BEF00117

MITSUBISHI ROSA

Owner's Handbook

Please read this Owner's Handbook before using your vehicle.
Keep it in the vehicle to enable reference at any time.

FUSO

MITSUBISHI FUSO TRUCK & BUS CORPORATION

Foreword

Thank you very much for purchasing the Mitsubishi Fuso BE Series Bus.

This owner's handbook explains how to handle the vehicle properly, how to perform simple adjustments and how to conduct inspection so that the bus can be operated safely and comfortably at all times.

Please be sure to read this handbook before using the bus as errors in handling can result in breakdowns or accidents.

MITSUBISHI FUSO TRUCK & BUS CORPORATION

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Before Reading This Handbook

- Confirm the model name, etc., of the vehicle you purchased since model names, vehicle types and engine model names, etc., are presented in this handbook.
- Please note that there may be slight differences between explanations and drawings due to improvements or variations in specifications.
- The following codes and symbols are used in this handbook.
  OPT : Denotes optional equipment
  ⇨📖 : Denotes reference page

- In this handbook, the following four headings are used to designate important items of explanation or supplementary explanations. The contents under each of these headings is extremely important. Please be sure to read each and the following instructions given in them.

DANGER ⚠ — Indicates that the item itself, such as battery fluid, is dangerous.

WARNING ⚠ — Indicates that handling method can lead to bodily injury, etc.

CAUTION ⚠ — Indicates that a device or component could become damaged.

NOTE: — Indicates that subsequent contents should be known.

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Recommendation to drivers

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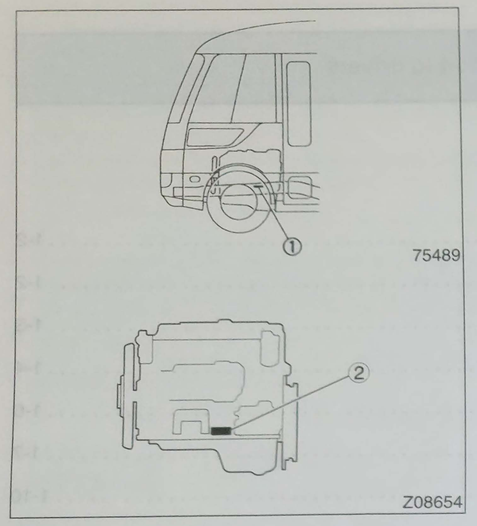


Vehicle identification number and engine numbers

If presented at the time of repair or parts order, the vehicle identification number ① and engine number ② will facilitate the quick and smooth processing of your requests.

1 Vehicle identification number (V.I.N.)

The vehicle identification number is indicated on the left frame, near the front wheel.

Example: JLFBE64DJ0B□□□□□□
- Chassis number
- Vehicle model

2 Engine number

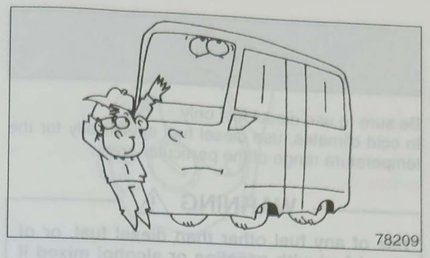
The engine number is indicated on the left side of the crankcase.

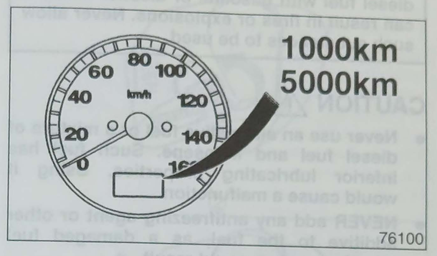
Example: 4M50-□□□□□□
- Engine number
- Engine model

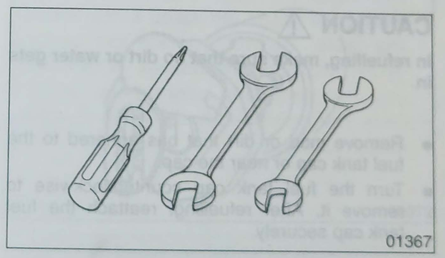
Vehicle Compliance and Data Plates

These are attached to the driver side door opening. The compliance plate certifies that your vehicle complied with Australian Design Rules at the time of manufacture. In all correspondence related to your vehicle the following information should be quoted.

- The engine number.
- The vehicle identification number (V.I.N.) - shown on compliance plate.
- The S.O.A. No. (where applicable), option code, paint and trim codes located on data plate.







Vehicle inspection

Inspection and servicing are necessary for obtaining adequate vehicle performance and prolonging its service life. Have the following inspections conducted regularly.

1 New Vehicle inspection

When a new vehicle has run for 1,000 km and for 5,000 km, it must undergo special inspection for initial settlement, etc. Have the vehicle inspected by nearest authorized MITSUBISHI FUSO dealer.

2 Pre-operation inspection

To ensure safe and comfortable operation at all times, have the vehicle undergo pre-operation inspection before operating it for a whole day.

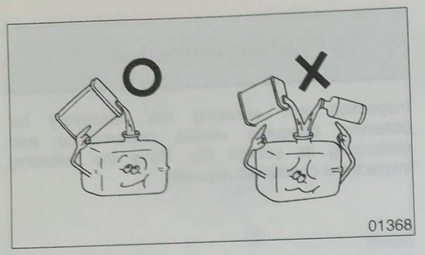
⇨□ P. 11-4

3 Periodic inspection

Periodic inspection is determined by increments of total distance travelled or by increments of time.

For details, ask your authorized MITSUBISHI FUSO dealer.

To guarantee safe operation, Mitsubishi recommends that certain parts (e.g., brake hose, fuel hose, brake unit oil seal) be replaced periodically. It is difficult to judge the deterioration of these parts in regular periodic inspections. When driving conditions are severe, the frequency of such inspections must be increased. Rubber hose in brake and fuel systems is an especially important item of inspection and maintenance. With the passage of time, rubber hose deteriorates, expands, wears down and cracks. Thus, this item must be checked by a technician specialist in accordance with the periodic inspection schedule. For safety, rubber hose should be replaced periodically. Replace deteriorated or damaged hoses immediately. For details, ask your authorized MITSUBISHI FUSO dealer.



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Fuel

Be sure to use diesel fuel only.
In cold climates, use diesel fuel specifically for the temperature range of the particular area.

WARNING ⚠

Use of any fuel other than diesel fuel, or of diesel fuel with gasoline or alcohol mixed it can result in fires or explosions. Never allow such substances to be used.

CAUTION ⚠

- **Never use an alternative fuel or a mixture of diesel fuel and kerosene. Such fuel has inferior lubricating properties. Using it would cause a malfunction.**
- **NEVER add any antifreezing agent or other additive to the fuel, as a damaged fuel injection system could result.**

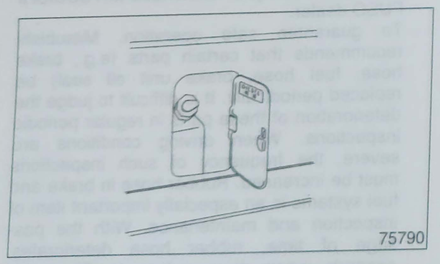
1 Refuelling

WARNING ⚠

Always stop the engine before refuelling. Also be sure to extinguish all fires from cigarettes, etc.

CAUTION ⚠

In refuelling, make sure that no dirt or water gets in.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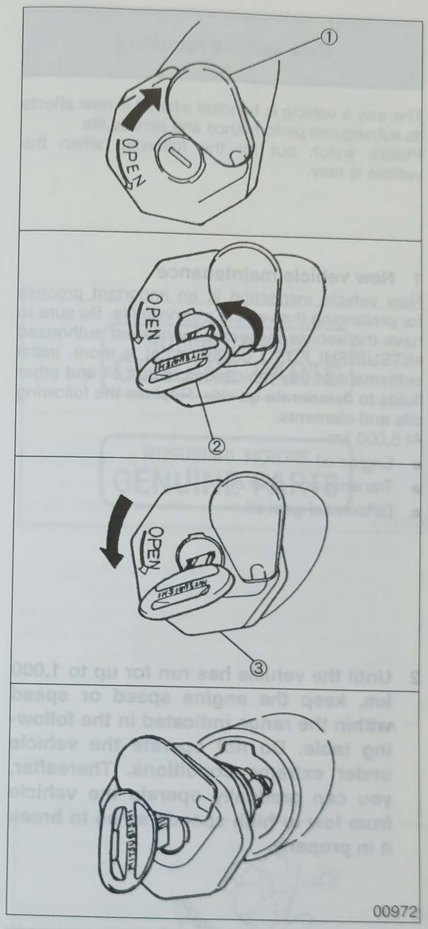
- Remove mud or dirt that has adhered to the fuel tank cap or near the cap.
- Turn the fuel tank cap counterclockwise to remove it. After refuelling, reattach the fuel tank cap securely.



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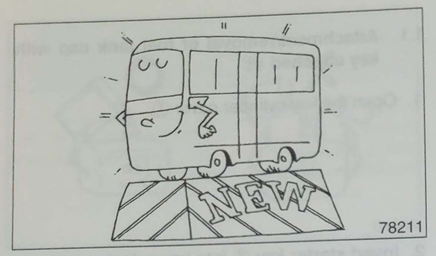
1.1 Attachment/removal of fuel tank cap with key attached

1. Open the key cylinder cover ①.
2. Insert starter key ② into key cylinder and turn it counter-clockwise.
3. Turn fuel tank cap ③ counter-clockwise and remove.
4. After replenishing fuel, securely attach fuel tank cap in reverse sequence.



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New vehicle handling

The way a vehicle is handled when it is new affects its subsequent performance and service life.
Please watch out for the following when the vehicle is new.

1 New vehicle maintenance

New vehicle inspection is an important process for prolonging the vehicle's service life. Be sure to have the vehicle inspected by nearest authorized MITSUBISHI FUSO dealer. What is more, initial settlement of the vehicle can cause oil and other fluids to deteriorate quickly. Replace the following oils and elements.
At 5,000 km

- Engine oil
- Transmission gear oil
- Differential gear oil

00902

2 Until the vehicle has run for up to 1,000 km, keep the engine speed or speed within the range indicated in the following table. Do not operate the vehicle under extreme conditions. Thereafter, you can gradually operate the vehicle from low to high speeds so as to break it in properly.

New vehicle engine speed
2,100 rpm

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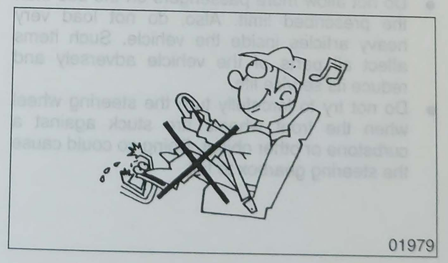
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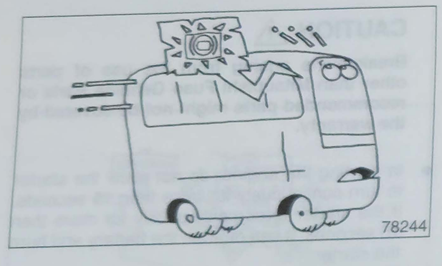
To prevent breakdowns or accidents

- Replace oil periodically. If deteriorated oil is used as such, it can cause burning of the bearings or other serious problems. Also, be sure to use only the types of lubricants, oil and grease recommended in this handbook. Other lubricants can lead to breakdowns.
- Clean or replace filters and elements on a regular basis. Use of clogged or damaged filter or element can cause power loss or defective engine performance.
- Use Mitsubishi Fuso Genuine Parts for all replacements.
  The quality of Mitsubishi Fuso Genuine Parts is guaranteed by the Company so these parts can be used safely.
- Mitsubishi Fuso Genuine Parts have a mark as shown at left attached or come in a box, etc., on which the same mark has been printed.

CAUTION ⚠

Breakdowns arising from the use of parts other than Mitsubishi Fuso Genuine Parts or recommended parts might not be covered by the warranty.

- In starting the engine, do not allow the starter to turn continuously for more than 15 seconds. If the starter turns continuously for more than 15 seconds, it can deaden the battery and burn the starter.
- When the vehicle starts to run forward, engage the clutch slowly. If the clutch is engaged suddenly, the service life of the power train will shorten.
- Do not run the vehicle with your foot left on the clutch. This will not only prevent output of adequate power but will also wear down the clutch disc, reducing service life.
- Do not keep the steering wheel turned all the way for longer than 10 seconds.
  Doing so can cause the power steering unit to malfunction.
- When driving over rough roads, reduce speed and try to avoid undulations as you go.

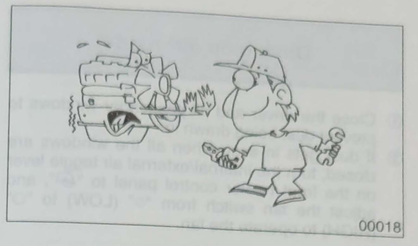


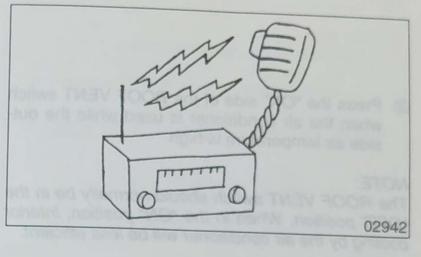
- If the tires should spin without moving the vehicle, as for example on a muddy road, do not power up the wheels needlessly. Put a cloth or other item in front of the tyres to establish traction.
- Do not disengage the clutch or shift to neutral gear while the vehicle is running. Also, never turn off the engine while the vehicle is running.

WARNING ⚠

It is extremely dangerous to stop the engine while driving the vehicle. If you do so, the brakes will lose effectiveness and it will become very difficult to turn the steering wheel.

- If you experience unusual sounds, odours or vibrations while driving the vehicle, stop it and inspect it.
- When climbing or descending a slope, watch out for engine overrun due to downward shifting or overspeed.
- In descending a slope, make full effective use of the engine brake and exhaust brake.
- If the warning lamps light or the buzzer sounds, stop the vehicle immediately at a safe location and execute countermeasures.
⇨📖 P. 5-5
- In cold environments, replace each oil type with oil of proper viscosity for the climatic temperature. Also check cooling water concentration, washer fluid concentration, battery specific gravity, etc.
- Do not allow more passengers on the bus than the prescribed limit. Also, do not load very heavy articles inside the vehicle. Such items affect all parts of the vehicle adversely and reduce its service life.
- Do not try to forcefully turn the steering wheel when the front wheels are stuck against a curbstone or other object. Doing so could cause the steering gearbox to fail.





- Never attempt to adjust the engine by yourself. The engine was adjusted for optimum condition before the vehicle was shipped from the factory.
  Incorrect adjustments to the engine can not only hinder engine performance, but also have a negative impact on exhaust and noise.

- Electronic devices are used in the vehicle. Careful attention has been given to avoid electromagnetic interference on these devices. Before installing a transceiver or other device that generates strong electromagnetic waves, consult the nearest authorized MITSUBISHI FUSO dealer.

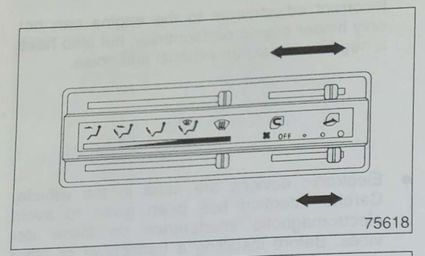
NOTE:
Normally, a transceiver for the vehicle consumes 12 volts. This vehicle is 24-volt specification. Please be careful when installing a transceiver.

- Do not add wiring to the vehicle carelessly. Consult with the nearest authorized MITSUBISHI FUSO dealer before adding more wiring.

WARNING ⚠

It is extremely dangerous to connect wiring for installation of electronic devices sold on the market. It can cause faulty operation of devices or fires caused by overheated wires.

Driving on dirt roads



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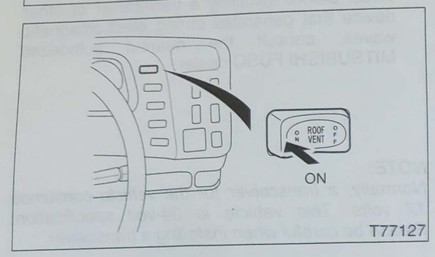
① Close the driver and all passenger windows to prevent dust being drawn in.
② If dust gets in even when all the windows are closed, turn the internal/external air toggle lever on the front heater control panel to "⟲", and adjust the fan switch from "○" (LOW) to "○" (HIGH) to operate the fan.

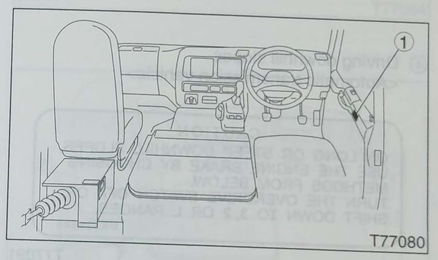


T77127

③ Press the "ON" side of the ROOF VENT switch when the air conditioner is used while the outside air temperature is high.

NOTE:
The ROOF VENT switch should normally be in the "OFF" position. When in the "ON" position, interior cooling by the air conditioner will be less efficient.

④ When ① and ② have been performed, if dust is seen swirling due to a strong wind or the car in front, temporarily turn the internal/external air toggle lever to "⟲" or place the ROOF VENT switch in the "OFF" position to block the external air.



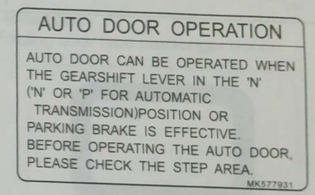
T77080

Warning labels

- The caution and warning labels show important information. Be sure to read them before using the vehicle.
- If any label has peeled so it is difficult to read, is scratched or otherwise damaged, or has peeled off completely, please inform an authorized MITSUBISHI FUSO dealer. The warning and caution labels apply only to the vehicle itself, not to any equipment mounted on the vehicle. For information on caution and warning labels that apply to equipment mounted on the vehicle, please refer to the owner's handbook supplied by the manufacturer of the equipment.
- The caution and warning labels are located in the vehicle as shown below. Samples of these labels are indicated in this and following pages.

