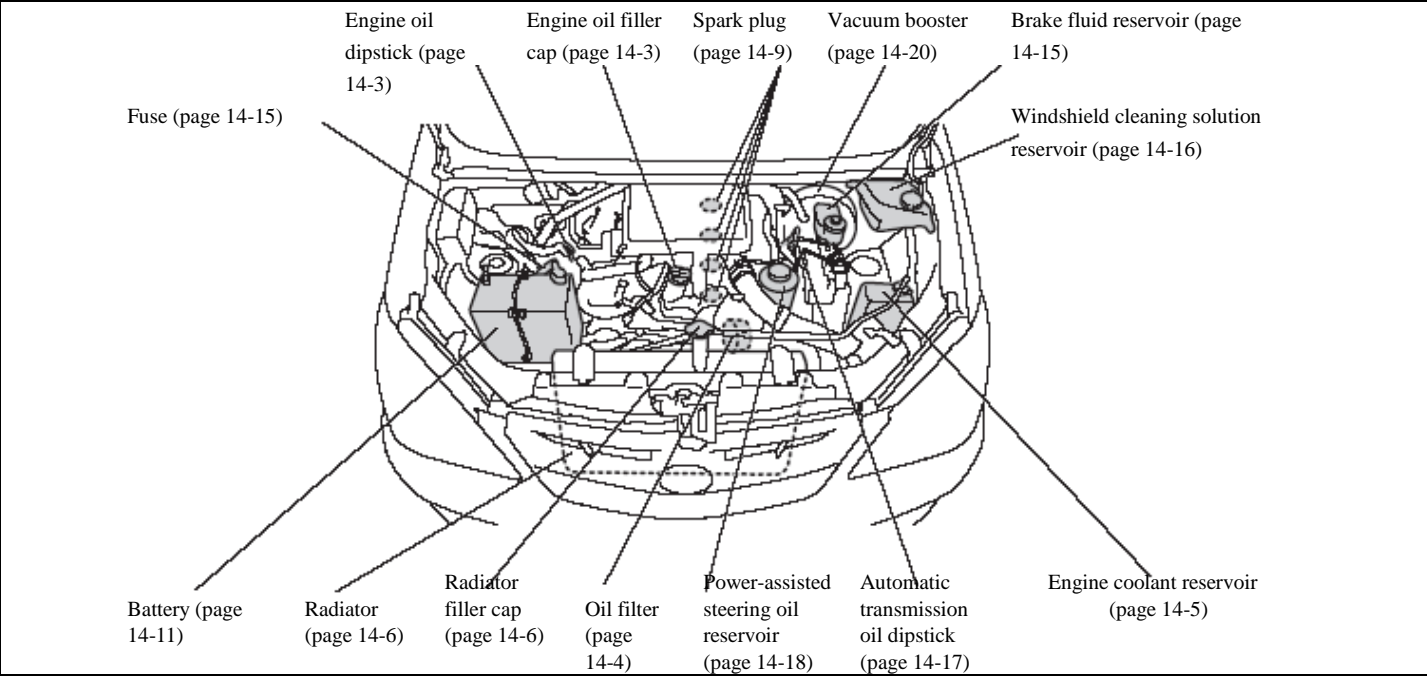
Section 14

Self maintenance

Engine compartment	14-1
Instructions for self maintenance	14-2
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Engine coolant	14-5
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Replacement of wiper blades	14-21
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Engine compartment





Instructions for self maintenance

Danger

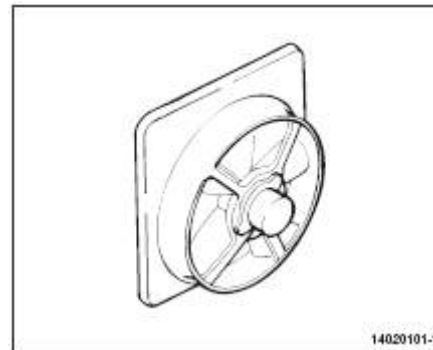
- If you are unfamiliar with maintenance practices, do not try to inspect or regulate any components.
- Do not smoke nearby inflammable substances such as fuel or battery so as not to cause sparkle or open fire.
- To avoid severe personal injuries, do remove the articles such as necklaces, bracelets and eardrops. Tie your long hair to behind your head. In addition, keep your hands, tools, clothes and other articles away from the moving parts and components during engine running.
- To avoid scald, wait till the engine gets cool before you begin to maintain any components inside the engine compartment (excluding the "not required" cases)
- No one is allowed to place his body beneath the jacked-up automobile; please use automobile supports.
- Automobile shall be maintained in well-ventilated areas.
- Do not allow children to access any oil and fluid.

- Check whether or not any tools and rags are left over before the engine hood panel is closed. During driving, these articles might damage the components, or even cause fire hazards.
- You may modify the wiring under no circumstances. Failure of observing the danger precautions might lead to component failure or even fire hazards.
- Use well-maintained tools to avoid personal injuries or damages to the components.

Warning

Prior to working on the electrical system, disconnect the cables from the negative terminal of battery. In addition, Be careful not to use a tool or other metallic objects to short-circuit the terminals; otherwise, the battery might be damaged.

Engine electronics cooling fan



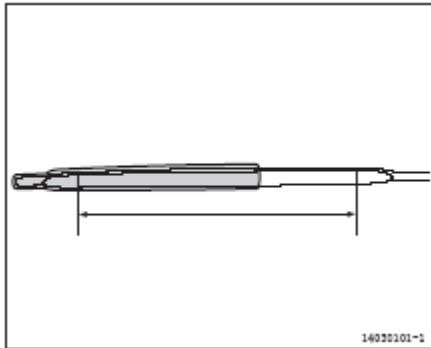
Danger

- To work nearby the radiator and condensator fan or radiator grills, set the ignition switch to the "Lock" position.
- When you maintain your automobile with the ignition switch set to "NO", do not touch or come close to the fan blades. When coolant reaches a certain temperature, radiator fan switch may be automatically activated. Moreover, when the air conditioner is turned on, condensator cooling fan may start rotation automatically.



Engine Oil

Inspection of engine oil level



1. Park your automobile on horizontal pavement.
2. Warm up the engine till working temperature is reached, and then shut it down.
3. A few minutes later, slowly pull out the oil dipstick and wipe away the oil.
4. Reinsert the oil dipstick to the bottom in so far as possible.
5. Pull out the oil dipstick again, and check whether or not the oil level is located between the “-” marks.
6. If the engine oil level is too low, add engine oil. For recommended engine oils, see Section 15.

Danger

Remove any splashed oil. Oil left over on hot components might cause fire hazards.

Attention

When the outside-automobile temperature is relatively low, engine oil may appear white and viscous and may be attached to the back side of oil filler or the oil filler port.

That phenomenon is caused by the mixture of water globule (from atomized moisture when engine gets cool) and engine oil. However, the phenomenon may disappear when evaporation of water occurs after outside-automobile temperature rises or engine is warmed up.

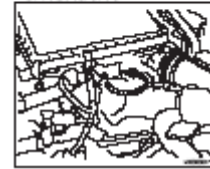
Engine oil may not be deteriorated due to that phenomenon, and it may be used as usual without any problem.

Replacement of engine oil and oil filter

K3-VE3, 3SZ-VE2/3



CA4GA8/9/10



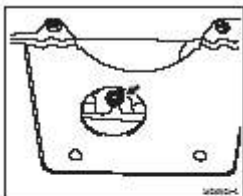
1. Park your automobile on horizontal pavement.
2. Warm up the engine till working temperature is reached, and then shut it down.
3. Remove the oil filler cap.

Danger

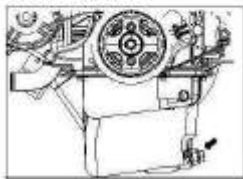
Be careful not to scald yourself by hot engine oil or hot engine components.



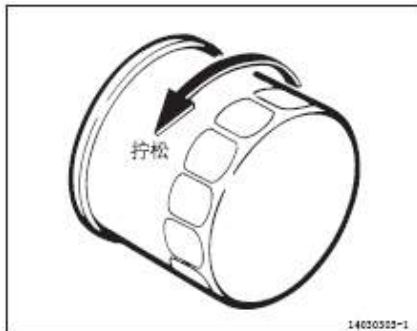
K3-VE3、3SZ-VE2/3



CA4GA8/9/10



4. Place a container under the drain plug to receive the discharged engine oil.
5. Use a spanner to remove the drain plug and gasket, and drain the oil. Wear safety goggles when necessary.



6. Use an oil filter spanner to unscrew the oil filter, and remove it by hand.
7. Apply a coat of engine oil onto the rubber gaskets for the new oil filter.
8. Screw the new filter to a designated position by hand till the gasket reaches the pedestal. Then, screw it down for 3/4 to 1 turn, and fix the filter onto the pedestal.
9. Reinstall the drain plug and new gaskets. Tighten up the drain plug.

Tightening torque:

23.6-35.4N·m
(2.4-3.6kgfm)

(K3-VE3、3SZ-VE2/3)

25-35 N·m
(2.6-3.6kgfm)

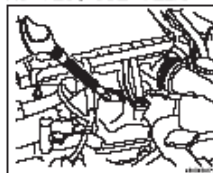
(CA4GA8/9/10)



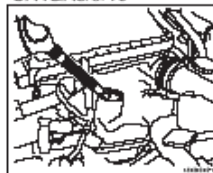
Warning

Do not excessively tighten up the oil filter and drain plug for fear of oil leakage.

