

Your Owner's Manual

- Before you operate your Perodua, carefully read this manual.
To protect yourself and extend the life of your Perodua, follow the instructions in this manual.
Failure to observe these instructions may result in serious bodily injury and damage to your vehicle.
- Throughout this manual, we have made general references to WARNINGS, CAUTIONS, and NOTES. WARNINGS are given to help you avoid the risk of accidents or bodily injuries. CAUTIONS are given to help you avoid damages to your vehicle. NOTES are given to provide important information or tips in operating your vehicle.
- All information and specifications in this manual are current at the time of printing. We reserve the right to make changes at any time without notice.
- Note that this manual applies to all models and explains all equipment, including options. Therefore, you may find some descriptions of equipment not installed in your Perodua.

- The numbers below descriptions and illustrations do not affect the contents.
- If you sell your Perodua, leave this manual in the vehicle. The future owner will also need it.
- The model and the engine types described in this vehicle.

Model	Description
L200	Type EF engine (660 cc)
L201	Type ED engine (850 cc)

Engine type	Description
EF-CL	Carburetor engine
ED-10	Carburetor engine
ED-20	EFI engine

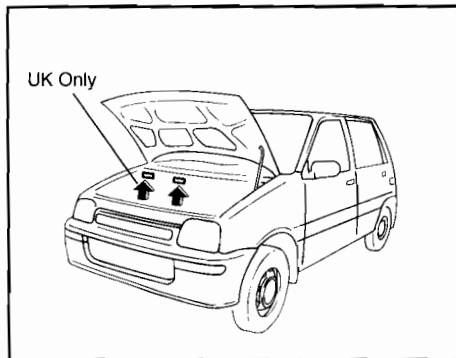
Your responsibility for maintenance

It is the owner's responsibility to make sure that the specified maintenance is performed. Section 12 gives details of maintenance requirements.

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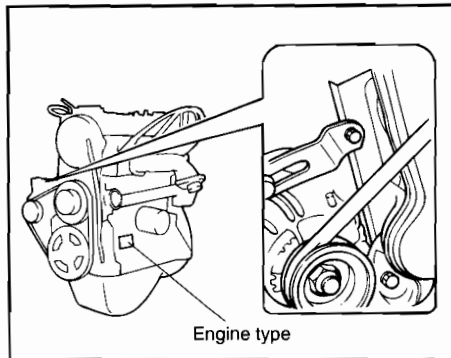
Vehicle identification



The vehicle identification numbers are given on the places as shown in the illustration.

OLE-00005

Engine identification



The engine identifications are given on the places as shown in the illustration.

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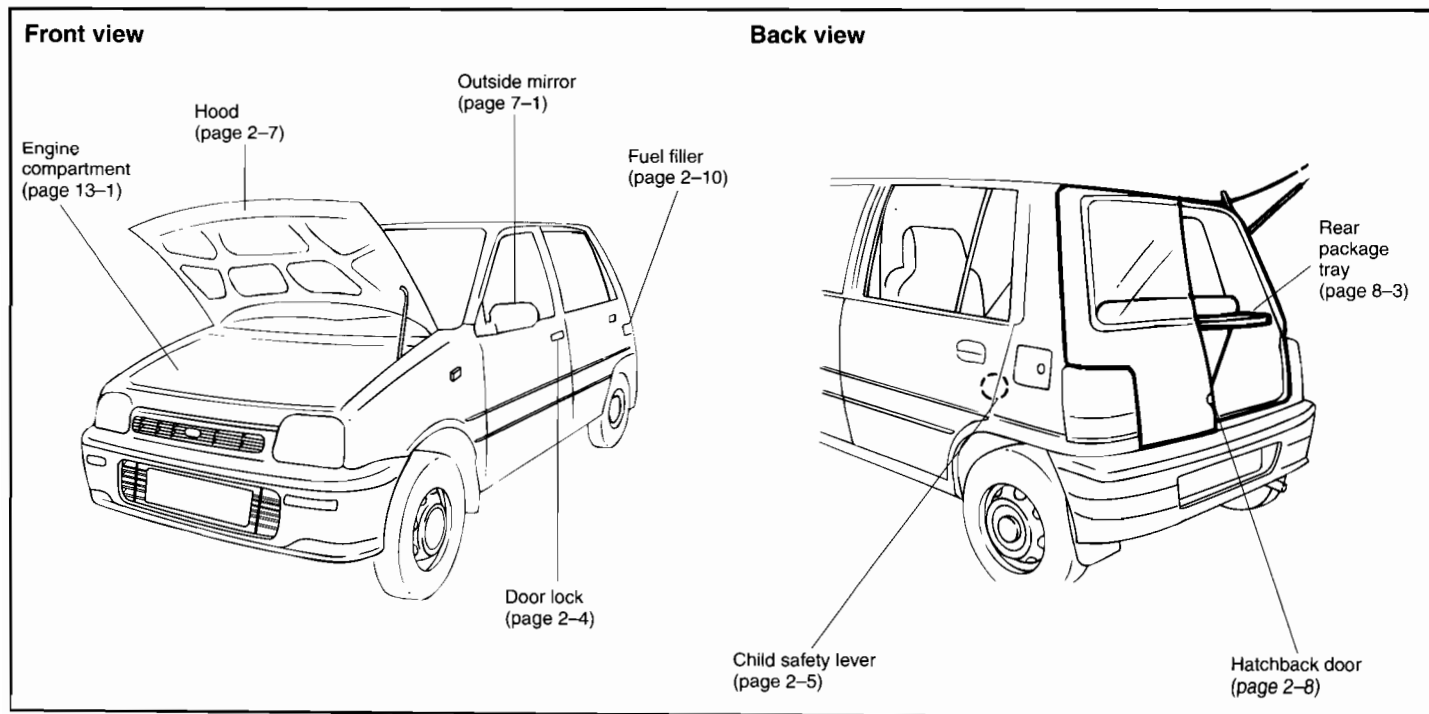
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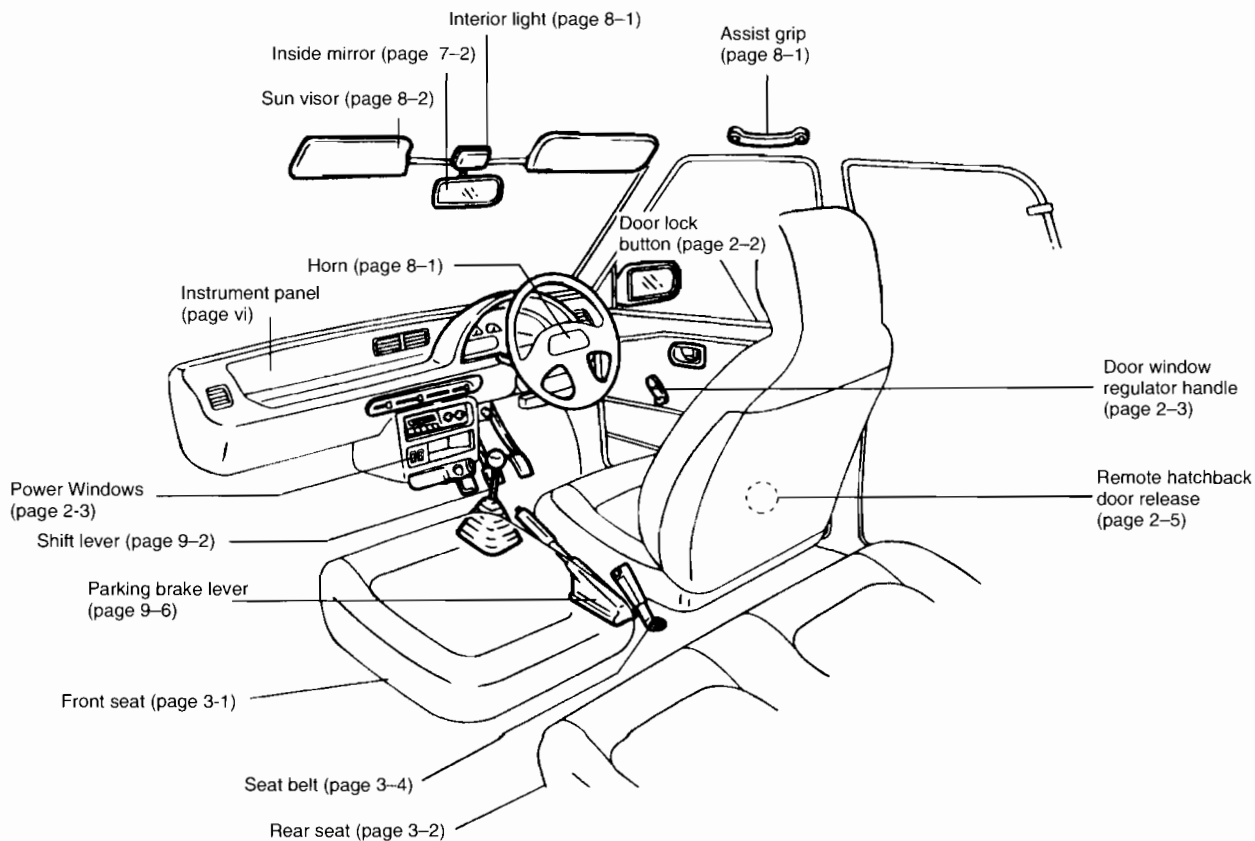
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Exterior view



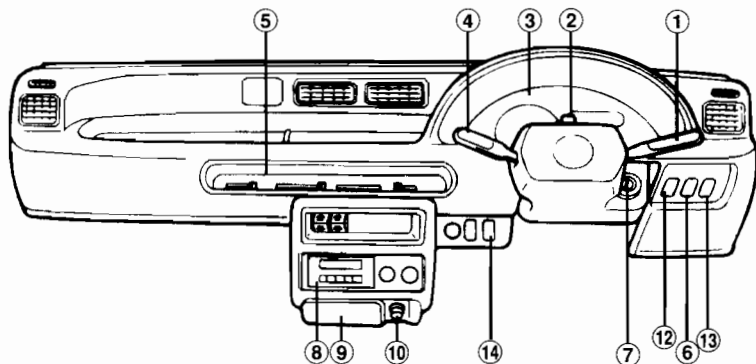
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Interior view



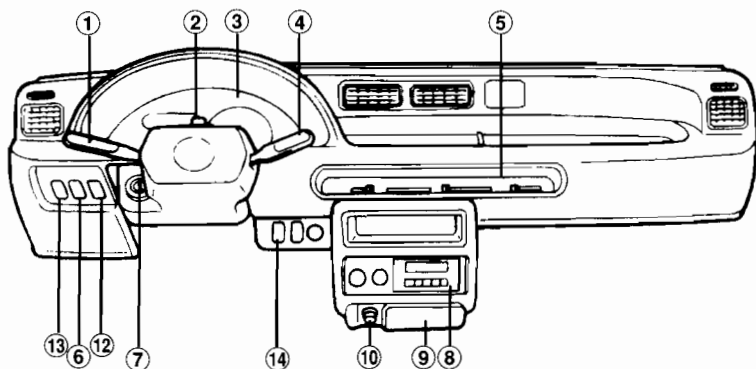
Instrument panel overview

Right-hand drive vehicle



- ① Multi-control switch (page 4-2)
- ② Hazard warning signal switch (page 4-3)
- ③ Combination meter panel (page 5-1)
- ④ Windshield wiper and washer switch (page 4-4)
- ⑤ Air conditioner or boost ventilator control panel (page 6-1)
- ⑥ Rear wiper and washer switch (page 4-4)
- ⑦ Ignition switch (page 4-1)
- ⑧ Radio control panel
- ⑨ Ashtray (page 8-2)
- ⑩ Cigarette lighter (page 4-5)
- ⑪ Power windows (page 2-3)
- ⑫ Rear window defogger switch (page 4-6)
- ⑬ Head light leveling switch (page 4-5)
- ⑭ Rear fog light switch (page 4-7)

Left-hand drive vehicle



OLE-00011



Section 1

Special precautions for your vehicle

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Engine exhaust gas

WARNING

Do not inhale exhaust gases.

They contain carbon monoxide, a poisonous gas that is colorless and odorless. Inhalation of this gas can cause unconsciousness or even death.

Whenever you suspect that exhaust fumes may have entered the vehicle, find out the cause. Have the condition corrected immediately.

If you must drive your vehicle under this condition, drive with all side windows fully open.

To prevent exhaust gas accident, follow the precautions below.

Maintenance;

Always maintain the engine exhaust system, vehicle body, and ventilation system in their correct operating conditions. Make sure the exhaust system has no loose connections or holes. We recommend that the exhaust system and vehicle body be inspected by competent repair facilities in the following cases:

- Whenever your vehicle has its oil changed
- Whenever you notice a change in the exhaust sound
- Whenever the exhaust system has been damaged or corroded
- Whenever you hit an object

In addition, follow the maintenance schedule in Section 12.

Ventilation system;

To allow the ventilation system of your vehicle to operate properly at all times, make sure that the air inlet ducts in front of the windshield are always free from leaves and other obstructions.

Daily operation;

We recommend that you do not run the engine for any extended periods of time while the vehicle is parked or stopped.

There are possibilities that carbon monoxide may be admitted into your vehicle due to *improperly-maintained or a damaged exhaust system.*

Do not run the engine in a garage or an enclosed area except when required for driving the vehicle in or out.

Make sure that other objects do not accumulate around the tail pipe to prevent exhaust gases from accumulating under the vehicle body.

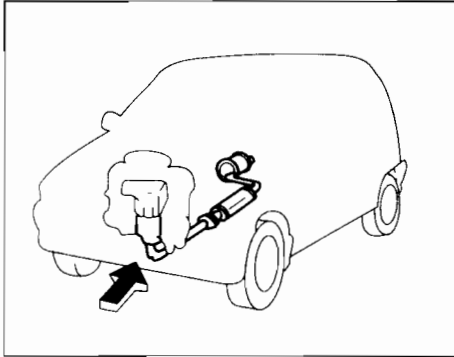
WARNING

Turn off the engine when taking the nap in the car;

- **This is to prevent accidentally activate the shift lever and depressing the pedal for a long period of time while napping.**
- **This is also to prevent deadly toxic gases from flowing into the passenger compartment.**



Catalytic converter



The catalytic converter is an emission control device installed in the exhaust system to reduce pollutants in exhaust gas.

WARNING

The exhaust system becomes hot and hot exhaust gas is emitted while the engine is running. Do not drive or park your vehicle over anything combustible, such as grass, leaves, paper or rags.

Also keep people or combustible object away from the exhaust system.

CAUTION

A large amount of unburned gas introduced into the catalytic converter may overheat the converter, which may cause a fire.

To prevent this and other damages, observe the followings;

- **Do not drive with an extremely low fuel level.**
- **Do not run the engine at fast idle speed for more than 10 minutes or at idle speed for more than 20 minutes.**
- **Do not push- or pull-start your vehicle.**
- **Do not turn off the engine while the vehicle is moving.**
- **Avoid racing the engine.**
- **Use only unleaded fuel.**

Follow the periodic inspections specified in the Perodua maintenance schedule to ensure that the engine itself, catalytic converter, and entire emission control system are operating properly.

If the engine hardly starts, stalls frequently, or pings or knocks during acceleration, have your vehicle checked as soon as possible by a Perodua dealer.

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For your safety

We at Perodua want you to enjoy your new vehicle with all its capabilities. We also want you to use common sense as safety and common sense driving go hand in hand. Part of common sense driving is learning about the capabilities and limitations of a vehicle, and realising that vehicles designed for different purposes may handle differently.

Read and understand all WARNINGS, CAUTIONS, and NOTES in this manual

WARNING

- **Avoid sharp turns, abrupt maneuvers or any unsafe actions. Failure to do so could result in a loss of control, an accident, roll-over of the vehicle and serious bodily injury.**
- **Do not attempt off-road use.**
- **We recommend all the passengers to use seat belts. (See “Seat belts”)**
- **Remember that operation of any vehicle after drinking or taking drugs is dangerous to you and others.**

- **Obey the traffic laws.**
- **Do not operate any equipment or mechanism from outside.**

Remember that while you rely on the manufacturer to make a good vehicle, the manufacturer and the motoring public rely on you to drive safely.

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Fuel recommendation

Vehicles with catalytic converter

Use only unleaded full with its Research Octane Number 90 or higher.

Vehicles without catalytic converter

Use leaded or unleaded fuel with its Research Octane Number 90 or higher.



Modification of your vehicle

Never modify your Perodua. Modification of your vehicle could affect its performance, safety or durability, and may even violate governmental regulations. Damage or performance problems resulting from modification may not be covered under warranty. In addition, vehicle modifications can cause a loss of control, an accident, or serious bodily injury.

OLE-01006

Installation of a mobile two-way radio system

A mobile two-way radio system in your vehicle could affect electronic systems. If you are going to install a mobile two-way radio system, make certain to follow the radio manufacturers' instructions or consult a Perodua dealer for precautionary measure or special instructions.

OLE-01008

Break-in period

The internal friction, which is high in a new vehicle, will decrease gradually as all moving parts adjust to each other.

We recommend observing the following precautions during the first 1,600 km (1,000 miles) to extend the future performance and economy of your vehicle.

- Do not drive over 90 km/h (55 mph) for 4-speed vehicle or 100 km/h (62 mph) for 5-speed vehicle.
- Do not drive for long periods at any one constant speed, either fast or slow.
- Avoid full throttle start.
- Avoid sudden stops except in case of an emergency, especially during the first 300 km (200 miles).

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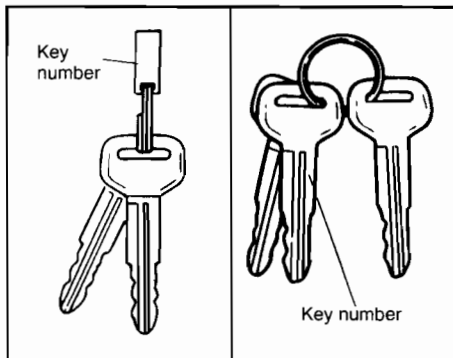
Section 2

Doors and locks

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Keys (without engine immobilizer system)



Two or three keys are provided for your vehicle.

We recommend that you keep your record of the key number with your important papers.

Always carry a spare key with you in case you lock your key in the vehicle.

If you have lost your keys, contact a Perodua dealer.

OLE-02001

Engine immobilizer system

The engine immobilizer system is a security system. When the key is inserted into the ignition switch, the transponder chip located at the key grip sends an electric signal to the vehicle. Then, this electric signal is collated with the ID code pre-registered in the vehicle. If the electric signal is matched with the ID code, the engine can be started. If they are not matched with each other, the engine cannot be started.

WARNING

- **Do not, under any circumstances, modify, add or remove on item connected to the immobilizer system.**

Keys (with engine immobilizer system)

The vehicle is equipped with three encoded keys.

The black key is called the master key.

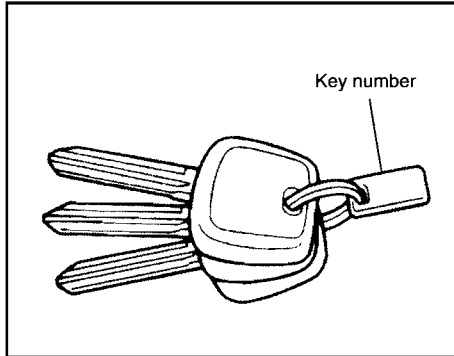
Your car is equipped with one black key.

The grey key is called the sub key. Your car is equipped with two grey keys.

Only these three keys make it possible to start your engine.

NOTE:

1. **The master key and the key number are required for registration at Perodua dealer when making a new sub key if your sub key is lost. Be sure to keep the master key in a safe place.**
2. **If your master key is lost, immediately consult with your Perodua dealer.**



When ordering spare keys, you are required to bring your master key along with the key number to your Perodua dealer. Hence, we recommended that you keep the record of the key number with your important papers.

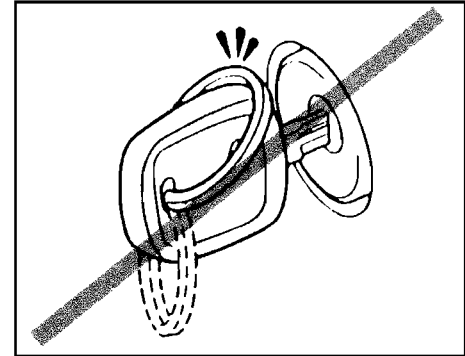
NOTE

You can register and make your sub keys up to three pieces.

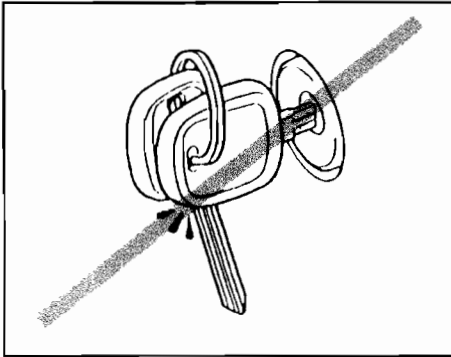
CAUTION

The master key and sub key incorporate in their key heads a transponder chip that is indispensable to this engine immobilizer system. Hence, be sure to observe the following points in handling the keys.

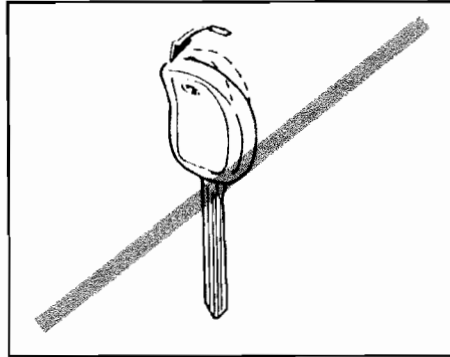
1. Do not cover the key grip with an object (e.g. aluminium gloves) that shuts off electromagnetic waves.
2. Be very careful not to apply any impact to the key.
3. Do not expose the key to high temperature for a long time. For example, do not leave the key at the dashboard exposed to direct sunrays.
4. Never soak the key in water and wash it in a supersonic wave washing machine.
5. Do not use the key together with an electromagnetic object (e.g. magnetic bracelet).



6. Do not operate the ignition switch with the ring hooked over the key grip shown in the figure above.



7. Do not operate the ignition switch with another key contacted, as shown in the figure above.



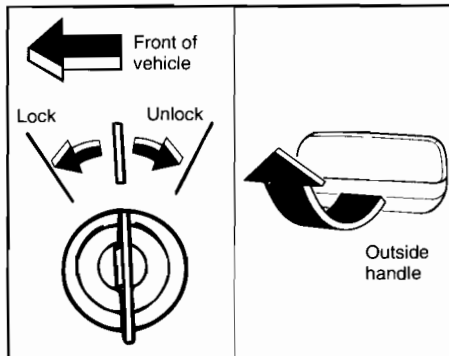
8. Never bend the key grip, as shown in the figure above.



Door locks

WARNING

- Ensure the safety around the vehicle before opening any door.
- Be sure, before driving, that all doors are securely closed and locked. This will help prevent the door from being accidentally opened, and the occupants from being thrown out of the vehicle.
- Never leave infants or pets unattended in the vehicle on a hot day. Inside the vehicle will reach an extremely high temperature.



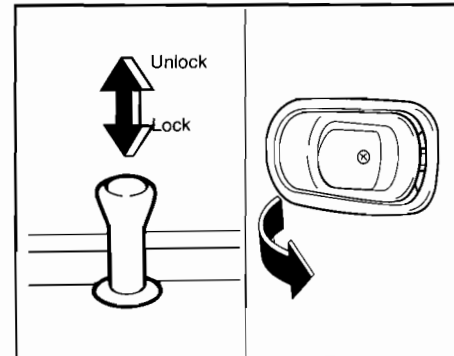
To lock/unlock doors with key

Turn the key toward the front of the vehicle to lock the door and toward the rear to unlock.

On vehicles equipped with central door locking, when you lock or unlock the driver side door, the other door(s) will also automatically be locked or unlocked.

To open the door by outside handle

Pull the outside handle to open an unlocked door.



To lock/unlock the doors with lock button

Push in the lock button to lock and pull it out to unlock the door.

You can also lock the door from outside as follows:

Push in the lock button before closing the door. Then, close the door while holding the outside door handle in its raised position in the case of the front door. Simply close the door in the case of the rear door.



Child safety levers

On the vehicle equipped with central locking

When you lock or unlock the driver side door lock button, the other door(s) are locked or unlocked in the same way.