1 Locations in vehicle

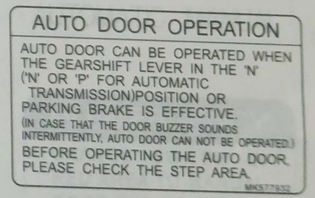
① Auto door operation
<Folding door type passenger door>


AUTO DOOR OPERATION

AUTO DOOR CAN BE OPERATED WHEN THE GEARSHIFT LEVER IN THE 'N' ('N' OR 'P' FOR AUTOMATIC TRANSMISSION)POSITION OR PARKING BRAKE IS EFFECTIVE.
BEFORE OPERATING THE AUTO DOOR, PLEASE CHECK THE STEP AREA.

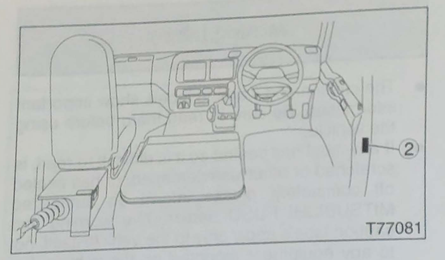
MK577931
T77087

<Swing door type passenger door>


AUTO DOOR OPERATION

AUTO DOOR CAN BE OPERATED WHEN THE GEARSHIFT LEVER IN THE 'N' ('N' OR 'P' FOR AUTOMATIC TRANSMISSION)POSITION OR PARKING BRAKE IS EFFECTIVE.
(IN CASE THAT THE DOOR BUZZER SOUNDS INTERMITTENTLY, AUTO DOOR CAN NOT BE OPERATED.)
BEFORE OPERATING THE AUTO DOOR, PLEASE CHECK THE STEP AREA.

MK577932
T77088



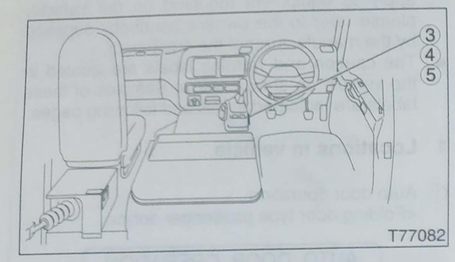
T77081

② Tyre placard

TYRE SIZE, LOAD AND SPEED RATING	COLD INFLATION PRESSURE*		MAXIMUM AXLE LOADING	
	FRONT	REAR	FRONT	REAR
205/85R16 117/115L LT	600kPa	425kPa	2600kg	3800kg

* AT MAXIMUM AXLE LOAD BE64 P/No. MK526803

T77089



T77082

③ Shift lock
<Automatic transmission vehicle>

SHIFT LOCK
• PLEASE OPERATE SHIFT LEVER WITH TREADING ON BRAKE PEDAL
• WHEN YOU STOP ENGINE, PLEASE PUT SHIFT LEVER ON [P] POSITION, THEN TAKE KEY OFF

KNOB FOR RELEASE
IN AN EMERGENCY, PULL THE KNOB FORWARD TO RELEASE SELECTOR LEVER.

T77090

④ Driving downhill slopes
<Automatic transmission vehicle>

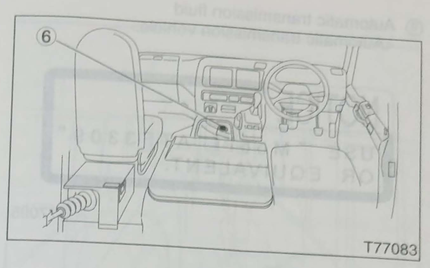
CAUTION
ON LONG OR STEEP DOWNHILL SLOPES, USE THE ENGINE BRAKE BY CHOOSING METHODS FROM BELOW.
TURN THE OVERDRIVE SWITCH **OFF** OR SHIFT DOWN TO **3**, **2** OR **L** RANGES.
MK526585

T77091

⑤ When the oil temp warning lamp lights up
<Automatic transmission vehicle>

CAUTION
IF THE T/M OIL TEMP WARNING LAMP LIGHTS UP IN CLIMBING, STOP PROMPTLY OR DO SHIFT DOWN.
IF THE LAMP STILL STAYS ON AFTER SHIFT DOWN, STOP PROMPTLY.
ME513214

T77092



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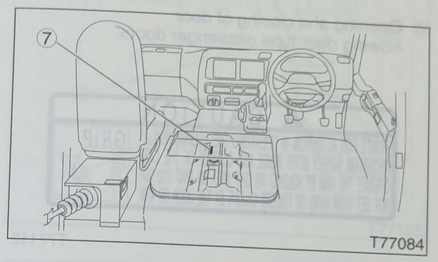

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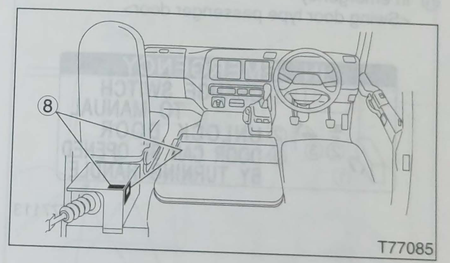


T77085

⑥ Pressure cap

T77124

⑦ Engine oil

ふそう純正エンジンオイル
S－3（CD級）以上を御使用下さい
USE DIESEL ENGINE OIL
API SERVICE CD OR HIGHER GRADE

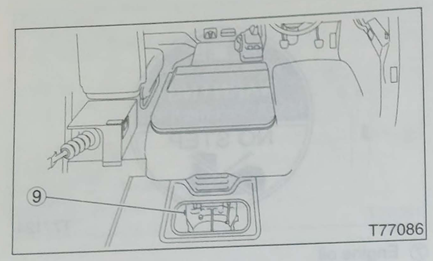
Z10084

⑧ In emergency
<Folding door type passenger door>

T77093

IN EMERGENCY
CHANGE SWITCH IN RED AREA TO MANUAL, DOOR CAN BE OPENED BY HAND.

T77094



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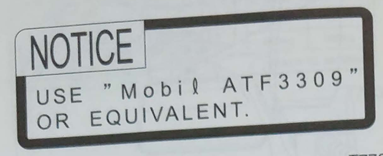
⑨ Automatic transmission fluid
<Automatic transmission vehicle>



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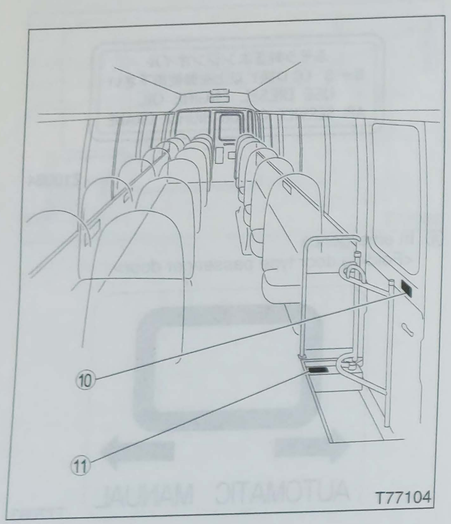


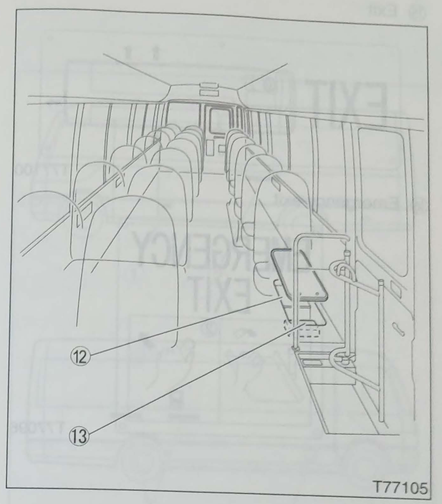
T77104

⑩ Opening and closing of door
<Swing door type passenger door>

T77112

⑪ In emergency
<Swing door type passenger door>

T77113

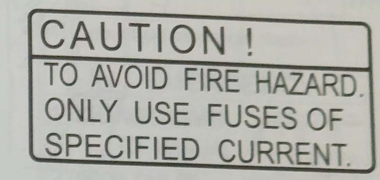


T77105

⑫ Battery

Z10710

⑬ High-current fuse



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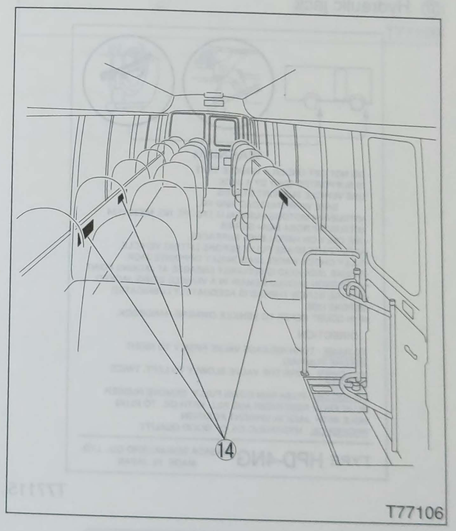
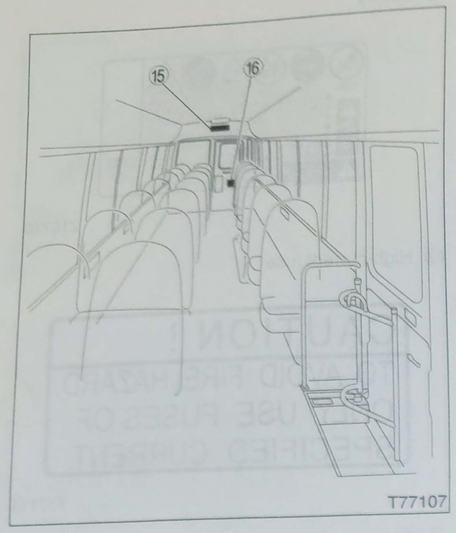


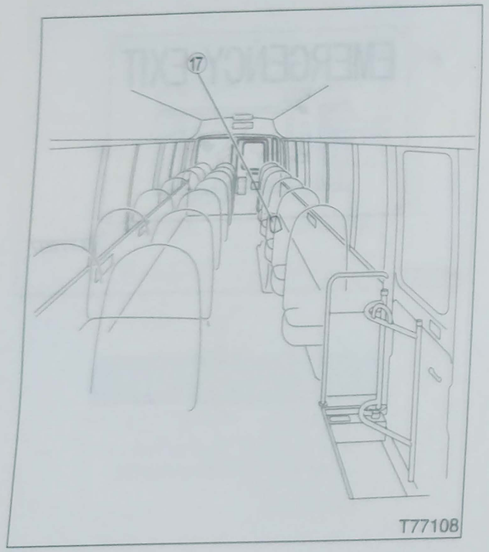
T77106

⑭ Emergency exit

T77097



T77107



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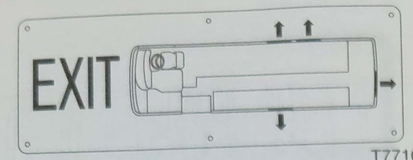
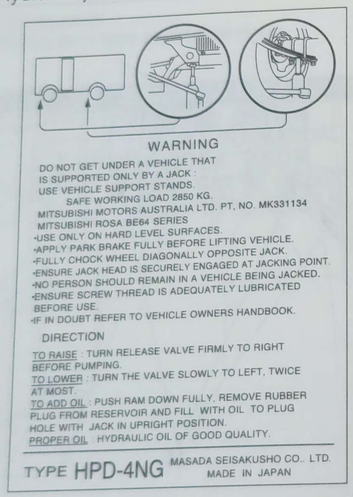


T77100

⑯ Emergency exit

T77096

⑰ Hydraulic jack



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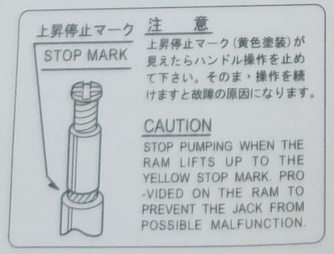

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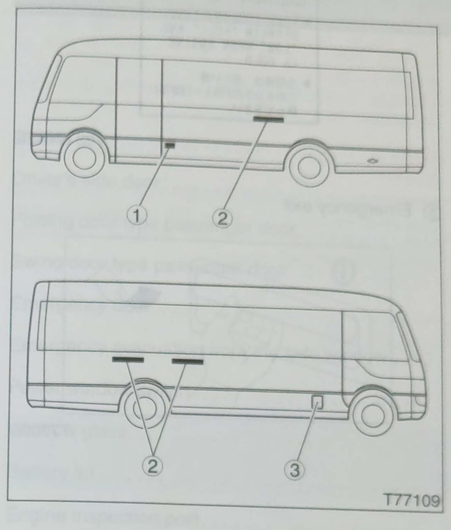
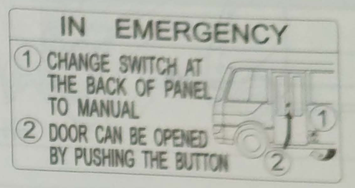


T77109

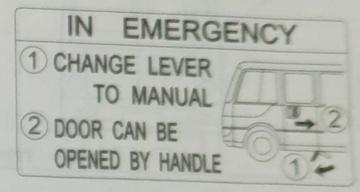
2 Locations outside vehicle

① In emergency
<Folding door type passenger door>



T77101

<Swing door type passenger door>



T77102

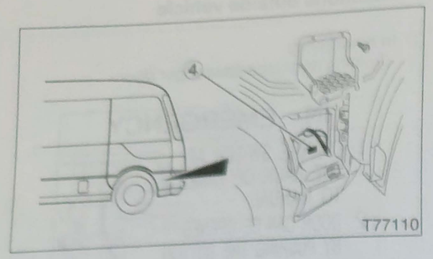
② Emergency exit

T77099

③ Fuels

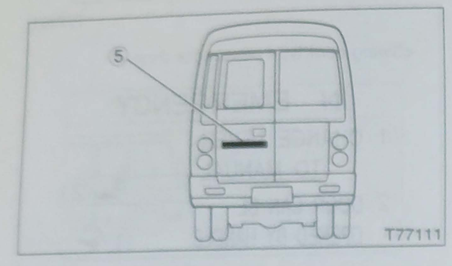
T77117

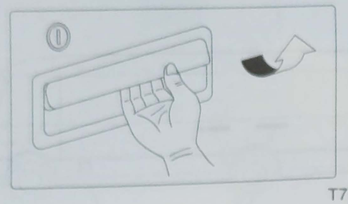
④ Coolant



T76475

⑤ Emergency exit

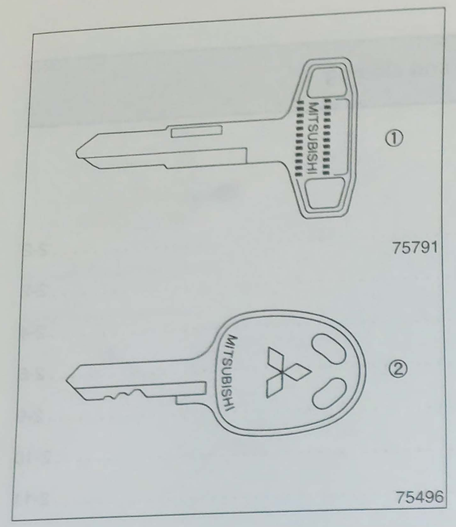




T77098

Door opening and closing

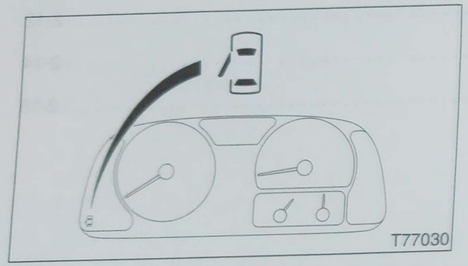
Starter key 2-2
Driver's side door 2-2
Folding door type passenger door 2-4
Swing door type passenger door 2-6
Emergency door 2-9
Emergency evacuation from the side window 2-10
Power window switch 2-11
Window glass 2-12
Battery lid 2-12
Engine inspection port 2-12
Getting on and off the bus 2-14
Side view confirmation window 2-15



Starter key

Two starter keys ① are provided. Either can be used to start or stop the engine, and to lock or unlock the doors.
There is a special key ② for the folding door type passenger door.

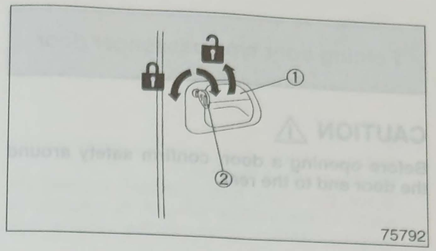
NOTE:
Write down the number of each key. If you should lose your key and you know the number, you can order a replacement from the nearest authorized MITSUBISHI FUSO dealer.

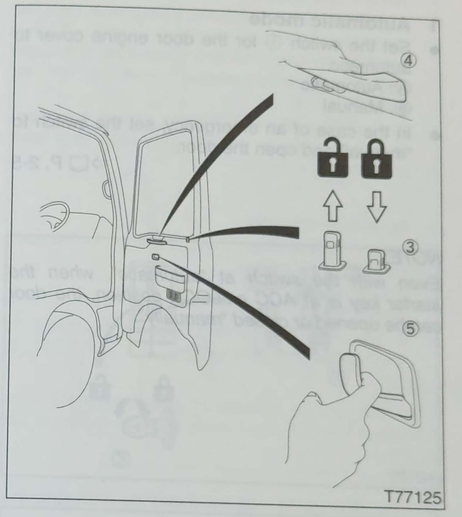


Driver's side door

WARNING ⚠

- **Before opening the door, stop the bus and confirm safety at the front and rear. If the door is opened carelessly, it may hit against another ongoing vehicle or pedestrian, resulting in very serious injury.**
- **Close the door securely, and check that the door-ajar warning lamp is off. If you started driving with the door ajar, the door could suddenly open, resulting in an accident.**
- **Do not open or close the door while holding anything other than the pull handle.**





1 From the Outside

- Pull the outer handle ① toward you and open the door.
- The door can be opened or locked with the starter key ②.
  If you push (lock) the lock knob ③, then shut the door while keeping the outer handle pulled out toward you, you can lock the door without using the starter key.
  Be careful not to forget to remove the starter key.