K3-VE3、3SZ-VE2/3



CA4GA8/9/10



10. Charge up the engine oil slowly.
For recommended engine oils and volumes, see Section 15.
11. Install the oil filler cap by hand.
12. Wait for a few minutes, and check the engine oil level.
13. Run the engine, and check the oil filter or drain plug for engine oil leakage.
If any leakage is detected, the oil filter or drain plug is improperly installed.
14. Shut down the engine and wait for several minutes.
Check the engine oil level once more, and add oil when necessary.



Engine coolant

Danger

- Remove any splashed oil. Oil left over on hot components might cause fire hazards.
- Wash your hands thoroughly.
- Long-term exposure to used engine oil might lead to skin carcinoma.
- Never discharge the waste oil onto the ground or into sewage drains. Take care to dispose the waste oil at places equipped with suitable treatment facility. It is advisable to replace oil at the local special service store.
- Install the oil filler cap securely. Otherwise, oil consumption might increase, and engine oil splashed onto component might cause fire hazards.

Danger

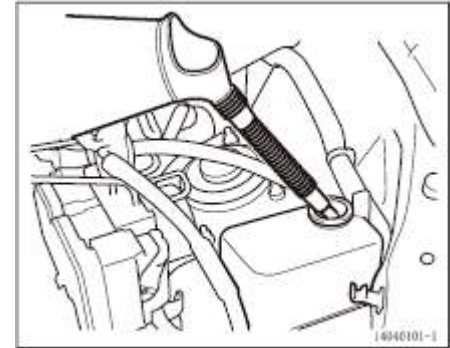
Be careful not to scald yourself when you remove the radiator filler cap or drain plug.

- Precautions for usage
 1. Do use coolant conforming to Q/CA M-192-2007standard.
 2. Use coolant all the year around.
 3. It is prohibited to palm the coolant with coolants of other brands.
 4. Verify the validity period of products.
 5. Before winter begins, verify whether or not the ice point of coolant you used is applicable to the minimum temperature of regions where your automobile may operate.
- The user shall select the types of coolant listed in the table below as per the temperature conditions of the regions where the automobile may operate:

Type	Part code	Ice point	Color and characteristics
YQ-2004X	523334 04 0262	-20°C	Deep blue, transparent, free of precipitate
YQ-2004D	523334 04 0278	-35°C	Deep blue, transparent, free of precipitate
YQ-2004J	523334 04 0322	-45°C	Orange red, transparent, free of precipitate
YQ-2002	523334 04 0323	-8°C	Light green, transparent, free of precipitate

If the coolant level drops considerably, contact the local special service store for inspection of the cooling system.

Inspection of engine coolant level



When engine gets cool, check the coolant level inside the reservoir.

Check whether or not the level is located between “FULL” and “LOW” lines.

If the coolant level drops due to spontaneous evaporation, add soft water only. If massive coolant is lost, add long-acting coolant.

If the reservoir is empty, add coolant into the radiator and reservoir.

Wipe off the spilled coolant, and securely install the reservoir cap and radiator filler cap.



Replacement of engine coolant

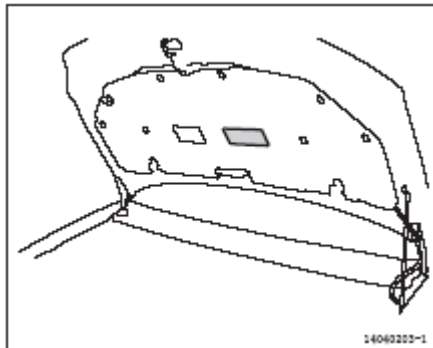
Do replace coolant regularly.

For coolant volume, see Section 15.

Danger

- When engine is still very hot, do not open the radiator filler cap or drain plug.
- Take care to inject coolant only when engine is already cooled down.
- Inject coolant when your automobile is kept level.
- Avoid exposure to your eyes; in case any exposure to your eyes take place, flush your eyes with fresh water. Swallowing the product is harmful to your health, go to a doctor immediately.
- Beware of scald caused by high-temperature coolant.
- Coolant shall be stored out of the reach of children.
- To protect the environment against pollution, never pour any coolant into the sewage drains, soil and water sources. The coolant shall be reclaimed timely.

Charging-up procedures of engine coolant

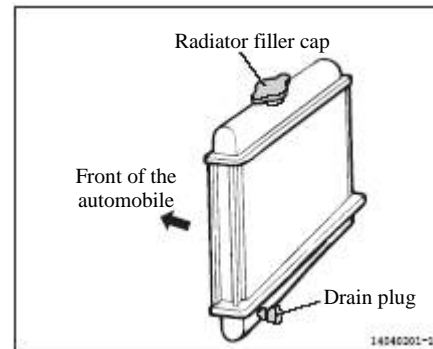


Warning

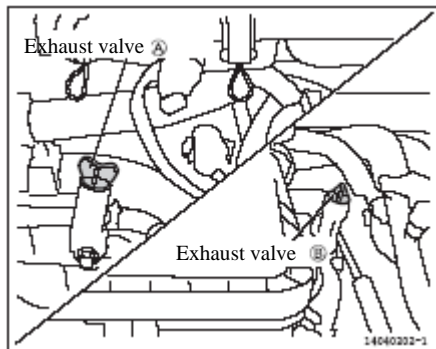
Before you replace the engine coolant, take care to read the charging-up procedures for engine coolant affixed on the engine hood panel, and perform operations as per the instructions.

The instructions are only applicable to K3-VE3 and 3SZ-VE2/3.

Replacement of coolant



1. Remove the radiator filler cap.
2. Place a container under the drain plug to receive the discharged coolant.
3. Remove the drain plug and gasket of radiator to drain the coolant.
4. Drain the coolant from the reservoir.



- 5.* Unscrew and remove the plug cock of exhaust valve A and B.
6. Install the drain plug and gasket of radiator.
- 7.* Charge up coolant from the filler port of radiator. When coolant overflows out of exhaust valve A, tighten up the plug cock A.
8. When coolant overflows out of exhaust valve B, tighten up the plug cock B.

Attention*

If no coolant overflows from exhaust valve **A** or **B** and coolant overflows from the filler port of radiator, tighten up the plug cock **A** and **B**, and then tighten up the radiator filler cap.

9. Charge up the coolant till its surface reaches the filler port of radiator.
10. Close the radiator filler cap.
11. Allow the engine to idle for a while and then shut it down.
12. Drain the coolant completely.
13. Repeat steps 9 to 12 for several times.
14. Install drain plug and new gaskets of the radiator, and tighten up them securely.
15. Charge up coolant (ethylene glycol based antifreeze) into the radiator and reservoir slowly. Pour an amount of clean soft water into the radiator till it gets full.
Pour clean soft water into the reservoir till the level reaches the "FULL" line.
16. Soundly fasten the radiator and reservoir cap.

17. Allow the engine to run for several minutes (till the cooling fan runs twice), and then shut down the engine. Allow the engine to cool down.

18. Remove the radiator filler cap with care, and check the coolant level. If necessary, add clean soft water into the radiator.

19. Install and tighten up the radiator filler cap.

20. Warm up the engine till normal working temperature is reached.

Check whether or not coolant leaks from the drain plug.

If any leakage is detected, the drain plug of radiator is improperly installed.

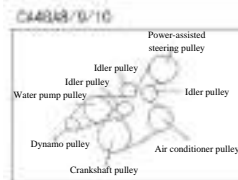
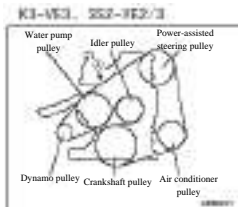
21. Drive your automobile for a while, and check the coolant level.

If the coolant is already reduced, add coolant of suitable mixing ratio into the reservoir till the "FULL" line is reached.

Note: The items marked with symbol "*" are only applicable to engines K3-VE3 and 3SZ-VE2/3.



Inspection of driving belts



Danger

Be careful not to scald yourself by hot engine components and radiator.

Shut down the engine, and check the driving belts for cracks, excessive wear or oil stain.

If any driving belt is damaged, contact the local special service store for replacement. Conduct pressing → and measure the deflection.

Check whether or not the deflection falls within the prescribed limits.

See Section 15.

If the deflection falls outside the prescribed limits, contact the local special service store for regulation of the driving belts.

Cleaning and replacement of air filter

Compressed air may be used to clean the air filter.

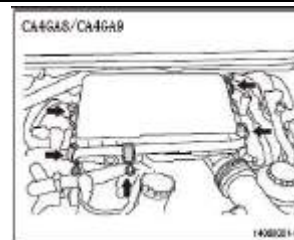
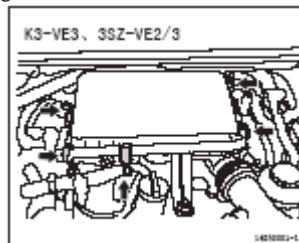
The compressed air shall be blown in through the clean side of the air filter. When necessary, replace the air filter.

If your automobile mainly runs in dusty areas before, the air filter shall be cleaned once every time a road mileage of 2,500km is finished.

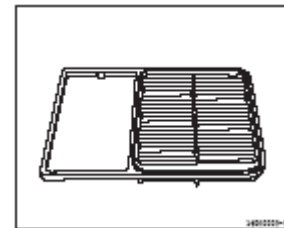
Use soft cloth to wipe off filth or dust attached onto the case and pedestal of air filter.