NOTE

Be very careful not to leave the key inside the vehicle.

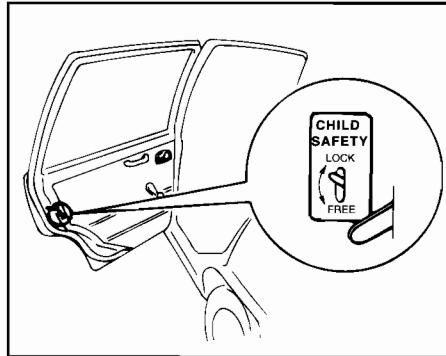
To open the door from inside

Pull the inside lever toward you to open the unlocked door.

NOTE

Be careful not to leave the key inside the vehicle.

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The rear door can be opened by means of both inside lever and the outside door handle, when the child safety lever is pulled downward to free position before the door is closed.

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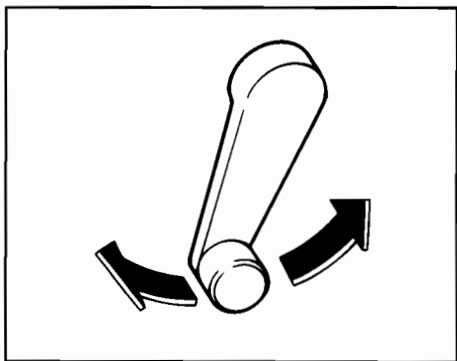
The child safety levers are provided to prevent the rear door from being opened from inside by children when the door is unlocked.

The rear door can only be opened from outside. When the child safety lever is pulled upward to lock position before the rear door is closed.

We recommend you to use this lever whenever children are in the rear seat.



Door windows

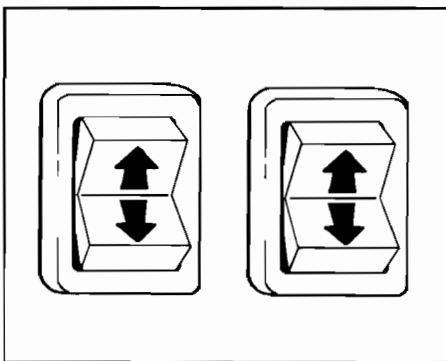


Turn the door window regulator handle to raise or lower the window.

WARNING

- **Keep your and/or passenger's hands, head and other body parts away from the moving window to avoid the risk of serious body injuries.**
- **Do not attach anything to or near the window. This could block driver's vision.**

Power windows



(Front door windows only)

The power windows operate only with the ignition switch turned "ON". Each window can be opened/closed while the respective switch is pressed.

Driver's side.

The driver side window rises/lowers automatically when the switch is pushed up/down fully. To stop the automatically operating driver side window halfway, lightly push up/down the switch in the reverse side for a short time.

Front window passenger side.

To lower/raise the window, push up/down the switch. The window keeps moving as the switch is being pressed.

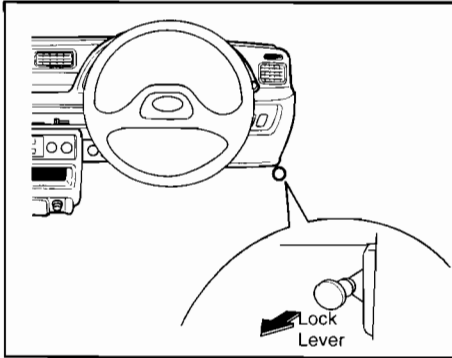
WARNING

- **Keep your and / or passenger's hands, head and other body parts away from the moving window to avoid the risk of serious body injuries.**
- **When children are riding in your vehicle, set the window lock switch to the "OFF" position.**

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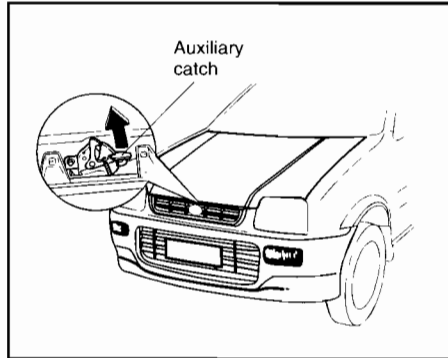


Hood



To open hood

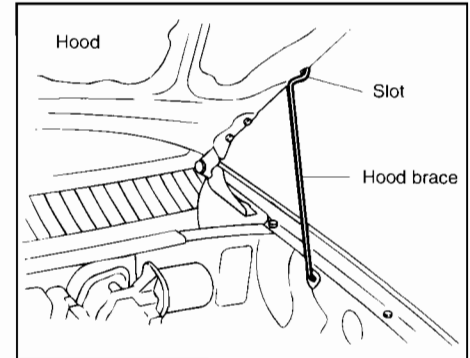
Pull the lock lever toward you to unlock the hood.



Stand in front of the vehicle.
Raise the auxiliary catch with your fingers and raise the hood.

CAUTION

- Do not use tools to open the hood. It may damage the latch.
- Never open the hood with the wiper arms raised. The hood may be scratched or the wiper arms and blades may be damaged.
- Auxiliary catch can be **HOT**, do not open the hood until it has cooled.



To support hood

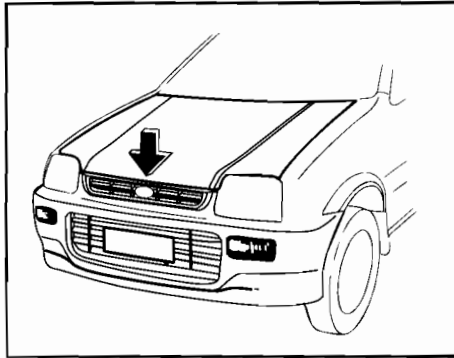
Insert the brace into the slot on the hood.

WARNING

Make sure the hood brace supports the hood securely after inserting it. Failure to do so could cause the hood to fall and result in serious bodily injury.



Hatchback door



To lock hood

Store the hood brace in the original position.

Lower the hood and push down the front edge of the hood gently to latch the hood.

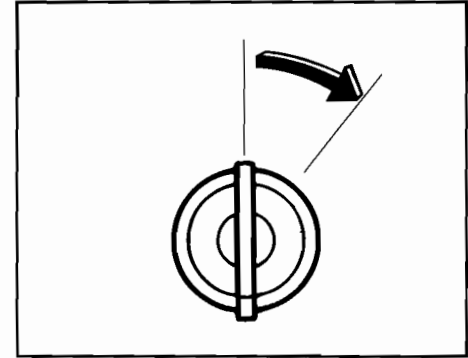
CAUTION

Push down the hood with excessive force may dent the hood panel.

WARNING

Make sure the hood is securely closed and latched before driving. The driver's vision will be blocked if the hood accidentally opens fully. Should you notice, while driving, that the hood is not securely locked, immediately pull off the road, stop the vehicle and latch the hood securely.

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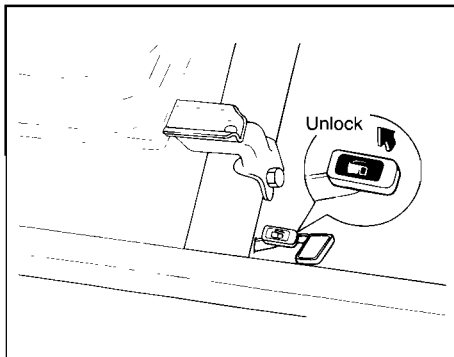


To unlock door

Turn the key clockwise to unlock the door.

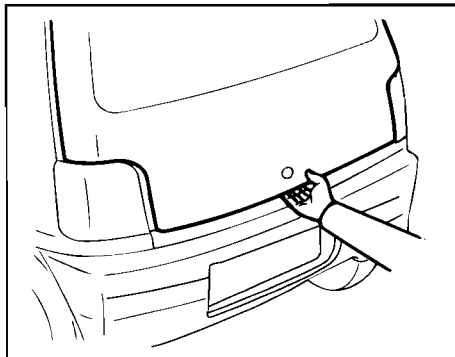


Hatchback door opener



The hatchback door release lever is located under the outer side of the driver's seat.

To unlock the hatchback door, pull the hatchback door lock release lever upward.

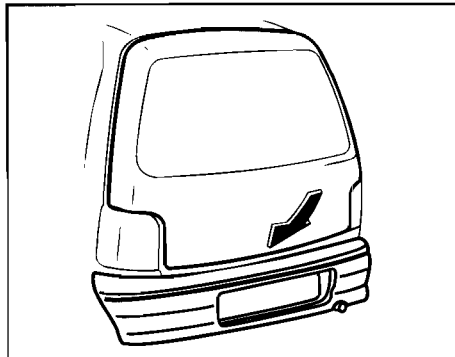


To open door

Raise the hatchback door by hand. When the door is opened fully, it is held in a raised position.

WARNING

**Never open the hatchback door with the rear wiper raised.
The wiper blade may injure you.**



To lock door

Make sure that the hatchback door will not interfere with the package tray or any object in the luggage compartment when it is closed.

Lightly push the hatchback door about 20 - 30 cm (8 - 12 inches) away from the closed position. The hatchback door will be closed and be locked.

Be careful not to lock your key in the vehicle.



Fuel filler

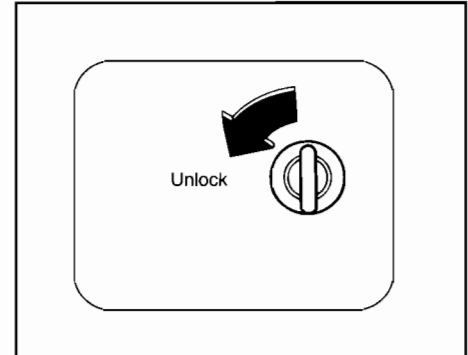
WARNING

Make sure the door is securely locked after closing it. Also, keep the door closed at all times while driving. Poisonous exhaust gas will enter the vehicle and lead to death.

OLE-02012

WARNING

- To prevent a fire when refueling, always turn off the ignition switch. Also, do not smoke, cause sparks nor bring open flame near. Because the fumes are flammable.
- Never carry any fuel container in your vehicle. The fuel may leak from the container and may cause an explosion or a fire.



To lock/unlock fuel lid

To unlock the fuel lid, turn the lock counter-clockwise with the key.

To lock the fuel lid, close the lid and lightly push the lock section of the fuel lid.

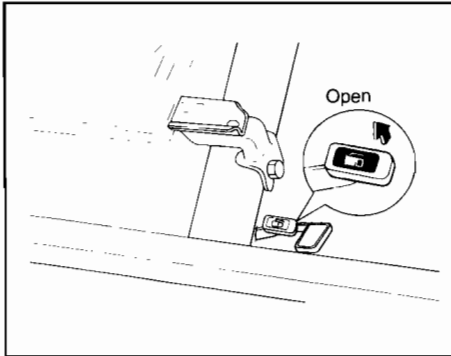
NOTE

Ensure that the fuel lid is locked securely.

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Fuel lid opener

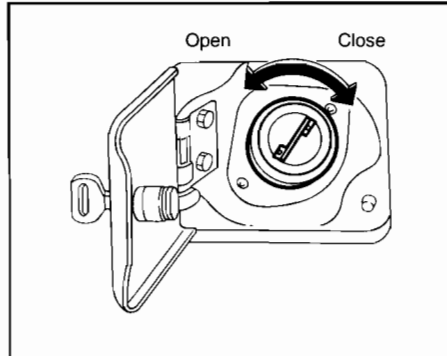


The fuel lid release opener is located under the outer side of the driver's seat.

To open the fuel lid, pull the fuel lid lock release lever upward.

OLE-02010

Fuel tank cap



To open cap

Turn the fuel tank cap counterclockwise to open.

To close cap

Align the claws at the inner side of the cap with the cutout sections of the tank neck.

Turn the fuel tank cap clockwise to securely close.

WARNING

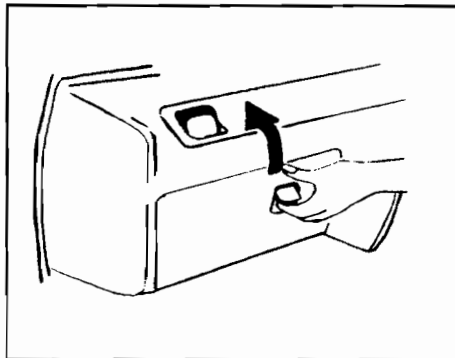
Do not open the fuel cap quickly to prevent the fuel from spouting out from the fuel filler pipe under hot weather condition, etc. Failure to observe this warning may cause severe injury.

CAUTION

Do not open the fuel cap quickly to prevent the fuel from spouting out from the fuel filler pipe under hot weather condition, etc. Failure to observe this caution may damage the paint finish or resin made parts by spilt fuel.



Glove box



To open the glove box, pull the lock and hand it to go down smoothly. To close it, just push the glove box to the original position and it will close automatically.

WARNING

Make sure the glove box is closed while driving to reduce any injuries if an accident occurs.

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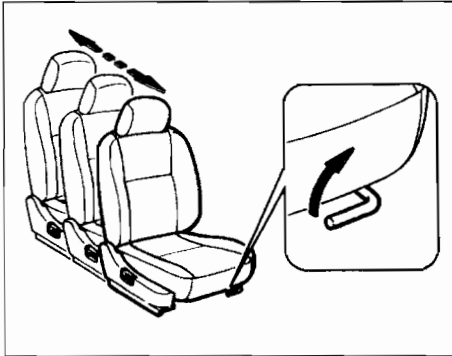
Section 3

Seats and seat belts

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Front seats

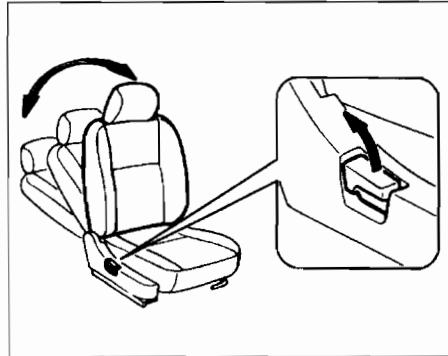


To adjust seat position

Raise the seat adjust lever and slide the seat, with slight body pressure, to the desired position.
Then, release the lever.

WARNING

- **Make sure, after adjusting, the seat is locked securely in position by trying to slide it forward and backward. This could prevent accidental movement of the seat, which could cause a loss of control of the vehicle.**



- **Never attempt to adjust the driver seat while driving. This could cause a loss of control of the vehicle and an accident.**

To adjust seatback angle

Lean slightly forward and pull the reclining lever upward. Slowly tilt the seatback to the desired angle.
Then release the lever.

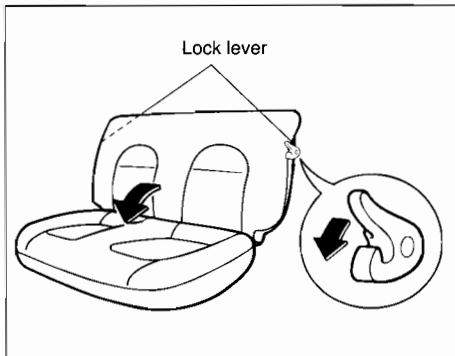
WARNING

- **Make sure, after adjusting, the seatback is locked securely in position by exerting body pressure. This could prevent accidental movement of the seatback, which could cause a loss of control of the vehicle.**
- **Never attempt to adjust the driver seatback while driving. This could cause a loss of control of the vehicle and an accident.**
- **Avoid reclining the seatback any more than needed to reduce the risk of sliding under the seat belt in a collision.**

OLE-03001



Rear seat



To fold down seat

Unlock the seatback and fold it forward.

To return seat

1. Make sure the area where the seatback is about to be placed is free from obstacles.
2. Return the seatback to the upright position and lock it.

WARNING

- **Make sure, after returning, the seatback is securely locked and any portion of the seat belts is not pinched by the rear seat.**
- **Do not allow anyone to ride in the cargo area. It is not designed as a passenger seat.**
- **Do not pile up anything in the cargo area higher than the front seatback, to prevent cargos from blocking driver's vision.**
- **Secure the luggage, if possible, at the front of the cargo area.**
- **Do not overload.**

OLE-03016

Instructions on seat belts

Perodua recommends that all occupants be properly restrained with a seat belt provided. Observe the following precautions for proper function of the seat belt. Failure to do so could result in serious bodily injury in an accident or sudden braking. Check the belt system periodically and if any seat belt fails to function properly, have the system checked promptly by a Perodua dealer.

Child; We recommend children sit in the rear seat and be restrained with a seat belt. According to accident statistics, children are safer when properly restrained in the rear seat than in the front seat.

- Do not allow them to stand up or kneel on the seat.
- Do not hold a child in your arms. In an accident, a child held in your arms could be crushed between the vehicle interior and you.



Small-framed person or youth;

If the shoulder belt comes across the neck or face of a front seat passenger, move the seat forward or backward so that the belt will snugly fit him.

Pregnant woman; Perodua recommends using a seat belt.

The lap belt should be worn securely and as low as possible over the hips, not on the waist. Consult your doctor for recommendation.

Injured person; Perodua recommends using a seat belt.

Consult your doctor for recommendation.

WARNING

- **Seat belts are designed to bear upon the bony structure of the body, and should be worn low across the front of the pelvis, or the pelvis, chest and shoulders, as applicable; wearing the lap section of the belt across the abdominal area must be avoided.**

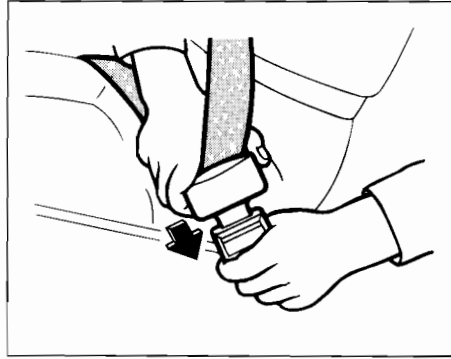
- **Seat belts should be adjusted as firmly as possible, consistent with comfort, to provide the protection for which they have been designed. A slack belt will greatly reduce the protection afforded to the wearer.**
- **Care should be taken to avoid contamination of the webbing with polishes, oils and chemicals, and particularly battery acid. Cleaning may safely be carried out using mild soap and water. The belt should be replaced if webbing becomes frayed, contaminated or damaged.**
- **It is essential to replace the entire assembly after it has been worn in a severe impact even if damage to the assembly is not obvious.**
- **Belts should not be worn with straps twisted.**
- **Each belt assembly must only be used by one occupant; it is dangerous to put a belt around a child being carried on the occupant's lap.**
- **No modifications or additions should be made by the user which will either prevent the seat belt adjusting devices from operating to remove slack, or prevent the seat belt assembly from being adjusted to remove slack.**
- **Do not allow anyone to use the shoulder belt if it crosses above the chest or near the neck or face.**
- **Never wear the shoulder belt under your outer arm or behind your back.**
- **Do not recline the seatback more than needed.**
- **Do not fasten the seat belt over hard or fragile objects, such as eye glasses, jewelry, pens, and keys.**
- **Do not wear the seat belt on heavy clothing. It could prevent proper positioning of the belt.**
- **Do not modify or disassemble the system.**
- **If the seat belt system came across a severe impact, have it replaced by a Perodua dealer, even if damage is not obvious.**



3-point emergency lock retractor type seat belts

CAUTION

- Take care not to damage the seat belt webbing or hardware by pinching in the seat, door etc.
- Cleaning may safely be carried out using mild soap or lukewarm water. Never use bleach, dye, or abrasive cleaners. They may severely damage the belt. Do not remove the belt when cleaning. Retract the belt after drying thoroughly.

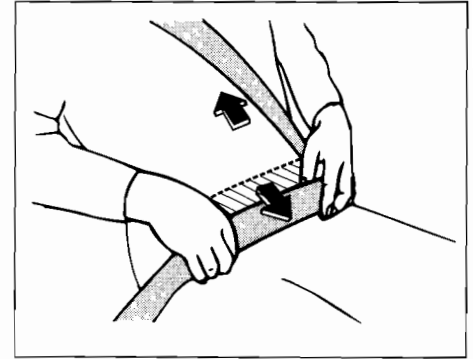


To fasten belt

Pull the seat belt from the retractor and insert the tongue plate into the buckle until it clicks.

WARNING

For full restraint, make sure, after inserting the tongue plate, the connection is secure and the belt is not twisted.



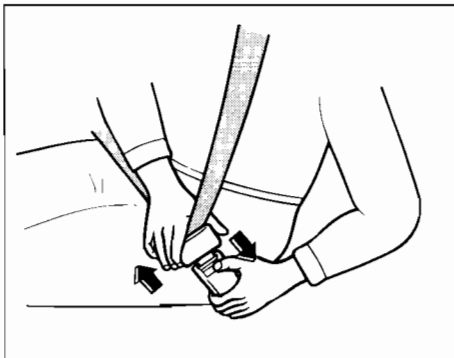
To adjust belt

Place the belt as low as possible on your hips, not on your waist. Pull the shoulder portion of the belt toward the retractor to remove any slack.

OLE-03004



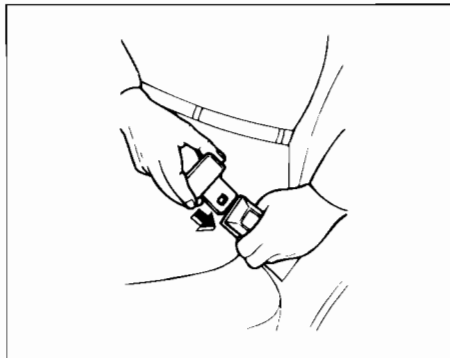
2-point seat belt



To unfasten belt

Push the buckle release button.
Allow the retractor to retract the belt completely.
Make sure that the belt is not twisted as it is retracted.

OLE-03018

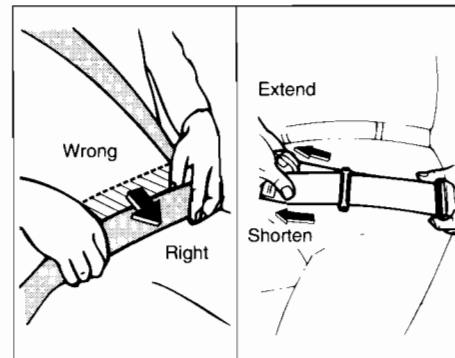


To fasten belt

Insert the tongue plate into the buckle until it clicks.

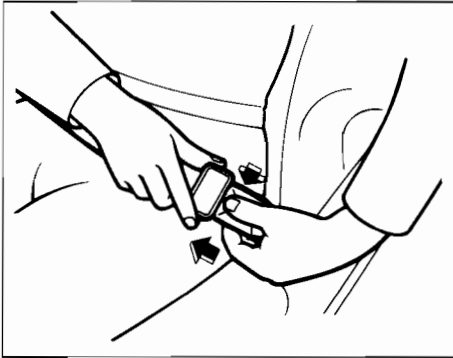
WARNING

For full restraint, make sure, after inserting the tongue plate, the connection is secure and the belt is not twisted.



To adjust belt position

Place the belt as low as possible on your hips, not on your waist.
Hold the tongue plate at a right angle to the belt and pull the belt to extend or shorten.

**To unfasten belt**

Push the buckle release button.

Insert the tongue plate into the buckle when the seat belt is not in use.

CAUTION

To prevent seat belt damage, make sure that the belt webbing is not caught by the door lock or seatback.

OLE-03021



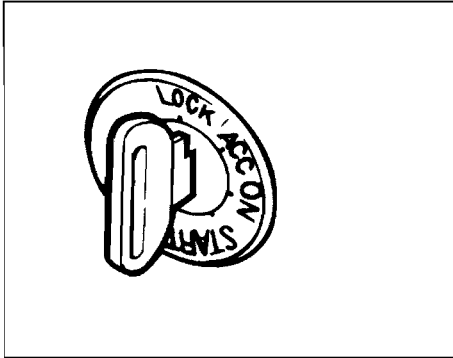
Section 4

Instruments and controls


Ignition switch	4-1
Multi-control switch	4-2
Hazard warning signal switch	4-3
Wiper and washer switches	4-4
Headlight leveling switch	4-5
Cigarette lighter & digital clock	4-5
Defogger switch	4-6
Rear fog light switch	4-7



Ignition switch

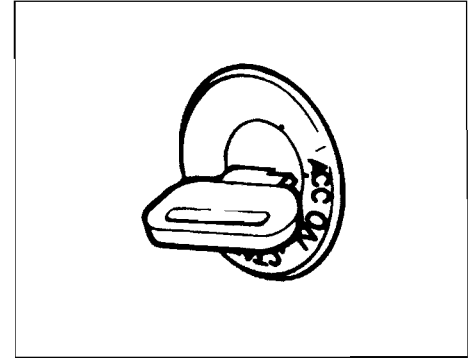


LOCK ... The key can be pulled out or inserted in this position. If the key will not turn from this position, try again while gently turning the steering wheel alternately to right and left.