2 From the Inside

- Pull out the pull handle ④ and shut the door securely. If the door is only half shut, reshut it.
- When the lock knob ③ is pressed down, the door locks. When you pull out the knob, the door unlocks.
- To open the door, pull out the inner handle ⑤ and push the door outward.

CAUTION ⚠

If the door is shut while holding anything other than the pull handle, breakdowns can result.

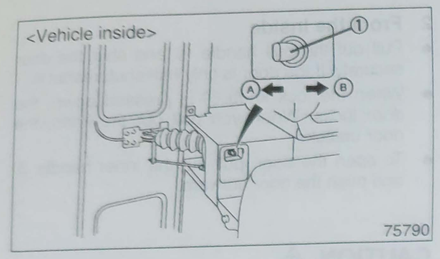
NOTE:

- *When locking a door from outside without using the starter key, always do so only after removing the key.*
- *To prevent theft, when leaving the vehicle, remove the starter key and lock the doors. Also, don't forget to shut door windows. If children are present, be sure to always take them with you.*

Folding door type passenger door

CAUTION ⚠

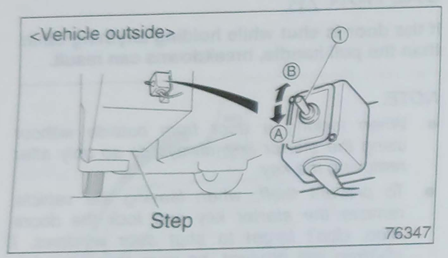
Before opening a door, confirm safety around the door and to the rear.



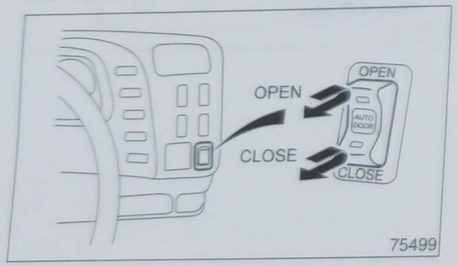
1 Automatic mode

- Set the switch ① for the door engine cover to automatic.
  Ⓐ: Automatic
  Ⓑ: Manual
- In the case of an emergency, set the switch to "manual" and open the door.

⇨ P. 2-5



NOTE:
Even with the switch at "automatic", when the starter key is at ACC or LOCK position, the door can be opened or closed "manually".



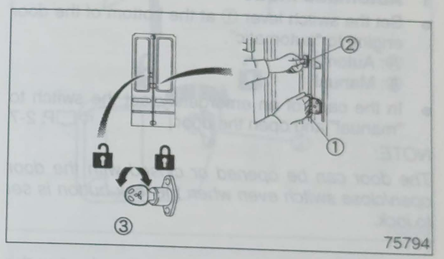
The door can be opened and closed using the door switch.

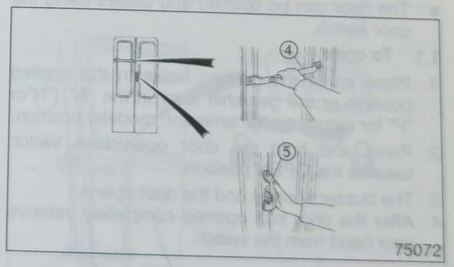
1.1 To open

1. Place either the parking brake in the applied position or the gearshift lever in the "N" ("N"or "P" for automatic transmission models) position.
2. Press and hold the door open/close switch towards the OPEN position.
3. The buzzer sounds and the door opens.
4. After the door has opened completely, remove your hand from the switch.

1.2 To close

1. Press and hold the door open/close switch towards the CLOSE position.
2. The buzzer will sound and the door closes.
3. After the door has closed completely, remove your hand from the switch.





NOTE:

- *Accelerator interlock mechanism*
  Whilst the door is open and the engine is running, the accelerator interlock mechanism will be activated making it impossible to step on the accelerator when;
  - *The gearshift lever is shifted to a position other than "N" ("N" or "P" for automatic transmission models) and*
  - *The parking brake is not applied.*
- *Open and close the door while the engine is running.*
- *If the door is opened or closed immediately after the engine has been turned on, or if the door is opened and closed repeatedly, vacuum pressure might not be adequate and the door might not open or close fully.*
  In such cases, let the engine run idle for a while, then open or close the door.
  The door might remain half open because the vacuum pressure is inadequate.
  After closing the door, confirm that it has closed completely.

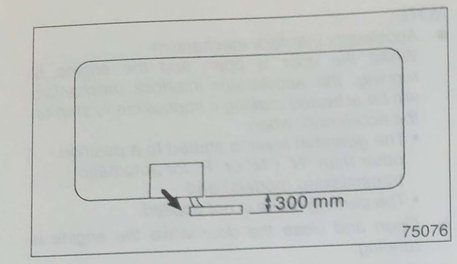
2 Manual mode

2.1 From outside

- While gripping the handle ①, press the push button ② to open.
- Grip handle and pull it toward you to shut door securely.
  Pull handle again if door is ajar.
- Door can be locked with the key ③ to the centre folding door lock.

2.2 From inside

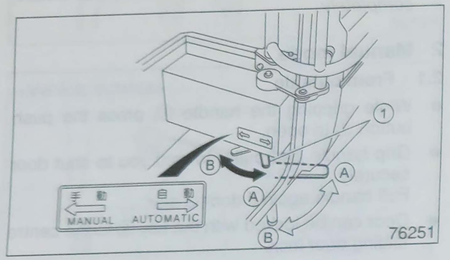
- Grip lock lever handle ④, release lock, then pull lock lever toward you to open.
- Hold grip ⑤ to shut door. Confirm that the lock at the top of the door is engaged securely, then confirm that the door does not open even if you pull the grip.



Swing door type passenger door

CAUTION ⚠

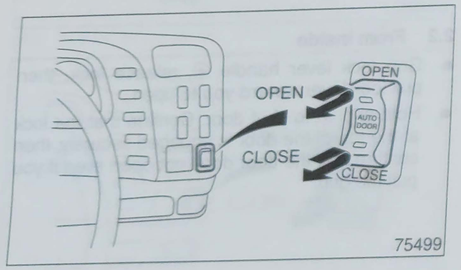
- **Before opening door, confirm safety around the door and to the rear.**
  Since the door fans outward beyond the width of the vehicle when it is opened, be sure to confirm safety at the vehicle side before opening it.
- **Close the door securely, and check that the door-ajar warning lamp is off. If you started driving with the door ajar, the door could suddenly open, resulting in an accident.**
- **Do not hold down the door switch for more than one minute, as this may lead to a fault in the door engine.**



1 Automatic mode

- Set the switch lever ① at the bottom of the door engine to "automatic".
  Ⓐ: Automatic
  Ⓑ: Manual
- In the case of an emergency, set the switch to "manual" and open the door. ⇨ P. 2-7

NOTE:
The door can be opened or closed with the door open/close switch even when the lock button is set to lock.



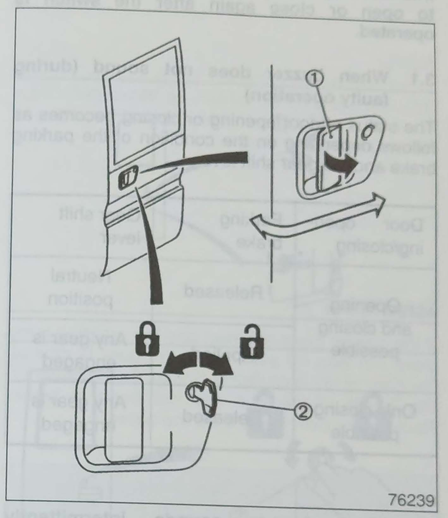
- The door can be opened and closed using the door switch.

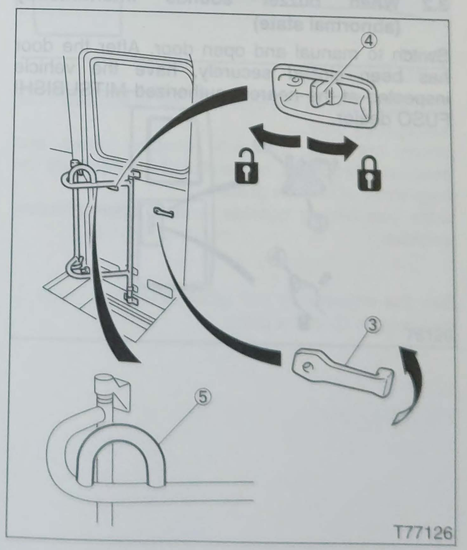
1.1 To open

1. Place either the parking brake in the applied position or the gearshift lever in the "N" ("N"or "P" for automatic transmission models) position.
2. Press and hold the door open/close switch towards the OPEN position.
3. The buzzer sounds and the door opens.
4. After the door has opened completely, remove your hand from the switch.

1.2 To close

1. Press and hold the door open/close switch towards the CLOSE position.
2. The buzzer will sound and the door closes.
3. After the door has closed completely, remove your hand from the switch.





NOTE:
Accelerator interlock mechanism
Whilst the door is open and the engine is running, the accelerator interlock mechanism will be activated making it impossible to step on the accelerator when;

- *The gearshift lever is shifted to a position other than "N" ("N" or "P" for automatic transmission models) and*
- *The parking brake is not applied.*

2 Manual mode

Manipulate the switch lever after setting it to "manual". ⇨ P. 2-6

2.1 From outside

- Open the door toward the rear while pulling the handle ①.
- Door can be locked with the starter key ②.
  You can lock the door without using the starter key by pressing the lock button ④ and closing the door.
  Be careful not to forget to take out the starter key.
- Grip the handle and close it to the front securely.
  If the door remains ajar, close once again.

2.2 From inside

- Turn the inner handle ③ and open the door while pushing on it.
- The door can be locked by sliding the lock button ④ to the right.
- Hold the grip ⑤ and pull it toward you to close the door. If the door remains ajar, close once again.

NOTE:
Do not open or close the door while holding the inner handle.

3 When door does not open after pressing the switch

Take the following corrective measures, depending on how the buzzer sounds.

CAUTION ⚠

If a person or object gets stuck in the door while it is being opened or closed, the buzzer sounds intermittently and the door stops. The door starts to open or close again after the switch is operated.

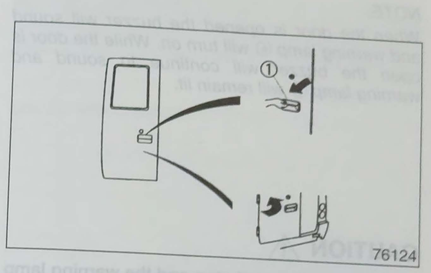
3.1 When buzzer does not sound (during faulty operation)

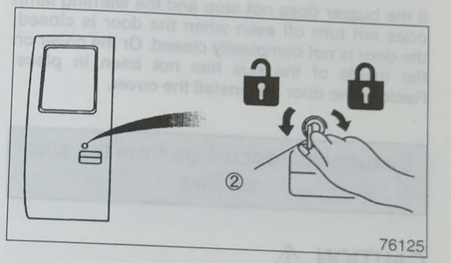
The status of door opening or closing becomes as follows depending on the condition of the parking brake and the gear shift lever.

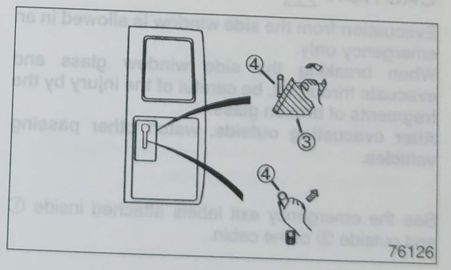
Door opening/closing	Parking brake	Gear shift lever
Opening and closing possible	Released	Neutral position
	Applied	Any gear is engaged
Only closing possible	Released	Any gear is engaged

3.2 When buzzer sounds intermittently (abnormal state)

Switch to manual and open door. After the door has been closed securely, have the vehicle inspected at the nearest authorized MITSUBISHI FUSO dealer.







Emergency door

CAUTION ⚠

Only use the emergency when leaving the vehicle in an emergency.
The emergency door is locked when the starter key is turned to OFF position, and the door is controlled to unlock when the key is turned to ACC position.

1 From outside

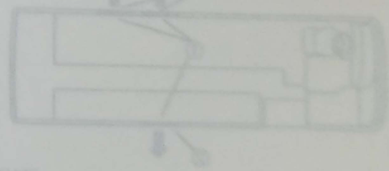
- Pull the handle ① located at the outside of bus to open the emergency door. The buzzer sounds when the door is opened.
- Push the door to close.

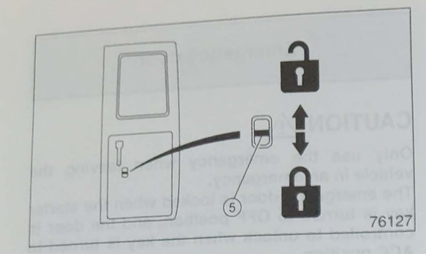
- To unlock the door, insert the starter key ② into the keyhole and turn left.

2 From inside

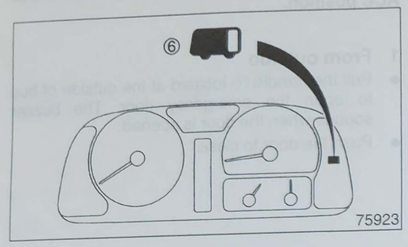
- To open the door
  1. Hold the top of cover ③ and pull it toward you to remove. The buzzer sounds when the cover is removed.
  2. Turn the handle ④ right to open the emergency door.
- To close the door

  Grasp the handle ④ and pull it toward you to close.





- Lift the lock button ⑤ up to release the lock.



NOTE:
When the door is opened the buzzer will sound and warning lamp ⑥ will turn on. While the door is open the buzzer will continue to sound and warning lamp ⑥ will remain lit.

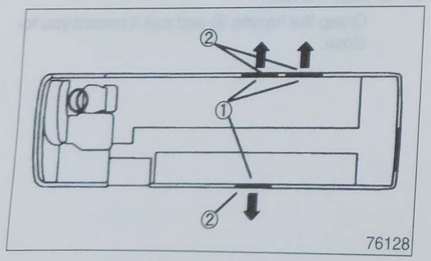
CAUTION ⚠

If the buzzer does not stop and the warning lamp does not turn off even when the door is closed, the door is not completely closed. Or the cover on the inside of the bus has not been in place. Reclose the door and install the cover.

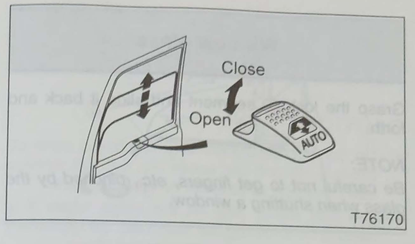
Emergency evacuation from the side window

CAUTION ⚠

Evacuation from the side window is allowed in an emergency only.
When breaking the side window glass and evacuate through it, be careful of the injury by the fragments of broken glass.
After evacuating outside, watch other passing vehicles.



See the emergency exit labels attached inside ① and outside ② of the cabin.



Power window switch

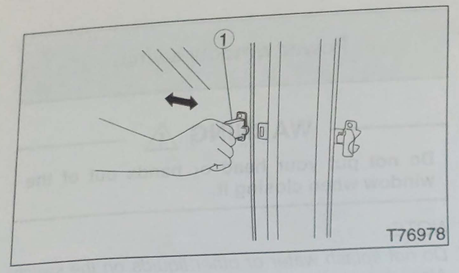
WARNING ⚠

Do not put your head or hands out of the window when closing it.

NOTE:
Do not splash water or other liquids on the switch. Also, do not allow rain to get on the switch.

The front window can be opened and closed with the starter key in the "ON" position.

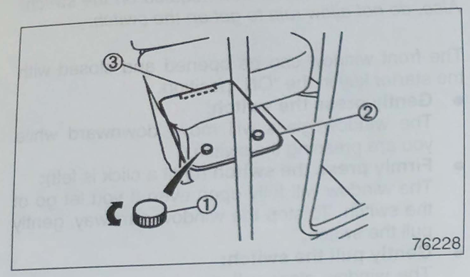
- **Gently press the switch:**
  The window glass will move downward while you are pressing the switch.
- **Firmly press the switch** (until a click is felt)**:**
  The window will fully open even if you let go of the switch. To stop the window part-way, gently pull the switch.
- **Gently pull the switch:**
  The window glass will move upward while you are pulling the switch.
- **Firmly pull the switch** (until a click is felt)**:**
  The window will fully close even if you let go of the switch. To stop the window part-way, gently press the switch.



Window glass

Grasp the lock ① segment and slide it back and forth.

NOTE:
Be careful not to get fingers, etc., pinched by the glass when shutting a window.



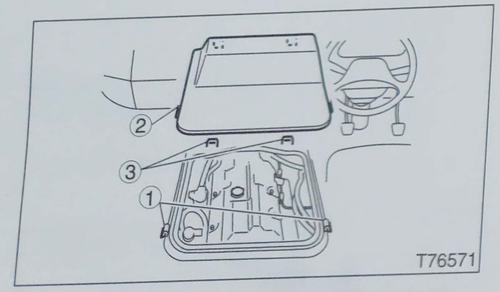
Battery lid

1 To open

1. Turn the lock bolt ① to counterclockwise and remove it.
2. Lift up battery lid ② and remove it.

2 To close

1. Hook the rear side of the lid to the claws ③.
2. While holding down the lid as a whole, turn the lock bolt to clockwise and install it.



Engine inspection port

1 Engine

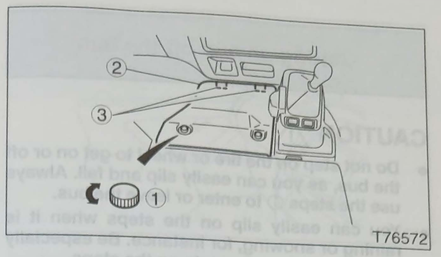
1.1 To open

1. Remove right and left clamps ①.
2. Lift up on engine lid ② and remove it.

1.2 To close

1. Hook the front side of the lid to the claws ③.
2. Lock the left and right clamps.

NOTE:
When closing, lock securely with clamp.