Warning

- Do not drive your automobile with the air filter removed; otherwise, the engine may be subjected to excessive wear.
- Do not oil the filter so as not to reduce its working efficiency.
- Before the air filter cap is not fitted on, do not allow any foreign materials to enter into the case of air filter; otherwise, the engine may be damaged.



1. Unclasp the buckles.
2. Lift up the upper case simultaneously.
3. Remove the air filter.



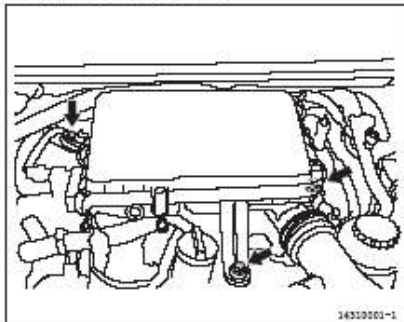
Storage

1. Install the air filter onto the cap.
2. Install the upper case.
3. Lock up the buckles.



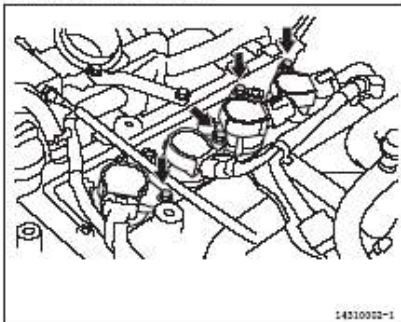
Replacement of spark plug (if tools are available)

K3-VE3, 3SZ-VE2/3



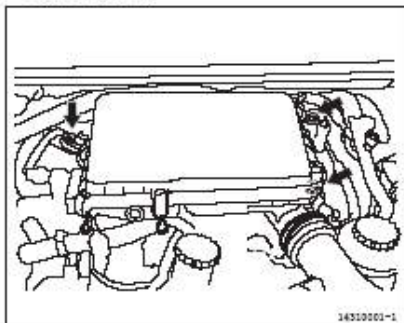
14310001-1

K3-VE3, 3SZ-VE2/3



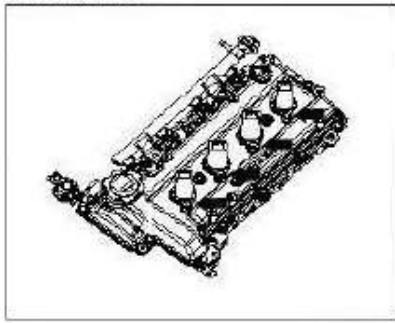
14310002-1

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CA4GA8/9/10



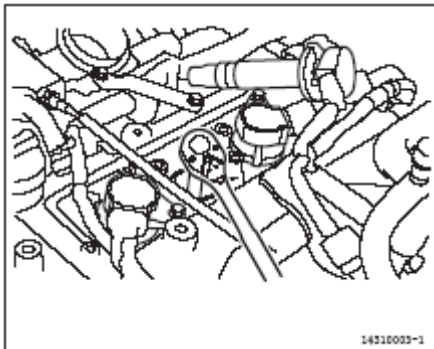
1. Unscrew the mounting bolts from air filter case, and remove the case.
2. Unscrew the mounting bolts of ignition coil.
3. Pull out the ignition coil.

Attention

Remove it with special care, and do not pull it out. If possible to pull it out and connect the conductors, disconnect the connector of ignition coil.

Danger

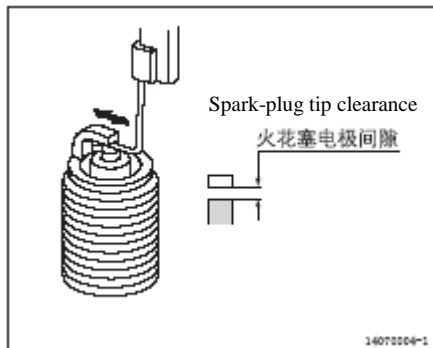
The sheath and spark plug are very hot; be careful not to scald yourself.



4. Use a spark plug wrench to unscrew the spark plug.
("K3-VE3 and 3SZ-VE2/3 are taken as example here)
5. Install the spark plug securely.

⚠ Warning

Do not excessively tighten the spark plug; otherwise, the engine might be damaged.



6. Use a spark-plug tip clearance gauge to check the electrode clearance of spark plug.
If necessary, bend the grounding electrode as required to regulate the spark-plug tip clearance.
For recommended spark plugs, see Section 15.

⚠ Warning

- **Do not regulate the electrode clearances of used spark plug; otherwise, engine might be damaged.**
7. Install the spark plug securely.

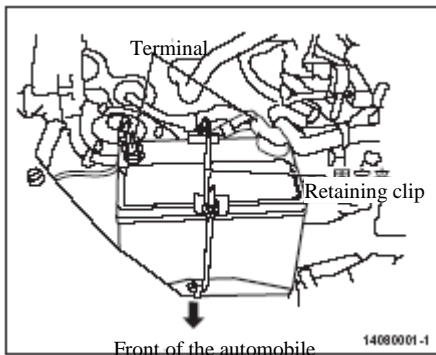
⚠ Warning

Do not excessively tighten the spark plug; otherwise, the engine might be damaged.

8. Install the ignition coil.



Inspection and cleaning of battery



Check it for cracks, erosion or loosened connector or unfixed clips.

If the battery terminals are dirty, clean them with sodium bicarbonate water, and coat new grease onto them.

If the terminals are loosened, tighten up them securely.

Check whether or not the electrolyte level is located between the upper limit and lower limit. If the electrolyte level is too low, remove the vent cap from all units. Charge up all unit with distilled water till the upper limit is reached.

Danger

- Perform battery maintenance with special care. Do not short circuit battery terminals with a tool or other metallic objects. If the battery terminals are short-circuited, the battery may be subjected to overheat, damage or even explosion.
- When distilled water charging-up is over, tighten up the vent caps. Otherwise, the battery electrolyte might spill and damage your automobile, or even lead to severe personal injuries.
- The batteries contain virulent and corrosive sulfuric acid. You shall wear safety goggles and handle the items with care, such that the electrolyte may not spatter onto your body, clothes and your automobile. If electrolyte spatters onto your skin or into your eyes, take off the contaminated clothes and flush corresponding positions for at least 15 minutes.
- If electrolyte is swallowed, drink water or milk as much as possible, and go to a doctor immediately.
- Do not lay any ignition sources close to the batteries; otherwise, the batteries might explode.
- Do not allow children to access the batteries.

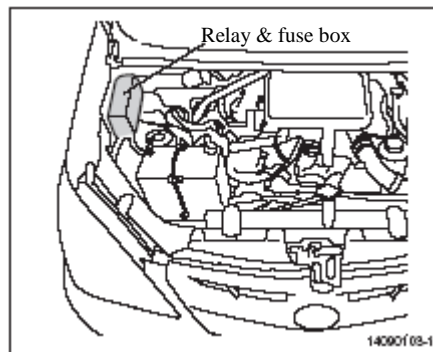
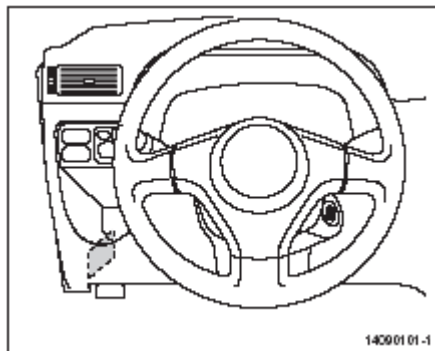
Warning

In case electrolyte spatters onto the lacquer finish, clean the contaminated area immediately.

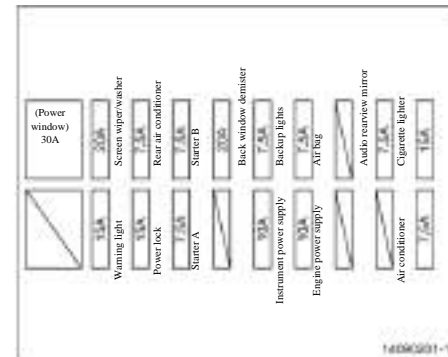


Fuse

Position of fuse



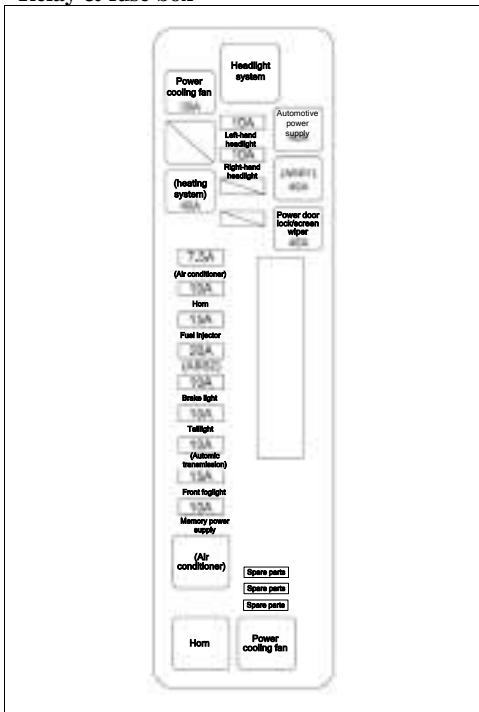
Main fuse box



To replace a fuse, use fuse of specified in the label affixed on fuse box cover.