For your safety, on vehicles equipped with automatic transmission, the shift lever must be in the  range when the key is turned from the "ACC" position to the "LOCK" position.

WARNING

- Do not turn the key to "LOCK" position while the vehicle is in motion. Failure to observe this warning may cause the key to be removed easily and unintentionally and may cause the steering wheel to be locked, leading to a serious accident.
- Do not leave the key in an unattended vehicle or in a vehicle occupied only by children. **The vehicle or electrical equipment may operate suddenly if the key is turned from the "LOCK" position accidentally.**



ACC... Accessories, such as radio are operated in this position while the engine is not running.

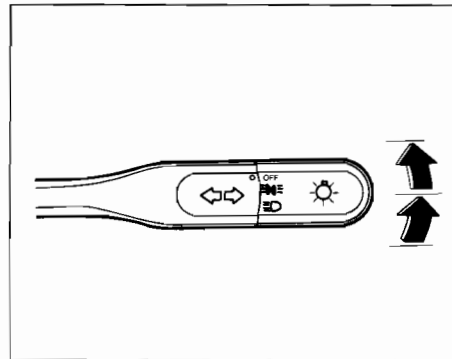
NOTE

To prevent the battery from being discharged, do not operate the radio or the like for a lengthy time without running the engine.



Multi-control switch

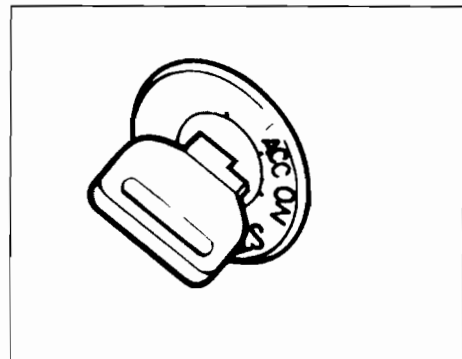
Headlight control



Turn the multi-control switch knob to turn the headlights on.

Switch positions

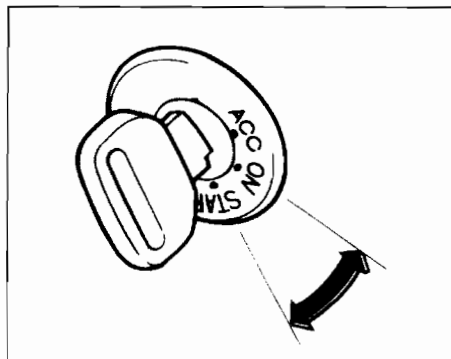
Position	☰☱☲	☰☷
	1st stage	2nd stage
Light	1st stage	2nd stage
Headlights	OFF	ON
Clearance lights	ON	ON
Tail lights	ON	ON
License plate lights	ON	ON
Instrument panel lights	ON	ON



ON... The engine runs in this position.

CAUTION

Never leave the ignition switch in this position while the engine is off. Failure to observe this caution will cause the battery to be totally discharged.



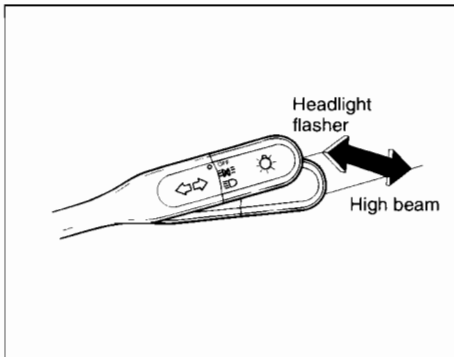
START... The engine starts in this position. Release the key after the engine has started. It will automatically return to "ON".

For starting tips, see "Section 9".

OLE-04001



Hazard warning signal switch



To turn on/off high beam

With the headlights on, push the lever forward to turn on high beam and pull it back to turn off.

The indicator light on the instrument panel will glow.

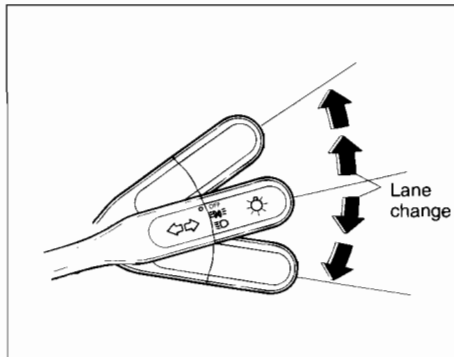
To flash lights

Pull the lever lightly and release.

The headlight flasher works with the headlight on or off.

OLE-04002

Turn signal light control switch



The turn signal lights flash with the ignition turned "ON".

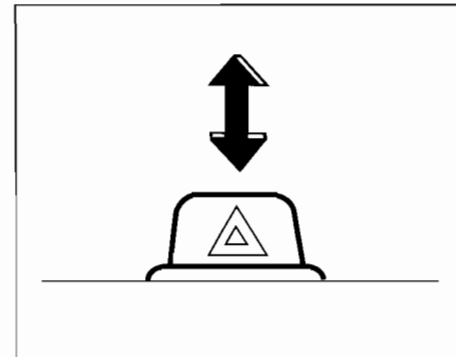
Move the multi-control lever up or down to signal a turn.

The indicator lights on the instrument panel will begin flashing.

You can also signal a lane change by moving the lever slightly and holding it there.

If the lights flash faster than normal, a bulb may be burned out.

OLE-04003



Push the switch down to flash all the turn signal lights.

The indicator lights on the instrument panel will begin flashing.

Pull the switch up to turn off.

The turn signal switch will not operate when this switch is on.

Do not operate this switch except in an emergency.

WARNING

Pull off the road in case of an emergency to prevent an accident.

OLE-04004



Wiper and washer switches

WARNING

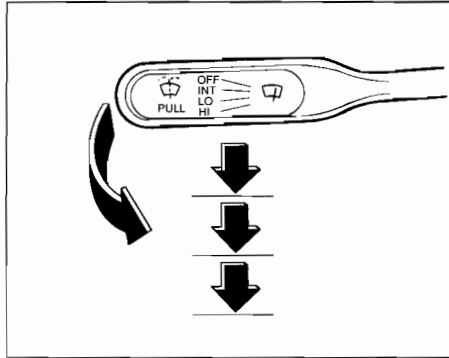
- Worn or dirty wiper blades could reduce your visibility. Be sure to maintain and replace wiper blades as necessary.

CAUTION

- Do not use radiator coolant in place of washer fluid to prevent paint damage.
- Do not operate the wiper when window is dry. It may damage the wiper blades.
- Do not operate the washer if the washer tank is empty. This may damage the motor.

OLE-04006

Windshield wiper and washer switch



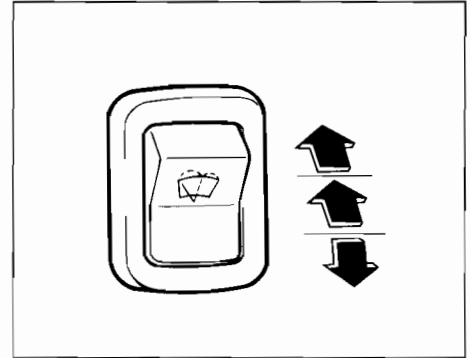
The wipers and the washer operate with the ignition turned "ON".

Push the wiper switch lever down to turn the wiper on. The wiper operates intermittently when the wiper switch is set at the "INT" position.

Pull the lever toward you to activate the washer.

OLE-04007

Rear wiper and washer switch



Push the upper side of the switch to turn the wiper on.

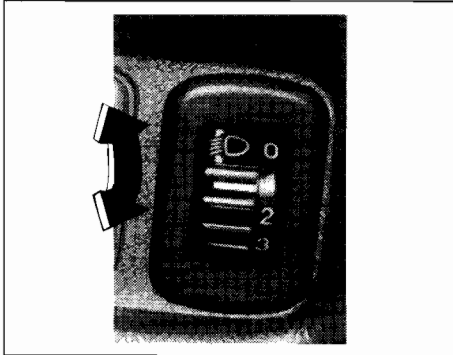
Push it further to activate washer while operating the wiper.

To activate only the washer, push the lower side of the switch.

OLE-04008



Headlight levelling switch



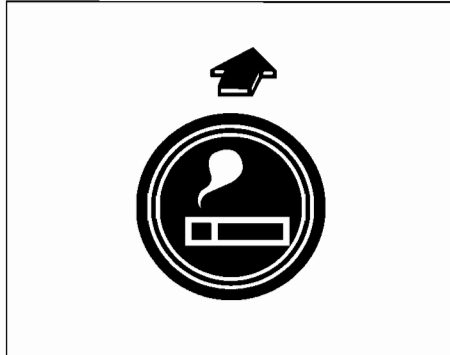
Adjust the headlight levelling control switch in response to load condition of your vehicle.

Switch positions

Load condition	Position
A driver	0
2 persons in front	0
2 in front + 2 in rear	1
2 in front + 2 in rear + luggage (up to gross vehicle weight*)	2
A driver + luggage (up to rear axle permissible weight*)	3

* See Section 15

Cigarette lighter



Push the cigarette lighter in fully with the ignition set to "ON" or "ACC". The cigarette lighter will automatically return to the original position when it is ready to use.

Pull the lighter out.

Store the lighter after use.

WARNING

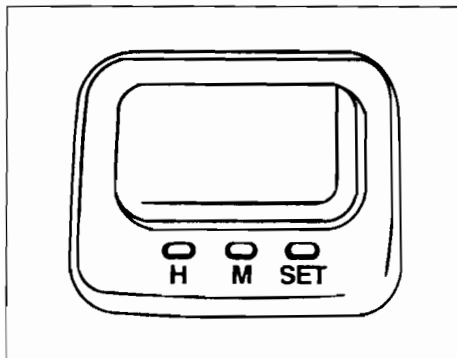
Do not touch hot coil to prevent from getting burned.

CAUTION

- If the lighter should fail to automatically pop back to the original position in 20 seconds, immediately pull it back. Do not force the lighter in. Have the lighter system checked by a Perodua dealer immediately.
- We do not recommend inserting any parts or accessory other than specified. They may damage the cigarette lighter system.



Digital clock



The digital clock will appear when ignition key is at 'ON' or 'ACC' position.

Operation control

Digital clock can be adjusted for the correct hours and minutes by pushing each button.

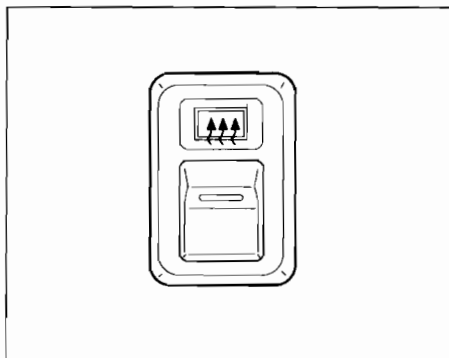
H :To adjust hour.

M :To adjust minutes.

SET :To adjust minutes to become '00'.

EXP :11.30 ~ 12.29 -- Change to 11.00

Rear window defogger switch



The rear window defogger operate with the ignition turned 'ON' or 'ACC'.

Push the defogger switch to demist the rear window. While the defogger is 'ON', the indicator light glows.

The defogger is not design for thawing snow or to dry rain.

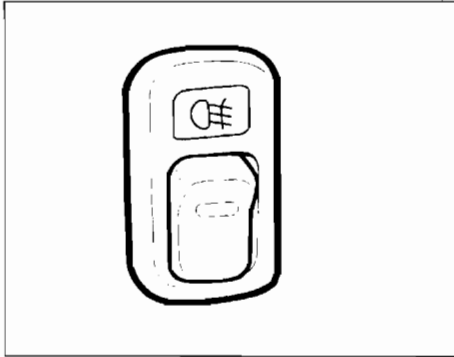
CAUTION

Turn the defogger switch 'OFF' when the rear window is clear to prevent battery discharge. Do not scratch heater at any time.

OLE-04012



Rear fog light switch



The rear fog light glows with the multi-control 2nd stage and with the rear fog light switch turned on.

While the rear fog light is on, the indicator light on the instrument panel glows.

OmE-04011

Rear Fog Light-On-Warning Buzzer

When you open the door with the ignition set to "ACC" or "LOCK" and with the rear fog light switch turned ON, the buzzer will sound to tell you that the light switch is still ON position.

OmE-04013



Section 5

Meters and gauges

5

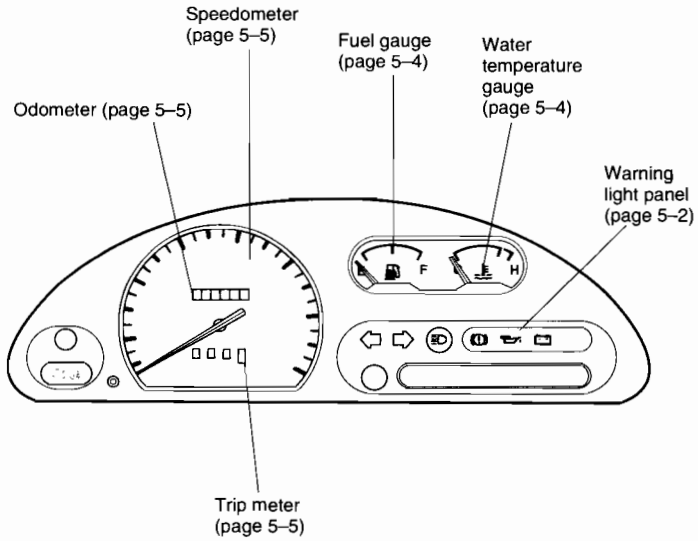
Combination meter panel overview	5-1
Warning lights	5-2
Fuel gauge	5-4
Water temperature gauge	5-4
Speedometer, odometer and trip meter.....	5-5



Combination meter panel overview

Single type

OLE-05016





Warning lights

The warning lights indicate abnormal conditions in the relevant systems.

WARNING

- **If you have to stop the engine or the vehicle for emergency, pull the vehicle to a safe place at the side of the road. Shut off the engine and turn the hazard warning signal lights on.**
- **Allow the engine to cool before checking any component in the engine compartment to prevent burn injury.**
- **Keep hands, clothing and other objects away from any moving part in the engine compartment to prevent serious bodily injury.**

OLE-05003

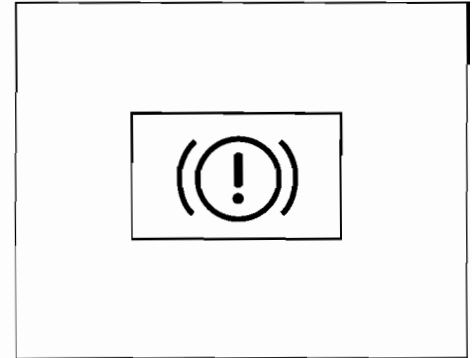
To check all warning lights

1. Apply the parking brake.
2. Turn the ignition key to the "ON" position, but do not start the engine. All the warning lights should go on.
3. After the engine has started and the parking brake lever has been lowered, the warning lights should go out.

If any warning light does not function, have it checked by a Perodua dealer as soon as possible.

OLE-05032

Brake warning light



If the brake fluid level drops to near the "MIN" line of the brake fluid reserve tank while the engine is running, the warning light goes on. Add the brake fluid, if necessary, and check the fluid leakage. If the warning light goes on, the brake system requires increased force and the stopping distance will be increased.



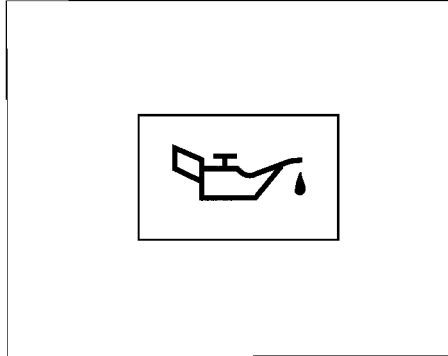
WARNING

Do not continue driving with the warning light on. Failure to do so could cause an accident.

Have the brakes checked by a Perodua dealer immediately.

OLE-05021

Oil pressure warning light



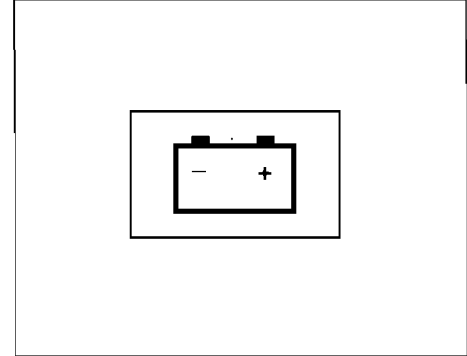
If the lubrication system should malfunction while the engine is running, the warning light goes on.

CAUTION

Turn the engine off if the warning light goes on. Failure to do so could cause severe engine damage.

OLE-05020

Battery charge warning light



If the charging system should malfunction while the engine is running, the warning light goes on. Turn off the accessories and engine.

WARNING

Before checking or adjusting the drive belt, shut off the engine and allow it to cool.

Failure to do so could cause serious bodily injury.

CAUTION

Do not continue driving if the drive belt is broken or loose.

It may cause engine overheating.

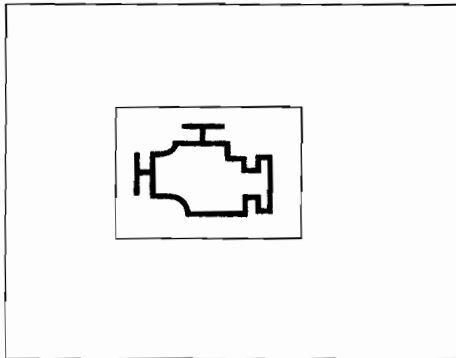
OLE-05022



Fuel gauge

Water temperature gauge

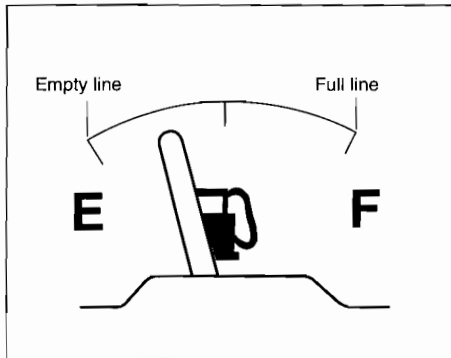
Check engine light



If the engine electronic control system should malfunction during engine operation, the warning light goes on.

When this light goes on, immediately have the vehicle checked by an authorized Perodua dealer.

OmE-05007



The fuel gauge indicates the approximate amount of fuel in the fuel tank with the ignition turned "ON".

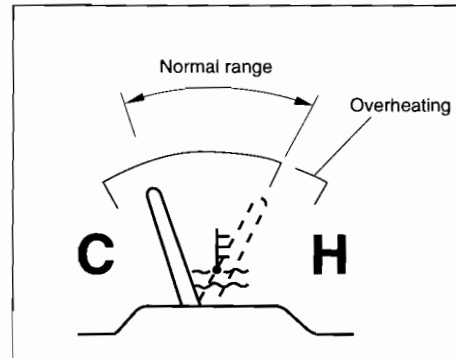
WARNING

Do not drive with the fuel level below the empty line.

It may cause engine misfire.

Furthermore an accident may happen if the vehicle stalls or hesitates while driving.

OLE-05004



The water temperature gauge indicates the temperature of the engine cooling system with the ignition turned "ON".

CAUTION

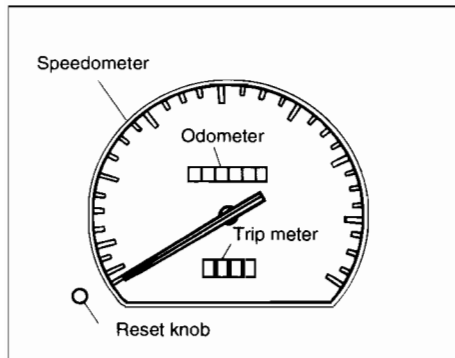
Do not continue driving if the gauge indicates overheating.

(See "Engine overheating")

OLE-05005



Speedometer, odometer and trip meter



Speedometer

The pointer indicates vehicle speed.

Odometer

The odometer indicates distance that has been driven.

White digits-1 km (1 mile)

Trip meter

The trip meter indicates distance that has been driven in each trip.

Push the reset knob to set the meter to zero.

White digits-1 km (1 mile)

Black digits-100 m (1/10 mile)

OLE-05006



Section 6

Air control systems

6

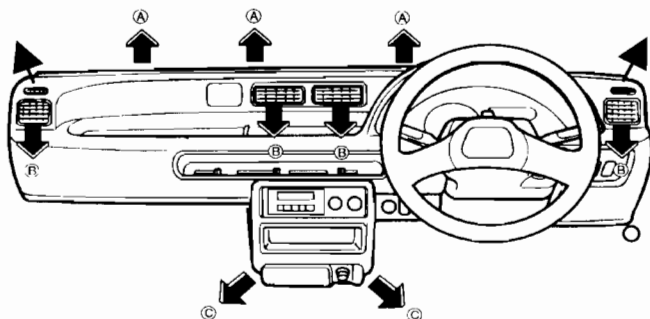
Heater/Air conditioner/boost ventilator 6-1



Heater/boost ventilator

The heater or boost ventilator operates with the ignition turned "ON".

Outlet ports

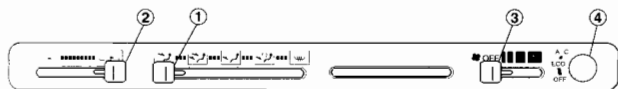


NOTE

Air direction of the outlet ports B is controlled by the knob provided.

OLE-06002

Control levers and switches



6-1

1 Air outlet control lever

Air outlet is changed with this lever.

Warming or ventilation

Warm or outside air will be directed to your head.



Outlet port (B)

Keeping your head warm and your feet ventilation

Warm air will be directed to your head while air will be directed to your feet.



Outlet port (B) & (C) (small amount from (A))

Ventilation

Ventilation air is directed to your feet.



Outlet port (C) (small amount from (A))

Ventilation and demisting

Ventilation air is directed to your feet while the windshield and door glasses are demisted.



Outlet port (A) & (C)

Defroster

The windshield and door glasses are demisted.

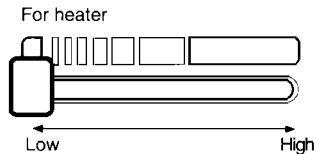


Outlet port (A)





② Temperature control lever

Air temperature is adjusted with this lever.





When the warm air is not desired, move the lever to the left end.

③ Air intake control lever

-  Inside air is recirculated.
-  Outside air is introduced.

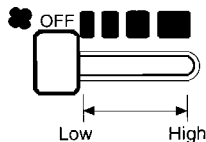
NOTE

When the outside air is unpleasant, move the lever to . It is, however, important to shift the lever to  from time to time as the glass may become fogged or the inside the vehicle may become stuffy.

Set the lever to  in normal use.

④ Blower fan switch

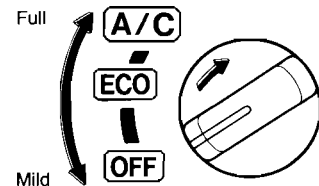
Air flow level is changed with this lever.



⑤ Air conditioner switch

Turn the air conditioner switch clockwise to cool or dehumidify air. When full cooling is not needed, turn the switch to the ECO mode to get mild cooling.

This mode helps energy-saving operation.



NOTE








- When the ambient temperature is near 0°C, dehumidifying function will not work.
- Rapidly-cooled air may cause fog from outlet ports. This is not malfunction.
- If the engine water temperature rises excessively when the vehicle is driven on a long grade etc. with the air conditioner on, the air conditioner will turn off automatically.

WARNING

While the vehicle is idling, engine idling speed is slightly increased with the air conditioner on. Special attention must be paid in starting or stopping the vehicle.