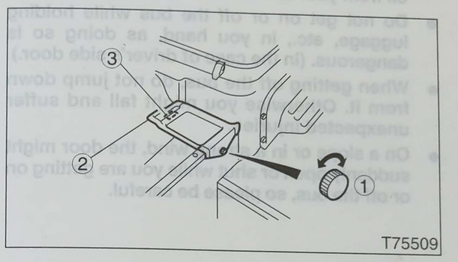
2 Pressure cap (radiator cap)

2.1 To open

1. Turn the lock bolt ① to counterclockwise and remove it.
2. Lift up engine lid ② and remove it.

2.2 To close

1. Hook the front side of the lid to the claws ③.
2. While holding down the lid as a whole, turn the lock bolt to clockwise and install it.



3 Power steering fluid tank

3.1 To open

1. Loosen the lock bolt ①.
2. Raise the lid ② to detach it.

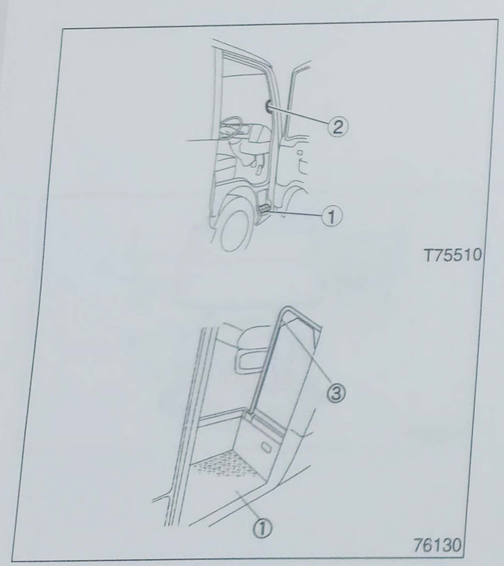
3.2 To close

1. Engage the front of the lid on the hook ③.
2. Fasten the lock bolt to secure the lid.

Getting on and off the bus

CAUTION ⚠

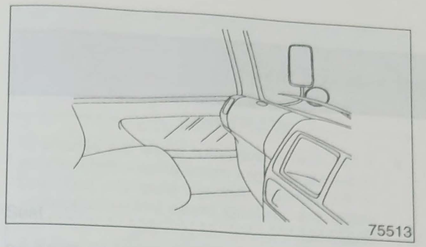
- **Do not step on the tire or wheel to get on or off the bus, as you can easily slip and fall. Always use the steps ① to enter or leave the bus.**
- **You can easily slip on the steps when it is raining or snowing, for instance. Be especially careful if snow or ice gets on the steps.**
- **If grease or oil gets on your shoe sole, there is the danger that you might slip when getting on or off the bus, or slip while operating the brake pedal or clutch pedal. Wipe away grease and oil from your shoes before getting on the bus.**
- **Do not get on or off the bus while holding luggage, etc., in you hand, as doing so is dangerous. (In the case of driver's side door.)**
- **When getting off the bus, do not jump down from it. Otherwise you might fall and suffer unexpected injuries.**
- **On a slope or in a strong wind, the door might suddenly open or shut while you are getting on or off the bus, so please be careful.**



Hold the grips ②, ③ firmly and place your feet securely on the steps ① when getting on or off.

CAUTION ⚠

Do not get on or off the bus while holding onto anything other than the grips. Otherwise, there might be a breakdown.



Side view confirmation window

This window enables you to confirm safety outside the vehicle by the assistant driver's seat. When turning to left, for instance, confirm safety on the left side by using the side-view confirmation window, together with mirror.

NOTE:

Do not block the view from the side-view confirmation window by pasting papers, etc., onto it or placing objects nearby it.

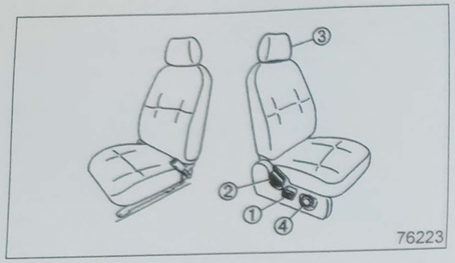
Seat and steering wheel adjustment

Seat 3-2
Seat belt 3-4
Child restraints 3-7
Steering wheel 3-9

Seat

WARNING ⚠

- **If the seat is adjusted while the vehicle is running, it might move excessively, which is dangerous. Always stop the bus and apply the parking brake before adjusting the seat.**
- **After adjusting the seat, check to see if it is stationary by trying to move it. If the seat is not stationary, it might move while the bus is running, which is dangerous.**



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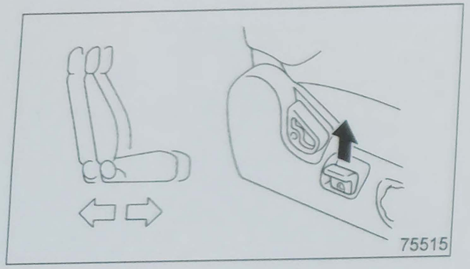
1 Driver's seat

① Slide lever
② Reclining lever
③ Head restraint
④ Height adjuster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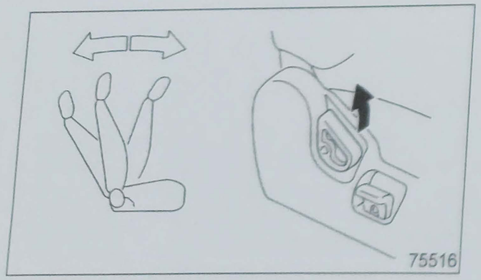
1.1 Seat forward/rear adjustment

While holding slide lever pulled out, adjust seat.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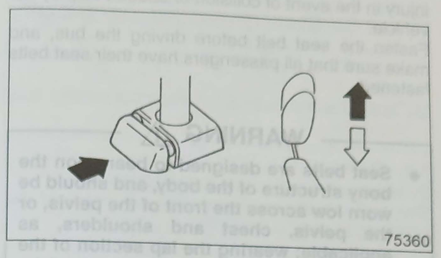
1.2 Reclining adjustment

WARNING ⚠

To recline seat, hold your back or hand against the seat back. If the seat back suddenly returns and hits your face, etc., there could be injuries.

Pull the reclining lever and recline the seat back.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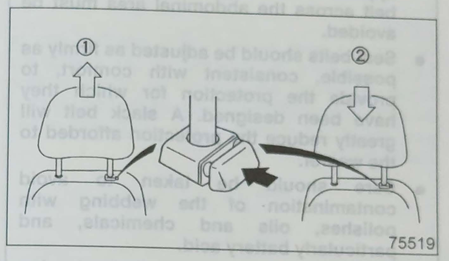
1.3 Head restraint

WARNING ⚠

Adjust head restraint to the proper position and secure it in place.

- Height adjustment

Adjust the height of the head restraint so that its centre fits against the back of your head.
To raise head restraint: Simply pull up on it.
To lower head restraint: Press the head restraint knob and lower head restraint.



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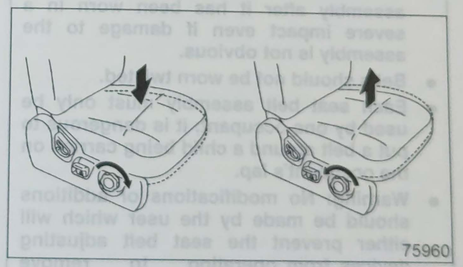
- Head restraint attachment/removal

① To remove head restraint:
Pull up head restraint all the way. Then, while pressing the head restraint knob, remove head restraint.
② To attach head restraint:
Insert the head restraint in place, then press head restraint knob. Push down on head restraint until it stops.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1.4 Up and down position adjustment of seat cushion

Operate the height adjuster to adjust the height of the seat cushion (seating surface).
Turning the height adjuster right, the seat cushion is lowered and retracted a little. Turning left, the seat cushion is raised and advanced a little.

2 Assistant driver's seat

CAUTION ⚠

While riding in the vehicle, please sit properly in your seat like the driver and fasten your seat belt. Otherwise the body might be jerked about easily if there is a collision or sudden braking, and this can be dangerous.

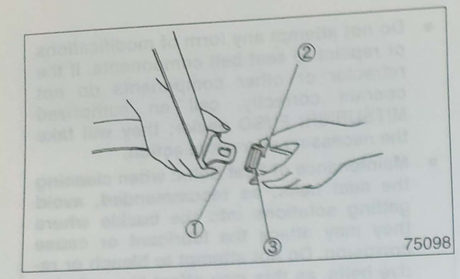
Seat belt

Fasten the seat belt correctly so as to minimise injury in the event of collision or sudden stop by the vehicle.
Fasten the seat belt before driving the bus, and make sure that all passengers have their seat belts fastened.

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 twisted.
- Each seat 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.
- Warning: 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 attempt any form of modifications or repairs to seat belt components. If the retractor or other components do not operate correctly, call an authorized MITSUBISHI FUSO dealer; they will take the necessary corrective action.
- Maintenance of Seat Belts: when cleaning the seat belts, as recommended, avoid getting solutions into the buckle where they may attack the lubricant or cause corrosion. Do not attempt to bleach or re-dye belts, as this may affect the webbing strength.



1 Three-point seat belt with ELR (emergency locking retractor) attached

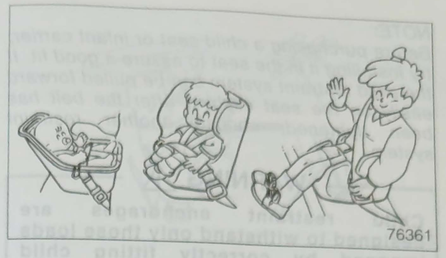
1.1 Attachment

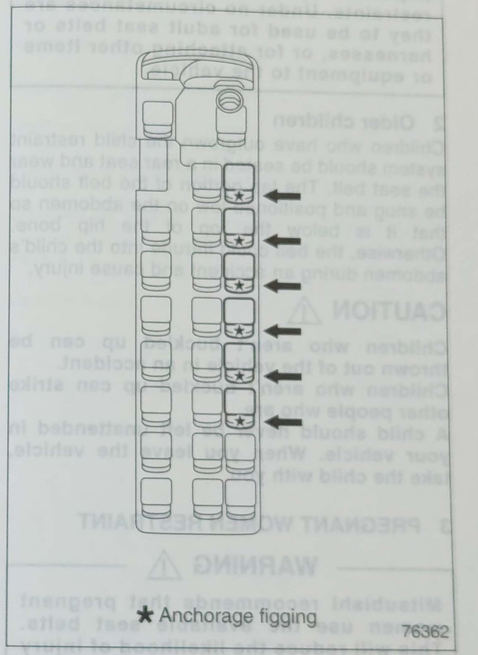
1. Sit deep in the seat with your back straight.
2. Pull gently on the belt tongue ① and insert it into the buckle ② until you hear a clicking sound.
   Make sure the belt is not twisted when you fasten it.
3. Apply the lap belt as low as possible over your hip bone.

1.2 Removal

To remove the belt, press the red button ③.
The belt retracts automatically, so just hold the belt tongue as you return it.

NOTE:
Normally, a seat belt with ELR attached can be freely extended or retracted. In an emergency, however, the belt automatically becomes stationary so as to protect the body. Pull out the belt slowly. If you pull it out quickly, it may stop and remain stationary midway.





Child restraints

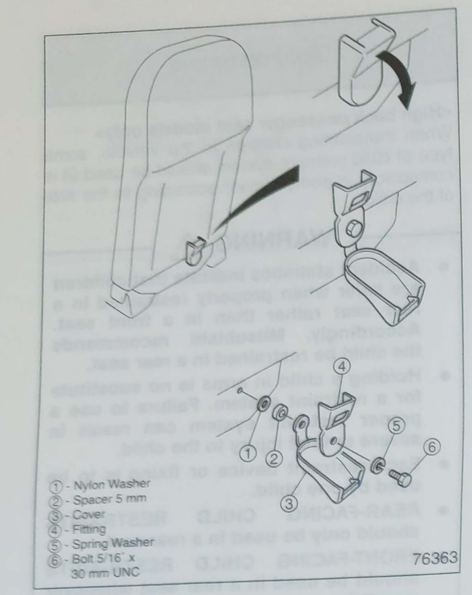
<High back passenger seat models only>
When transporting children in the vehicle, some type of child restraint system should be used (it is compulsory in some states) according to the size of the child.

WARNING ⚠

- **Accident statistics indicate that children are safer when properly restrained in a rear seat rather than in a front seat. Accordingly, Mitsubishi recommends the child be restrained in a rear seat.**
- **Holding a child in arms is no substitute for a restraint system. Failure to use a proper restraint system can result in severe or fatal injury to the child.**
- **Each restraint device or fixing is to be used by one child.**
- **REAR-FACING CHILD RESTRAINTS should only be used in a rear seat.**
- **FRONT-FACING CHILD RESTR-AINTS should be used in a rear seat whenever possible.**

1 INFANTS AND SMALL CHILDREN

- For children too young to sit, use a Standards Association of Australia approved baby restraint. For small children whose height when seated allows the shoulder belt to lie in contact with the face or the throat, an approved child seat should be used.
- The child restraint system should be appropriate for the child's weight and height and properly fit the vehicle. For a higher degree of safety, THE CHILD RESTRAINT SYSTEM SHOULD BE INSTALLED TO THE REAR SEATS PROVIDED WITH ANCHORAGE FITTINGS.
- Anchorage fittings are provided on the rear of the six outboard passenger seats immediately behind the driver. Refer illustration.
- For further information on the most suitable type, obtain a copy of the pamphlet "A Simple Guide to Child Restraints" (published by the Federal Office of Road Safety) from your State Road Safety Office.
- When installing a child restraint system, refer to the instructions provided by the manufacturer of the restraint system.
  Failure to do so can result in severe or fatal injury to a child. When not in use, keep the child or infant seat secured with the seat belt or remove it from the vehicle in order to prevent injury to the child.



NOTE:
Before purchasing a child seat or infant carrier, try installing it in the seat to assure a good fit. If the child restraint system can be pulled forward easily on the seat cushion after the belt has been tightened, choose another restraint system.

WARNING ⚠

Child restraint anchorages are designed to withstand only those loads imposed by correctly fitting child restraints. Under no circumstances are they to be used for adult seat belts or harnesses, or for attaching other items or equipment to the vehicle.

2 Older children

Children who have outgrown the child restraint system should be seated in a rear seat and wear the seat belt. The lap portion of the belt should be snug and positioned low on the abdomen so that it is below the top of the hip bone. Otherwise, the belt could intrude into the child's abdomen during an accident and cause injury.

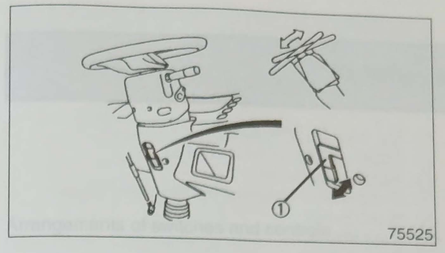
CAUTION ⚠

Children who aren't buckled up can be thrown out of the vehicle in an accident.
Children who aren't buckled up can strike other people who are.
A child should never be left unattended in your vehicle. When you leave the vehicle, take the child with you.

3 PREGNANT WOMEN RESTRAINT

WARNING ⚠

Mitsubishi recommends that pregnant women use the available seat belts. This will reduce the likelihood of injury to both the woman and the unborn child. The lap belt should be worn across the thighs and as snug against the hips as possible, but not across the waist. The woman's doctor should be consulted if there are any questions.



Steering wheel

Move the steering wheel to an appropriate angle while pulling up on the lock lever ①. When you remove your hand from the lever after adjusting, the lever returns to its original position. If the lever does not return, swing the steering wheel back and forth a little until the lock lever returns.

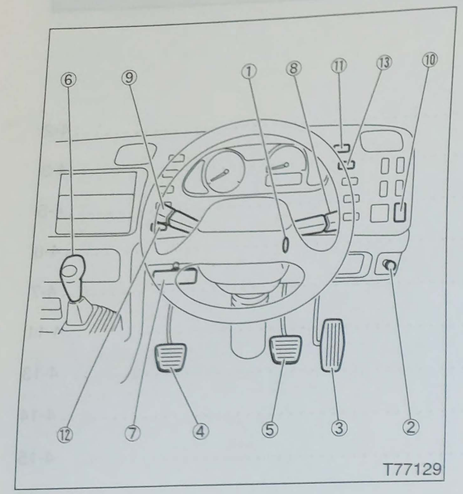
WARNING ⚠

- **After adjusting the steering wheel, try to move it so as to confirm that it remains stationary.**
- **Adjust the steering wheel only when the vehicle is stopped. Never adjust while the vehicle is running as doing so is extremely dangerous.**
- **Do not sit on the steering wheel or deliberately apply excessive loads to it.**

Switches and controls

Arrangements of switches and controls 4-2
Starter switch 4-3
Warm up switch 4-5
Engine idling control volume 4-6
Starting the engine 4-7
Warming up the engine 4-11
Stopping the engine 4-13
Pedals 4-14
Gear shift lever 4-15
Parking brake 4-16
Combination switch 4-17
Rear view mirror 4-21

Arrangement of switches and controls



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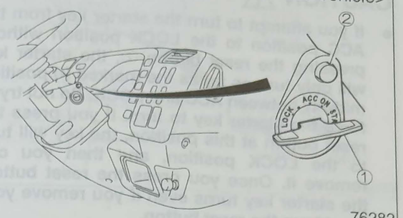
① Starter switch
② Engine idling control volume
③ Accelerator pedal
④ Clutch pedal <Manual transmission vehicle>
⑤ Brake pedal
⑥ Gear shift lever
⑦ Parking brake
⑧ Combination switch
- Lighting switch
- Passing/dimmer switch
- Turn signal switch

⑨ Combination switch
- Exhaust brake switch
- Wiper switch
- Washer switch

⑩ Automatic door switch
⑪ Roof ventilation switch ⇨ P. 1-10
⑫ Hazard warning lamp switch
⑬ Warm up switch

<Except automatic transmission vehicle>



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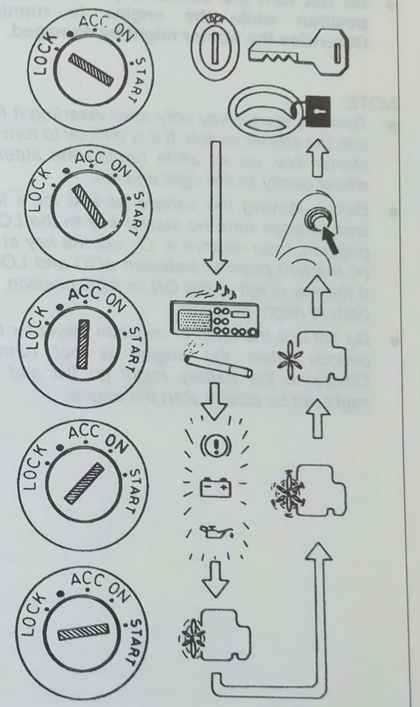

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Starter switch

WARNING ⚠

Never turn the starter key to any other position but ON while the vehicle is running. If it is switched to the ACC position, the engine stops and the following dangerous conditions arise.
- **The brakes become extremely poor in effectiveness.**
- **If the vehicle is equipped with power steering, the steering wheel will become very difficult to turn.**
- **The electrical circuitry stops operating. This can also cause breakdown of electrical components.**

When the starter key is removed, the steering wheel locks and cannot be turned.