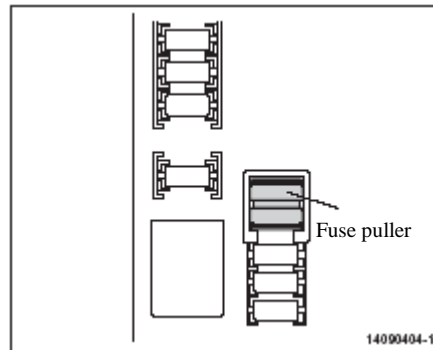
Relay & fuse box



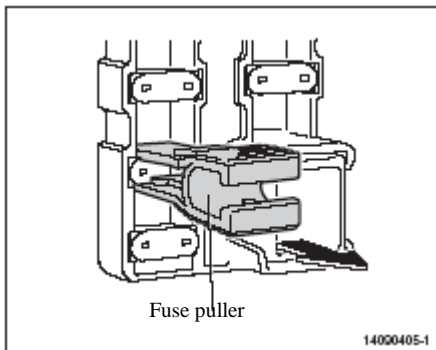
Inspection and replacement of fuse

Attention

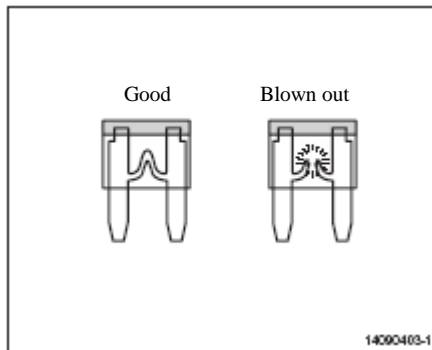
Prior to install a new fuse, find out the cause and repair the fault. If you cannot finish the tasks, contact the local special service store for inspection of the system.



1. Remove the fuse puller from the relay and fuse box.



2. Use the fuse puller to nip and remove the fuse.



3. Check the removed fuses. If the fuse is already blown out, replace it with a spare fuse. If the fuse is not blown out, other causes might exist. Contact the local special service store for inspection of your automobile.
- If it is determined to take repair measures later, disconnect the cable from negative terminal of battery for prevention.

Attention

If the cables are disconnected from the negative terminal of battery, all data related to the EFI and electronic-control automatic transmission memorized by the diagnostic function may be lost.

Similarly, the preset data of clock and radio may also be lost.

Danger

To prevent fire hazards caused by excessively high current:

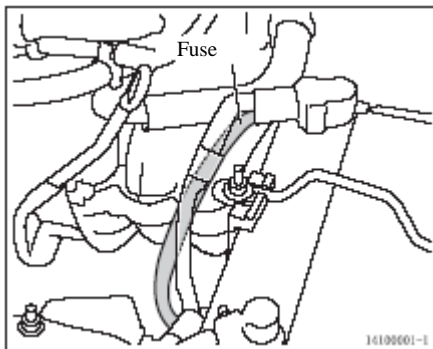
- Never adopt other objects to substitute for fuse even for temporary purposes.
- Take care to use the fuse of specified load only.

Particularly, never use fuses whose rated current is high than the specified values.

It is advisable to reserve a set of spare fuse to deal with an emergency.



Inspection of fuse



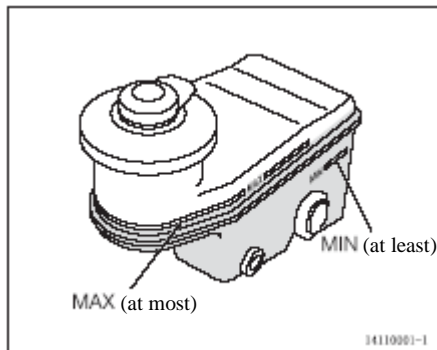
If overcurrent is delivered from the positive terminal of battery to the headlight circuit or ignition switch circuit, the fuse may be blown out to prevent fire hazards.

Contact the local special service store immediately for repair of the system.

Danger

Never install any object in the position of fuse even temporarily; otherwise, your automobile might be seriously damaged and subjected to fire hazard.

Inspection of brake fluid level



Check whether or not the level of brake fluid reservoir is between MAX and MIN. If the brake fluid level is too low, add clean brake fluid slow till the MAX (at most) line is reached.

For recommended brake fluids, see Section 15. (For automobile quipped with K3-VE3 or 3SZ-VE2/3 manual transmissions) brake fluid and clutch fluid share one reservoir.

Warning

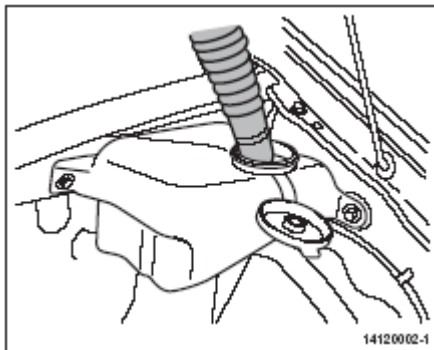
Wipe out the spilled liquid oil thoroughly to prevent it from damaging the lacquer finish.

Danger

- Brake fluid is harmful to your eyes. If your eyes are exposed to the brake fluid, rinse it out.
- To obtain normal brake performance:
 - Take care to use specified brake fluid;
 - Use brake fluid as per the instructions given by the manufacturer;
 - Do not palm different types of brake fluid.
 - Do not use brake fluid that had been exposed to air for more than 1 year. Such brake fluid might possibly absorbed excessive moisture.
 - Do not allow filth sand grain or dust to enter into the brake fluid.
- If the level of brake fluid drops obviously, contact the local special service store for inspection of the braking system.



Inspection of level of window cleaning solution



Ensure that the cleaning solution are enough for use. If the level is too low, charge up the liquid.

Danger

Always use clean cleaning solution. Dirty liquid might lead to clogging of washer system or block off your vision.

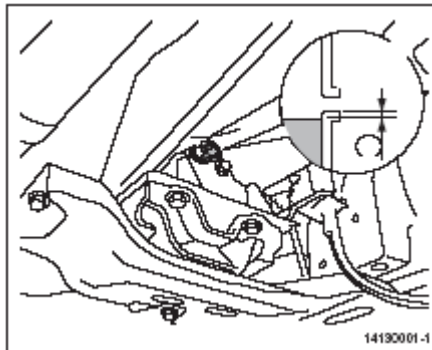
Warning

Follow the instructions given by the manufacturer, and prepare cleaning solution as per suitable proportion.

Attention

Washers of the front window and rear window share one cleaning solution reservoir.

Inspection of manual transmission oil level



Danger

To avoid personal injuries, do not check the oil level before the ignition switch is completely set to the “LOCK” position and the engine gets cool adequately.

Park your automobile on a level pavement, and pull up the parking brake handle. Set the ignition switch to the “LOCK” position.

Remove the filler port plug, and check the transmission oil level by fingers. If the transmission oil level falls within 5mm below the bottom margin of the port, the oil level is acceptable.

If the oil level is acceptable, reinstall and securely tighten up the filler port plug.

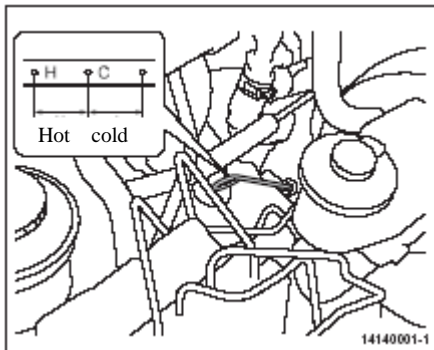
Tightening torque: 20-30N·m
(2.0-3.1kgfm)

When the oil level is relatively low, charge up the specified liquid oil till liquid oil flows out of the filler port. For recommended manual transmission oils, see Section 15. Reinstall tighten the filler port plug securely.

Tightening torque: 20-30N.m
(2.0-3.1kgfm)



Inspection of automatic transmission oil level



When transmission oil temperature is 70-80°C, check the oil level. If your automobile has run for 15 minutes at 60km/hr or 30 minutes at 40km/hr, oil temperature may change to approximately 70 - 80°C.

1. Park your automobile on a horizontal surface, and pull up the parking brake handle.
2. Allow the engine to idle, and depress the brake pedal securely in the meantime. Smoothly move the gear change hand lever from gear **P** to gear **L**, and then move it back to gear **P**.
3. Pull out and wipe up the oil dipstick, and insert it.

4. Pull out the oil dipstick to check whether or not the oil level falls within the “hot” range.
5. If the oil level is too low, add specified liquid oil through filler pipe slowly. Never add oil excessively.

For recommended automatic transmission oils, see Section 15.

6. Insert the oil dipstick till the bottom.
7. Wipe up the spilled liquid oil.

Warning

- If liquid oil gets dirty, replace liquid oil at the local special service store.
- If the oil level too low or fuel volume is reduced considerably, contact the local special service store for inspection of the system.

Danger

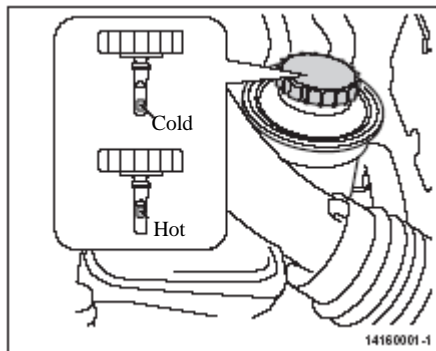
- Both the liquid oil and its peripheral zone are quite hot; therefore, be careful not to scald yourself.
- Never touch or come close to the moving parts and components while the engine is running, so as to avoid severe personal injuries.