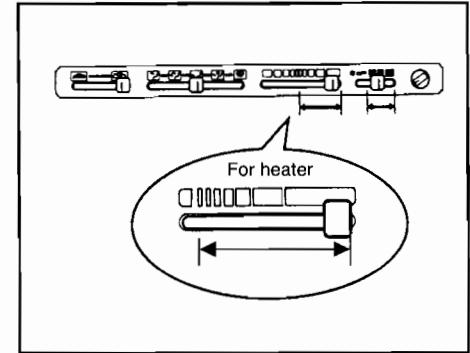
Operation tips

- Make sure that the air inlet ducts in front of the windshield are not blocked by leaves or other obstructions.
- Do not cool strongly with the air outlet control lever in , or , and the air conditioner on in extremely humid weather. The temperature difference between outside air and the windshield could cause the windshield to be misted, which may block your vision.
- Do not move the air intake control lever to  with the air outlet control lever in , , or . The glass is prone to mist in this setting.
- Do not use  to cool in high humidity. This could cause the windshield to be misted.
- If your vehicle has been parked for a long time in intense sunlight and inside temperature is extremely high, turn on the air conditioner with the windows fully open. After the vehicle interior becomes cool, close the windows and set the temperature to your desired level.
- The windows are prone to mist on a rainy day, resulting in poor visibility. Should this happen, operate the air conditioner in the cooling.

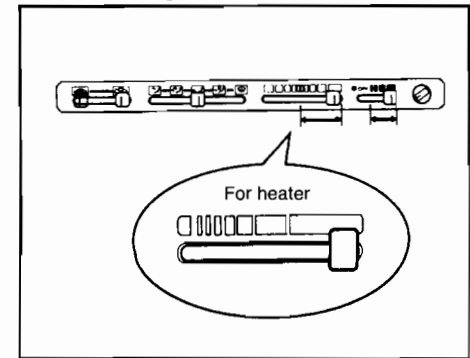
O.L.E-06004

Setting positions of control levers and switches

Heating

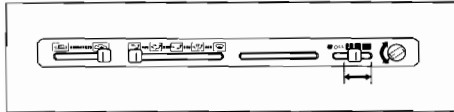


Quick heating

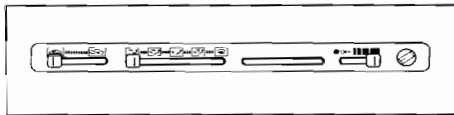




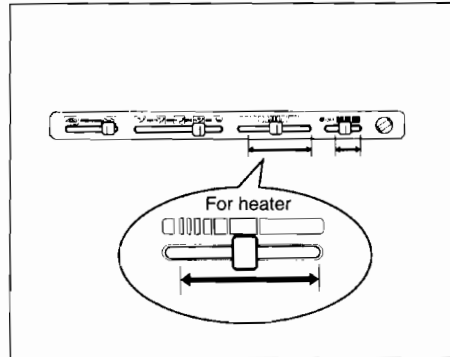
Cooling



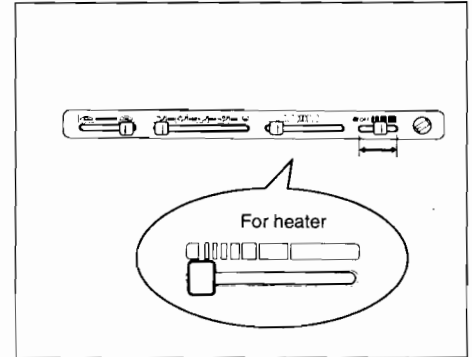
Quick cooling



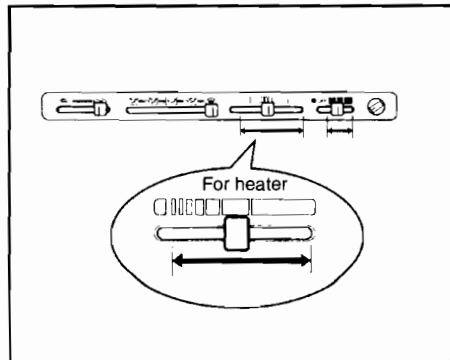
Heating and demisting



Ventilation



Demisting



Natural air will flow in even with the blower fan switch off. If air flow is not sufficient, switch on the blower fan.

01.E-06005



Section 7

Mirrors

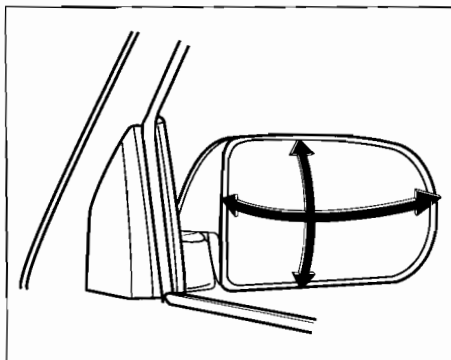
Outside mirrors	7-1
Inside mirror	7-2



Outside mirrors

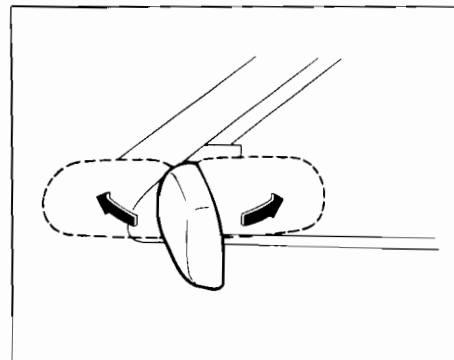
WARNING

**Do not adjust mirrors while driving.
This could cause a loss of control of
the vehicle.**



To adjust mirrors

Adjust the outside mirrors by hand so that you can see part of your vehicle in the mirror closest to the vehicle.



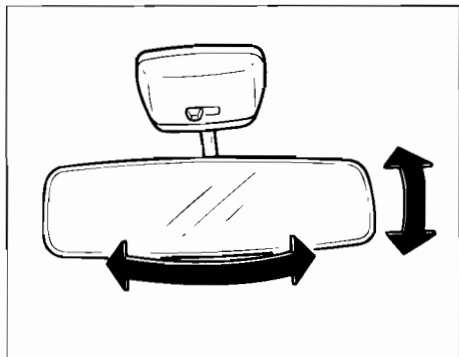
To fold outside mirrors

Fold the mirror forward or backward as required.

OLE-07001



Inside mirror



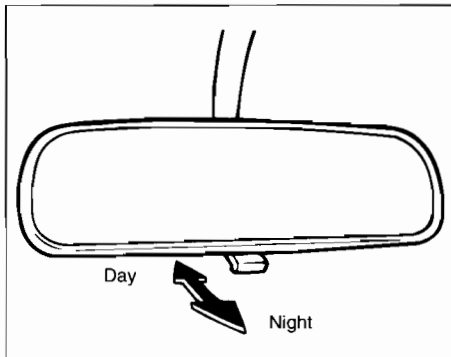
To adjust mirror

Adjust the inside mirror by hand so that you can see the rear view clearly.

The inside mirror is so designed that it may drop easily by severe impact such as collision.

WARNING

Do not adjust the mirror while driving. This could cause a loss of control of the vehicle.



To set night position

Pull the lever toward you to reduce glare from the headlights behind you at night.

WARNING

Set the mirror in the day position when you need not to reduce glare. Rear view clarity is reduced in the night position.

OLE-07004



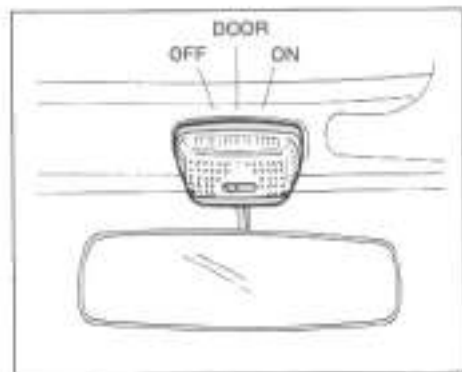
Section 8

Interior equipment

Interior light	8-1
Horn	8-1
Assist grip	8-1
Ashtray	8-2
Sun visor	8-2
Seat under tray	8-3
Rear package tray	8-3



Interior light



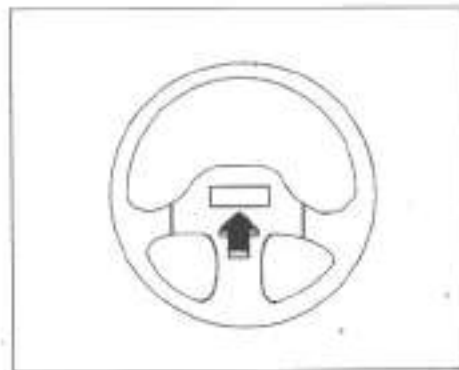
Set the interior light switch to "ON" to turn on the light and to "OFF" to turn it off. With the switch set to the "DOOR" position, the light turns on when the front door is open or is not securely closed.

WARNING

Make sure the rear doors are closed securely. No half door warning switch is provided on the rear doors.

04.0 00000

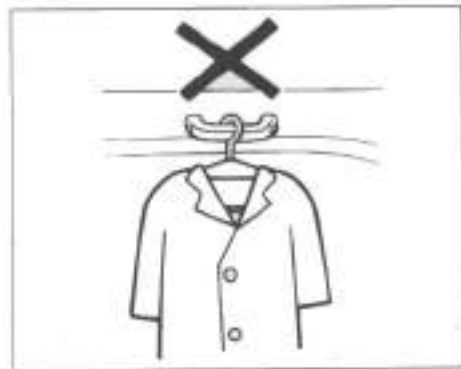
Horn



Push the arrow-headed position to activate horn.

04.0 00000

Assist grip



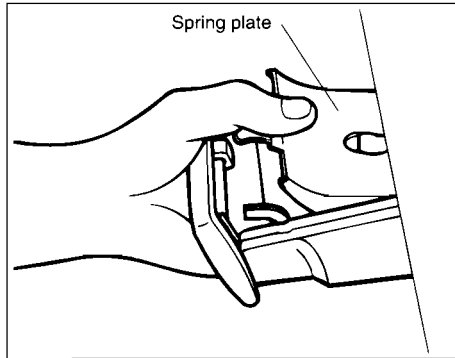
WARNING

Do not hang anything on the assist grip. It could block driver's vision.

04.0 00000



Ashtray



Pull the ashtray to use.
Return the ashtray to the original position after use.

To remove ashtray

Pull the ashtray as far as it will go. Remove it while applying a slight downward force upon the spring plate.

To install ashtray

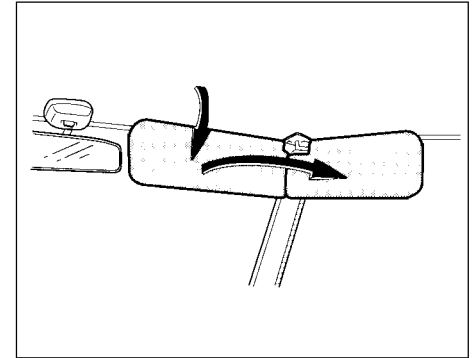
Align the ashtray with the right and left rails and push it into position.

WARNING To prevent a fire;

- Do not use the ashtray for trash disposal.
- Extinguish cigarette thoroughly before closing the ashtray.

OLE:08004

Sun visor



Lower the sun visor to protect your eyes from bright sunlight. The sun visor also moves toward the door window.

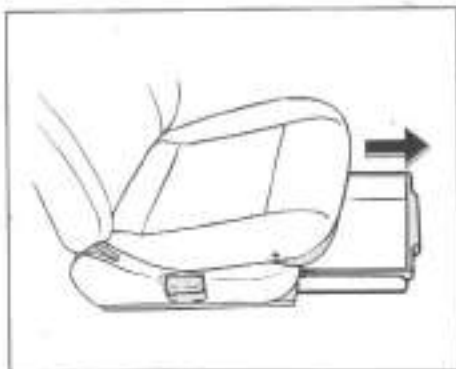
WARNING

Return the sun visor to the original position when not in use. It may block driver's vision.

OLE:08007



Seat under-tray



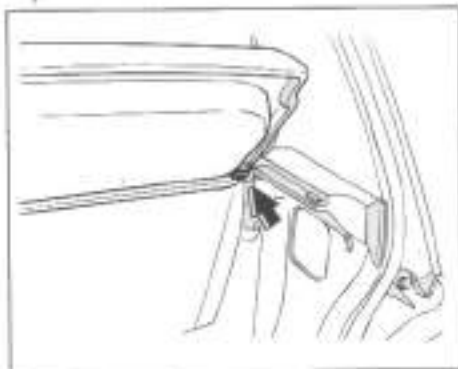
Pull the seat under-tray to use.

WARNING

After use, be sure to return the seat under-tray positively to the original position. Failure to observe this warning may cause the seat under-tray to pop out during running, resulting in danger of obstructing your driving operation.

SLC-00119

Rear package tray



To remove package tray

Raise the package tray and remove the shafts at each end of the package tray from the correspondent catches.

To install package tray

Align the shafts with the corresponding catches and lower the package tray.

WARNING

Do not place anything on the package tray. It may block driver's vision or damage the package tray.

SLC-0006



Section 9

Driving tips

Before starting engine	9-1
Starting engine	9-1
Manual transmission shifting instruction	9-2
Shifting points	9-3
Automatic transmission shifting instructions	9-4
Normal driving tips	9-7
Economical driving tips	9-7
Cold driving tips	9-7
Brake system	9-8
Parking tips	9-9



Before starting engine

1. Check the area around the vehicle before entering it.
2. Make sure that the parking brake is applied.
3. Adjust seat position, seatback angle, and headrest height.
4. Adjust the inside mirror and outside mirrors.
5. Lock all doors.
6. Fasten seat belts.
7. Turn off unnecessary lights and accessories.
8. Check fuel gauge.

ILL-00001

Starting engine

CAUTION

- **Do not crank the starter continuously for more than 10 seconds.**
- **Do not race a cold engine to prevent engine damage.**
- **Keep moderate speed until the engine warms up thoroughly.**

ILL-00002

Starting procedure of vehicle with auto-choke (carburetor engine)

1. Depress the clutch pedal fully and hold it in that position until the engine starts. (Manual transmission).
2. Shift the transmission lever to neutral (manual transmission) or to P range (automatic transmission). Do not depress the accelerator pedal.
3. Turn the ignition key to "ON". Ensure the warning lights glow.
4. With your foot off the accelerator pedal, turn the ignition key to "START" and release.
5. You need not keep your foot on the accelerator pedal. Check that warning lights go out except parking brake warning light.
6. Warm up the engine for a few minutes before driving.



Manual transmission shifting instruction

When engine hardly starts

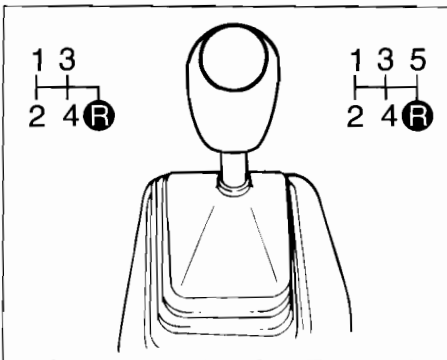
1. If the engine will not start despite of a few attempts, it is likely that fuel is excessively inhaled into the carburetor. Allow a short period of time before next attempt.
Start the engine with the accelerator pedal depressed fully.

CAUTION

Do not operate the engine switch continuously for more than 10 seconds.

2. If the engine will not start yet, do not continue to operate the ignition switch. Check the fuel, spark plugs etc.

OLE-09025



The shift pattern is shown above.

Depress the clutch pedal fully when shifting. If the gear will not be shifted easily, release and depress the clutch pedal and try again.

The transmission is so designed that the shift lever cannot be shifted from the 5th gear to the reverse gear directly. To shift from the 5th gear to the reverse gear, first return the shift lever to neutral, and then to the reverse gear after the vehicle has completely stopped.

CAUTION

Shift into the reverse gear after the vehicle has been stopped completely; otherwise, the transmission may be damaged.

When you drive on steep hills, downshift for engine braking depending on road conditions or vehicle speed.

WARNING

Be careful when downshifting on, slippery, or wet roads. Failure to do so could cause wheel lock or skid, and a loss of control or an accident.

OLE-09003



Shifting points

Recommended shifting speeds

Upshift or downshift at the following speed for better fuel economy and longer engine life.

km/h (mph)

Gear	Engine type	ED-10	ED-20	EF-CL
	1st-2nd 2nd-1st		15 (9)	
2nd-3rd 3rd-2nd		35 (22)		
3rd-4th 4th-3rd		50 (31)		
4th-5th* 5th-4th		70 (44)		

* 5-speed vehicle

OLE-09004

Maximum allowable speeds

CAUTION

If your vehicle exceeds the maximum allowable speeds given on the table below, do not downshift. If this caution is neglected, the engine could be damaged.

km/h (mph)

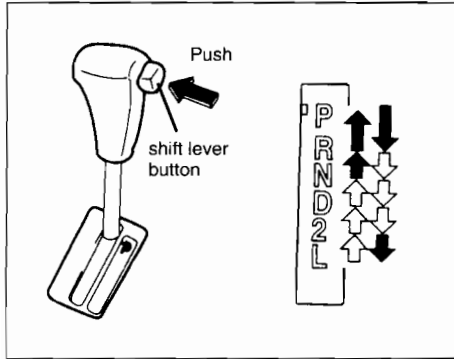
Gear	Engine type	ED-10	EF-CL	ED-20
	1st		30 (19)	35 (22)
2nd		55 (34)	60 (38)	65(40)
3rd		80 (50)	90 (56)	100(65)
4th*		120 (75)	135(84)	

* 5-speed vehicle

OLE-09005



Automatic transmission shifting instructions



⇒ : Move the shift lever with the brake pedal depressed and the shift lever button pushed.

→ : Move the shift lever with the shift lever button pushed.

⇔ : Move the shift lever without pushing the shift lever button.

The following show the function of each range.

P For parking the vehicle, starting the engine and removing the ignition key.

R For reversing the vehicle.

N Neutral

The engine can be started in this range.

It is, however, advisable to start the engine in the P range for assured safety purpose.

D For normal driving

Gear shifting is carried out automatically between the 1st gear and the 3rd gear according to the vehicle speed.

2 For upgrade driving and down grade driving.

On a upgrade, you can drive the vehicle with less gear shifting. On a downgrade, the engine brake works slightly.

L For steep downgrade driving.

Use this range when the engine brake is needed.

NOTE

- The engine can be started only in **P** or **N**.
- For ⇔, → operation, the shift lever cannot be moved without depressing the shift lever button to prevent wrong manipulations. Check the indicator to see the present position of the shift lever.

Moving off

Depress the brake pedal fully and hold its position. Then, release the shift lever from the **P** range.

After releasing the parking brake completely, move the vehicle by the releasing the brake pedal slowly.

WARNING

- Never operate the shift lever while depressing the accelerator pedal. The vehicle may move suddenly.
- When engine revolution speed is high (such as right after starting the engine, during warming-up or when the air conditioner switch is on), depress the brake pedal firmly, otherwise the vehicle may move.



Driving

- Use **D** for normal driving. Manual operation from **L** to **2** or **D** can also be carried out.
- When rapid acceleration is required, depress the accelerator pedal fully. Even if the shift lever is in **D**, the transmission will downshift automatically to the 2nd gear depending on vehicle speed.
- If the engine stalls while driving, restart it with the transmission in **N**. It is, however, advisable to start the engine in **P** normally.
- When you drive on steep hills, downshift for engine braking depending on road conditions or vehicle speed.

WARNING

Be careful when downshifting on slippery or wet road. Failure to do so could cause wheel lock or skid, and a loss of control or an accident.

CAUTION

- Shift to **P** or **R** after the vehicle has completely stopped. If you shift the gear while the vehicle is moving, the transmission may be damaged.

Maximum allowable speeds

CAUTION

If your vehicle exceeds the maximum allowable speeds given on the following table, do not down shift. If this caution is neglected, the engine could be damaged.

Range	km/h
2	0-81
L	0-45



Brief stopping

Depress the brake pedal firmly with the shift lever in the same range or in **(N)**.

If you stop for a long time, apply the parking brake with the shift lever in **(N)**.

WARNING

If the brake pedal is not firmly depressed and the shift lever in the **(L), **(2)**, **(D)** or **(R)** the vehicle may tend to move.**

To prevent sudden vehicle movement:

- **Apply the parking brake on an uphill grade.**
- **Keep brake pedal depressed when shifting from **(N)** to other ranges.**

Parking or stopping

After the vehicle has been completely stopped, apply the parking brake and shift the transmission lever to **(P)** while depressing the brake pedal.

WARNING

- **Shift the transmission lever completely in **(P)** to help prevent unintended or accidental vehicle movement.**
- **Do not race the vehicle unnecessarily.**



Normal driving tips

WARNING

Slow down when driving in crosswind or on rough road.

CAUTION

- Do not rest your foot on the clutch pedal while driving, or do not hold your vehicle with the clutch while stopping on an upgrade. This could cause clutch overheating.
- Do not rest your hand on the shift lever knob while driving. The transmission could accidentally be shifted into another range.
- Do not race the engine when shifting, this could cause engine overheating.
- Do not drive through water if water depth is higher than the bottom of the wheel rims. Drive slowly when driving through water.

02J-08113

Economical driving tips

- Accelerate your vehicle moderately. Avoid unnecessarily sudden acceleration or braking. Keep the same speed as long as possible.
- Avoid unnecessarily high speed driving.
- It is advisable to drive in the top gear when driving in high speed. This will help reduce engine noise level as well as fuel consumption.
- Time your driving to help the vehicle move as long as possible since moving the vehicle from a stop requires more fuel.
- Drive sensibly and maintain your vehicle properly. They will keep originally-designed performance of your vehicle as well as save fuel.
- Do not overload.
- Do not keep engine idling unnecessarily.
- Turn the air conditioner off when not required.
- Remove the roof rack when not required.

02J-08113

Cold driving tips

Battery

Check the battery condition and cables. Battery capacity tends to reduce in cold weather. (See Section 13).

Engine coolant

Fill the sufficient mixture rate of coolant.

Engine oil

Refer to the engine oil viscosity chart on Section 14.

Washer fluid

Use anti-freeze type washer fluid.

Parking brake

Shift the manual transmission lever to 1st or reverse, or the automatic transmission lever to **P**. Check the wheels.



Brake system

Tandem master cylinder brake system

Your Perodua is equipped with a tandem master cylinder brake system. Each brake system functions independently.

If either of the brake system should fail, the other system still works. However, the brake system requires increased force and the stopping distance will be increased. Furthermore, the brake warning light should glow.

WARNING

**Do not continue driving with the malfunctioning brake system.
Have the system checked immediately**

OLE-09016

Brake booster

The brake booster utilizes engine manifold vacuum to assist braking force.

WARNING

If the engine is stopped while driving, braking will require more force than usual and stopping distance will increase.

OLE-09017

General precautions for braking

WARNING

- **Do not depress the brake pedal suddenly when a tire is punctured. This could cause a loss of control of the vehicle.**
- **Make sure that the floor mat does not interfere with the free movement of the pedal.**
- **Braking effectiveness will be reduced with moisture. Lightly depress the brake pedal several times to remove moisture.**
- **Do not rest your foot on the brake pedal while driving. This could cause brake overheating. Do not also keep depressing the brake pedal when descending a steep grade. Downshift to get engine braking.**

OLE-09018



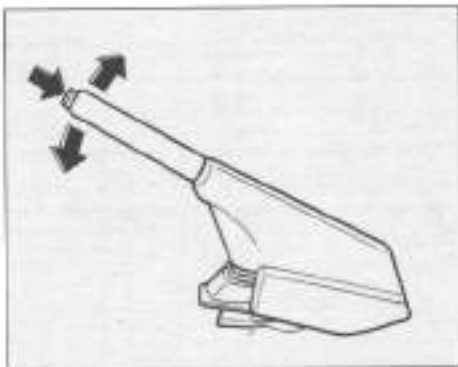
Parking tips

WARNING

When parking or stopping your vehicle, make sure that there is no combustible objects such as dry grass and oil around and underneath your vehicle. The exhaust pipe may reach an extremely high temperature, and it is possible that nearby combustible objects may be ignited.

05.010001

Parking brake



Pull the lever up to set the parking brake.

To release the parking brake, first raise the lever slightly and push the button with your thumb. Then, lower the lever completely.

WARNING

When you park the vehicle, always engage the parking brake fully and place the manual transmission lever in 1st on the uphill grade or reverse on the downhill grade.

CAUTION

Make sure that the parking brake has been completely released and that the parking brake warning light or the brake warning light is off. A partially applied parking brake could cause brake overheating, and promote pad and lining wear.