LOCK : This is the position where the starter key ① is inserted and removed.
Room lamp and hazard lamp can be used.
To put the starter key in the LOCK position, set it between the ACC and LOCK position (where the • mark is), press the reset button ② and turn the key. When the starter key is removed, the steering wheel locks.
There is no reset button in automatic transmission vehicles. Also, the starter key cannot be pulled out if the range selector lever is not in the P position.

ACC : This is the position where the engine stops. The audio equipment and cigarette lighter can be used in this position.

ON : This is the position where the engine runs. All electrical circuits operate at this position.

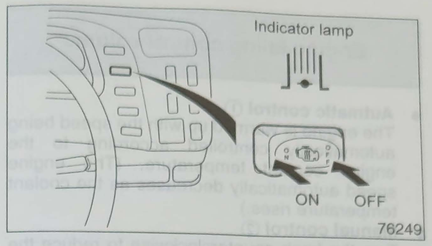
START: This the position where the engine is started.
After the engine has started, remove your hand from the starter key. It will return to the ON position automatically.

CAUTION ⚠

- **If you attempt to turn the starter key from the ACC position to the LOCK position without pressing the reset button ②, the starter key will only turn as far as the marked (•) position midway between ACC and LOCK. Do not try to force the starter key to turn. If you press the reset button at this position, the key will turn to the LOCK position, and then you can remove it. Once you press the reset button, the starter key turns even if you remove your hand from the reset button.**
- **Do not turn the starter key to the START position while the engine is running. Otherwise the starter might be damaged.**

NOTE:

- *Turn the starter key only after inserting it fully into the starter switch. If it is difficult to turn the starter key, do so while turning the steering wheel gently to the right and left.*
- *Before leaving the vehicle parked for a long time, always turn the starter key to the LOCK position, then remove it. Or, set the key at the (•) marked position between ACC and LOCK. If the key is left at the ON or ACC position, the battery might go dead.*
- *Do not use the radio or cassette player for long periods while the engine is not running. Otherwise the battery might go flat and you might not be able to start the engine.*



Warm up switch

To warm up the engine quickly or make the heater work more effectively with the vehicle stationary, turn the warm-up switch to "ON".

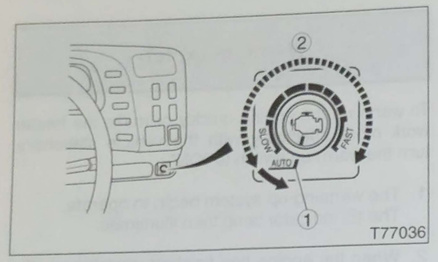
1. The warming-up system begin to operate. The indicator lamp then illuminate.
2. When the engine has finished warming up, the warm-up system stops operating automatically. The indicator lamp then goes off.
3. Once the engine has warmed up or the heater is working satisfactorily, turn the warm-up switch to "OFF".

For the warming-up operation, refer to Page 4-11.

NOTE:

- *When you start driving, be sure to turn the warm-up switch to "OFF" to deactivate the warm-up system.*
  The warm-up switch doesn't become automatically "OFF".
  Be sure to place the engine idling control volume in the "AUTO" position before turning the warm-up switch to "ON". If the engine speed is raised while the engine idling is under manual control, black smoke may be emitted from the exhaust.
- *The warm-up system is used to make the engine warm up more quickly and to make the heater work more effectively when the vehicle is stationary on cold days.*

  When the warm-up system is in operation.
  • The engine's idling speed automatically increases.
  • The exhaust brake operates.
  As a result, the coolant warms up more quickly.



Engine idling control volume

- **Autmatic control** ①
  The engine is warmed up with the speed being automatically controlled according to the engine coolant temperature. (The engine speed automatically decreases as the coolant temperature rises.)
- **Manual control** ②
  Turn the knob counterclockwise to reduce the engine speed.
  Turn it clockwise to increase the engine speed.
  The engine idling control knob should normally be placed in the automatic control position.

Engine idling speed
Approx. 650 rpm

CAUTION ⚠

- **Turn the engine idling control knob gently, as forcing it could damage the internal mechanism.**
- **If the idling speed is set too low using manual control, the engine may become excessively noisy. Make sure the idling speed is correct.**

NOTE:

- *Keep the engine idling control volume in the "AUTO" position while driving. If it is in a raised engine speed position, the vehicle could move suddenly on starting, or the clutch may wear prematurely on a manual transmission vehicle.*
- *If you turn the warm-up switch to "ON" when the engine speed is raised manually using the engine idling control volume, black smoke is likely to be emitted. Place the engine idling control volume in the "AUTO" position before turning the warm-up switch to "ON".*

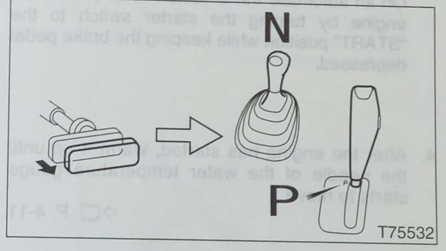
Starting the engine

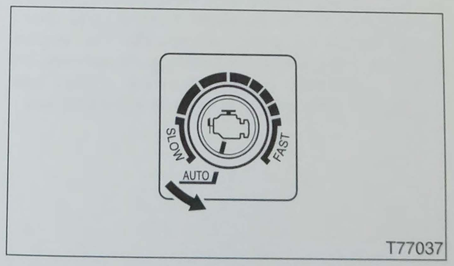
DANGER ⚠

Where ventilation is poor, as in garages, do not start the engine or warm it up. The exhaust can cause carbon monoxide poisoning.

WARNING ⚠

Do not stop the vehicle with the engine or preheater left running at locations where there are combustible items near the exhaust pipe, such as dry grass or paper.
If combustible items contact the exhaust pipe, fires can result.

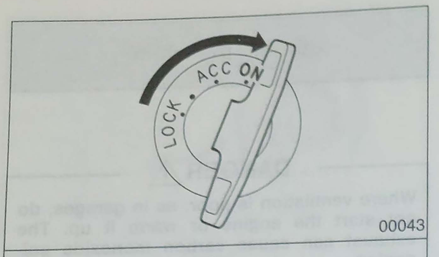




1 Preparation

- Pull the parking brake lever and engage the parking brake securely.
- Put the gear shift lever in neutral.
  Put the range selector lever at [P] for the automatic transmission vehicle.

- Turn the enging idling control volume to the auto-idle setting.



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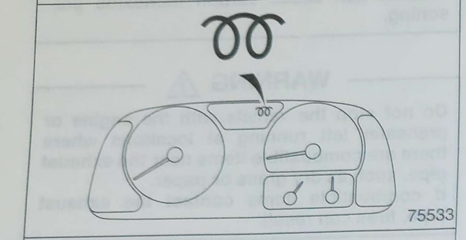
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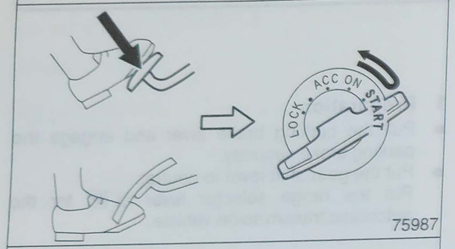

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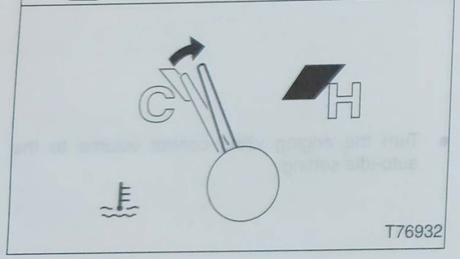


T76932

2 Starting the engine

1. Turn the starter switch to ON position.

2. Check whether the ʊʊ indicator lamp lights.
   - If the ʊʊ indicator lamp does not glow, start by method 3.
   - When the ʊʊ indicator lamp lights. Wait until the ʊʊ indicator lamp extinguishes. When the ʊʊ indicator lamp extinguishes, start by method 3.

3. On a manual transmission vehicle, start the engine by turning the starter switch to the "START" position while stepping on the clutch pedal.
   On an automatic transmission vehicle, start the engine by turning the starter switch to the "START" position while keeping the brake pedal depressed.

4. After the engine has started, warm it up until the needle of the water temperature gauge starts to move.

⇨ P. 4-11

3 Precautions in starting engine

- Do not turn the starter for longer than 15 seconds. Otherwise the starter might fail or the battery could run down.
- If the starter fails to start the engine within 10 seconds, return the starter switch to the "ACC" position, wait for a while, and then try again.
- Avoid turning the starter switch to the "START" position repeatedly at short intervals. The starter and/or engine could break down or become damaged. Wait at least 3 seconds before another attempt.
- If the engine has been started while stepping down on the accelerator pedal, adjust the amount of stepping force on the pedal as the engine runs so that the engine speed does not become high.
- To adjust engine speed immediately after the engine has started, use the engine idling control volume so as to avoid racing the engine.
- After the vehicle has been left unoperated for a long time, or after the engine oil or the engine oil filter element has been replaced, crank the engine first, then start it.

NOTE:

- *In cold climates, if the ʊʊ indicator lamp does not glow, it may be that the engine preheating circuit fuse has blown. Inspect the fuse.*

⇨ P. 12-12

If the ʊʊ indicator lamp blinks, the engine preheating circuit has broken down. Have it inspected at the nearest authorized MITSUBISHI FUSO dealer.

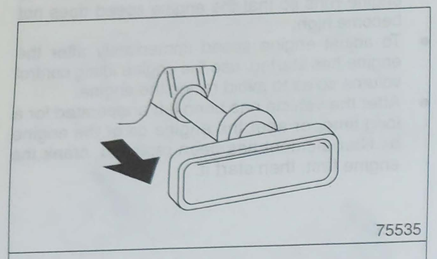
- *A large-capacity battery of good starting performance is recommended for cold climates.*

4 Starting after leaving the vehicle parked for a long time

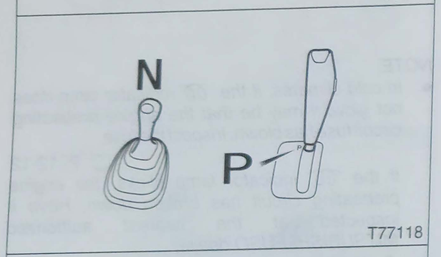
After leaving the vehicle parked for a long time, or after changing the engine oil or oil filter, engine oil inside the engine depletes. Crank the engine as indicated below before starting it.

WARNING ⚠

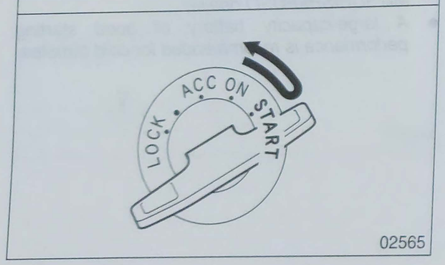
Apply the parking brake securely for safety. Also, put chocks in front of the tires.



4. Apply the parking brake securely.



5. Set the gear shift lever at neutral.
   Set the range selector lever at [P] for the automatic transmission vehicle.



6. Turn the starter key to START position without stepping on the accelerator pedal, and crank the engine for about 15 seconds. The engine might start, but for 15 seconds do not step on the accelerator pedal. When the engine has started, remove your hand from the starter key.

CAUTION ⚠

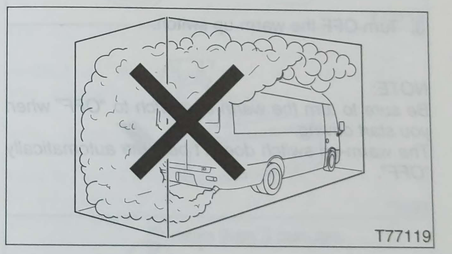
If the vehicle has been parked for a long period of time, be sure to crank the engine with no load to protect the turbocharger.

Warming up the engine

CAUTION ⚠

- **Racing the engine immediately after it has started causes excessive wear of cylinders and pistons, leading to engine malfunction. Be sure to warm up the engine to operating temperature before full load operation according to the procedures described here.**
- **Too low idling speed may cause abnormal noise.**
  After warming up, be sure to return the engine speed to the appropriate idling speed.

NOTE:
Idling the engine for long time wastes fuel, and is therefore detrimental to environmental protection and resource conservation. So shut down the engine whenever you leave the vehicle, even for a short period.
After the engine has been idling for a relatively long time, white smoke may be given off from the muffler when driving off from a standstill and accelerating. This is a normal effect of the catalytic converter that is located in the muffer, and does not indicate any abnormality.

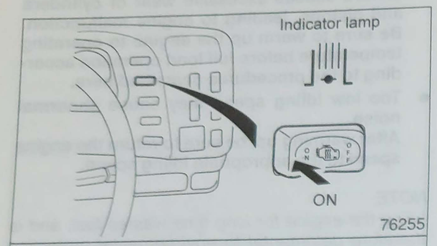


WARNING ⚠

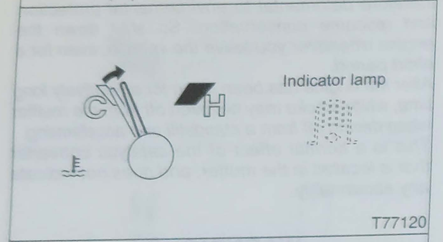
- **Do not warm up the engine in a garage or other closed area. When starting the engine or entering or leaving a garage, do not run the engine for longer than is necessary as the accumulation of exhaust gas in closed areas is very dangerous.**
  Exhaust emissions contain carbon monoxide (CO), which if breathed can cause unconsciousness or death.
- **Make sure that there are no flammables under or rear the parked vehicle, especially close to the exhaust pipe. A fire could be started by the heat from the engine or exhaust pipe.**
- **Do not touch water that emerges from the muffler; it is slightly acidic owing to the oxidizing catalyst inside the muffler. If this water gets onto your skin, rinse it off with plenty of clean water.**

The auto idling function provided by the engine idling control knob automatically adjusts the engine's idling speed. When you wish to shorten the engine's warm-up period, use the following method:

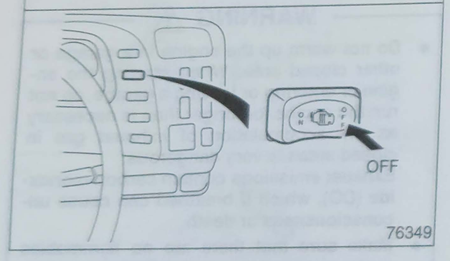
- When the engine is started by pressing the accelerator pedal, gradually return the accelerator pedal.



1. Turn the warm-up switch to "ON", and the warming-up system will run.
   - The indicator lamp will illuminate.
   - Engine's idling speed will be increased.
   - Exhaust brake will be activated.



2. When the temperature of the coolant rises sufficiently, the engine warming-up system stop automatically.
   The indicator lamp then goes out.



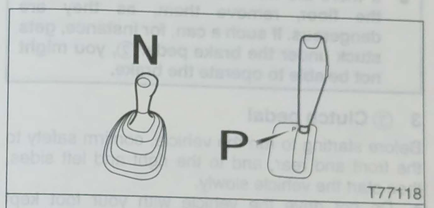
3. Turn OFF the warm-up switch.

NOTE:
Be sure to turn the warm-up switch to "OFF" when you start driving.
The warm-up switch doesn't become automatically "OFF".

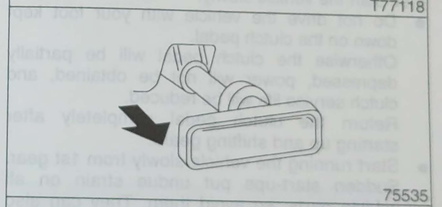
Stopping the engine

WARNING

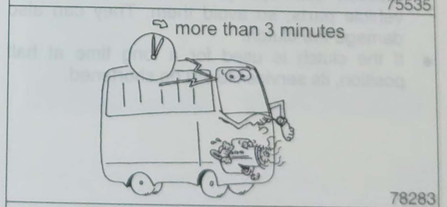
- **The engine and exhaust pipe become hot after the vehicle has been run. Do not park the vehicle where there are combustible items such as dry grass or waste paper. If combustible materials contact the engine or exhaust pipe, it may cause a fire.**
- **Never drive the vehicle under inertial force after turning off the engine. The brakes lose effectiveness and the steering wheel becomes very hard to turn, (vehicle equipped power steering), and this is very dangerous.**
  Also electrical circuitry stops functioning, which can cause electrical devices to malfunction.



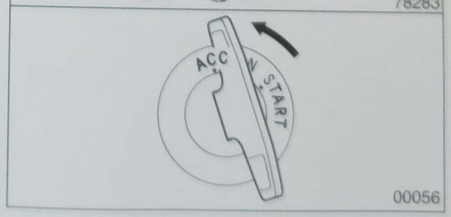
1. Set the gear shift lever to neutral position.
   Set the range selector lever at P for the automatic transmission vehicle.