Attention

- **The oil levels measured when liquid oil is cool (20°C-30°C) may be used as reference values only.**
Check again whether or not the oil level is correct at normal working temperature (70°C—80°C).
- **If the oil levels indicated on the front side and back side of the oil dipstick are different, the lower among them shall prevail.**



Inspection of power-assisted steering oil level



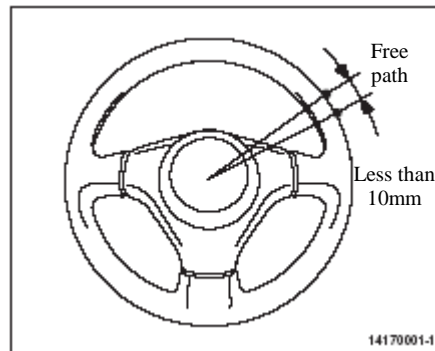
As shown in the following, check the oil level of power-assisted steering oil.

1. Park your automobile on a horizontal surface, and pull up the parking brake handle.
2. Remove the cap.
3. Check whether the oil level falls within “cold” (cold engine) or “hot” (warm engine).
4. If the oil level is too low, slowly add specified liquid oil as required. Never add oil excessively. For recommended power-assisted steering oils, see Section 15.

Warning

If the oil level too low or fuel volume is reduced considerably, contact the local special service store for inspection of the system.

Inspection of free path of steering wheel



Turn gently the steering wheel from its dead-ahead position rightwards and leftwards till resistance may be felt, and then measure the free path.

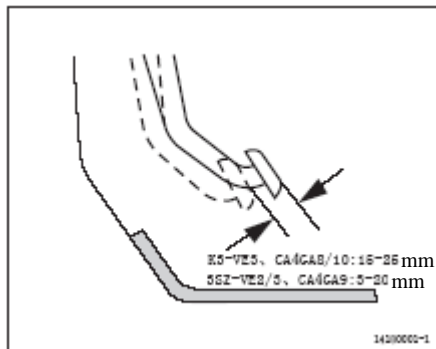
Check whether or not the free path falls within the prescribed limits.

Danger

If the free path does not fall within the prescribed limit, contact the local special service store immediately for inspection of the system.



Inspection of free path of clutch pedal



Push gently by hand the clutch pedal till resistance may be felt, and measure the free path.

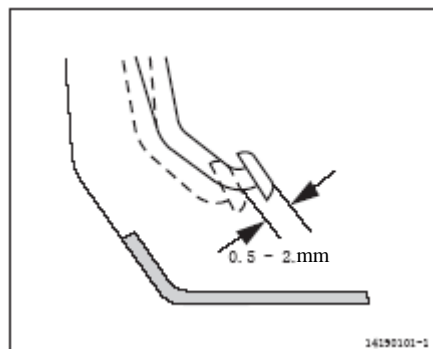
Check whether or not the free path falls within the prescribed limits.

Danger

If the free path does not fall within the prescribed limit, contact the local special service store immediately for inspection of the system.

Brake pedal

Inspection of free path of brake pedal



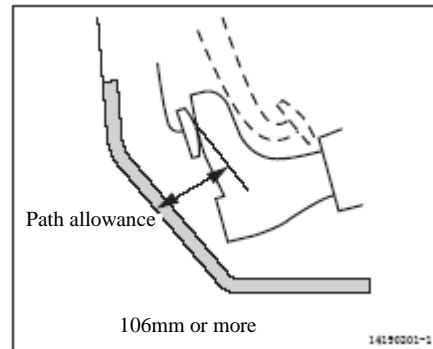
Shut down the engine, and depress the brake pedal 5 times at least to release the vacuum inside the vacuum booster.


Push gently by hand the brake pedal till resistance may be felt, and measure the free path. Check whether or not the free path falls within the prescribed limits.

Danger

If the free path does not fall within the prescribed limit, contact the local special service store immediately for inspection of the system.

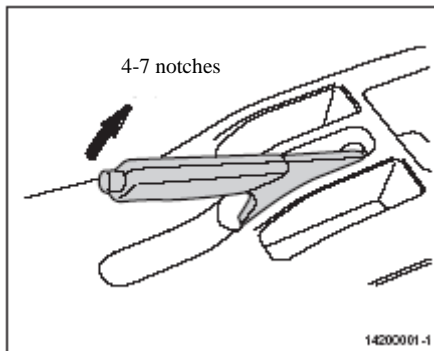
Inspection of path allowance of brake pedal



1. Park your automobile on horizontal pavement.
2. Set the gear change hand lever to neutral (manual transmission) or return it to  gear (automatic transmission).
3. Pull up the parking brake handle.
4. While the engine is running, depress the brake pedal securely for several times.
5. Depress the brake pedal at 294 Nm (30kgf) measurement system, and measure the distance from the top of brake pedal to the partition board.
6. Check whether or not the path allowance falls within the prescribed limits.
7. In addition, check whether or not the path allowance is constant.




Inspection of path allowance of parking brake handle



Danger


If the path allowance does not fall within the prescribed limit, contact the local special service store immediately for inspection of the system.

1. Park your automobile on horizontal pavement.
2. Set the gear change hand lever to neutral (manual transmission) or  gear (automatic transmission).
3. Depress the brake pedal forcibly.
4. Release the parking brakes completely.
5. Pull up the parking brake handle slowly at 196 Nm (20kgf), and count the number of notches.
6. Check whether or not the number of notches falls within the prescribed limits.

Danger

If the number of notches does not fall within the prescribed limit, contact the local special service store immediately for inspection of the system.

Inspection of service condition of vacuum booster

1. Park your automobile on horizontal pavement.
2. Set the gear change hand lever to neutral (manual transmission) or  gear (automatic transmission).
3. Shut down the engine and depress the brake pedal for several times till the path does not vary.
4. Depress the brake pedal and start up the engine simultaneously. Here, the brake pedal may move downward slightly.
5. Depress the brake pedal and shut down the engine simultaneously. Keep the pedal in the said position for approximately 30 seconds. Here, the pedal shall not move.
6. Start up the engine and shut it down in approximately 1 minute. Depress the brake pedal forcibly for several times. Every time it is depressed, the pedal stroke shall be reduced gradually.

Danger

If any fault is detected, contact the local special service store immediately for inspection of the system.



Replacement wiper blades

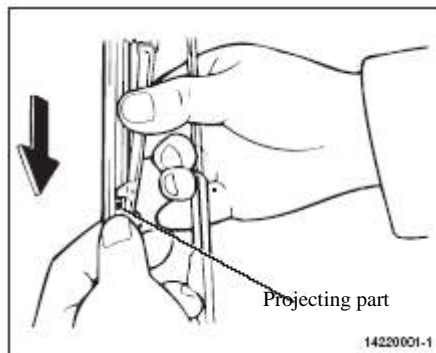
Danger

To replace the wiper blades, ensure that the ignition switch is already set to the “LOCK” position.

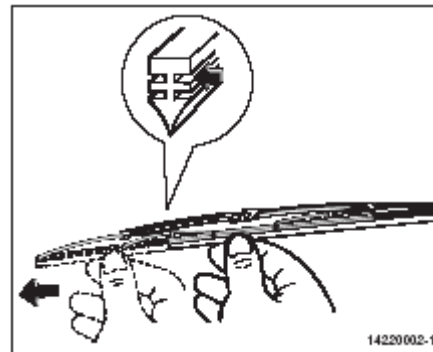
Warning

Be careful not to allow the wiper frame to score the glass surface.

Install blades of suitable length.



1. Push and hold the projecting part of wiper blade, and draw out the wiper blade in the meantime.
2. Pull the blade out of the frame down the groove.



3. Insert the notch section of blade into the big hole in the frame. Push the blade into the frame down the groove.
4. Push and hold the projecting part of wiper blade, and draw the wiper blade in the meantime till it is locked up.



Replacement of bulbs

Adopt the specified bulbs.

(See Section 15)

Danger

To prevent injuries:

- Shut down the engine prior to replacement.
- Do not allow the children to access the bulbs.
- Allow the bulb to cool down prior to replacement.

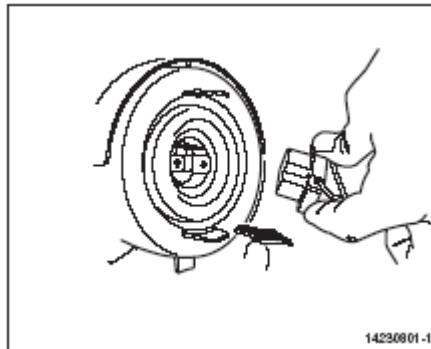
Warning

Do not allow the bulbs to fall or scratch the surfaces.

After replacement, turn on the light switch to check whether or not it may go on. If frequent replacement of bulbs is required, contact the local special service store for inspection of the system.

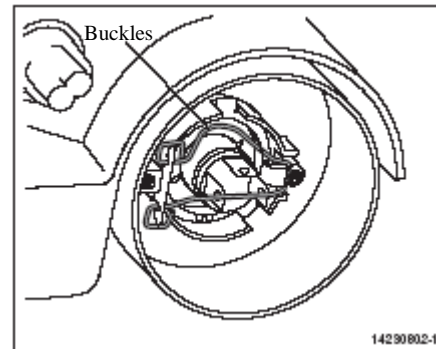
It is advisable for you to reserve a set of standby bulbs, and the bulbs are available at the local special service store.