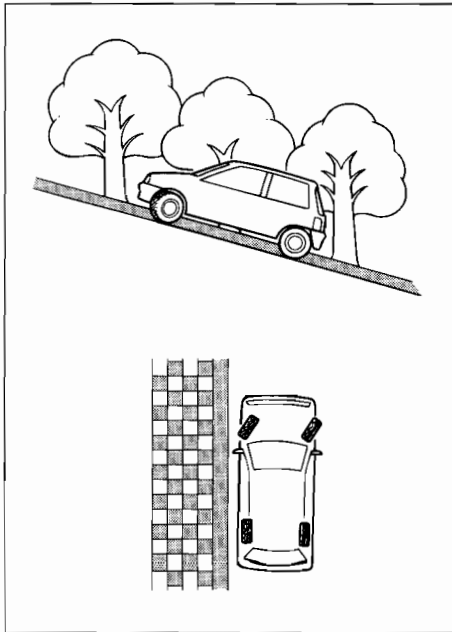
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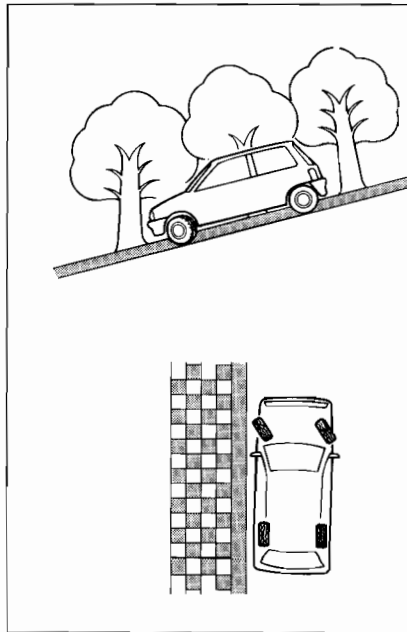
Parking on slope

Turn the front wheels as shown when parking on a slope.

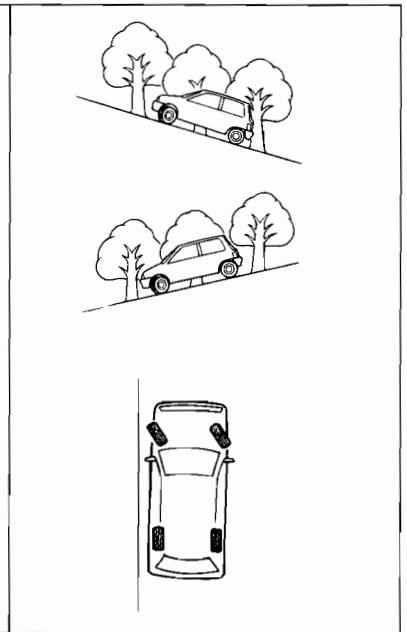
On upgrade with curb



On downgrade with curb



On either grade without curb





Section 10

In case of an emergency

If engine won't start	10- 1
Jump-starting	10- 1
Engine overheating	10- 3
Flat tire	10- 3
Towing	10-10
If your vehicle gets stuck	10-13



If engine won't start

If the engine is warm or if you smell fuel, excessive fuel may have been inhaled into the engine. Wait for a while and start the engine with the accelerator pedal fully depressed. Do not continue to operate the ignition switch if the engine still will not start.

If the sound level of the horn is low, or if the headlights are dim, first check the battery. See Section 13.

If the battery is discharged, jump-start it.

If the cause still is not clear, have the system checked by a Perodua dealer.

WARNING

Do not push- or pull-start the vehicle. This could damage the vehicle or cause an accident.

0LD-0001

Jump-starting

WARNING

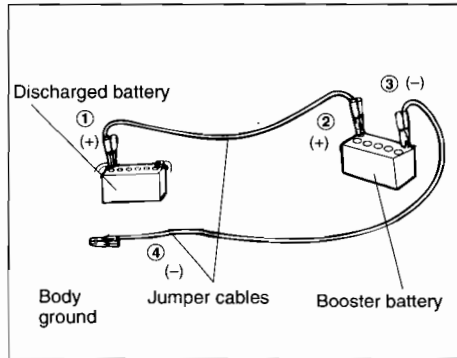
Observe the following instructions to prevent serious bodily injury and damage to your vehicle. In addition, follow the instructions of a jumper cable manufacturer.

- If you are not versed in the jump starting procedure, ask a Perodua dealer or a towing service.
- Refer to "Instructions on Routine maintenance" before jump starting.
- Batteries contain sulfuric acid which is poisonous and corrosive. Wear protective safety glasses and be careful not to splash battery fluid on yourself, clothes or vehicle. If battery fluid is splashed on your skin or in your eye, remove your contaminated clothes and wash the part at least 15 minutes. Immediately see a doctor. Continue applying water with a sponge or cloth on the way to a medical facility.
- If you have swallowed battery fluid, drink as much water or milk as possible and immediately see a doctor.

- Keep any fire away from the battery. It could cause battery explosion.
- Do not charge a frozen battery. Thaw battery fluid before jump-starting; otherwise the gas in the battery fluid may explode.
- Do not jump-start the vehicle with a battery of low fluid level.
- Keep children away from a battery.
- Jump-start the vehicle in a well ventilated place.

CAUTION

- Use a 12-volt booster battery. Application of higher voltage may cause serious damage to the electrical equipment such as relays and radio. Do not jump-start the vehicle unless you are sure of the booster battery voltage.
- The capacity (AH rating) of the booster battery must not be lower than that of the discharged battery.
- Wash splashed battery fluid away from paint finish immediately.



1. If the booster battery is installed on the other vehicle, keep vehicles apart. Turn off all unnecessary lights and accessories on the vehicles. Place the transmission lever in neutral (manual transmission). Fully apply the parking brake.
2. Remove all the vent caps from the booster and discharged batteries.
3. Start the engine on the vehicle with a booster battery and let it run for a few minutes at about 2,000 rpm.

4. Before connecting jumper cables, make sure that the ignition key of the vehicle with a discharged battery is turned to the "OFF" position.
5. Connect jumper cable from the negative terminal of the booster battery to a solid unpainted metallic point away from the battery.
Do not lean jumper cable over the battery when connecting.
Make sure that the connection is secure.

WARNING

To prevent short circuit;

- **Make sure insulation of jumper cables is in good condition.**
- **Do not connect the cable from the negative terminal of the booster battery to or near a moving part, or to the negative terminal of the discharged battery.**
- **Do not allow the jumper cables or clamps to touch anything except the correct battery terminals or the ground.**
- **Do not allow the jumper cable clamps to touch each other while connecting clamps.**

6. Crank the engine of the vehicle with the discharged battery. After the engine has started, run it at 2,000 rpm for several minutes.
7. Carefully disconnect the cables in the exact reversed order; the negative cable first and then the positive cable.
8. Check the battery electrolyte level. Add distilled water up to the "UPPER" mark.
9. Secure the vent caps to the original positions.

If you are unsure of the cause of battery discharging, have your vehicle checked by a Perodua dealer.

OLE-10002



Engine overheating

In case the engine overheats, the engine emits pinging noises and engine performance drops noticeably as well as the water temperature gauge indicates overheating;

Observe the following WARNINGS and take the procedure described below.

WARNING

To help reduce the risk of burn or serious bodily injury;

- Allow the engine to cool before checking any component in the engine compartment.
- Do not attempt to remove the radiator cap when the engine and radiator are still hot.
As the radiator cap is of the pressurized type, hot coolant will splash out.
- Do not open the hood if steam is coming out.
- Never touch or come close to the radiator fan blades when the engine is running.

1. Park the vehicle in a safe place and turn off the air conditioner.
2. If steam is coming out, turn off the engine. Conversely, if steam is not coming out, keep the engine idling.
3. After the engine has cooled, carefully open the hood and check the components.
4. If the drive belt is broken, engine coolant is leaking, or the coolant level is low etc., stop the engine immediately and contact a Perodua dealer.
5. Add coolant if the coolant level is insufficient. ("See Section 13".)

The engine is more prone to overheat in summer. The following should be checked regularly:

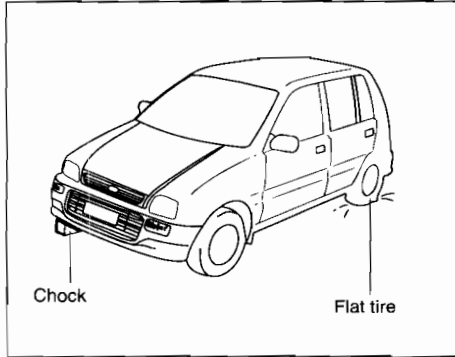
- Water leakage in the cooling system
- Water level of the radiator and reserve tank
- Radiator fin clogging
- Drive belt tension

If the engine overheats frequently, have the cooling system checked by a Perodua dealer.

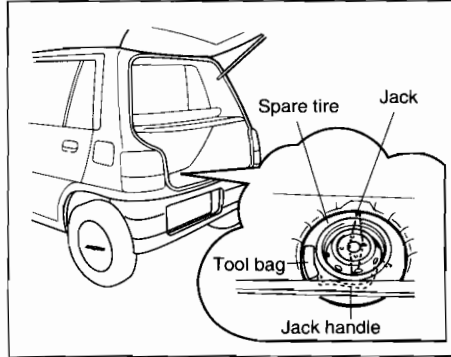
Flat tire

WARNING

- If your vehicle has a flat tire, pull off to the side of the road or safe place to replace the tire.
Avoid changing a flat tire on a slope.
- Move the passengers off the vehicle to a safe place.
- Make sure the parking brake is applied, and the manual transmission is in 1st or in reverse, Or the automatic transmission in P range, after ignition key switch is turned off.

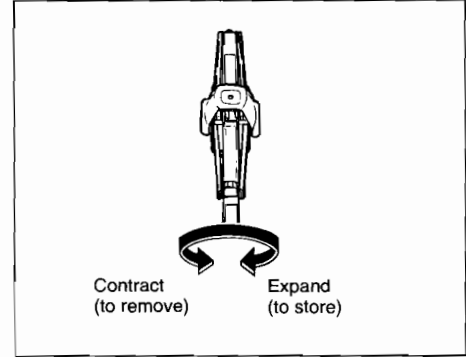


1. Chock the tire, located diagonally opposite to the flat tire, at the opposite end. This is the most effective location for a chock. For improved safety, chock the wheel at both sides, if possible.



2. Open the hatchback door and remove the spare tire cover. Learn the storage location of tools, spare tire and jack.

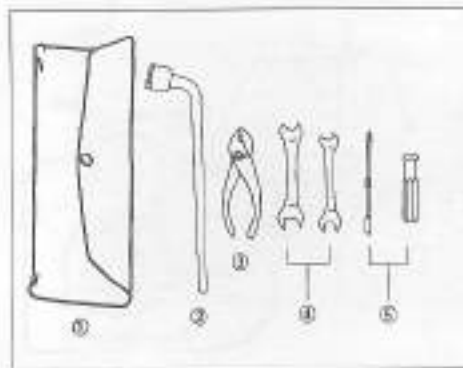
Jack



Turn the worm shaft as shown to remove or to secure the jack.

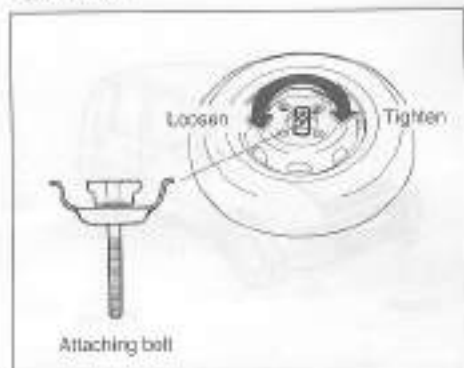


Tools



- ① Tool bag
- ② Lug nut wrench
- ③ Screw driver
- ④ Wrench (10 x 12, 12 x 14) mm
- ⑤ Screw driver

Spare tire



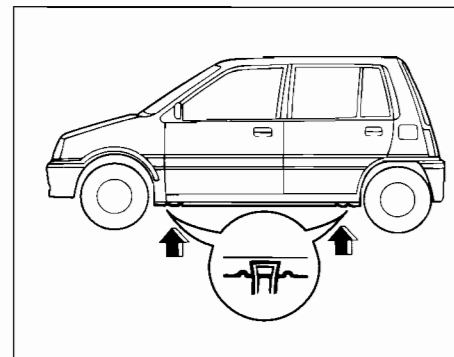
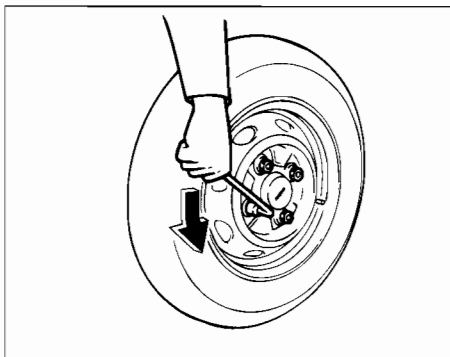
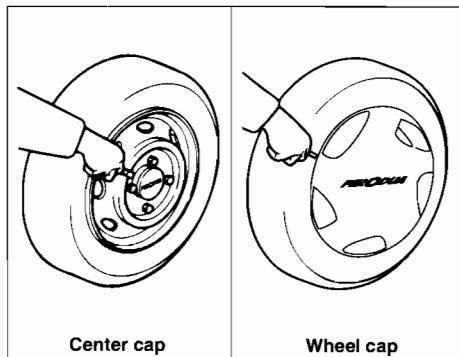
Loosen/tighten the attaching bolt to remove/secure the spare tire. Place the spare tire as shown in the illustration to store.

NOTE

- **Maintain the spare tire following the tire maintenance schedule.**
- **Install the attaching bolt facing the direction as shown in the illustration so that the spare tire board will be seated securely.**

Maintenance instructions

- Apply chassis grease to all the sliding parts and screw threads.
- Ensure that there is no distortion or crack on the jack. If there is, replace it with a new one.



3. Insert the beveled section of the screwdriver under the center cap or the wheel cap.
Pry with the screwdriver to remove the center cap or wheel cap.

4. Slightly loosen the wheel lug nuts with the wheel lug nut wrench.
Do not remove the lug nuts.

WARNING

Be careful not to get injured by slipping the lug nut wrench.

5. Four jack setting points are provided: two on each side as shown in the illustration.
Set the jack at the jack setting point that is nearest to the flat tire.



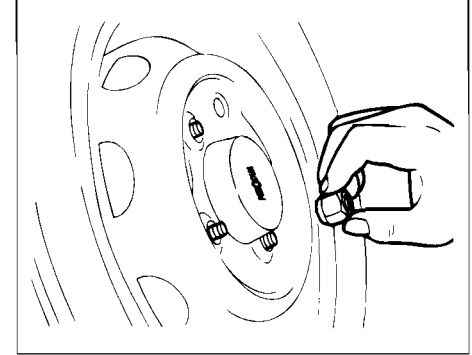
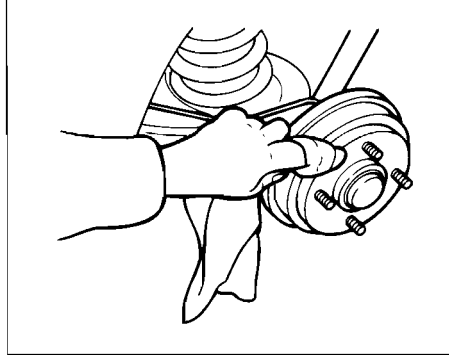
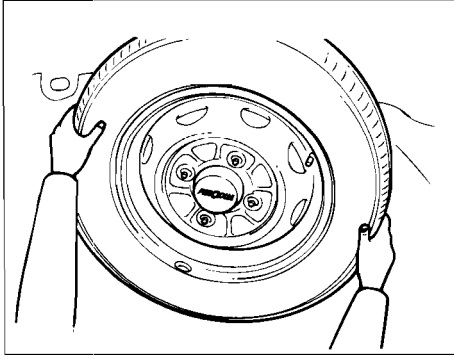
WARNING

To prevent accidental slip of the jack and serious bodily injury:

- The jack should be used on level firm ground whenever possible. Place a flat and wide board underneath the jack, if necessary, to stabilize the jack.
 - It is recommended that the wheels of the vehicle be chocked, and that no person should remain in a vehicle that is being jacked.
 - No person should get bodily under a vehicle that is supported only by a jack; use vehicle support stands.
 - Never place any of your body portion under the vehicle jacked up.
 - Use the jack provided with your vehicle only for the purpose of changing wheels.
 - Do not raise other vehicles or loads at any time with it.
 - Set the jack at the specified point.
 - Do not rock or push the vehicle jacked up.
- Do not run the engine when the vehicle is jacked up.
 - Take heavy luggage away from the vehicle as much as possible.



6. Insert the jack handle into the worm shaft of the jack and turn it clockwise to raise the vehicle.
Jack up the vehicle gently until the tire clears the ground surface enough to remove and install the tire.



7. Remove the wheel lug nuts and replace the flat tire with a spare tire.

WARNING

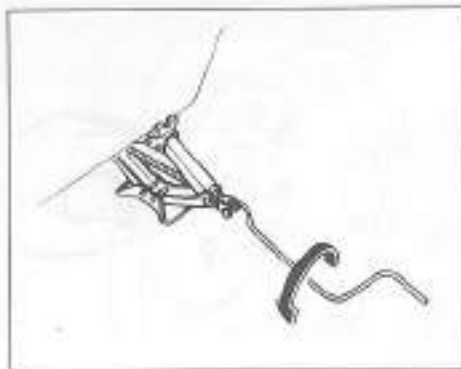
Remove any corrosion and objects on the brake drum and disk, and the wheel lug nut surface with a cloth before putting on the spare tire. Installation of wheels without secure metal-to-metal contact at the mounting surface may cause the wheel lug nuts to loosen while driving.

- Lay the removed flat tire so that it may not fall down accidentally.
- We recommend wearing gloves. The flat tire may be still hot.

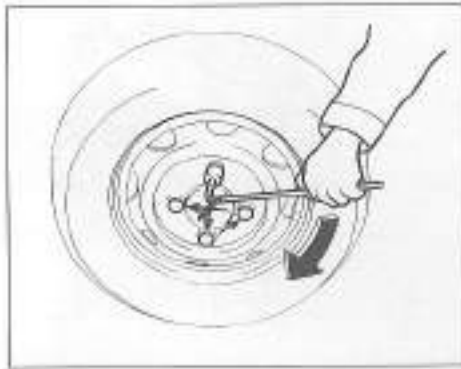
8. Reinstall all wheel lug nuts and tighten them until the wheel is no longer loose. Make sure the taper portion of the lug nuts are securely installed in the holes. Do not yet tighten them firmly.

CAUTION

Do not oil the lug nuts. They may be loosened while the vehicle is moving.



9. Insert the jack handle into the worm shaft of the jack and turn it counterclockwise to lower the vehicle.



10. Tighten the wheel lug nuts securely in the diagonal order across the wheel.

Tightening torque: 9 - 12 kgf-m
(65 - 87 ft-lb, 88.2 - 117.6 N.m)

CAUTION

Do not tighten the lug nuts with other tools or by foot.

It may damage the thread of the lug nuts or hub bolts.

After driving of 1,000 km (600 miles), check to see that the wheel lug nuts are tight.



11. Install the wheel center cap of the wheel cover, by lightly tapping, aligning the cutout section with the air valve.



Towing

12. Check the air pressure of the replaced tire and adjust it as specified. Tighten the air valve cap.

Tire air pressure of the mounted spare tire is kept higher than specified. Make sure to adjust it after installation.

13. Store all tools, jack, jack handle, and flat tire securely.

WARNING

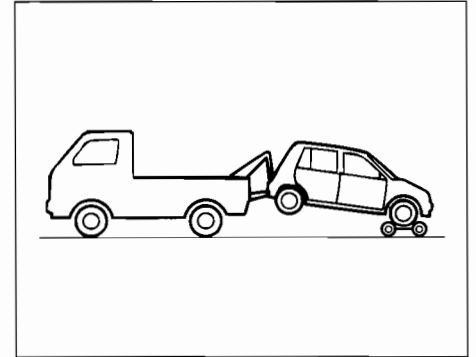
If you notice any vibration or abnormal noise after changing a wheel, have them checked by a Perodua dealer immediately.

We recommend that your vehicle be towed by a Perodua dealer or commercial tow truck service.

If the wheels or axles are damaged, use a towing dolly.

CAUTION

For vehicle with automatic transmission. Never tow your car with front wheel on the ground. Always use the towing dolly.



To tow with front wheels on ground

We recommend using a towing dolly.

If a towing dolly is not available, shift the transmission to neutral and turn the ignition key in "ACC".



Instructions on towing

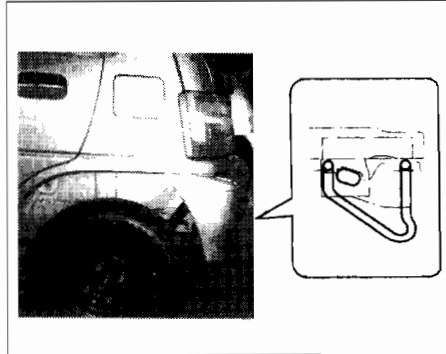
A driver must ride in the vehicle being towed and control it.

WARNING

- When the engine is not running, the brake booster does not operate. Therefore, braking will require more force than usual.
- For safety reasons, do not use a towing hook unless your vehicle is towed on hard-surfaced roads.
- The ignition key of the vehicle being towed should not be pulled out or be turned to "OFF". The towed vehicle could lose turning ability and cause an accident.

OLE-10009

Other vehicle towing



The rear tow hook for towing the other vehicle is provided at the rear left side of the vehicles.

(EC specifications only)

WARNING

- Do not exceed towing capacity mentioned below.

kg (lbs)	
With brake	400 (880)

Failure to be observe this caution may result of serious bodily injuries, by lost of control or damage your vehicle.

- Do not exceed the maximum towing speed regulated by the local regulation.

CAUTION

- Do not use this hook as for transportation hook. Failure to be observe this caution may cause damage vehicle body. This towing hook are designed for towing the other vehicle only.
- Always pull the hook straight-ahead to prevent it from being damaged. Do not pull it from side or in a vertical direction. Also, do not pull it sharply.



Section 11

Appearance care

Exterior cleaning	11-1
Interior cleaning	11-2
Rust prevention	11-2



Exterior cleaning

Washing

1. Park the vehicle away from direct sunlight and in a well-ventilated area. Turn the engine off.
2. While evenly applying water, gently wash the surface with a car washing brush. Use car wash solution or neutral detergent, if required.
3. Apply pressurized water to under-body.
4. Rinse the surface thoroughly so that no solution will remain.
5. Wipe off water with a sponge or chamois.
6. Dry the brake system.

WARNING

Keep children away from washing solution.

CAUTION

- **Be careful not to apply water to the electrical systems in the engine compartment. This could cause short circuit.**
- **Follow the instructions on washing solution.**
Gasoline or strong toxic solvents are not recommended to protect paint finish
- **Do not apply hot water on the vehicle. This could damage the paint finish. Also, do not wipe off dirt or dust if the body surface is dry.**

02J-1101

Waxing

Wax your vehicle on a regular basis to preserve the paint finish. Wash and dry the vehicle before waxing.

If the paint finish is hot, move the vehicle into shade and allow the surface to cool before waxing.

CAUTION

To protect paint finish;

- **Do not rub the surface hard or rub with hard cloth.**
- **Do not use steel wool or abrasive cleanser.**
- **Follow the instructions on wax.**

02J-1102



Interior cleaning

Clean the interior with a vacuum cleaner.

CAUTION

Gasoline or strong toxic solvents are not recommended.

It may damage the materials.

OLE-11003

Rust prevention

We at Perodua produce high-quality vehicles with advanced rust preventive design and construction.

Nevertheless, this constitutes merely part of a total rust prevention program. To maintain good rust preventive quality for a long period of time, it is important for you to understand how to do your part.

WARNING

Do not coat the exhaust system components with additional rust preventive materials. This could overheat and cause a fire.

Cause of rust formation

The followings are usual causes of rust:

- Dirt and water
- Chips, nicks, scratches, and dents that expose bare metal
- Chemical substances and industrial pollutant

Rust preventive measures

Keep your Perodua clean;

If you live in the area where rust formation is prone to occur, such as near seacoast, or where industrial pollutants spread, be especially careful of rust formation.