2. Apply the parking brake securely.

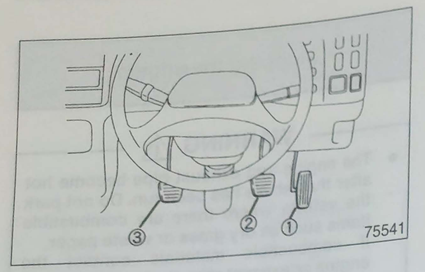


3. Allow the engine to idle for more than 3 minutes before stopping the engine.
   Engine parts become hot, especially after the vehicle has been driven up a hill or at high speeds, so idle the engine so that it can cool down sufficiently.



4. Turn the starter key to ACC position and stop the engine.

NOTE:
If the vehicle rolls backward with a forward gear selected when started on a slope, the engine may be stopped by its reverse operation prevention device. If this happenes, return the starter switch to the ACC position and then restart the engine.



Pedals

1 ① Accelerator pedal

Do not race the engine immediately after it has been started, as doing so can cause the engine to malfunction.
Racing the engine also wastes fuel.

2 ② Brake pedal

Use the brake pedal correctly.

⇨☐ P. 6-5

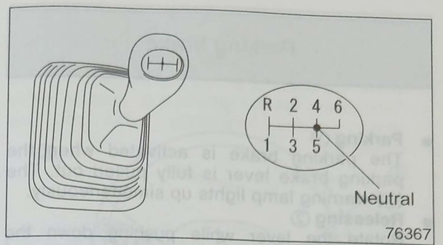
WARNING ⚠

- **Applying the brake suddenly on slippery surfaces, such as wet or snow-covered roads, makes it easy for the vehicle to slide. Please be careful.**
- **If there are items such as empty cans on the floor, remove them, as they are dangerous. If such a can, for instance, gets stuck under the brake pedal ②, you might not be able to operate the brake.**

3 ③ Clutch pedal

Before starting to run the vehicle, confirm safety to the front and rear, and to the right and left sides, then start the vehicle slowly.

- Do not drive the vehicle with your foot kept down on the clutch pedal.
  Otherwise the clutch pedal will be partially depressed, power will not be obtained, and clutch service life will be reduced.
  Return the clutch pedal completely after starting up and shifting gears.
- Start running the vehicle slowly from 1st gear. Sudden start-ups put undue strain on all vehicle parts, so avoid them. They can also damage the clutch.
- If the clutch is used for a long time at half position, its service life will be shortened.



Gear shift lever

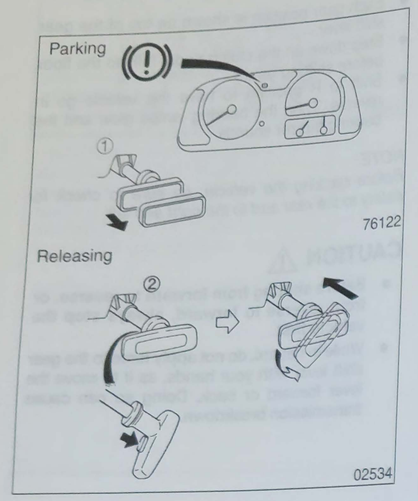
- Each gear position is shown on top of the gear shift lever.
- Step down on the clutch pedal fully to the floor before shifting gears.
- Shift to R position to have the vehicle go in reverse. Then the backing lamps glow and the backing buzzer sounds.

NOTE:
Before backing the vehicle, be sure to check for safety to the rear and to the right and left.

CAUTION ⚠

- **Before shifting from forward to reverse, or from reverse to forward, always stop the vehicle first.**
- **While in neutral, do not apply force to the gear shift lever with your hands, as if to move the lever forward or back. Doing so can cause transmission breakdown.**

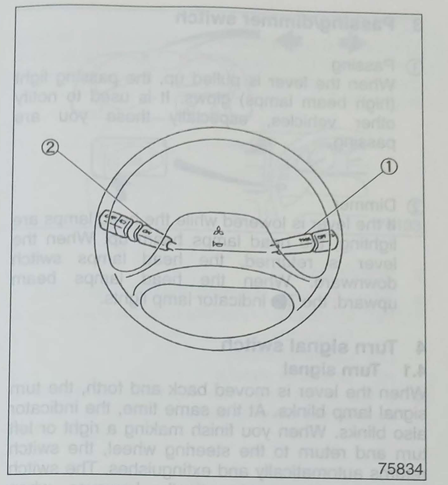
Parking brake

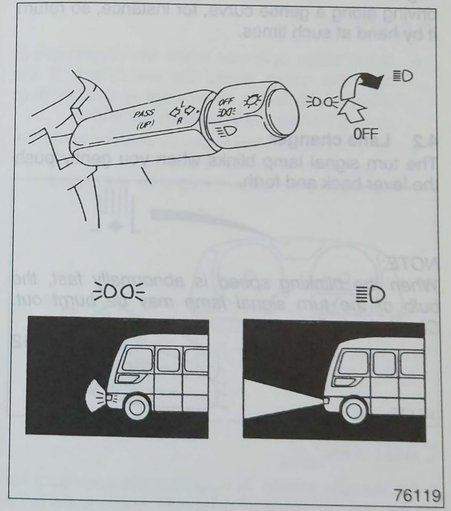


- **Parking** ①
  The parking brake is activated when the parking brake lever is fully pulled out. The (!) warning lamp lights up simultaneously.
- **Releasing** ②
  Rotate the lever while pushing down the button, and then return slowly to its original position while gripping the lever. Make sure that the (!) warning lamp goes out.
- Please see the precautions for parking on page 6-13.

WARNING ⚠

- **Do not use the parking brake to slow down or stop the vehicle except in emergencies.**
- **Illumination of the (!) warning lamp does not necessarily indicate that the parking brake has been fully activated. Be sure to pull the lever all the way.**





Combination switch

1 Arrangement of switches

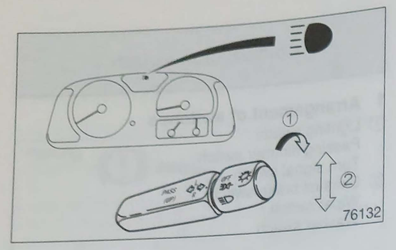
① Lighting switch
Passing/dimmer switch
Turn signal switch
② Exhaust brake switch
Wiper switch
Washer switch

2 Lighting switch

When the switch is turned, the following lamps light.

	Clearance, tail, licence and meter illumination	Head lamp
Position	Light	Extinguishes
Position	Light	Light

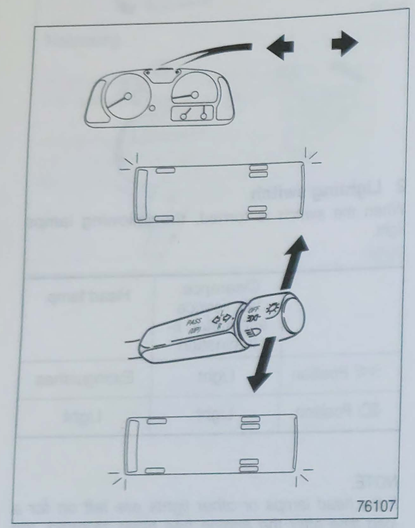
NOTE:
If the head lamps or other lights are left on for a long time after the engine has been stopped, the battery might go dead, and you will not be able to start the engine.



3 Passing/dimmer switch

① Passing
When the lever is pulled up, the passing light (high beam lamps) glows. It is used to notify other vehicles, especially those you are passing.

② Dimmer
If the lever is lowered while the head lamps are lighting, the head lamps beam up. When the lever is returned, the head lamps switch downward. When the head lamps beam upward, the indicator lamp lights.



4 Turn signal switch

4.1 Turn signal

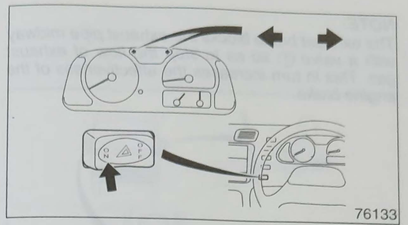
When the lever is moved back and forth, the turn signal lamp blinks. At the same time, the indicator also blinks. When you finish making a right or left turn and return to the steering wheel, the switch returns automatically and extinguishes. The switch might not return automatically, however, when driving along a gentle curve, for instance, so return it by hand at such times.

4.2 Lane changer

The turn signal lamp blinks when you gently push the lever back and forth.

NOTE:
When the blinking speed is abnormally fast, the bulb of the turn signal lamp may be burnt out. Check the bulb.

⇨ P.12-12

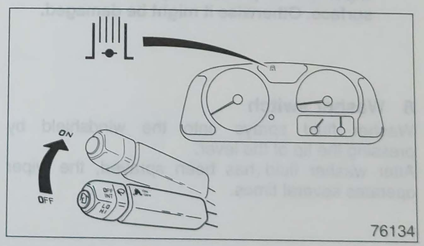


5 Hazard lamp switch

Pressing this switch to the ON position causes all turn signal lamps to flash. The ◀ ▶ indicator lamp will flash at the same time. Pressing the switch to the OFF position stops the lamp flashing.
If you are forced to stop the vehicle on the road, switch on the hazard warning lamps to warn other drivers of your presence and thus prevent a collision. You can switch on the hazard warning lamps with the starter switch in any position.

CAUTION ⚠

Without the engine running, operation of the hazard warning lamps for an extended period may drain battery such that the engine cannot be started.



6 Exhaust brake switch

The exhaust brake bolsters the effectiveness of the engine brake. It can be used as a supplementary brake when descending slopes, for instance, or travelling at high speeds.

WARNING ⚠

Using the exhaust brake on a wet, frozen, snow-covered, or otherwise slippery road surface when the vehicle is lightly loaded or not loaded can cause the tires to slip on the road surface, resulting in a skid. Do not use the exhaust brake on slippery road surfaces.

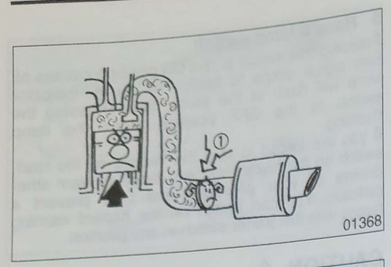
NOTE:
Do not keep the exhaust brake switch in the activation position at all times. Frequent use of the exhaust brake reduces fuel economy. Move the exhaust brake switch between the activation and non-activation positions as necessary according to road and traffic conditions.

- The exhaust brake functions when you press the lever forward after lifting your foot from the accelerator pedal and the clutch pedal. While the brake is functioning, the indicator lamp lights.

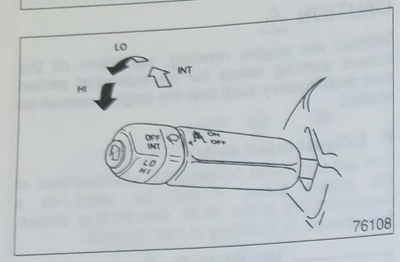
In cases such as the following, the brake releases temporarily. When the original condition is restored, the brake functions again.

- While you are stepping down on the accelerator or clutch pedal.
- While the gear shift lever is in neutral.
- When the ABS functions.
- When the warning lamp lights.

For the automatic transmission vehicle, when the vehicle speed drops to 10 km/h and under, the exhaust brake is automatically released. In some cases, the exhaust brake is released temporarily during gear change.



NOTE:
The exhaust brake blocks the exhaust pipe midway with a valve ① so as to stop the flow of exhaust gas. This in turn increases the effectiveness of the engine brake.



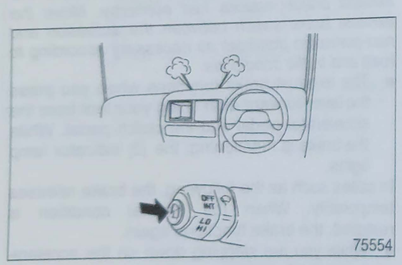
7 Wiper switch

- When the lever is turned, the wiper functions.
  INT: Intermittent operations; turns once very 3-5 seconds.
  LO: Operates slowly
  HI: Operates rapidly.
- If the wiper does not wipe the window well, replace the wiper blades.

⇨ P. 11-61

CAUTION ⚠

- **If the wiper operates while the windshield is dry, the glass could be scratched. If the windshield is dry, always spray washer fluid onto it before wiping it with the wiper.**
- **Do not operate the wiper or washer while the wiper arm is pulled away from the window surface. Otherwise it might be damaged.**



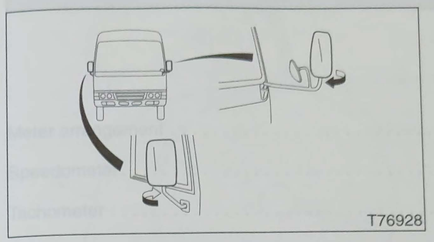
8 Washer switch

Washer fluid sprays onto the windshield by pressing the tip of the lever.
After washer fluid has been sprayed, the wiper operates several times.

CAUTION ⚠

If the washer switch is operated continuously for 20 seconds or more, or operated where there is no washer fluid, the motor might burn out.
For information on washer fluid replenishment and washer fluid concentration.

⇨ P. 11-62



Rear view mirror

When the mirror gets in the way, as for example when turning or passing another vehicle on a narrow road, or when parking at a narrow location, you can fold the mirror down while holding the mirror stay.

NOTE:

- *While driving, be sure to return the mirror to its original position and confirm that you have a good backward view.*
- *While the mirror is extended out, be careful driving on narrow roads.*
- *In making a right or left turn, watch out for the path of the inner wheels, and confirm safety with side mirror and side windows.*

Instruments and warning lamps

Meter arrangement 5-2

Speedometer 5-2

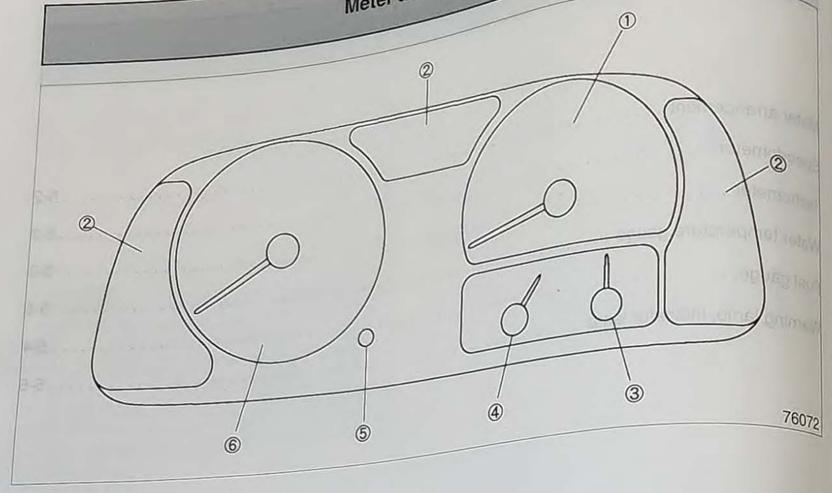
Tachometer 5-3

Water temperature gauge 5-3

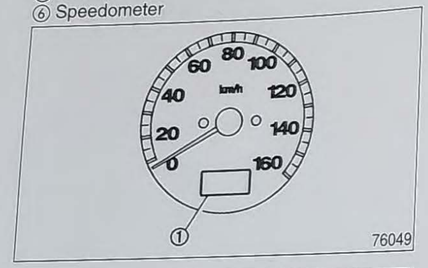
Fuel gauge 5-4

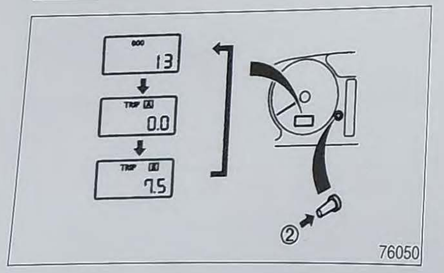
Warning lamp, indicator lamp 5-5

Meter arrangement



① Tachometer
② Warning lamp, indicator lamp
③ Water temperature gauge
④ Fuel gauge
⑤ Reset knob
⑥ Speedometer

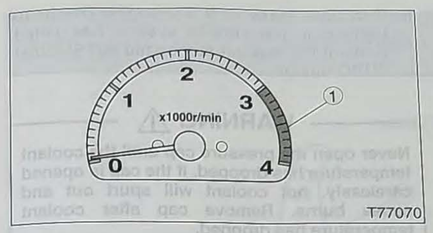




Speedometer

- Speedometer
  Indicates the vehicle speed in km/h.
- Odometer (Integrating mileage meter)/Trip meter (Local mileage meter) ①
  Indicate ODO (Odometer) and TRIP (Trip meter) when the starter switch is "ON".

- Indication is switched every time the trip knob ② is pressed.
  ODO (Odometer): Indicates the total drive mileage in the unit of 1km.
  TRIP (Trip meter): Indicates the drive mileage between two points in the unit of 0.1km
  Two trip meters are provided, which are TRIP "A" and TRIP "B". Each of which indicates the mileage independently.
- Press the trip knob for more than one second to reset the indication. In this case, the trip meter which now indicates the mileage only returns to "0.0".

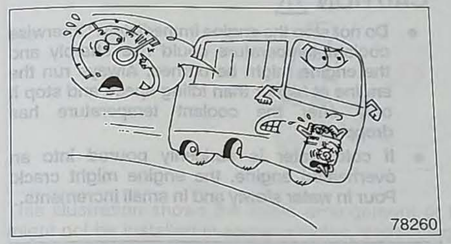


Tachometer

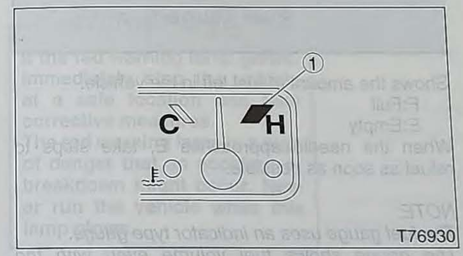
- The tachometer indicates engine speed in revolutions per minute.
- The red zone ① indicates engine overrun. Be careful to avoid this range. Be especially careful when down shifting or descending a hill.
- When the engine overruns, the warning lamp (red) is lit.

CAUTION ⚠

If the engine is overrun, it could be damaged.