Headlight

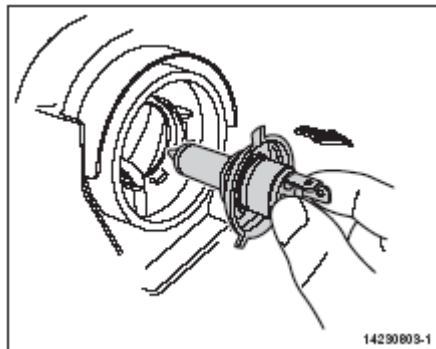


Remove the bulb

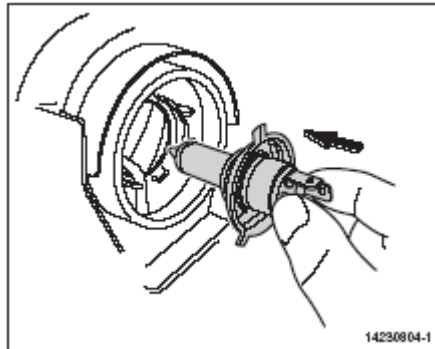
1. Hold firmly and pull up the both sides of wiring connector so as to disconnect it. Then, remove the rubber cap.



2. Unclasp the buckles.



3. Remove the bulb



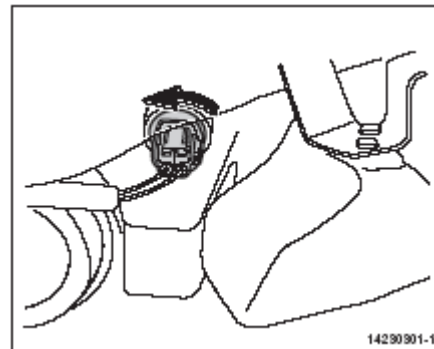
Install a bulb

1. Install a bulb and lock up the buckles.
2. Install the rubber cap.
3. Connect the conductors

 **Warning**

Never touch the glass section of bulb. Liquid oil on your fingers may damage it.

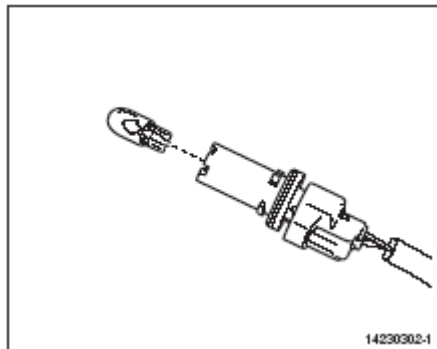
Width light



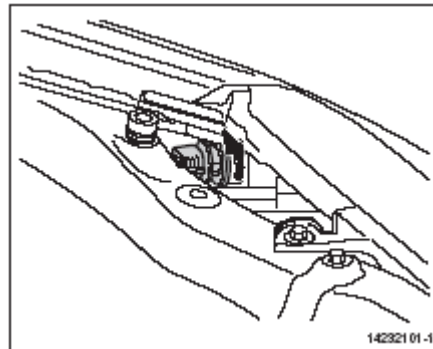
1. Turn anticlockwise the receptacle for approximately 45 degrees, and remove it.



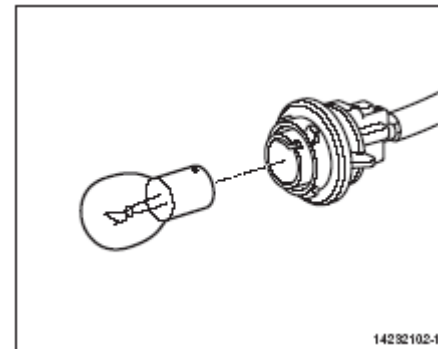
Front turn signal light



2. Pull outward the bulb, and remove it from the receptacle.



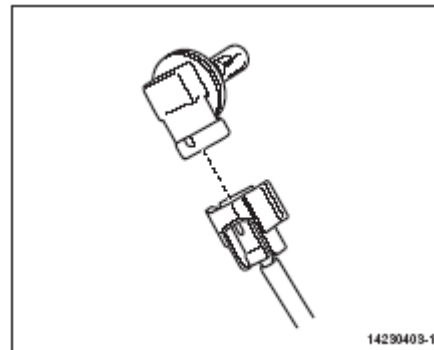
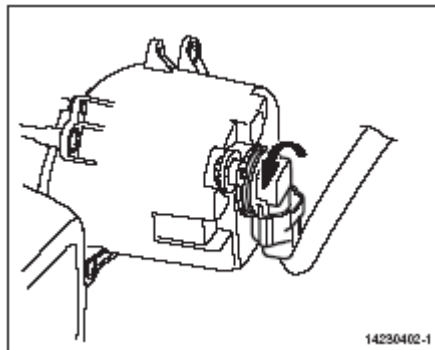
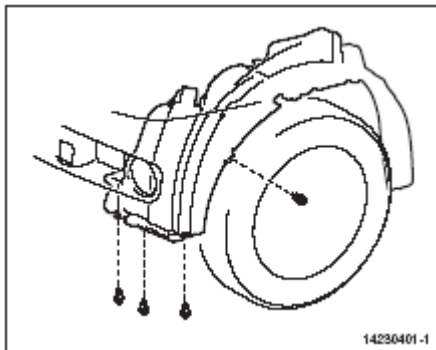
1. Turn anticlockwise the receptacle for approximately 45 degrees, and remove it.



2. Push and turn anticlockwise the bulb, and remove it.



Front foglight



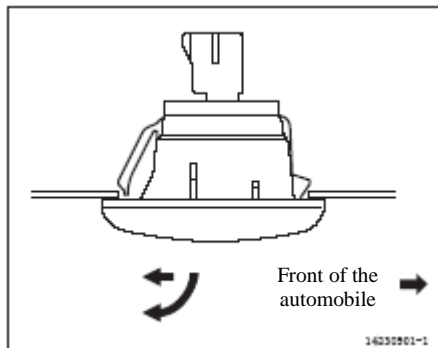
1. Unclasp 4 buckles used for mounting the front wing lining.
2. Turn anticlockwise the wiring connector for approximately 45 degrees, and remove it.
3. Remove the bulb.
4. Reinstall it in reverse order.

Warning

Never touch the glass section of bulb. Liquid oil on your fingers may damage it.



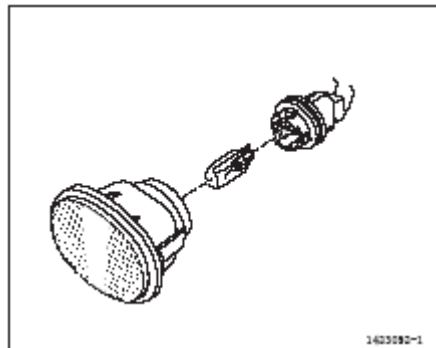
Lateral turn signal light



1. Pull the light lens of lateral turn signal light as per the direction shown in the figure.

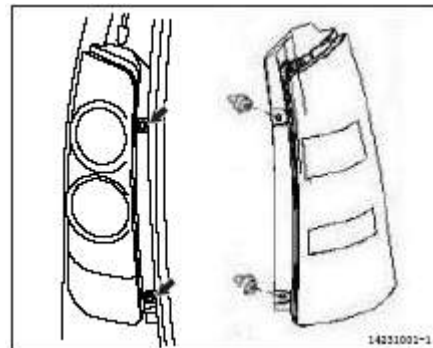
Attention

Be careful not to break or scratch the light lens during removal.

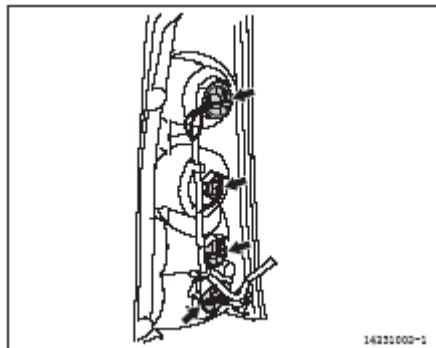


2. Turn anticlockwise the receptacle for approximately 45 degrees, and remove it.
3. Pull outward the bulb, and remove it from the receptacle.

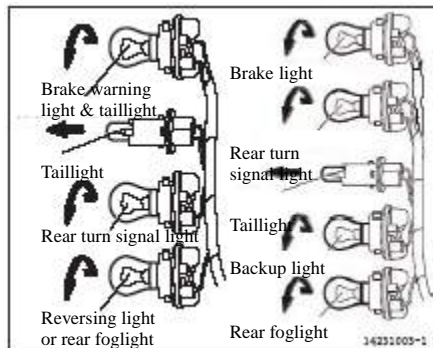
Rear combination light



1. Unscrew 2 bolts and remove the light assembly.



2. Push and turn anticlockwise the bulb, and remove it.

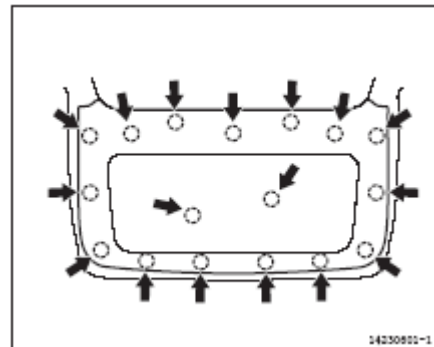


3. (Except for the taillights)
Push and turn anticlockwise the bulb, and remove it.
(Taillight)
Pull outward the bulb, and remove it from the receptacle.