Clean the fenders and other parts hidden from you.

Wash away mud thoroughly as wet mud could promote rust formation. High-pressure steam cleaning will be effective.

When cleaning the under-side of the doors, rocker panels, frame members, and so forth, make sure the water drain holes are not clogged.

**Keep your garage dry:**

Moisture is harmful for your vehicle, especially over 0°C. Therefore, do not park your vehicle in a poorly-ventilated area with high humidity.

Do not wash your vehicle in a garage or keep your vehicle in a wet condition.

Keep paint finish and trim in good conditions;

Any scratch or chip on the paint finish must be touched up as soon as possible. Have the bare steel repaired at a qualified body repair shop or a Perodua dealer.

Pay attention to interior;

Check, at regular intervals, that under-side of the mats and carpets are dry.

Do not wash the interior.

Furthermore, carry chemicals, cleansers, fertilizers, salt, etc. in a proper container.

If it has split or leaked, clean and dry the area immediately.

001-100



Section 12

Vehicle maintenance

Maintenance requirements	12-1
Maintenance schedule	12-3



Maintenance requirements

Maintenance service is important to ensure trouble-free, safe and economical driving.

Failure to maintain your vehicle can cause an accident or damage to your vehicle.

We at Perodua offer you a new-vehicle check when your new vehicle has been operated 1,000 km (600 miles) since the registration date. Note that, however, the filters and the lubricants are at the owner's expense. Please feel free to bring your new vehicle to a Perodua dealer for this free but very important inspection service.

Pre-starting check

For safe and comfortable driving, perform the pre-starting check.

- Engine oil quality and level
- Engine coolant level
- Brake fluid level
- Washer fluid level
- Drive belt
- Battery electrolyte level
- Tire air pressure and wear
- Fluid leakage
- Light operation
- Steering wheel operation
- Brake pedal function
- Accelerator pedal operation

While driving slowly:

- Speedometer and water temperature gauge
- Turning effort of steering wheel
- Brake function
- Other abnormal operations
- Check to see if the vehicle is pulled to one side while driving straight on a level road or when the brakes are applied.



Carefully watch your Perodua

Watch your Perodua for changes in performance, sounds, and visual signs that indicate requirement of maintenance service.

Some important clues are as follows:

- Engine hissing, stumbling, or pinging
- Appreciable loss of power
- Unusual engine noises
- Any leak of fluid or oil
(Water drainage from the air conditioner is normal.)
- Change in exhaust sound
- Flat-looking tire, excessive squeal when cornering or braking, or uneven tire wear
- Vehicle pulled to one side when driving straight on a level road
- Loss or brake effectiveness, “spongy” feeling of brake and clutch pedal, pedal almost touching the floor, vehicle pulled to one side when braking
- Engine temperature continually higher than normal

If you notice any of these conditions, have the vehicle checked by a Perodua dealer.

Maintenance records

Keep a copy of the repair order for any maintenance service performed on your Perodua.

It proves that all required maintenance has been performed for warranty coverage.

Routine maintenance

If you have some mechanical knowledge and automotive tools, you can service some of the maintenance items by yourself.

Routine maintenance procedures are given in Section 13.

Note that routine maintenance can affect your warranty coverage. See the Warranty Information Book for the details of warranty statements.

Scheduled maintenance service

The scheduled maintenance items listed in this section are required to be serviced at regular intervals. Follow the maintenance schedule provided.

Note that all the maintenance services are at the owner's expense.

If you drive under the severe driving conditions or drive unfrequently, more frequent maintenance services are required. In this case, consult a Perodua dealer.



Maintenance schedule

Follow the distance and the period the vehicle has been driven whichever comes first, if without any notice.
Continue maintenance service after 100,000 km (60,000 miles), following the schedule.

○... Check or inspect ●...Change or replace

Section	Items	What to check	x 1,000 km	1	10	20	30	40	50	60	70	80	90	100
			x 1,000 miles	0.6	6	12	18	24	30	36	42	48	54	60
			Years	—	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Engine	<ul style="list-style-type: none"> • Engine noise • Engine starting • Idling and acceleration • Exhaust gas 	• Condition		○		○		○		○		○		○
	• Valve clearance	• Clearance		○		○		○		○		○		○
	• Spark plug	• Condition			○	●	○	●	○	●	○	●	○	●
	• Ignition timing	• Timing		○		○		○		○		○		○
	• Distributor breaker point	<ul style="list-style-type: none"> • Gap • Damage 		○	○	○	○	○	○	○	○	○	○	○
	• Distributor cap and rotor	• Condition				○		○		○		○		○



○....Check or inspect ●....Change or replace

Section	Items	What to check	× 1,000 km	1	10	20	30	40	50	60	70	80	90	100
			× 1,000 miles	0.6	6	12	18	24	30	36	42	48	54	60
			Years	—	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Engine	• Timing advance device	• Operation			○		○		○		○		○	
	• Air cleaner element	• Cleaning • Replacement		○	○	○	●	○	○	○	○	●	○	○
	• Engine oil	• Leakage		○		○		○		○		○		○
		• Change		●	●	●	●	●	●	●	●	●	●	●
	• Oil filter	• Replacement		●	●	●	●	●	●	●	●	●	●	●
	• Fuel line and connection	• Tightness • Crack and damage • Leakage		○		○		○		○		○		○
		• Fuel hose replacement		Every 4 years										
	• Fuel filter	• Replacement		Every 40,000 km (24,000 miles)										



○...Check or inspect ●...Change or replace

Section	Items	What to check	× 1,000 km	1	10	20	30	40	50	60	70	80	90	100	
			× 1,000 miles	0.6	6	12	18	24	30	36	42	48	54	60	
			Years	—	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	
Engine	• Carburetor	• Condition of linkage • Operation of throttle valve and choke valve						○				○			
	• Coolant	• Level		○	○	○	○	○	○	○	○	○	○	○	
		• Leakage				○		○		○		○		○	
		• Change		Every 2 years											
	• Drive belt	• Tension • Crack and damage		○	○	○	○	○	○	○	○	○	○	○	
	• Timing belt	• Replacement		100,000 km (60,000 miles)											
	• Radiator cap	• Function						○					○		



○...Check or inspect ●...Change or replace

Section	Items	What to check	× 1,000 km	1	10	20	30	40	50	60	70	80	90	100
			× 1,000 miles	0.6	6	12	18	24	30	36	42	48	54	60
			Years	—	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Exhaust emission control system	• Blow-by gas recirculating device	• Damage of piping						○				○		
	• Fuel evaporative emission control device	• Damage of piping • Clog and damage of charcoal canister						○				○		
	• Fuel cut system	• Operation			○		○			○		○		○
	• Air-to-fuel ratio control system	• Operation			○		○			○		○		○
	• Piping	• Damage • Attaching condition			○		○			○		○		○
	• Heat preventive device	• Tightness and damage of heat insulator			○		○			○		○		○
	• Installation of emission control device	• Tightness • Damage			○		○			○		○		○



○...Check or inspect ●...Change or replace

Section	Items	What to check	x 1,000 km	1	10	20	30	40	50	60	70	80	90	100	
			x 1,000 miles	0.6	6	12	18	24	30	36	42	48	54	60	
			Years	—	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	
Power transmission system	• Manual transmission	• Oil level • Oil leakage • Oil change		○		○		●		○		●		○	
		• Rattle of operating mechanism						○					○		
	• Clutch	• Free play • Reserve travel			○	○	○	○	○	○	○	○	○	○	○
		• Operation				○		○		○		○		○	
	• Automatic transmission	• Fluid level • Fluid leakage		○		○		○		○		○		○	
		• Fluid change	Every 60,000 km (36,000 miles) or 4 years whichever comes first.												
		• Rattle of operating mechanism							○				○		
		• Oil-cooler hose	Every 4 years												



○...Check or inspect ●...Change or replace

Section	Items	What to check	× 1,000 km	1	10	20	30	40	50	60	70	80	90	100
			× 1,000 miles	0.6	6	12	18	24	30	36	42	48	54	60
			Years	—	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Power transmission system	• Drive shaft	• Tightness of connecting section • Crack and damage of joint dust boot				○		○		○		○		○
		• Rattle of spline and joint section						○				○		
Suspension system	• Spring	• Damage						○				○		
	• Attaching portion and linkage	• Tightness and damage of attaching portion • Rattle of linkage						○				○		
	• Suspension arm, control arm, and dust cover	• Tightness • Damage of arm • Rattle of connecting section						○				○		
	• Shock absorber	• Oil leakage • Damage • Rattle of attaching section • Operation						○				○		
	• Stabilizer	• Tightness • Damage						○				○		



○...Check or inspect ●...Change or replace

Section	Items	What to check	× 1,000 km	1	10	20	30	40	50	60	70	80	90	100
			× 1,000 miles	0.6	5	12	18	24	30	36	42	48	54	60
			Years	—	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Running system	• Tire	<ul style="list-style-type: none"> • Air pressure • Wear • Crack and damage • Objects caught in the tire pattern 		○	○	○	○	○	○	○	○	○	○	○
		• Rotation			○	○	○	○	○	○	○	○	○	○
	• Wheel	• Looseness of hub nuts and bolts				○		○		○		○		○
		• Damage of rim and disc							○			○		
	• Wheel bearing	• Rattle							○			○		



○....Check or inspect ●....Change or replace

Section	Items	What to check	× 1,000 km	1	10	20	30	40	50	60	70	80	90	100	
			× 1,000 miles	0.6	6	12	18	24	30	36	42	48	54	60	
			Years	—	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	
Steering system	• Steering wheel	<ul style="list-style-type: none"> • Tightness • Free play • Rattle • Operation 				○		○		○		○		○	
	• Rods and arms	<ul style="list-style-type: none"> • Tightness • Rattle • Damage 			○		○		○		○		○		
	• Ball joint dust boot	• Crack and damage			○		○		○		○		○		
	• Gear box	• Leakage		○					○				○		
		• Tightness of installation							○				○		
	• Knuckle	• Rattle of linkage						○					○		
	• Wheel	<ul style="list-style-type: none"> • Alignment • Turning angle 						○					○		



○...Check or inspect ●...Change or replace

Section	Items	What to check	× 1,000 km	1	10	20	30	40	50	60	70	80	90	100
			× 1,000 miles	0.6	6	12	18	24	30	36	42	48	54	60
			Years	—	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Brake system	• Brake pedal	• Free play • Reserve travel	○	○	○	○	○	○	○	○	○	○	○	○
		• Effectiveness		○	○	○	○	○	○	○	○	○	○	○
	• Parking brake lever	• Reserve travel	○	○	○	○	○	○	○	○	○	○	○	○
		• Effectiveness			○		○		○		○		○	
	• Parking brake rods and cables	• Tightness • Rattle • Damage						○				○		
	• Brake hose and tube	• Leakage • Condition of installation • Crack and damage	○	○	○	○	○	○	○	○	○	○	○	○
		• Hoses replacement	Every 4 years											



○...Check or inspect ●...Change or replace

Section	Items	What to check	× 1,000 km	1	10	20	30	40	50	60	70	80	90	100	
			× 1,000 miles	0.6	6	12	18	24	30	36	42	48	54	60	
			Years	—	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	
Brake system	• Brake fluid	• Disc brake	Level	○	○	○	○	○	○	○	○	○	○	○	
			Change	Every 1 year or 20,000 km (12,000 miles)											
		• Drum brake	Level	○	○	○	○	○	○	○	○	○	○	○	○
			Change	Every 2 years											
	• Brake lining	• Wear of shoe sliding section and drum-to-lining clearance			○		○		○		○		○		
	• Brake drum	• Wear • Damage					○					○			
	• Disc and pad (Disc brake)	• Damage of disc • Wear of disc and pad • Disc-to-pad clearance			○		○		○		○		○		
	• Master cylinder, wheel cylinder, and disc caliper	• Fluid leakage			○		○		○		○		○		
		• Operation • Damage • Wear					○					○			
		• Rubber parts replacement	Every 2 years												



○...Check or inspect ●...Change or replace

Section	Items	What to check	x 1,000 km	1	10	20	30	40	50	60	70	80	90	100	
			x 1,000 miles	0.6	6	12	18	24	30	36	42	48	54	60	
			Years	—	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	
Brake system	● Brake booster	● Operation						○				○			
		● Rubber parts and vacuum hose replacement	Every 4 years												
	● Proportioning valve	● Replacement	Every 4 years												
Chassis and body	● Exhaust pipe and muffler	● Tightness and damage of installation			○			○		○		○		○	
		● Function of muffler						○				○			
	● Frame and body	● Lock function ● Tightness ● Damage							○				○		
		● Operation ● Tightness							○				○		
	● Seat belt	● Operation ● Tightness							○				○		
	● Chassis grease and oil	● Condition				○			○			○		○	



○....Check or inspect ●....Change or replace

Section	Items	What to check	× 1,000 km	1	10	20	30	40	50	60	70	80	90	100
			× 1,000 miles	0.6	6	12	18	24	30	36	42	48	54	60
			Years	—	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Chassis and body	• Heater hose	• Replacement	Every 4 years											
Electrical system	• Battery	• Electrolyte level		○	○	○	○	○	○	○	○	○	○	○
		• Gravity • Connection of terminal sections			○		○		○		○		○	
	• Wire harness	• Tightness and damage of connecting sections					○					○		
	• Lighting system	• Operation		○	○	○	○	○	○	○	○	○	○	○
	• Horn, wiper, window washer and steering lock	• Operation			○		○		○		○		○	
	• Meters and gauges	• Operation			○		○		○		○		○	

OLE-13005



Section 13

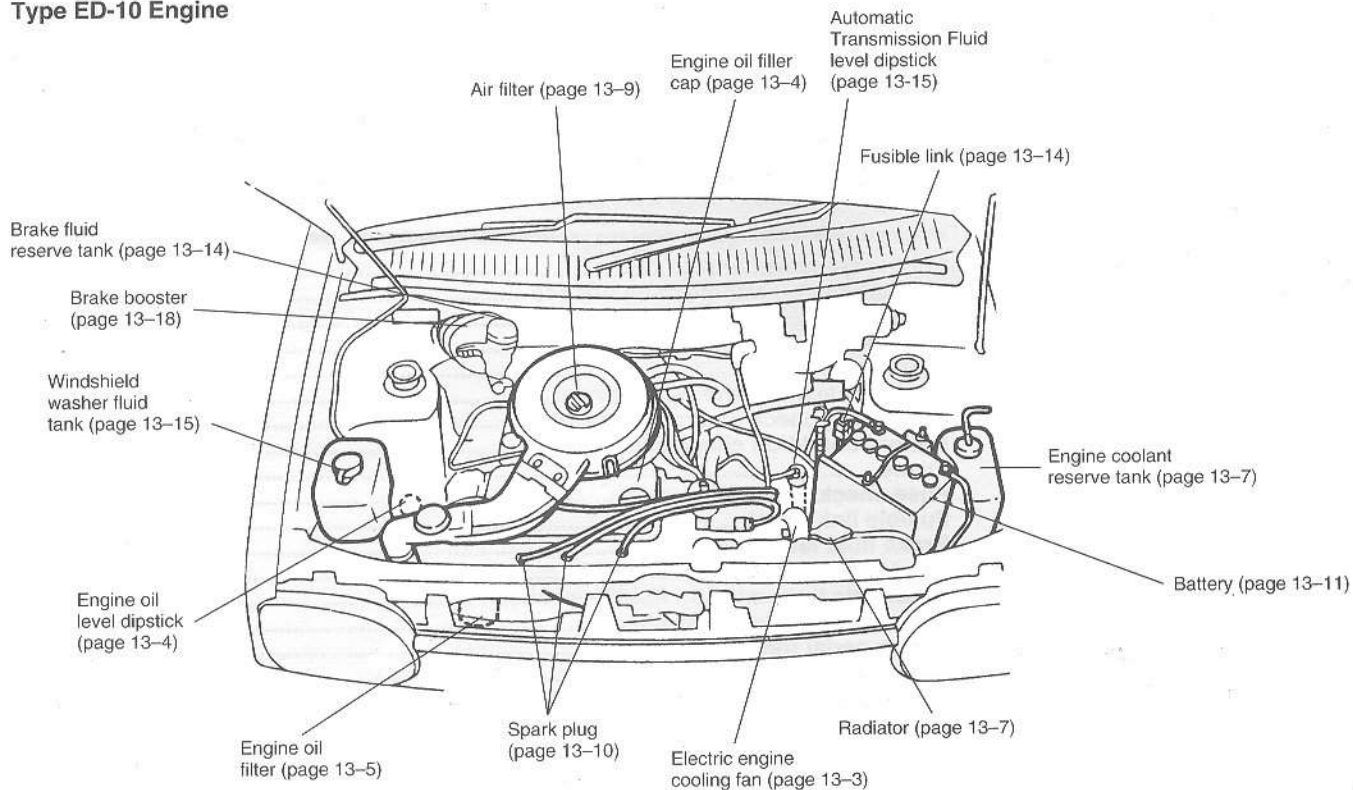
Routine maintenance

Engine compartment	13- 1
Instructions on routine maintenance	13- 3
Engine oil	13- 4
Engine coolant	13- 7
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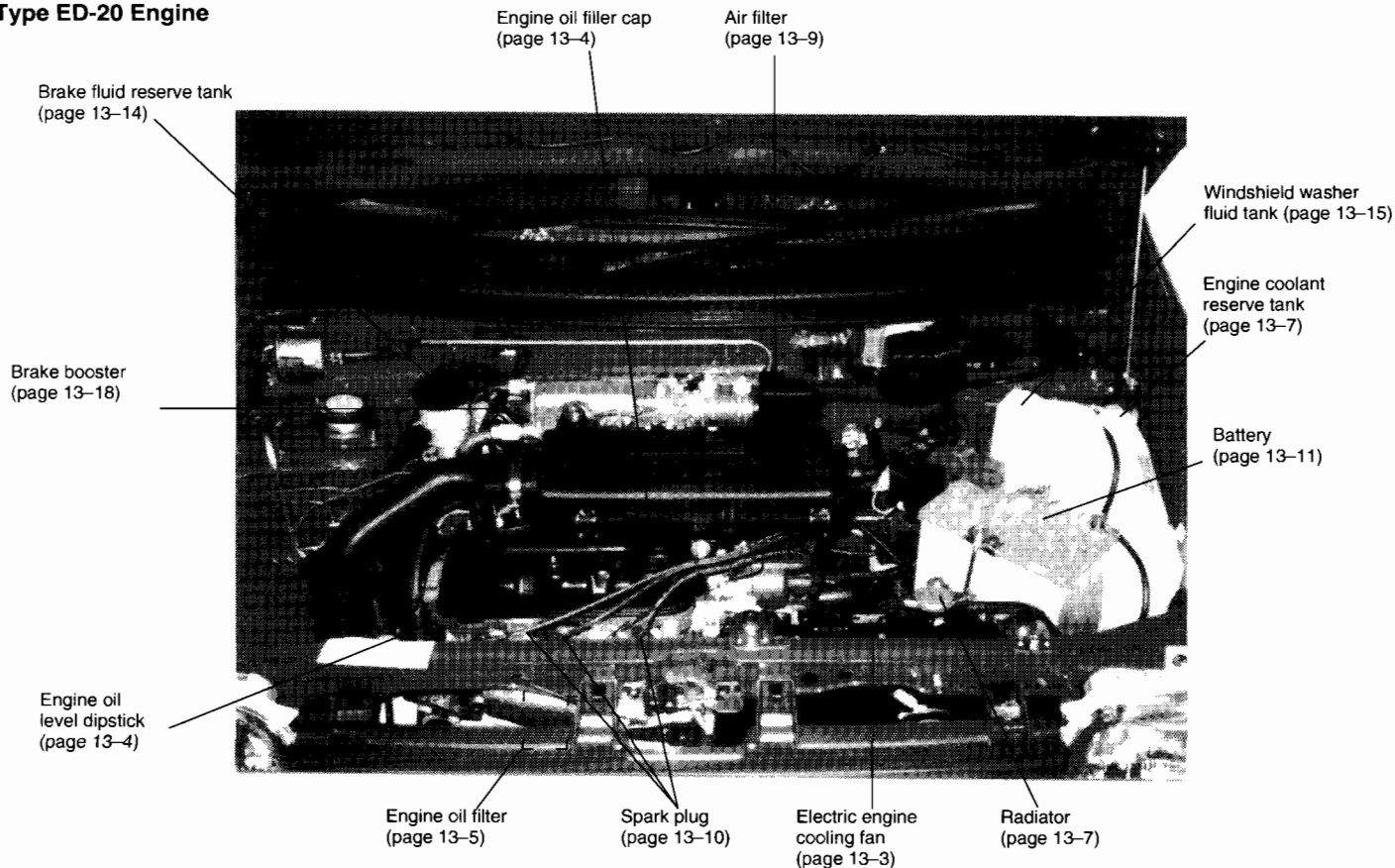
Engine compartment

Type ED-10 Engine





Type ED-20 Engine





Instructions on routine maintenance

WARNING

- If you are not versed in servicing procedures given, do not attempt to check or adjust the components.
- Do not allow smoking, sparks or flames near flammable objects, such as fuel or battery, to prevent a fire.
- To help reduce the risk of serious bodily injury, remove any necklace, bracelet, ring, and so forth. Secure long hair behind your head. Also, keep hands, tools, clothes, and other objects away from the moving parts when the engine is running.
- To help reduce the risk of burn injury, allow the engine to cool before servicing any component in the engine compartment, except when not required.
- No person should get bodily under a vehicle that is supported only by a jack; use vehicle support stands, etc.
- Service your vehicle in a well-ventilated place.

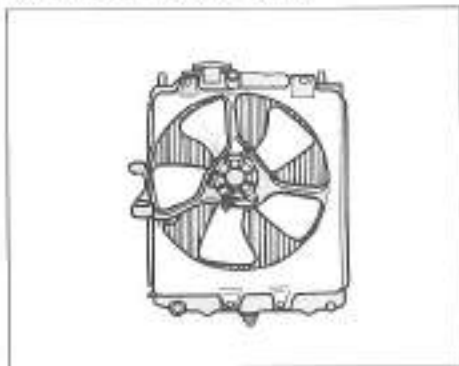
- Keep children away from any fluid or oil.
- Check that any tool or cloth is not left when closing the hood. They may damage the components or even a fire while driving.

CAUTION

- Disconnect the cable from the negative terminal of the battery before working on the electrical systems. Also, be careful not to short the terminals with a tool or other metal objects. It could cause a battery damage.
- Use well-maintained tools to prevent damage to the components.

0CC-1089

Electric engine cooling fan



WARNING

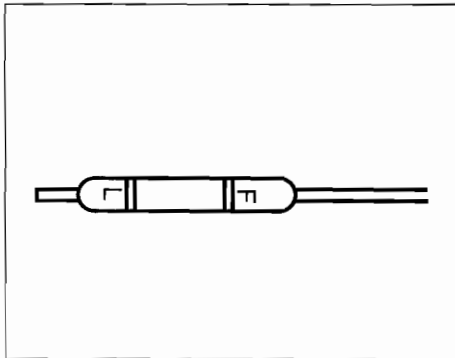
- Turn the ignition switch off when you work near the radiator and condenser fans, or radiator grill.
- Do not touch or come close to the fan blades if you service your vehicle with the ignition switch in "ON". The radiator fan switch is activated automatically when the coolant temperature reaches the certain level. Furthermore, the condenser cooling fan will automatically start to rotate with the air conditioner on.

VAZ-1009



Engine oil

Engine oil level check



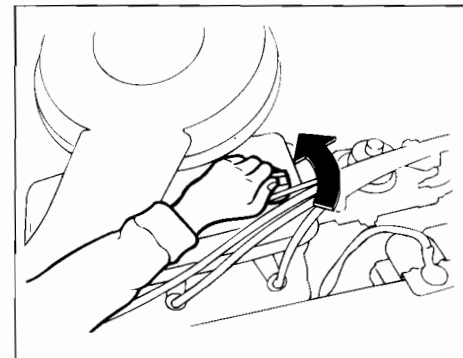
1. Park the vehicle on a level surface.
2. Warm up the engine to operating temperature and stop it.
3. After a few minutes, slowly pull the dipstick out and wipe the oil clean.
4. Reinsert the dipstick as far as it will go.
5. Pull out the dipstick again and check the oil level if it is between "F" and "L" marks.
6. If the engine oil level is too low, add the engine oil. For recommended engine oil, see Section 14.