NOTE:
Engine overrun refers to the condition in which, conversely, the engine is made to turn by the tires while down shifting or descending a hill, and the speed exceeds the engine's maximum speed.



Water temperature gauge

This gauge shows the temperature of engine coolant. Under normal conditions, the needle is near the middle of the display while the vehicle is running. If the needle goes to the red zone ①, the engine is overheated. Immediately stop the vehicle at a safe location and run the engine at higher than idling speed until the engine cools down.
When the needle returns to the display center, stop the engine and conduct the following inspections and measures.

1. Inspect to see if coolant leaks from radiator or hose, etc.
2. Inspect to see if the fan belt has been severed. Also see if belt tension is normal.
   ⇨ P. 11-40
3. Inspect coolant volume. Replenish if inadequate.
   ⇨ P. 11-34
4. Inspect to see if refuse, etc., has adhered to the radiator front surface.

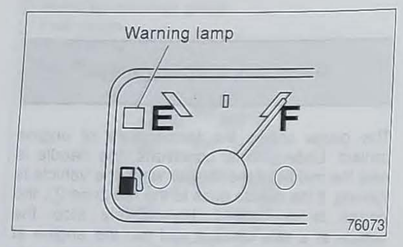
5. If coolant leaks or if the engine overheats frequently, the cooling system has failed. Consult the nearest authorized MITSUBISHI FUSO dealer.

WARNING ⚠

Never open the pressure cap until the coolant temperature has dropped. If the cap is opened carelessly, hot coolant will spurt out and cause burns. Remove cap after coolant temperature has dropped.

CAUTION ⚠

- **Do not stop the engine immediately. Otherwise coolant temperature could rise sharply and the engine might be burned. Always run the engine at higher than idling speed and stop it only after the coolant temperature has dropped.**
- **If cold water is suddenly poured into an overheated engine, the engine might crack. Pour in water slowly and in small increments.**



Fuel gauge

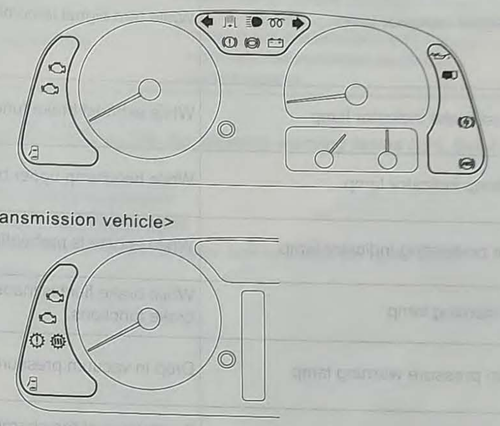
Shows the amount of fuel left in the vehicle.
F:Full
E:Empty
When the needle approaches E, take steps to refuel as soon as possible.

NOTE:
The fuel gauge uses an indicator type gauge. The gauge shows fuel volume even with the starter switch at ACC or LOCK position. If the switch is left as is for a long time, however, the gauge might change slightly.

- Warning lamp
  It is lit when the water is accumulated beyond the specified amount in the fuel filter.
  Drain water from the fuel filter.

⇨📖 P.11-33

Warning lamp, indicator lamp



<Automatic transmission vehicle>

T77071

This illustration shows the basic arrangement of the warning lamp and indicator lamp. These lamps might not be installed in some vehicles, depending on specifications.

WARNING ⚠

If the red warning lamp glows, immediately stop the vehicle at a safe location and take corrective measures.
The red warning lamp is a sign of danger that an accident or breakdown might occur. Never run the vehicle while this lamp glows.

Mark	Name	When lamp glows	Ref. page
	Turn signal indicator lamp	While turn signal lamp blinks.	4-18
	Exhaust brake indicator lamp	While exhaust brake functions.	4-19
	Headlamp indicator lamp	While headlamp upper beam glows.	4-18
	Engine preheating indicator lamp	While engine is preheating.	4-8
	Brake warning lamp	While brake fluid is inadequate or parking brake functions.	5-9
	Vacuum pressure warning lamp	Drop in vacuum pressure of vacuum tank.	5-9
	Charge warning lamp	Breakdown of the charging system.	5-8
	Oil pressure warning lamp	Engine oil pressure drops or engine oil volume decreases.	5-8
	Disc brake warning lamp	Disc brake pad is worn.	5-10
	Emergency door warning lamp	When the emergency door is open the buzzer will sound.	5-10
(Red)	Enginge control warning lamp	Fault in electronic control circuitry of fuel injection system (Drive impossible)	5-10
		When there is engine overrun.	5-3
(Amber)	Engine control warning lamp	Fault in electronic control circuitry of fuel injection system (functionality reduced) (Drive possible)	5-10
ABS	ABS warning lamp	Antilock braking system (ABS) fault.	6-10
	Driver's side door or swing door type passenger door warning lamp	When the driver's side door or swing door type passenger door is open.	2-2 2-6

Mark	Name	When lamp glows	Ref. page
	Automatic transmission fluid temperature warning lamp	When the temperature of the automatic transmission fluid is too high.	7-13
	Automatic transmission warning lamp	When there is a problem with the automatic transmission electrical control system.	7-13

NOTE:
When the starter key is turned from ACC to ON, the following warming lamps light, but if they extinguish thereafter, everything is normal.

- : Extinguishes when parking brake is released
- : Extinguishes when the engine starts
- : Remains extinguished while vacuum in the vacuum tank exceeds the rated value.
- : It lights out in a few seconds.

75574

1 Oil pressure warning lamp

This lamp lights when the starter switch is turned to ON position and extinguishes when the engine starts.
If it glows while the engine is running, the following abnormalities are indicated. Immediately stop the vehicle at a safe location, turn off the engine, and conduct an inspection.

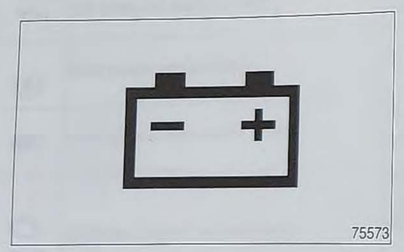
NOTE:
In cold climates, the warning lamp may glow for a while after the engine has been started because then the engine oil viscosity is high.

1.1 Engine oil pressure drops abnormally

1. Inspect engine oil volume and replenish if it is inadequate.
2. Check to see if oil is leaking anywhere on the engine.
3. If oil level is adequate and no oil is leaking, the lubrication system malfunctions.
   Notify the nearest authorized MITSUBISHI FUSO dealer.

CAUTION ⚠

Do not run the vehicle while the oil pressure warning lamp lights. Otherwise you might burn the engine.


75573

2 Charge warning lamp

This lamp lights when the starter key is turned to ON position. It extinguishes after the engine starts and charging of the alternator begins.
If it glows while the engine is running, something is wrong with the charging system. If the lamp glows, immediately stop the vehicle at a safe location, turn off the engine and inspect the following items.

1. Has the fan belt been cut? Is tension on the belt normal?
2. Has the high-current fuse on the charging circuit blown? If so, replace the fuse.
3. If all of the above is normal, it may be that the charging system malfunctions. Consult the nearest authorized MITSUBISHI FUSO dealer.

75571

75572

3 Brake warning lamp

WARNING ⚠

Never run the vehicle while the brake warning lamp lights. Adequate braking power cannot be obtained. The brake will not be effective if brake fluid leaks. The parking brake also could malfunction.

Inspect when the parking brake has been engaged or when brake fluid is below the prescribed level.
If the lamp still lights after releasing the parking brake or while the vehicle is running, immediately stop the vehicle at a safe location, turn off the engine and inspect.

3.1 Brake fluid reduction

1. Inspect the brake fluid level in the brake reservoir tank. Also check for brake fluid leakage.
2. Replenish brake fluid if it is inadequate. Step on the brake pedal several times and see if the brake fluid reduces.
3. If the brake fluid reduces, it indicates that brake fluid is leaking. Consult the nearest authorized MITSUBISHI FUSO dealer.

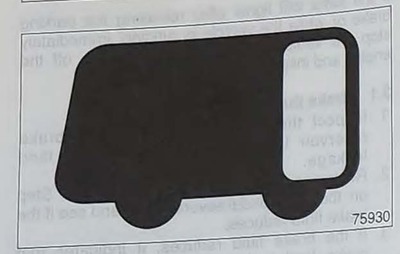
4 Vacuum pressure warning lamp

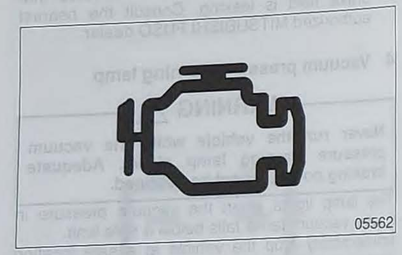
WARNING ⚠

Never run the vehicle while the vacuum pressure warning lamp glows. Adequate braking power cannot be obtained.

The lamp lights when the vacuum pressure in brake vacuum tanks falls below a safe limit.
Immediately stop the vehicle at a safe location and inspect the following items.

1. Adjust the engine to medium-speed and wait for the lamp to extinguish.
2. See if there is any leakage from pipes, etc.
3. If the lamp does not extinguish, or if it extinguishes but then glows again immediately, servicing is required. Consult the nearest authorized MITSUBISHI FUSO dealer.





5 Disc brake warning lamp

WARNING ⚠

To leave this lamp glowing is extremely dangerous as the brakes might not be adequately effective.

The lamp lights when disc brake pad has worn beyond the prescribed limit.
Have the pad replaced by the nearest authorized MITSUBISHI FUSO dealer as soon as possible.

6 Emergency door warning lamp

When the emergency door is opened the buzzer sounds and the warning lamp is turned on. When the door is closed the buzzer will stop and the warning lamp will turn off.

CAUTION ⚠

If this light is left on, after a while the vehicle will not start.

7 Engine control warning lamp

7.1 Illumination of red lamp

Illumination of the red engine control warning lamp indicates a fault in the electronic control circuitry of the fuel injection system. If the lamp illuminates, place the starter switch in "ACC" or "LOCK" position for 5 seconds or longer to reset the computer and then restart the engine. If the lamp stays off, there is no problem. If the lamp illuminates again, stop the engine and contact the nearest authorized MITSHUBISHI FUSO dealer.

7.2 Illumination of orange lamp

Illumination of the orange engine control warning lamp indicates a fault in the electronic control circuitry of the fuel injection system that has caused the system's functionality to decrease. If the lamp illuminates, place the starter swithc in "ACC" or "LOCK" position for 5 seconds or longer to reset the computer and then restart the eingine. If the lamp stays off, there is no problem. If the lamp illuminates again, have your vehicle inspected at an authorized MITSHUBISHI FUSO dealer in the earliest opportunity.

Starting and driving

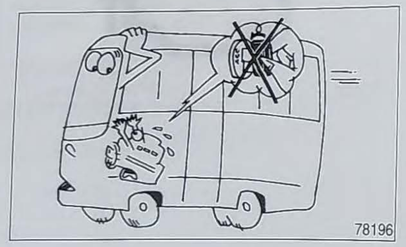
Precautions when setting the vehicle in motion 6-2
Precautions for driving 6-2
Suggestions for economical driving 6-4
Braking 6-5
Antilock braking system (ABS) 6-9
On uphill and downhill roads 6-11
On rough roads and in bad weather 6-12
Parking 6-13
Trailer towing 6-14

Precautions when setting the vehicle in motion

- Use mirrors and direct viewing to confirm that there are no people or obstacles under or near the vehicle.
- Check to see if a warning lamp (red) is glowing.
- Release the parking brake fully.
- Slowly set the vehicle in motion. If you start the vehicle suddenly, or use the clutch while partially depressed for a long time, the clutch could be damaged.

Precautions for driving

Observe the following precautions while driving.
If anything appears abnormal, stop the vehicle immediately and investigate the problem.
If you cannot identify causes and correct the situation, consult the nearest authorized MITSUBISHI FUSO dealer.
See P.7-8 concerning automatic transmission vehicles.

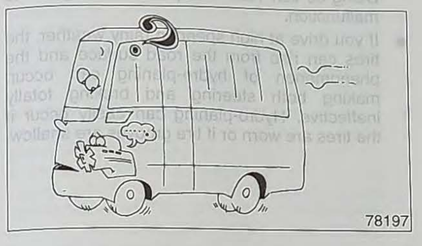


- Never drive the vehicle if the starter switch is at any position except the ON position.
  If the switch is at ACC position, the engine will stop.

WARNING ⚠

If the engine stops:

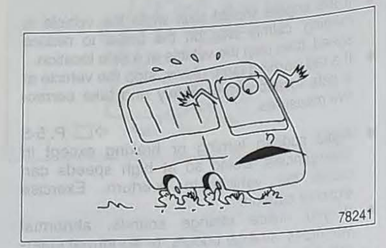
- **Brake vacuum pressure might not be supplied and the brakes might become ineffective.**
- **The power steering unit will stop operating, and steering will become extremely heavy.**
- **Electrical circuitry for warning lamps or meters stops functioning, which could cause electrical components to malfunction.**



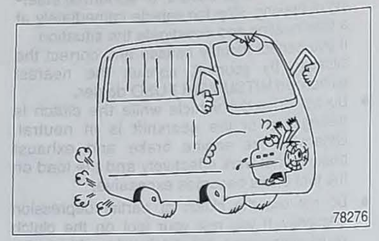
- If the starter key is removed, the steering wheel locks and steering cannot be performed.
- If the engine should stop while the vehicle is running, calmly step on the brake to reduce speed, then stop the vehicle at a safe location.
- If a red warning lamp glows, stop the vehicle at a safe location immediately and take corrective measures.

⇨📖 P. 5-5

- Avoid sudden turning or braking except in emergencies. Doing so at high speeds can cause the vehicle to overturn. Exercise extreme caution.
- If you notice strange sounds, abnormal vibrations, strange odours, or abnormal steering or braking, stop the vehicle immediately at a safe location and investigate the situation.
  If you cannot identify causes and correct the situation by yourself, consult the nearest authorized MITSUBISHI FUSO dealer.
- Do not drive the vehicle while the clutch is disengaged or the gearshift is in neutral. Otherwise the engine brake and exhaust brake do not work effectively and the load on the foot brake becomes excessive.
- Do not use the clutch at partial depression frequently. If you rest your foot on the clutch pedal while driving, the clutch will tend to act as if partially depressed.
  This can reduce the clutch service life.
- When driving on a narrow road or turning to left or right, watch out for the difference in inner wheel travel and use the mirror to confirm safety to the rear.
- Continuous driving at high speed puts an excessive load on the engine and other components. Make allowances for ample time while driving.



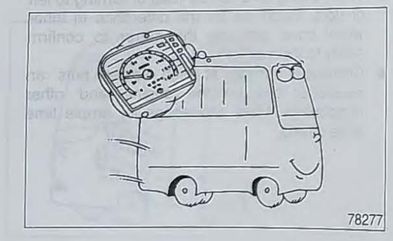
- Do not keep the steering wheel turned all the way for longer than 10 seconds. Doing so can cause the power steering unit to malfunction.
- If you drive at high speed in rainy weather, the tires can rise from the road surface and the phenomenon of hydro-planing can occur, making both steering and braking totally ineffective. Hydro-planing can easily occur if the tires are worn or if tire grooves are shallow.



Suggestions for economical driving

Observe the following so as to conserve fuel and prolong tire service life.

- Engine warm-up is adequate when the water temperature gauge needle starts to move.
- Do no race the engine. This not only wastes fuel; it is also bad for the engine.
- Do not start-up suddenly, accelerate suddenly or brake suddenly.
- While accelerating, shift gears before the optimum engine speed at the gear level is reached.
- Moderate speeds and drive the vehicle at a constant speed as much as possible. Unnecessary acceleration or deacceleration results in excessive fuel consumption.
- Keep the air pressure of tires at a proper level.
- Conduct pre-operational checks and inspect the vehicle on a regular basis.



Braking

When driving downhill, use engine braking and the exhaust brake together with the foot brakes. Do not use just the foot brakes.

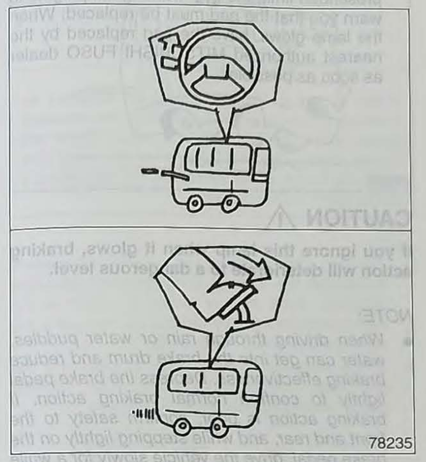
⇨📖.P.6-11

WARNING ⚠

- **If (⊖) or (①) warning lamp lights, stop the vehicle immediately and inspect it.**
  ⇨📖 P. 5-9
- **Do not brake suddenly except in emergencies.**
  When you brake suddenly, the tyres can lock and the vehicle can slip. It is easy for the vehicle to slip especially when there are a few passengers, when the road surface is slippery (rain, ice or snow on the road), or when descending a hill. Sudden braking accelerates wear on the tyres and can cause components to malfunction.
  Sudden braking also produces a strong shock, so please be careful.
- **There are two brake systems, one for front wheels and one for rear wheels. If one brake system malfunctions, the vehicle can still be stopped with the other system if it is normal. In this situation, however, braking power is drastically reduced. Do not drive the vehicle under this condition as it is extremely dangerous.**
- **Do not step up and down on the brake pedal repeatedly. Otherwise vacuum pressure reduces and braking force becomes inadequate.**
- **Do not drive the vehicle in neutral.Doing so puts a heavy load on the brake, which is dangerous, because then the engine brake and exhaust brake do not function.**
  When applying the brake, also use the engine brake.
  Drive carefully so as to avoid sudden steering or sudden braking.
- **Be careful not to use the foot brake excessively. If the foot brake is used too much, especially when descending a hill, the brakes can overheat, causing vapour lock or fading, which reduces brake effectiveness.**

NOTE:

- *The foot brake is an oil brake with a brake booster that uses vacuum pressure. Brake fluid pressure is magnified a vacuum booster, using negative pressure from the vacuum pump, which is driven by the engine, so that the brake is effective with just a little stepping force.*
- *In vapour lock, as in the case of fading, when the brake is used too much, the brake unit overheats, causing brake fluid in the brake pipe to boil and produce air bubbles. As a result, brake fluid pressure is no longer transmitted by stepping on the brake pedal, and the brake loses its effectiveness.*
- *In fading, when the foot brake is used frequently while descending long slopes or running at high speeds, the brake pad or lining becomes abnormally high in temperature and the wear coefficient reduces. As a result, foot braking action becomes extremely poor.*
- *Braking distance varies according to vehicle speed, number of passengers and road conditions.*



Stepping the brake too forcefully can produce powerful shock. Proceed as follows.