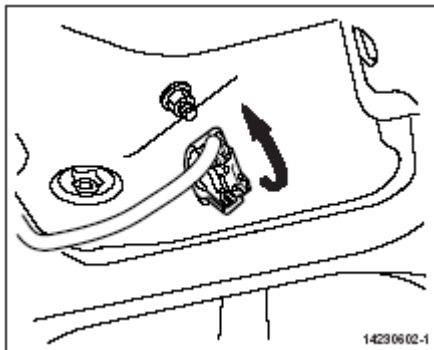
Attention

To install the rear combination light assembly, do verify that the projecting part of rear combination light is already aligned to the holes in the car body.

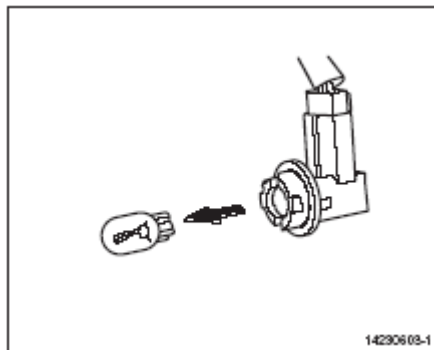
License light



1. Remove the back door ornament.

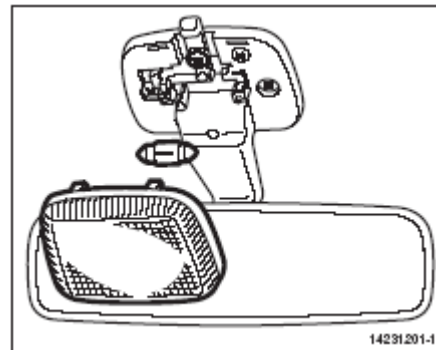


2. Turn anticlockwise the receptacle for approximately 45 degrees, and remove it.



3. Pull outward the bulb, and remove it from the receptacle.

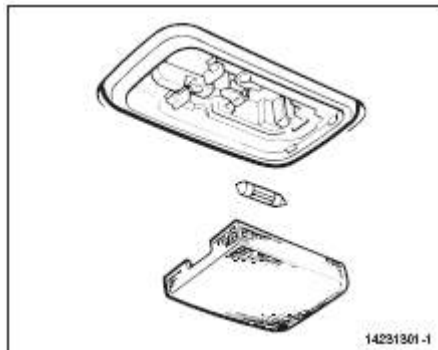
Roof light



1. Prize and unclasp the light lens cap gently.
2. Remove the bulb.



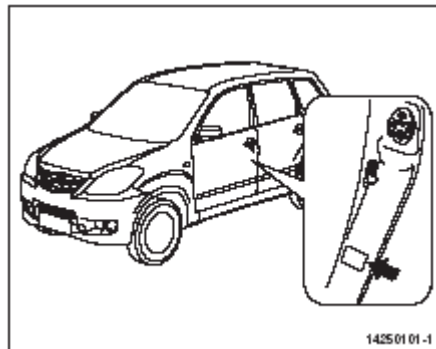
Boot compartment light



1. Prize and unclasp the light lens cap gently.
2. Pull out the bulb directly.

Tire

Tire pressure

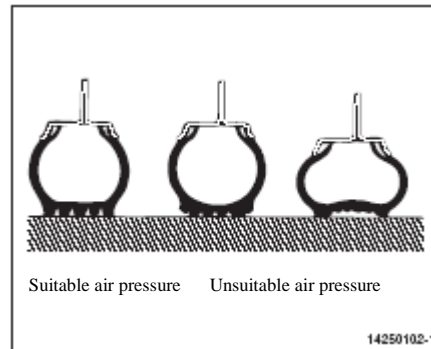


Use a manometer to check the cold-state tire pressure. For tire pressures, see Section 15 or tire label affixed in the position shown in the figure.

Danger

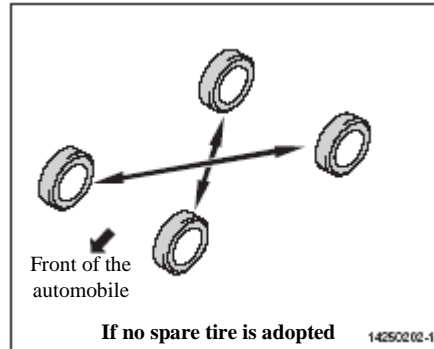
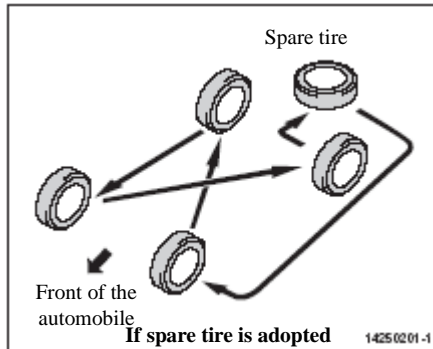
Maintain the specified tire pressure. Improper tire pressure may reduce the tire life, increase the fuel consumption, and lead to out of control of your automobile.

If you have to regulate tire pressure frequently, contact the local special service store for inspection of the wheel system.

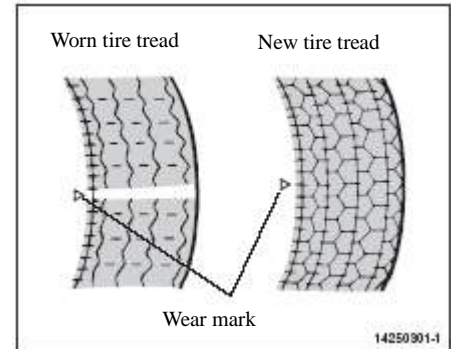




Interchanging of wheels



Inspection of tire wear



If the wear marks are exposed on the tire surface, replace the tires as soon as possible.

If the tires of your automobile are kept in the same positions during driving for a long time, the wear of the tires may have the individual peculiar modes. Therefore, it is advisable to interchange the wheels regularly for balance of wear.

Conduct interchanging of wheels as per the sequence shown in the figure above.

When interchanging is over, regulate the tire pressure.

Interval for interchanging of tires:

Once every 5,000km



Instructions for the tires

- Tire size and structure of tires selected for replacement must be identical with those of the original tires, and the loading capacity shall be identical or higher.
- Only specified hubs may be adopted.
- Since the first-life tire has not yet reach the maximum cohesive force, the first 160km shall be finished at moderate speed.
- When tubeless tire is replaced, the valve stem must be replaced.
- Always put on the dust cup of tire valve.
- Contact the local special service store for inspection of the uneven wear or damage of/to the tires.

Danger

- Do not equip your automobile with palmed tires of different types, dimensions and manufacturers because that may lead to out of control of your automobile.
- If you have to drive on the road shoulders, kettle holes or other obstacles, do drive your automobile at low speed to avoid out of control of your automobile.

- Do not drive your automobile when tires are damaged. Because the tires may outbursts. In addition, avoid using damaged rims.
- For tires with specified interchanging directions, take care to follow relevant instructions given by the tire manufacturer.

Warning

Be careful not to damage the tires due to scratch or oiling.





Section 15

Specifications

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Suspension	15-6
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Dimensions

Automobile model	CAH118A, DAS118A, CA118A, CA118L, CAH118H	CAH118B, DAS118B, CA118B, CA118L	CAH118C, DAS118C, CA118C	CAH118D, DAS118D, CA118D	CAH118E, DAS118E, CA118E	CAH118F, DAS118F, CA118F	CAH118G, DAS118G, CA118G	CAH118H, DAS118H, CA118H	CAH118I, DAS118I, CA118I	CAH118J, DAS118J, CA118J	CAH118K, DAS118K, CA118K	CAH118L, DAS118L, CA118L	CAH118M, DAS118M, CA118M	CAH118N, DAS118N, CA118N	CAH118O, DAS118O, CA118O	CAH118P, DAS118P, CA118P	CAH118Q, DAS118Q, CA118Q	CAH118R, DAS118R, CA118R	CAH118S, DAS118S, CA118S	CAH118T, DAS118T, CA118T	CAH118U, DAS118U, CA118U	CAH118V, DAS118V, CA118V	CAH118W, DAS118W, CA118W	CAH118X, DAS118X, CA118X	CAH118Y, DAS118Y, CA118Y	CAH118Z, DAS118Z, CA118Z		
Engine	4D118A	4D118B	4D118C	4D118D	4D118E	4D118F	4D118G	4D118H	4D118I	4D118J	4D118K	4D118L	4D118M	4D118N	4D118O	4D118P	4D118Q	4D118R	4D118S	4D118T	4D118U	4D118V	4D118W	4D118X	4D118Y	4D118Z		
Transmission type	Manual transmission		Automatic transmission	Manual transmission	Manual transmission																							
Overall length mm	4120/4185			4120	4150	4148	4150	4148	4120			4150	4148	4150	4148	4150	4148	4150	4148	4150	4148	4150	4148	4150	4148	4150	4148	
Overall width mm	1640/1685			1640	1680			1640			1680																	
Overall height mm	1695/1700/1740			1900	1740			1695			1740																	
Wheelbase mm	2,655																											
Ground clearance mm	200																											
Wheelspan mm	Front	1,405																										
	Back	1,415																										
Front/rear suspension mm	Front	650/690			650	680	678	680	678	650			680	678	680	678	680	678	680	678	680	678	680	678	680	678	680	678
	Back	815/840			815																							
Breakover angle	Approach angle	32.4/24.3			32.4	30.8			32.4			30.8																
	Left angle	25.6/23.4			25.6																							