WARNING

Clean any spilled oil. It may cause a fire if it is left on a hot component.

OLE-13006

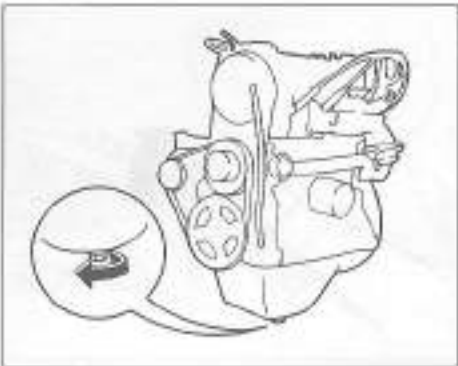
Engine oil and oil filter change



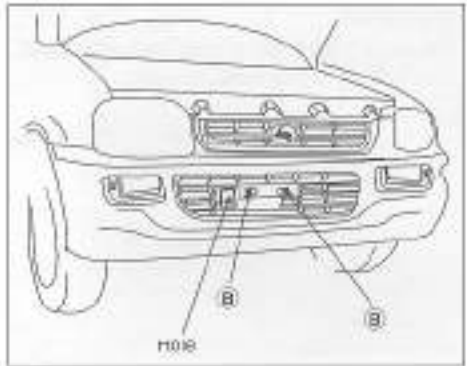
1. Park the vehicle on a level surface.
2. Warm up the engine to operating temperature and stop it.
3. Remove the oil filler cap.

WARNING

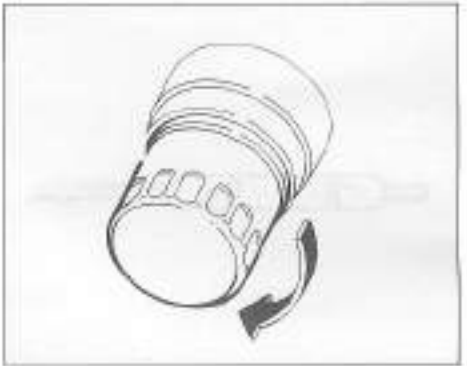
Be careful not to burn yourself with hot engine oil or hot engine components.



- 4. Place a container under the oil pan for draining engine oil.
- 5. Remove the drain plug and gasket with a wrench, and allow the oil to drain completely. Wear protective glasses, if necessary.



- 6. Removal of front number plates as preparatory step for oil filter replacement.
 - ① Remove two screws (B) and number plate.



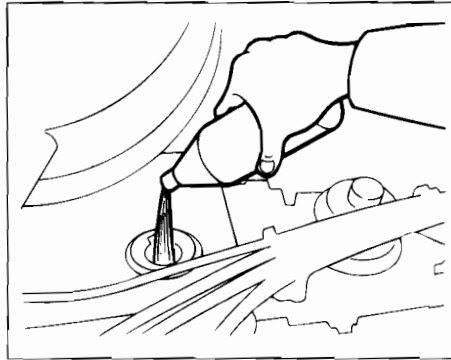
- ② Loosen the oil filter with an oil filter wrench and remove it by hand.
- ③ Apply a little engine oil on the rubber gasket of the new oil filter.



- ④ Screw the new filter into place and tighten it by hand until the gasket contacts the seat.
Then, give the filter about one additional turn to seat it.
- ⑤ Install the number plate, reversing the installation procedure.
- ⑥ Reinstall the drain plug and new gasket.
Tighten the drain plug with a proper-size wrench.

CAUTION

Do not overtighten the oil filter and drain plug. It could cause oil leakage.



- ⑦ Use Castrol M TEC SG or equivalent.
- ⑧ Slowly pour engine oil.
For engine oil capacity, see Section 14.
- ⑨ Install the oil filler cap by hand.

WARNING

Securely install the oil filler cap. If not, oil consumption may increase and engine oil may be splashed on the components, which may cause a fire.

- ⑩ Wait a few minutes and check the engine oil level.
- ⑪ Run the engine and check if engine oil is leaking from the oil filter or drain plug.
Any leak indicates improper installation of the oil filter or drain plug.
- ⑫ Turn the engine off and wait a few minutes.
Check the engine oil level again and add oil, if necessary.

WARNING

- **Clean any spilt oil. It may cause a fire if it is left on a hot component.**
- **Wash your hands thoroughly.**
- **Prolonged contact with used engine oil could cause skin cancer.**



Engine coolant

WARNING

Be careful not to burn yourself when removing the radiator cap or drain plug.

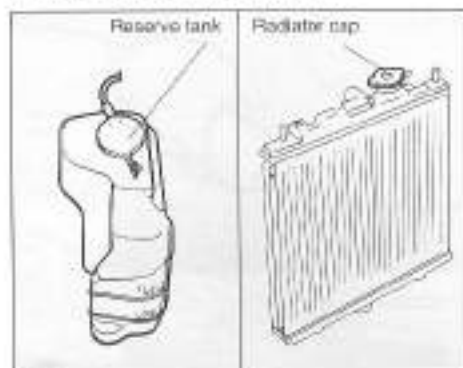
CAUTION

- Follow the coolant manufacturer's instructions.
- Keep the coolant/water ratio that matches the lowest temperature of your local region.

If coolant level decreases noticeably, have the cooling system checked by a Perodua dealer.

0407-0000

Engine coolant level check



Check the coolant level with the reserve tank when the engine is cold.

Check if the level is between the "FULL" and "LOW" lines.

If the coolant level becomes low due to natural evaporation, add soft water only.

If a substantial amount of coolant is lost, add long-life coolant.

If the reserve tank should become empty, fill the radiator as well as the reserve tank with coolant.

Wipe the spilt coolant away and install the reserve tank and radiator caps securely.

047-0000

Engine coolant change

Your sealed radiator system is filled with long-life coolant.

It is, however, necessary to change the coolant at regular intervals.

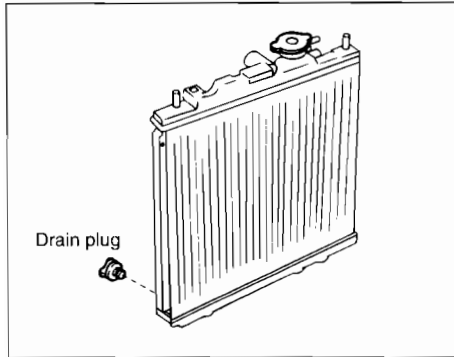
For coolant capacity, see Section 14.

WARNING

Do not remove the radiator cap when the engine is hot.

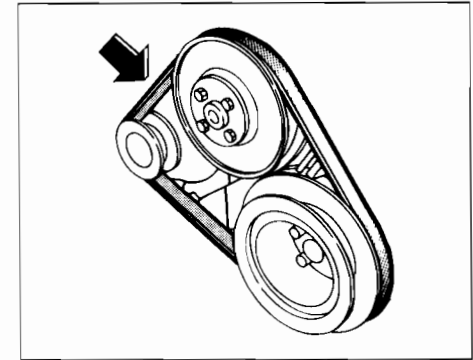


Drive belt check



To change coolant

1. Remove the radiator cap.
2. Place a container under the drain plug for draining coolant.
3. Remove the radiator drain plug and gasket, and allow the coolant to drain completely.
4. Drain the coolant from the reserve tank.
5. Install the radiator drain plug and new gasket, and tighten it securely.
6. Slowly pour proper amount of long-life coolant into the radiator and reserve tank. Pour proper amount of clean soft water into the radiator until it is full. Pour the clean soft water into the reserve tank to the "FULL" line.
7. Close the radiator and reserve tank caps securely.
8. Run the engine for several minutes and stop it. Allow the engine to cool.
9. Carefully remove the radiator cap and check the coolant level. Add the clean soft water, if necessary, to the radiator.
10. Install the radiator cap tightly.
11. Warm up the engine to normal operating temperature. Check if any coolant is leaking from the drain plug. Any leak indicates improper installation of the radiator drain plug.
12. After driving for a short while, check the coolant level. If the coolant has decreased, add clean soft water to the "FULL" line in the reserve tank.



WARNING

Be careful not to burn yourself with hot engine components and radiator.

Turn the engine off and inspect the drive belt for cracks, excessive wear or oiliness.

Have any damaged belt replaced by a Perodua dealer.

Push the midpoint of the drive belt between the alternator and the water pump pulley, and measure the deflection.

OLE-13010

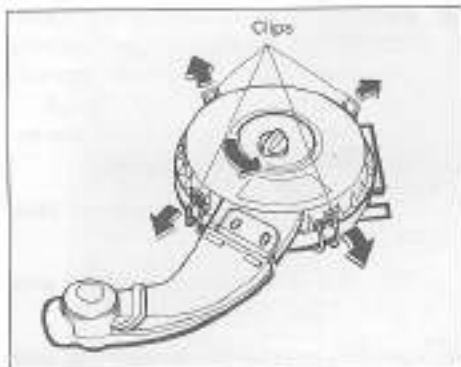


Air filter cleaning and replacement

Check to see that the deflection is within the specification.
See section 14.

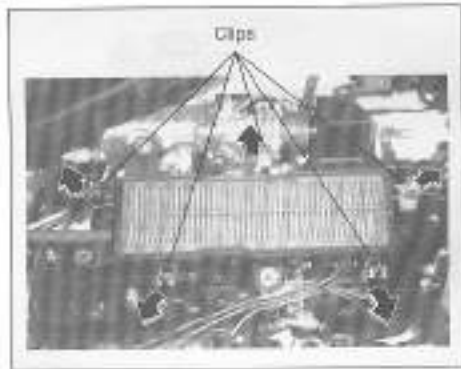
If the deflection is not within the specification, have the drive belt adjusted by a Perodua dealer.

6LC-9385



(ED-10 engine)

Unlock the clips and turn the screw counterclockwise to remove the air filter cover.



(ED-20 engine)

Unlock the clips to remove the air filter cover.

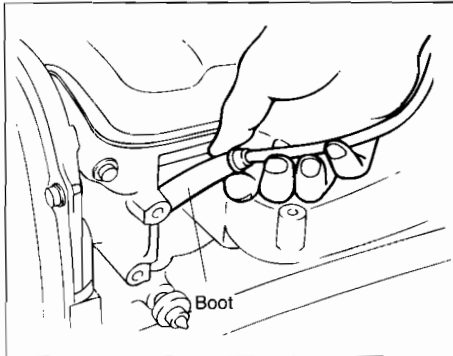
CAUTION

- Do not drive with the air filter element removed. Failure to observe this will cause excessive engine wear.
- Do not oil the element. It may reduce the effectiveness of the element.

6LD-9211



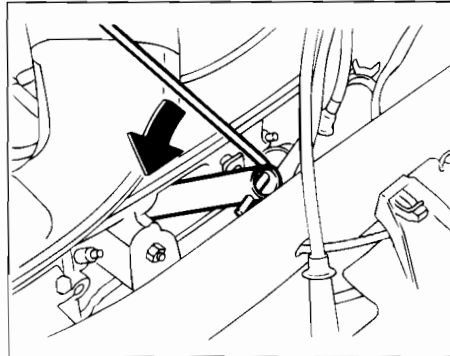
Spark plug check and replacement



1. Hold the boot at the end of the spark plug wire and disconnect the spark plug wire.
Do not pull the wire itself.

WARNING

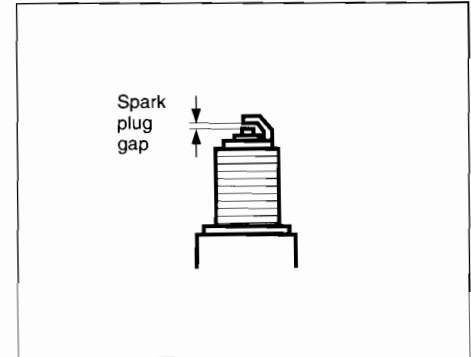
Be careful not to burn yourself as the boot and spark plug may be hot.



2. Unscrew and remove the spark plug with a spark plug wrench.
3. Check the insulator tip of the spark plug to see if it is light brown without any fouling. If it is not, have the spark plug cleaned by a Perodua dealer.

CAUTION

Do not allow dirt or anything to fall into the spark plug holes. It may cause engine damage.



4. Check the gap of the new spark plugs with a spark plug gap gauge. Bend the ground electrode to adjust spark plug gap as specified, if necessary.
For recommended spark plugs, see Section 14.
5. Install the spark plug securely.

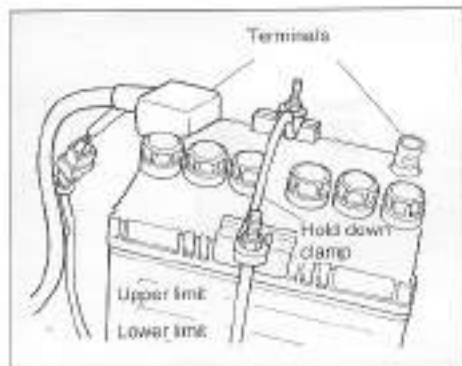
CAUTION

Do not overtighten the plug. It may cause engine damage.

6. Reconnect the spark plug wire in correct order.



Battery condition check and cleaning



Check the electrolyte level if it is between the upper and lower limits. If the level is low, add distilled water.

Check for cracks, or corroded or loose connections or loose hold-down clamps.

If the terminals of the battery are dirty, clean them with baking soda and apply new grease on them.

If the terminals are loose, tighten them securely.

WARNING

- Tighten the vent caps securely after adding distilled water. The battery electrolyte may be splashed out and damage your vehicle, or even cause serious bodily injury.
- Batteries contain sulfuric acid which is poisonous and corrosive. Wear protective safety glasses and be careful not to splash battery fluid on yourself, clothes, and vehicle. If battery fluid is splashed on your skin or in your eye, remove your contaminated clothes and wash the part at least 15 minutes.
- If you have swallowed battery fluid, drink as much water or milk as possible and immediately see a doctor.
- Keep any fire away from the battery. It could cause battery explosion.
- Keep children away from the battery.

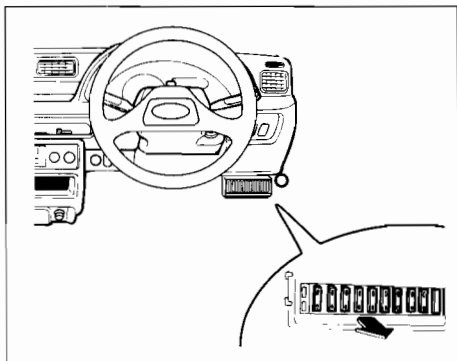
CAUTION

Wash splashed battery fluid away from paint finish immediately.

042-1093

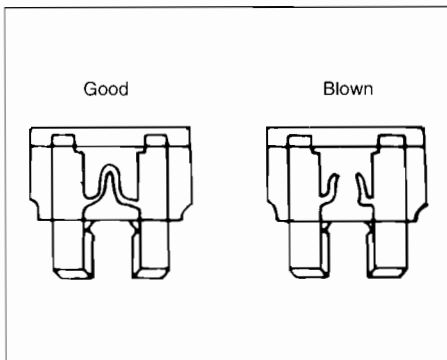


Fuse check and replacement



Locate the cause and remedy the problem before installing a new fuse. If you cannot, have the system checked by a Perodua dealer.

1. Turn the ignition switch off and remove the fuse box lid.
2. Make sure that the switch of the malfunctioning component is off.
3. With your fingers, pull out the fuse you want to check.



Should corrective repair be delayed, disconnect the cable from the negative terminal of the battery as a precautionary measure.

WARNING

To prevent a fire due to excessive current flow;

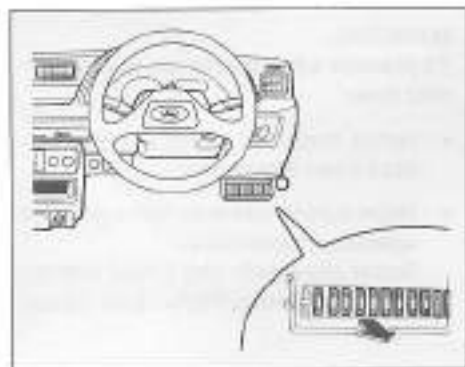
- **Never install anything in place of a fuse even temporarily.**
- **Make sure to use only fuses with the specified capacities. Never especially use a fuse with its amperage rating higher than specified.**

We recommend keeping a set of spare fuses for emergency.

OLE-13015

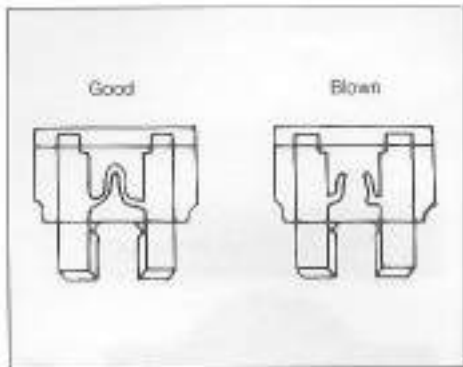


Fuse check and replacement



Locate the cause and remedy the problem before installing a new fuse. If you cannot, have the system checked by a Perodua dealer.

1. Turn the ignition switch off and remove the fuse box lid.
2. Make sure that the switch of the malfunctioning component is off.
3. With your fingers, pull out the fuse you want to check.



Should corrective repair be delayed, disconnect the cable from the negative terminal of the battery as a precautionary measure.

WARNING

To prevent a fire due to excessive current flow:

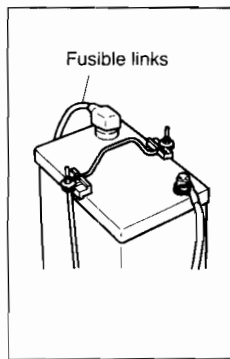
- Never install anything in place of a fuse even temporarily.
- Make sure to use only fuses with the specified capacities. Never especially use a fuse with its amperage rating higher than specified.

We recommend keeping a set of spare fuses for emergency.

GL-1011



Fusible link check



If excessive amount of current should run from the positive terminal of the battery to the headlight circuit or the ignition switch circuit, the fusible link will blow to prevent a fire.

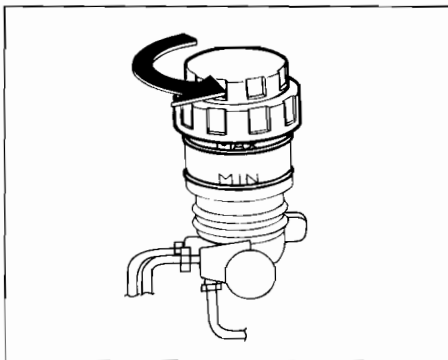
Immediately call a Perodua dealer to have the cause located and the system repaired.

WARNING

Never install anything in place of a fusible link even temporarily.

It may cause extensive damage to the vehicle and a fire.

Brake fluid level check



Check the brake fluid reserve tank if the brake fluid level is between the "MAX" and "MIN" lines.

If the brake fluid level is too low, slowly add clean brake fluid to the "Max" line. For recommended brake fluid, see Section 14.

CAUTION

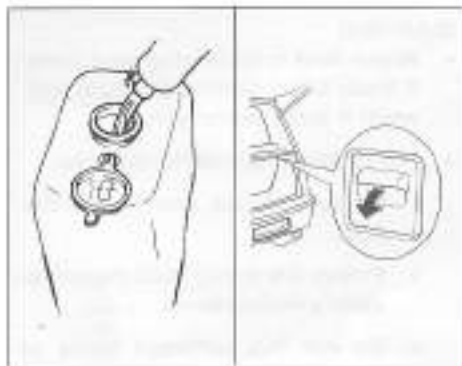
Wipe away spilt fluid thoroughly to prevent paint damage.

WARNING

- **Brake fluid is harmful to your eyes. If it has been splashed in your eye, wash it away thoroughly.**
- **For proper brake performances;**
 - **Be sure to use specified brake fluid.**
 - **Follow the brake fluid manufacturer's instructions.**
 - **Do not mix different types of brake fluid.**
 - **Do not use brake fluid that has been exposed to air for more than 1 year. It may have absorbed excessive moisture.**
 - **Do not allow dirt, sand, or dust into brake fluid.**
 - **If brake fluid decreases noticeably, have the brake system checked by a Perodua dealer.**



Window washer fluid level check

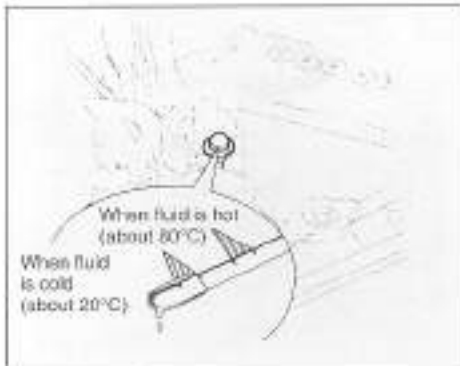


Make sure that the washer fluid level is sufficient.
Add fluid if the level is too low.

WARNING

Always use clean washer fluid. Dirty fluid can cause clogging of the washer system or can block your vision.

Automatic transmission fluid level check



1. Park the vehicle on a level surface and apply the parking brake.
2. Run the engine at idling speed and firmly depress the brake pedal. Move the shift lever from **P** to **L** and then from **L** to **P**.
3. Check the water temperature gauge to see that the engine coolant is warmed up enough.
4. Pull the dipstick out and wipe it clean. Insert it into the original position.
5. Pull the dipstick out and check the fluid level.

6. If the oil level is too low, add the specified fluid through the oil filter tube slowly. Do not overfill.
For recommended automatic transmission fluid, see section 14.
7. Securely insert the dipstick.
8. Wipe off any spill fluid.

CAUTION

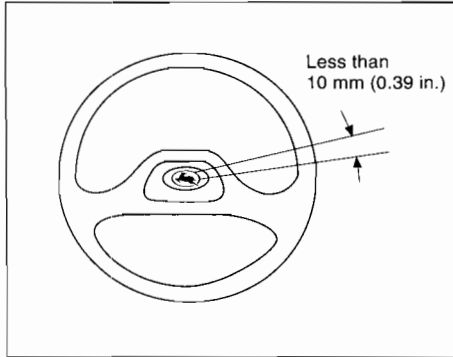
- If the fluid is dirty, have the fluid changed by a Perodua dealer.
- If the fluid level is too low, or if fluid decreases noticeably, have the system checked by a Perodua dealer.

WARNING

- Be careful not to burn your self as the fluid may be hot.
- Never touch or come close to the moving parts while the engine is running, to help reduce the risk of serious bodily injury.



Steering wheel free play check



Move the steering wheel lightly from straight-ahead position to right and left until you feel resistance, and measure the free play.

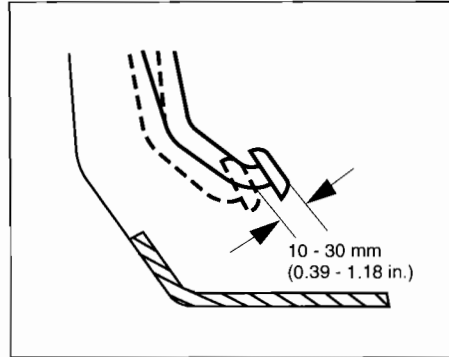
Check to see that the free play is within the specification.

WARNING

If the free play is not within the specification, have the system checked immediately by a Perodua dealer.

OLE-13022

Clutch pedal free play check



Depress the clutch pedal by hand lightly until you feel resistance, and measure the free play.

Check to see that the free play is within the specification.

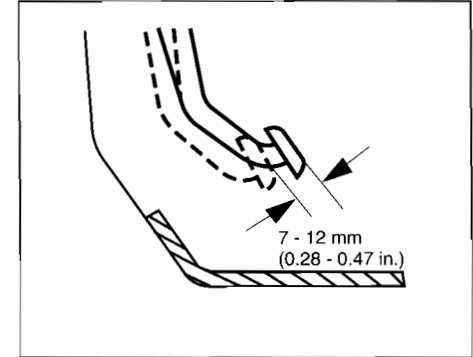
WARNING

If the free play is not within the specification, have the system checked immediately by a Perodua dealer.

OLE-13023

Brake pedal

Brake pedal free play check



Turn off the engine and depress the brake pedal more than five times to release vacuum in the brake booster.

Depress the brake pedal by hand lightly until you feel resistance, and measure the free play.

Check to see that the free play is within the specification.

WARNING

If the free play is not within the specification, have the system checked immediately by a Perodua dealer.