Vehicle weight

Automobile model	CA6410A4. CA5021XQ CA. CA7130. CA7131. CA6411A3	CA7150. CA7151	CA6410A3. CA5021XQ CA. CA6411A2	CA7150 A. CA7151 A	CA7153 A12	CA6413 A12	CA7133 A22	CA6413 A22	CA7153 A10	CA6413 A10	CA7133 A20	CA6413 A20	CA7152 A42	CA7152 A18	CA6412 A42	CA6412 A12	CA7152 A62	CA7152 A32	CA6412 A62	CA6412 A32	CA7132 A52	CA7132 A22	CA6412 A52	CA6412 A22	
Drive type	2WD																								
Transmission type	Manual transmission				Automatic transmission	Manual transmission										Automatic transmission				Manual transmission					
Number of passengers	5/7	5	5/7	5	5	7	5	7	5	5/7	5	7	5	7	5	7	5	7	5	7	5	7	5	7	
Gross mass kg	1570/1675	1580	1580/1685	1590	1590	1695	1580	1685	1580	1580/1685	1570	1675	1590	1590	1695	1695	1600	1600	1705	1705	1500	1580	1685	1685	
Full-load axle loading capacity kg	Front	694/691	699	699/696	704	704	701	699	096	699	696/699	694	618	704	704	701	701	709	709	706	706	199	699	696	696
	Back	876/984	881	881/989	886	886	994	881	989	881	989/881	876	984	886	886	994	994	891	891	999	999	881	881	989	989
Kerb	1130/1150/	1140/1	1140/1160/	1150/117	1150	1170	1140	8160	1140	1140/11	1830	1150	1850	1150	1170	1170	1160	1160	1180	1180	1148	1140	1160	1160	



Engine specs

Model of Engine	K3-VE3	3SZ-VE2/3	CA4GA8	CA4GA9	CA4GA10
Engine type	Petrol, 4-cycle DOHC (dual overhead camshafts)				
Number of cylinders & cylinder arrangement	4 cylinders, in-line arrangement				
Cylinder bore X stroke mm	72.0×79.7	72.0×91.8	73×80	73×89.4	73×77.6
Air displacement ml.	1,298	1,495	1,339	1,497	1,299
Rated power kw/rpm	67/6,000	80/6, 000	67/6,000	75/6,000	65/6,000
Peak torque Nm/rpm	120/4400	141/4400	120/4,400	135/4, 400	118/4,400

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Speed

	K3-VE3	3SZ-VE2/3	CA4GA8	CA4GA9	CA4GA10
	M/T	M/T	A/T	M/T	M/T
Maximum driving speed km/hr	160	170	160	160	170

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Fuel

Fuel to be adopted	Fuel tank capacity liters
China-III automobile models, lead-free gasoline with octane rating of 90 or higher China-IV automobile models, lead-free gasoline with octane rating of 93 or higher	45

15030001-1

Emission standard

Model	Emission standard grades	Emission standard
CA6410A3 CA6410A1 CA6410A4 CA7130 CA7150 CA7150A CA5021XQC CA5021XQCA CA5021XYZ CA5021XYZA CA6412A42 CA7152A42 CA6412A62 CA7152A62 CA6412A52 CA7132A52	China-III stage	GB 18352. 3-2005
CA6411A2 CA6411A1 CA7151 CA7151A CA7153A12 CA6413A12 CA7133A22 CA7153A10 CA6413A10 CA6413A10 CA6413A20 CA7133A20 CA6412A12 CA7152A12 CA6412A32 CA7152A32 CA6412A22 CA7132A22	China-IV stage	

Coolant

Type: Ethylene glycol based antifreeze

Capacity:

Liquid storage volume LOW/FULL	0.2/0.9 liter		These numeric values include the capacity of radiator, instead of the capacity of reservoir.
Gross capacity liter	K3-VE3	6.0	
	3SZ-VE2/3	6.8	

For recommended engine coolants, see Section 14.

15040001-1



Engine tuning

Engine type		K3-VE3	3SE-V E2/3	CA4GA8	CA4GA9	CA4GA10
Order of ignition		1-3-4-2		1-3-4-2	1-3-4-2	1-3-4-2
Ignition time °BTDC/rpm		6±2/idle speed *		—	—	—
Engine idle speed (when it is set to neutral) rpm		750		700±50	700±50	700±50
Valve clearance mm	Air intake [cold state]	0.18		0.2±0.03	0.2±0.03	0.2±0.03
	Exhaust [cold state]	0.31		0.2±0.03	0.2±0.03	0.2±0.03
Spark plug	Manufacturer	0.2±0.03	DENSO	DENSO	DENSO	DENSO
	No. :	DCPR7EA-9	XU22PR9	3707010-53K	3707010-53K	3707010-53K
	Clearance mm	0.9		1.0-1.1	1.0-1.1	1.0-1.1
Deflection of driving belt when being subjected to 98 Nm (10kgf) mm	New driving belt	10-11	6-6.5	—	—	—
	[Warm state]			—	—	—
	During inspection	10-13	10-12.5	—	—	—
	[Warm state]			—	—	—
Belt tension N		—	—	650±50 (when engine idles for at least 30 seconds)		

*When inspection is conducted for connector short circuit

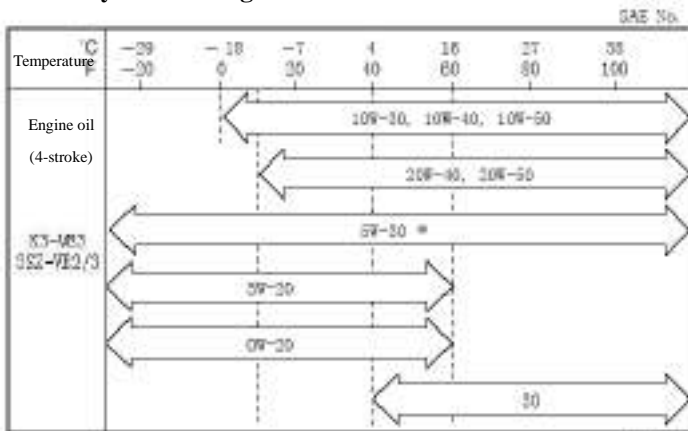
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Recommendation of lubricating oil

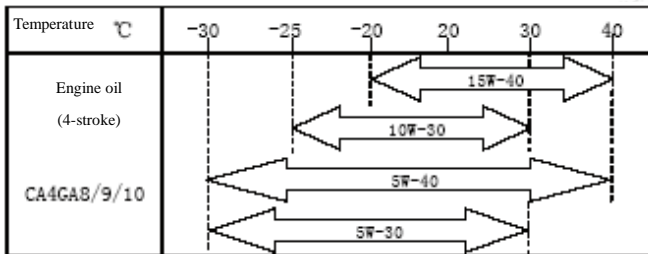
	Model of Engine	Grade	Viscosity	Capacity liter
Engine Oil	K3-VE3 3SZ-VE2/3	API SG or higher	See the table below	With oil filter: 3.0 Without oil filter: 2.7
	CA4GA8/9 /10	SL	See the table below	Volume indicated by upper graduation line marked on the oil dipstick: 3.5 Volume indicated by lower upper graduation line marked on the oil dipstick: 2.5
Manual transmission oil	Entire series	API GL-3 or 4	SAE 75W-90 or 75W-85 or 75W-80	To filler port plug: 2.2 Less than 5mm below the filler port plug: 2.1
Automatic transmission oil	3SZ-VE2/3	DEXRON-III	-	Gross volume: 4.6 Replaceable volume: up to 1.5
Rear axle oil (rear)	Entire system	API GL-5	SAE 80W-90	2.2



Viscosity table of engine oil



* Recommended standard oil



Brake fluid

FMVSS116 DOT 3

Warning

- Never palm liquid oils produced by different manufacturers. Such blending might lead to deterioration or change in properties of liquid oil.
- Use standard-brand brake fluid only.

Attention

(automobiles equipped with manual transmissions 3SZ-VE2/3 and CA4GA9)
Brake fluid and clutch fluid share one reservoir.

Power-assisted steering oil

DEXRON [®] -III

Warning

- Never palm liquid oils produced by different manufacturers. Such blending might lead to deterioration or change in properties of liquid oil.
- Use genuine power-assisted steering oil only.

Tyre specs

Tyre size	Tyre specs		Rim size
	Air pressure kilopascals (kgf/sq.cm)		
	Front	Rear	
185/70R14 88T	210 (2.1)	240 (2.4)	14×5J
185/65R15	210 (2.1)	240 (2.4)	15×5.5J

15090101-1



Wheel alignment

Toe-in mm	Front	0 ± 2.0
	Back	0
Camber angle	Front	$0^{\circ} 30', \pm 45'$
	Back	0
Caster angle		$4^{\circ} 35' \pm 1^{\circ}$
Knuckle pin angle		$12^{\circ} 25' \pm 1^{\circ}$
Wheel steering angle	Interior	$43^{\circ} 42' \pm 2^{\circ}$
	Exterior	$37^{\circ} 40' \pm 2^{\circ}$

Suspension

Front: MacPherson pillar type

Rear: 5-link-rod type with cross-tie

Bulb specs

Lights	Specification
Headlight	12V 60/55W
Width light	12V 5W
Front turn signal light	12V 21W
Lateral turn signal light	12V 5W
Rear turn signal light	12V 21W
Brake warning light/taillight	12V 21/5W
Taillight	12V 5W
Backup light	12V 21W
Front foglight	12V 55W
Rear foglight	12V 21W
License light	12V 5W
Roof light	12V 5W
Boot compartment light	12V 8W
Brake light	12V 21W



Section 16

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