OLE-13024



Parking brake reserve travel check

Brake pedal reserve travel check

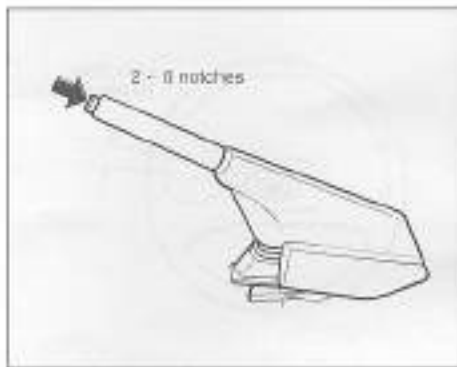


7. Check also to see that the reserve travel remains the same.

WARNING

If the reserve travel is not within the specification or reserve travel changes, have the system checked immediately by a Perodua dealer.

041-1506



1. Park the vehicle on a level surface.
2. Shift the manual transmission lever in neutral or the automatic transmission lever in P.
3. Apply the parking brake.
4. With the engine running, depress the brake pedal several times.
5. Depress the brake pedal with a force of 30 kg (66 lb), and measure the distance between the top of the brake pedal and the bulkhead.
6. Check to see that the reserve travel is within the specification.

1. Park the vehicle on a level surface.
2. Shift the manual transmission lever in neutral, or the automatic transmission lever in P range.
3. Firmly depress the brake pedal.
4. Fully release the parking brake.
5. Pull the parking brake lever upward slowly, and count the notches until the pulling force of the parking brake lever reaches 20 kgf (44 lb). Before completing the counting of parking brake lever notches, when the parking brake begins working effectively, release the foot brake.



Brake booster operation check

6. Check that the number of notches is within the specification.

WARNING

If the number of notches is not within the specification, have the system checked immediately by a Perodua dealer.

OLE-13026

1. Park the vehicle on a level surface.
2. Shift the manual transmission lever in neutral.
3. Stop the engine and depress and brake pedal several times, until the pedal travel on longer changes.
4. Start the engine with the brake pedal depressed.
The brake pedal should move down slightly.
5. Stop the engine with the brake pedal depressed. Hold the pedal for about 30 seconds. The pedal travel should not change.
6. Start the engine and stop it after about a minute. Firmly depress the brake pedal several times. The pedal travel should decrease with each application.

WARNING

If you notice any malfunction, have the system checked immediately by a Perodua dealer.

OLE-13027

Wiper blade replacement

WARNING

Make sure the ignition key is in “OFF”, before replacing the wiper blades.

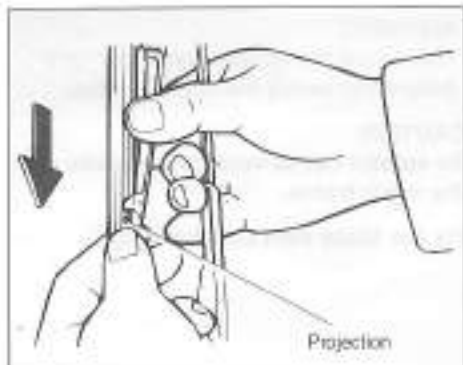
CAUTION

Be careful not to scratch the glass with the wiper frame.

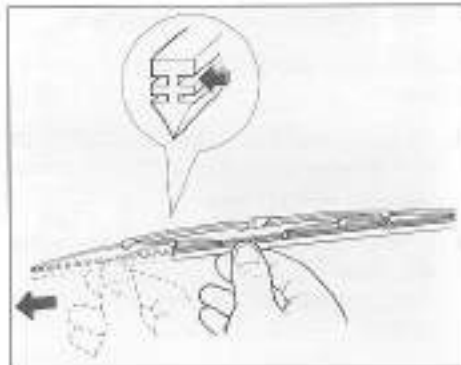
Fix the blade with suitable length.



Light bulb replacement



1. While pushing the projection, pull the blade until it becomes free.
2. Pull the blade off the frame along the slot.



3. Insert the cutout section of a new blade into the large hole section of the frame. Pull the blade along the slot into the frame.
4. While pushing the projection, pull the blade until it is locked.

Use the bulb as specified.
(See Section 14)

WARNING

To prevent injury;

- Turn the engine off before replacement.
- Keep children away from a bulb.
- Allow the bulb to cool before replacement.

CAUTION

Do not drop a bulb or scratch the surface.

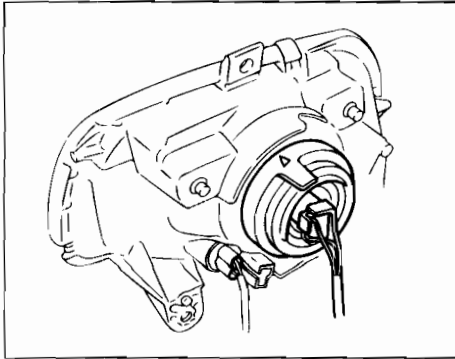
After replacement, turn the light switch on to see that the light will be illuminated. If a bulb requires frequent replacement, have the system checked by a Perodua dealer.

We recommend keeping a set of spare bulbs. Bulbs are available at an authorized Perodua dealer.

OLE1001

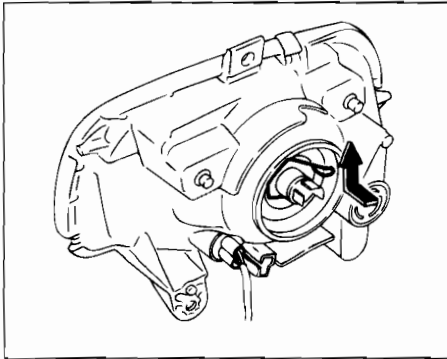


Headlights

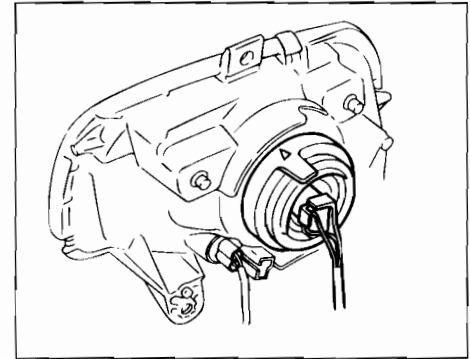


To remove bulb

1. Disconnect the wire connector and remove the rubber cover.



2. Disengage the clips and remove the bulb.



To install bulb

1. Install the bulb and lock the clips.
2. Install the rubber cover by aligning the "Δ" marks with each other.
3. Connect the wire connection.

CAUTION:

Never touch the glass portion of the bulb. Oil of your finger will damage it.

OLE-13056



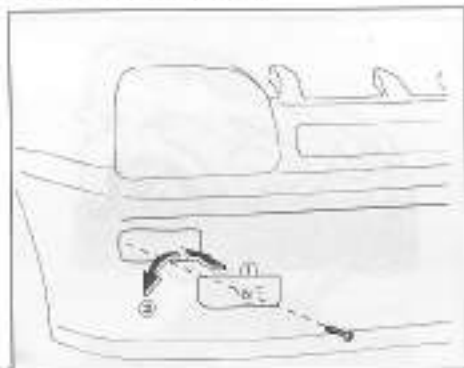
Clearance lights



1. Remove the bulb holder by turning it counterclockwise.
2. Remove the bulb by pulling it.

9.2.1304

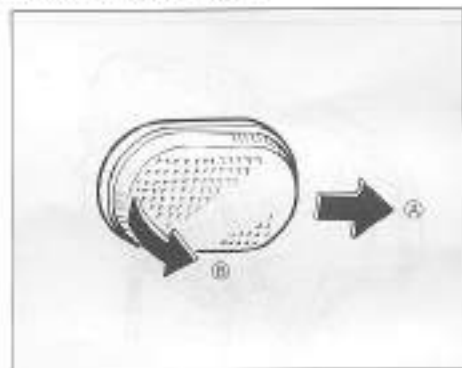
Front turn signal lights



1. Remove the screw to detach the light assembly.
2. Turn the bulb counterclockwise while pushing it.

9.2.1305

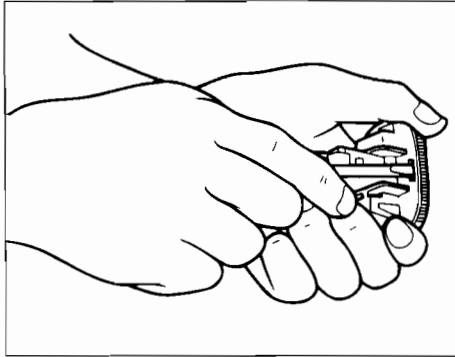
Side turn signal lights



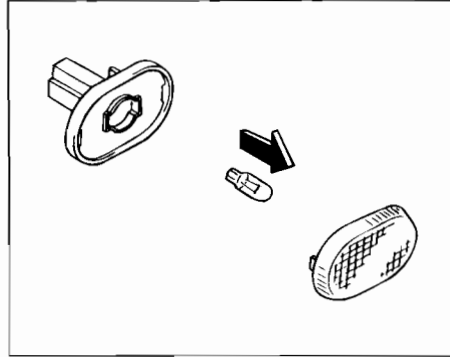
1. Pull the side turn signal light in the direction (B) while pushing it in the direction (A).
2. Disconnect the wire connection.



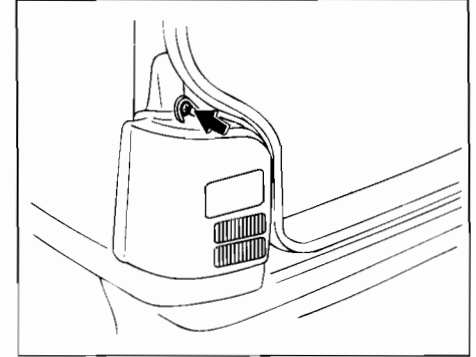
Rear turn signal lights/Stop & tail lights/Backup lights



3. Take out the lens by inserting the end of a screwdriver into the water-draining hole of the light case and pushing it strongly.



4. Pull out the bulb straight.

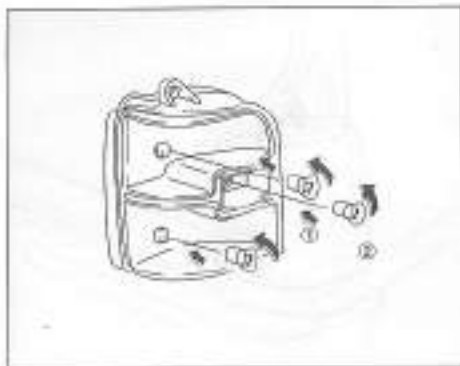


1. Remove the screw to detach the light assembly.

OLE-13058

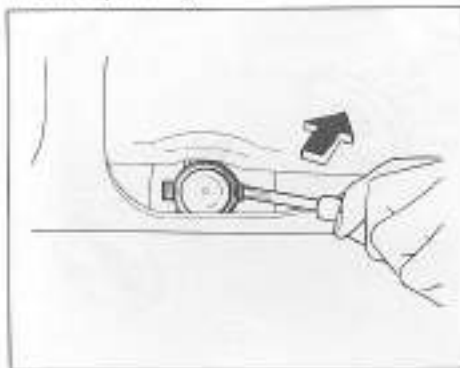


License plate light

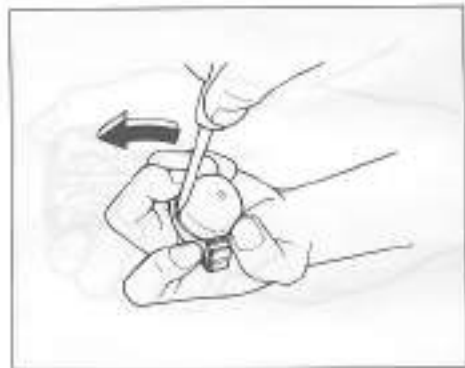


2. Remove the bulb by turning it counter-clockwise ② while pushing the bulb ①.

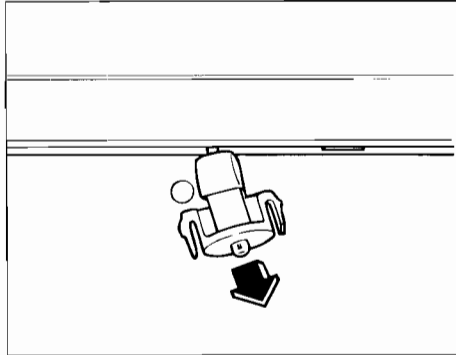
EE1199P



1. Remove the light assembly by means of a standard screwdriver.



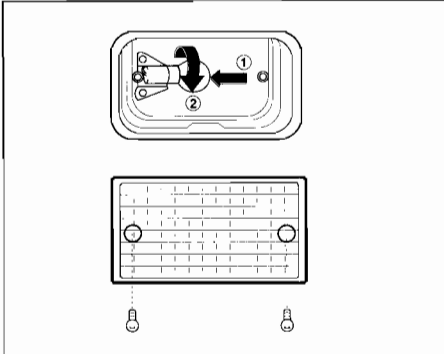
2. Remove the light cover by means of a standard screwdriver.



3. Pull out the bulb straight.

OLE-13039

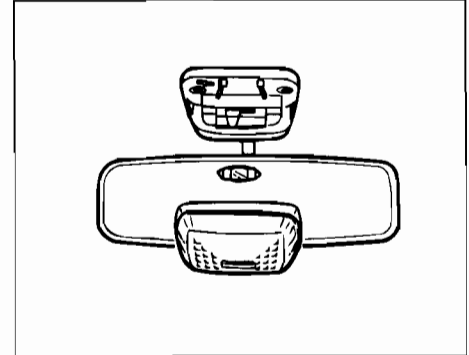
Rear fog light



1. Remove the two screws to detach the light assembly.
2. Turn the bulb counterclockwise while pushing it.
3. Installation
Reverses the removal procedure.

OLE-13042

Interior light

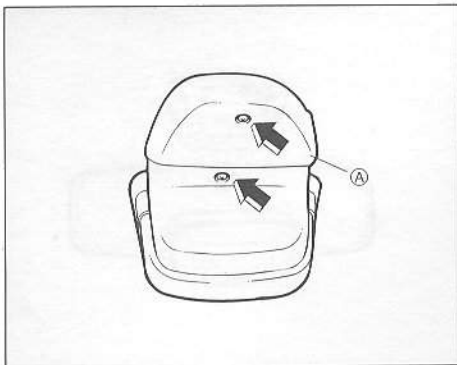


1. Lightly pry the lens to detach it.
2. Pull out the bulb straight.

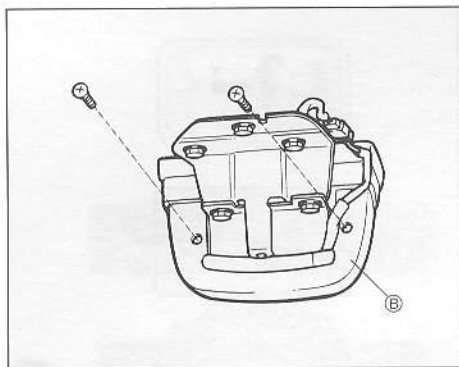
OLE-13042



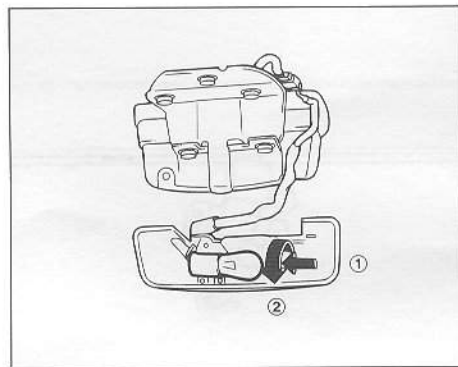
High-mounted stop light



1. Remove the two screws retaining the cover **(A)** of the high-mounted stop light.



2. Remove the two screws retaining the cover **(B)** of the high-mounted stop light.



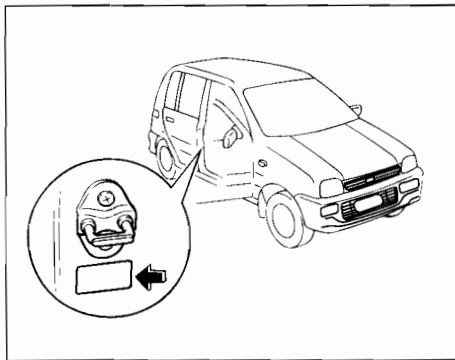
3. Turn the bulb counterclockwise while pushing it.

OLE-13041



Tires

Tire air pressure



Check the cold tire air pressure with a pressure gauge. For tire air pressure, see Section 14 or the tire label attached on the place shown in the illustration.

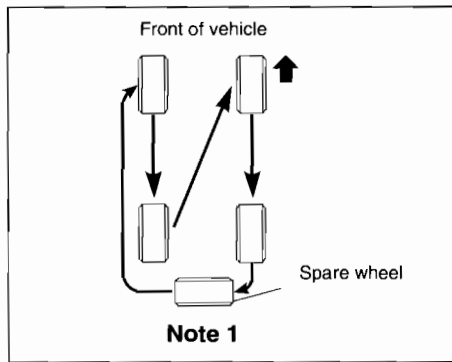
WARNING

Keep the tire air pressure as specified. Improper tire air pressure will reduce tire life, increase fuel consumption, and cause a loss of control of the vehicle.

If the tire requires frequent air pressure adjustment, have the wheel system checked by a Perodua dealer.

OLE-13043

Tire rotation



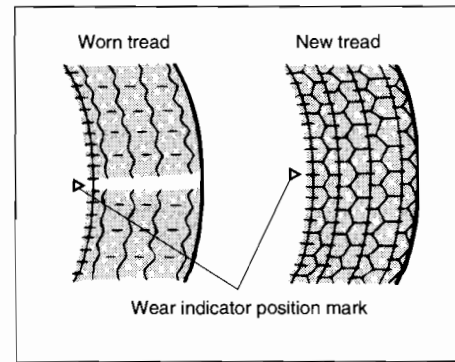
Rotate the tires in the order shown above. Adjust the tire air pressure after rotation.

Note 1 Vehicle with 4 steel wheels and one steel spare wheel or 4 aluminum wheels and one aluminum spare wheel.

Tire rotation interval:
every 10,000 km (6,000 miles) or 6 months

OLE-13044

Tire wear check



If the wear indicator on the tire surface is visible, replace the tire as soon as possible.

OLE-13045



Instructions on tires

- Install the tires of the same tire as originally-installed tires.
- Use only the disc wheels as specified.
- Drive at a moderate speed for the first 160 km (100 miles) as a new tire does not have maximum traction.
- Replace the air valve stem whenever replacing a tubeless tire.
- Always have a tire valve dust cap on a tire.
- Have uneven wear or damage on a tire checked by a Perodua dealer.

WARNING

- Do not install different types of tires on your vehicle. You could lose a control of the vehicle.
- Drive slowly on a curb, a pothole, or other obstacles to prevent a loss of control of the vehicle.
- Do not drive your vehicle with a damaged tire. It may deflate suddenly. Also, avoid using a damaged wheel rim.

CAUTION

Be careful not to damage the tires by scratching or by oiling etc.

04/12/18



Section 14

Specifications

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Engine specifications	14-1
Engine tune-up	14-2
Lubricant recommendation	14-3
Tire specifications	14-3
Bulb specifications	14-4



Vehicle specifications

		Model	ED-10, ED-20	EF-CL
Overall length	mm (in.)		3,345 (131.7)	
Overall width	mm (in.)		1,395 (54.9)	
Overall height	mm (in.)		1,435 (56.7)	1,415 (56.0)
Wheelbase	mm (in.)		2,280 (89.8)	
Tread	Front	mm (in.)	1,215 (47.8)	
	Rear	mm (in.)	1,205 (47.4)	
Fuel tank capacity	ℓ		32	
Gross vehicle weight	kg (lb)		—	
Axle permissible weight	Front	kg (lb)	—	
	Rear	kg (lb)	—	

0.2-190

Engine specification

Engine ID	ED-10, ED-20	EF-CL
Engine type	Gasoline, 4 cycle OHC	Gasoline, 4 cycle OHC
Cylinder number & arrangement	3-cylinder-in-line	3-cylinder-in-line
Bore × Stroke mm (in.)	66.6 × 81.0 (2.62 × 3.19)	68.0 × 80.5 (2.68 × 3.18)
Displacement cc	847	659

0.2-190



Engine tune-up

Item		Model	ED-10	EF-CL	ED-20
Firing order			1-2-3	1-2-3	1-2-3
Ignition timing		°BTDC/rpm	5 ± 2/900	7 ± 2/900	5 ± 2 (T TERMINAL ON)
Engine idling speed (in neutral)			M/T 1000 $\begin{smallmatrix} +100 \\ -50 \end{smallmatrix}$ A/T 1200 $\begin{smallmatrix} +100 \\ -50 \end{smallmatrix}$	M/T 900 $\begin{smallmatrix} +100 \\ -50 \end{smallmatrix}$ A/T 1000 $\begin{smallmatrix} +100 \\ -50 \end{smallmatrix}$	NON-ADJUSTABLE (900)
Valve clearance	Intake (hot)	mm (in.)	0.25 ± 0.05 (0.0098 ± 0.002)	0.25 ± 0.05 (0.0098 ± 0.002)	0.25 ± 0.05 (0.0098 ± 0.002)
	Exhaust (hot)	mm (in.)	0.30 ± 0.05 (0.0118 ± 0.002)	0.30 ± 0.05 (0.0118 ± 0.002)	0.30 ± 0.05 (0.0118 ± 0.002)
Spark plug	Manufacturer		NIPPONDENSO / NGK	NIPPONDENSO / NGK	NGK
	No.		W20EXR-U / BPR6EY	W16EXR-U, W16EX-U / BPR5ES, BP5ES	BPR 5EY-11
	Gap	mm (in.)	0.7 - 0.8 (0.028 - 0.031) / 0.8 - 0.9 (0.031 - 0.035)	0.7 - 0.8 (0.028 - 0.031)	1.0 - 1.1
Distributor air gap		mm (in.)	-	0.2 - 0.4 (0.008 - 0.016)	-
Distributor heel gap		mm (in)	-	0.45 (0.018)	-
Drive belt deflection (At inspection)		mm/kg (in./lb)	8.5 - 12/10 (0.33 - 0.47/22)	8.5 - 12/10 (0.33 - 0.47/22)	8.5 - 12/10 (0.33 - 0.47/22)

OLE-14003



Lubricant recommendation

Model		L201 (ED-10/ED-20)	L200 (EF-CL)
Engine coolant	Type	CCI Long Life coolant	
	Capacity ℓ	3.0 (With reserve tank)	
Engine oil	Grade	API SG or equivalent	
	Viscosity	See Chart below	
	Capacity ℓ	With oil filter	2.3
Without oil filter		2.1	
Transmission oil	Grade	GL-4	
	Viscosity	Apollo HE 80W	
	Capacity ℓ	1.42 (4-speed) 1.60 (5-speed)	
Automatic transmission oil	Grade	Caltex ATF 13686	
	Capacity ℓ	4.0	
Brake fluid	Grade	DOT 3 or SAE J1703	

OLE-14004

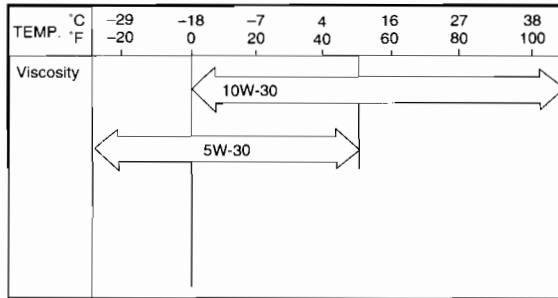
Tire specifications

Model	ED-10	EF-CL/ED20
Size	155/70R12	145/70R12
Air pressure kgf/cm ²	2.0	2.2
Wheel size	4.00B x 12	4.00B x 12
Tire brand	Dunlop SP7 (E11) 11021921 or equivalent	Dunlop SP7 (E11) 11021921 or equivalent
	Good Year INVICTA GP	Good Year INVICTA GP

OLE-14005



Engine oil viscosity chart



Bulb specifications

Light	Wattage
Headlights	55/60
Clearance lights	5
Front turn signal lights	21
Front side turn signal lights	5
Rear turn signal lights	21
Tail lights stop/tail lights	21/5
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OLE-14006



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