1. First, use the engine brake and exhaust brake to reduce speed adequately.

2. Depress the brake pedal and reduce speed just before reaching the target stopping point. Stable braking action can be obtained by stepping on the brake pedal two or three times.

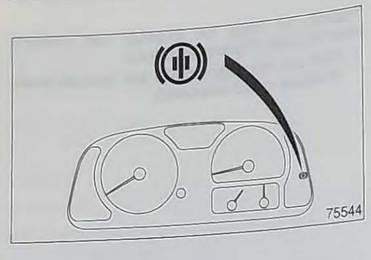
- In an emergency, step down on the brake pedal all the way. Braking action works suddenly and the vehicle stops.

CAUTION ⚠

Sudden braking accelerates wear of the tires and can cause components to malfunction. Do not brake suddenly except in emergencies.
Sudden braking produces powerful shocks. Please be careful.

- If the (⊜) or (①) warning lamp lights while driving the vehicle, stop it immediately and inspect it.

⇨ P. 5-9



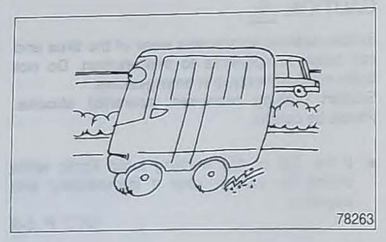
- When the disc brake pad has worn beyond the prescribed limit, the (!) warning lamp lights to warn you that the pad must be replaced. When the lamp glows, have the pad replaced by the nearest authorized MITSUBISHI FUSO dealer as soon as possible.

CAUTION ⚠

If you ignore this lamp when it glows, braking action will deteriorate to a dangerous level.

NOTE:

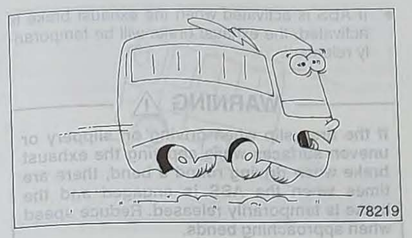
- *When driving through rain or water puddles, water can get into the brake drum and reduce braking effectiveness. Depress the brake pedal lightly to confirm normal braking action. If braking action is poor, confirm safety to the front and rear, and while stepping lightly on the brake pedal, drive the vehicle slowly for a while until braking action is completely restored.*



- Disc brake

Since the disc brake is superior to the drum brake in terms of heat discharge, it does not lose braking action even if used repeatedly. Hence there is a tendency to rely on the foot brake when driving. Watch out for the following.

- Avoid frequent braking at high speeds, since doing so can harm the brake pads more than usual.
- In descending a long slope, use the engine brake and exhaust brake together.



Antilock braking system (ABS)

If the brake is applied on the slippery road, tires will be locked to make the vehicle easily slip sideward. This equipment controls the braking force of each wheel respectively with computer in order to prevent tires from being locked.

WARNING ⚠

- **ABS does not enable the driving and stopping beyond the limit.**
- **It does not always shorten the braking distance. Do not put too much confidence in ABS. Keep sufficient following distance.**

1 Caution for driving the ABS equipped vehicle

- The braking distance is different depending on the conditions of the road surface. On the gravel road and deep new snow, the braking distance sometimes may be longer in comparison with the vehicle without ABS.
- When ABS is activated, a alight vibration is felt on the body and brake pedeal and "Whirring sound", the motor activating sound, is sometimes heard. This indicates that the system is activating properly and is not a trouble.
  Apply even more pressure to the brake pedal.
- If ABS is activated when it is rapidly braked, it is sometimes felt that the steering wheel is forced leftward/rightward. Particularly on the road where the slipping state is different between the left and right since it is frozen on one side of the road, it is sometimes necessary to correct the steering wheel.
- If the vehicle is empty or loaded with few passengers on the slippery road, the sideward slip sometimes results from the influence of the engine brake. In this case, step on the clutch pedal and then the brake pedal.

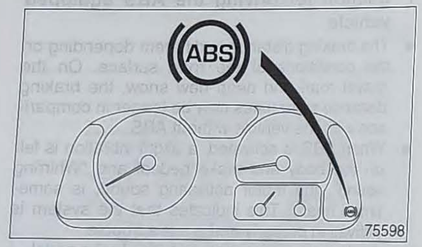
- If ABS is activated when the exhaust brake is activated, the exhaust brake will be temporarily released.

WARNING ⚠

If the tires slip when driving on slippery or uneven surfaces while applying the exhaust brake when driving round a bend, there are times when the ABS is engaged and the brake is temporarily released. Reduce speed when approaching bends.

NOTE:

- *Devices electric wiring etc. of ABS are present inside the tire. Do not apply any high-pressure cleaning water or any steam or water of the high-pressure washed directly to them, or it will damage or trouble the system.*
- *When installing a transceiver or changing the tire size, previously contact your nearest authorized MITSUBISHI FUSO dealer.*



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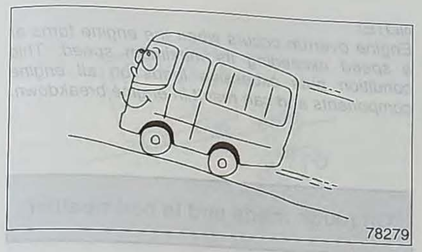
2 Lighting of warning lamp (ABS)

- It is proper if it comes on when the starter switch is turned to "ON" and goes out in a few seconds.
- If it does not go out, or comes on during driving, ABS may be troubled. Stop the vehicle at a safe place, and check the following.
  ① Stop the engine once, and restart the engine.
  ② If it does not got out, or comes on again in a while, ABS is troubled. Repair at your nearest authorized MITSUBISHI FUSO dealer at the earliest convenience.

NOTE:
Even if ABS is troubled and (ABS) warning lamp stays lit, ABS does not function but the brake works normally. If the warning lamp stays lit, repair at your nearest authorized MITSUBISHI FUSO dealer at the earliest convenience.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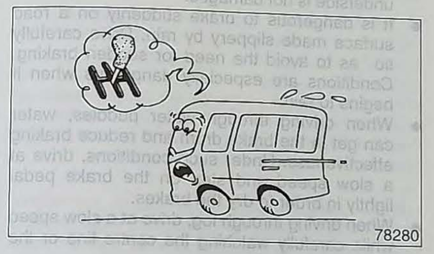
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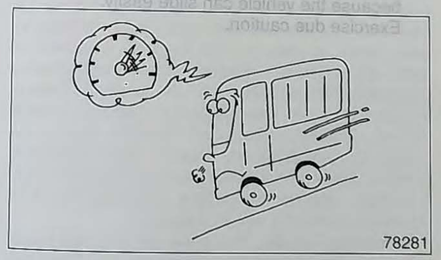
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On uphill and downhill roads

See P.7-9 concerning automatic transmission vehicles.

1 Uphill

When speed starts to drop, shift down quickly so as to avoid putting a load on the engine.

2 Downhill

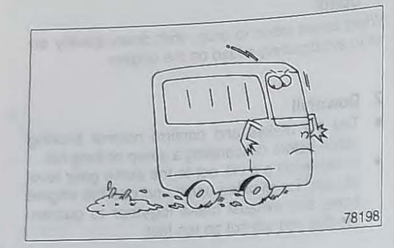
- Test the brakes and confirm normal braking action before descending a steep or long hill.
- In descending a hill, set to the same gear level as used for climbing uphill and use the engine brake and exhaust brake together to guarantee that you will not go too fast.

WARNING ⚠

- **Never drive a vehicle with the gear shift lever in neutral. Otherwise the engine brake and exhaust brake will not work and a heavy burden will be put on the foot brake. It will also cause overheating of the brake and rapid wear of the brake lining.**
- **Be careful not to use the foot brake excessively. If it is used too much, the brake will overheat, causing vapour lock or fading, and braking action will be poor.**

- Reduce vehicle speed adequately before down shifting.
  Skipping a gear level when down shifting or down shifting with the engine at high speed can cause overrun after the shift.
  As a rule, down shift after reducing vehicle speed to an engine 2000 rpm of approximately speed. Make sure that the tachometer needle does not go to the red zone.

NOTE:
Engine overrun occurs when the engine turns at a speed exceeding its maximum speed. This condition puts excessive loads on all engine components and can result in engine breakdown.


78198

On rough roads and in bad weather

See P.7-10 concerning automatic transmission vehicles.

- When driving over gravel or muddy roads, for instance, maintain a constant speed in a low gear.
- On rough undulating roads, lower speed adequately and be careful so that the vehicle underside is not damaged.
- It is dangerous to brake suddenly on a road surface made slippery by rain. Drive carefully so as to avoid the need for sudden braking. Conditions are especially dangerous when it begins to rain.
- When driving through water puddles, water can get in the brake drum and reduce braking effectiveness. Under such conditions, drive at a slow speed and step on the brake pedal lightly in order to dry the brakes.
- When driving through fog, drive at a slow speed while carefully watching the centre line or the vehicle in front of you.
- For travel over snow or ice, attach tire chains or snow tires, and drive at a reduced speed. Sudden braking or turning is very dangerous because the vehicle can slide easily.
  Exercise due caution.

78202

Parking

See P.7-11 concerning automatic transmission vehicles.

WARNING ⚠

- **Avoid parking on a slope road. When parking on the slope road from necessary, pull the parking brake lever securely together with placing chocks on the tire for safety. It is safer to turn the handle toward the obstruction (curb and the like) for the countermeasure against an emergency.**
- **Since the engine and the exhaust pipe are very hot just after driving, do not stop or park the vehicle where inflammable matter such as dry grass or waste paper is piled. If inflammable matter touches the hot engine or exhaust pipe, a fire may cause.**
- **When taking a nap, ensure to stop the engine. If this is not observed there is a possibility that you operate the accelerator pedal or the gearshift lever unconsciously, which may cause an unforeseen accident.**
  In the closed cabin, there is a possibility of carbon monoxide poisoning due to the exhaust gas.
- **When parking under the hot sun, do not leave cigarette lighters, carbonated beverage containers, glasses or other similar items in the vehicle.**
  The interior becomes extremely hot, so it is possible that combustible objects such as cigarette lighters could ignite by spontaneous combustion, or that cans of carbonated soft drinks or beer could explode due to the heat. Glasses with plastic lenses or plastic parts, or the lens coating could become cracked or deformed.

- Park the vehicle on a level place as much as possible.
- Put the gearshift lever at neutral.
  For the automatic transmission vehicle, set the range selector lever at parking.
- Pull on the parking brake securely.
- When leaving the vehicle, remove the starter key and lock the doors.

CAUTION ⚠

There is no relationship between lights of the (!) indicator lamp and the effectiveness of the parking brake. Be sure to engage the parking brake securely. If you leave the starter switch at ON or ACC position for a long time, the battery can go flat.

Trailer towing

Your BE Series bus has qualities which make it well suited for normal towing operations provided a few recommendations are observed. These are primarily concerned with the prevention of overloading of the vehicle and with the selection of proper equipment. If these precautions are taken and driving habits are regulated accordingly, the effects of towing trailers can be minimised.

It should be noted that the damage to the vehicle caused directly or indirectly by operating under conditions outside the limits set out on this page will void the warranty, relative to such damage.

CAUTION ⚠

DAIMLERCHRYSLER AUSTRALIA/PACIFIC recommends the use of DAIMLERCHRYSLER AUSTRALIA/PACIFIC approved towing equipment where it is available. No recommendation is made as to the make of equipment which may be used if DAIMLERCHRYSLER AUSTRALIA/PACIFIC approved equipment is not available.

- **State Regulations:** The legal authorities require that a trailer be fitted with stop, tail and turn signal lights. An electrical kit can be fitted by your authorized dealer which meets legal requirements and can be left on your vehicle permanently. **Note: The electrical supply is 24 volt, check that the trailer lights have the correct globes before connecting.** It may be necessary to fit additional rear vision mirrors to both sides of your vehicle to give clear vision past your trailer. Ensure that your trailer complies with regulations of the particular State in which you are travelling, e.g. lighting, safety chains, brakes, mass, etc. Check that your towbar tongue does not obscure your vehicle's number plate when the trailer is disconnected. If it does, remove the tongue ensuring that it is tightened correctly when replaced.
- **Maximum Loads:** The table on the next page sets out the maximum permissible operating loads for the vehicle and trailer. The loads apply only if MITSUBISHI approved Tow Bar and other specified equipment is used.

- **Permissible towing and load requirements:** The maximum trailer mass must not exceed 715kg (automatic transmission) or 1615kg (manual transmission only). Recommendations for towing up to this limit are as follows:

Model	Total Trailer Mass	Trailer Brakes
All	Up to 715kg	No
Manual Trans. only	715kg to 1615kg	Yes

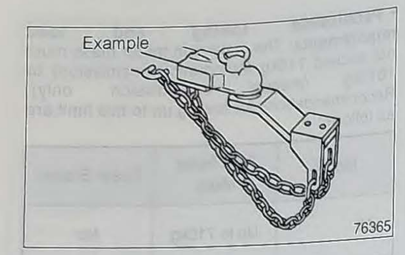
In addition the following towbar coupling load limitations apply:

Trailers up to 715kg	At least 5% of the total trailer mass up to 75kg maximum
Trailers up to 1615kg	At least 5% of the total trailer mass up to 165kg maximum
and the maximum rear axle load (3880kg) must not be exceeded. **and** the maximum payload of the towing vehicle must be reduced by the actual towbar coupling load. See 'Specifications' for the payload information.	

CAUTION ⚠

The trailer brake and towing hitch requirements as specified are minimum requirements only and DAIMLERCHRYSLER AUSTRALIA/PACIFIC recommend that a trailer brake and a load distributing hitch is used whenever you are towing, to improve stopping distance and towing stability. When using a load distributing hitch the load on the trailer tires increases. Do not exceed the trailer tire load rating.

With all towing operations it is important to limit the towing vehicle payload as noted. Failure to do so may result in exceeding the maximum load rating on the tires. This rating is marked on the tire placard and may also be displayed on the tire sidewall.



- **Setting up for towing**
  Having established compliance for the permissible towing loads and brake/hitch requirements, adjust the position of the load in the trailer so that 5 to 10% of the total mass of the trailer is on the coupling. (Refer table on page 6-15.)
  It is recommended that two safety chains are used. The chains should be **crossed** under the trailer draw bar so that the draw bar is prevented from touching the ground if it becomes detached from the vehicle. The chains must not stop the trailer from turning freely.

- **Operating hints**
  Vehicle preparation: Have your vehicle serviced prior to towing a heavy trailer, taking particular care of the state of engine tune, the condition of brakes, steering and tires.
  Adjust tire pressures to those quoted for a fully laden vehicle (see Tire Placard).
  Check the tires, wiring and brakes (if fitted) on the trailer.
  Have the cooling system checked and ensure that the radiator intake is clear to allow maximum air flow through the radiator.
  Check that tow bar fixing bolts are tightened to specification.
  After a loaded trailer has been connected to the vehicle, there might be a slight change in vehicle attitude which for your night driving safety may require the headlights to be re-aimed.

- **Driver Preparation**
  If you have never towed before, connect your trailer and take it for a run over familiar ground in your own district. Feel the difference in acceleration, handling and braking and you are less likely to be surprised if an emergency does occur when you are away from home territory. Any other driving members should also become familiar with the vehicle in this condition.

- **Hill climbing**
  When travelling in hilly country, whether with a manual or automatic transmission, whether ascending or descending hills, always select a lower gear to maintain engine speed to prevent engine and transmission overloading on upgrades and to avoid excessive use of the brakes on downgrades. If particularly steep or long downgrades are encountered, avoid 'riding' the brakes. Apply the brakes firmly to reduce speed and then remove your foot from the pedal to allow air to cool the brakes between applications.

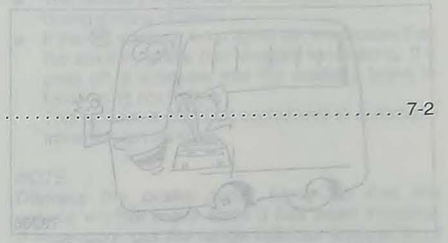
- **Normal cruising**
  Leave plenty of room between the front of your vehicle and the preceding vehicle. If the trailer begins to sway or becomes difficult to handle, gently slow down or apply the independent trailer brakes (if fitted) NOT the vehicle brakes.
  The cause of this problem is generally due to poor trailer balance and until this has been overcome the swaying will recur. Relocate the load in your trailer and re-assess the problem. If the wheels of your vehicle or the trailer leave the road surface and enter the unsealed edge of the road, resist the urge to pull it back quickly. Wait for a section where the levels of the road and the unsealed edge are comparable and then ease back onto the sealed section of the road with as little sway as possible.
  Try to maximise the distance between your trailer and passing or overtaking semi-trailers or other heavy vehicles. This will reduce the suction forces between the two and minimise disturbance of the trailer.

- **Braking**
  Do not apply the brakes severely, be alert and anticipate trouble far enough ahead to enable you to apply the brakes smoothly and evenly.
  Do not make any maneuvers before ensuring that the road behind and in front of your vehicle is clear.

- **Overheating**
  This will normally occur as a result of some mechanical failure or obstructed radiator air intake. If your vehicle should overheat, stop and check for loose or broken water pump/alternator drive belt, a blocked radiator air intake or a low water level. If these items are satisfactory the overheating could be caused by a number of mechanical causes that would have to be checked by a MITSUBISHI FUSO dealer.

How to handle automatic transmission (A/T) vehicle

Automatic transmission (A/T) vehicle. 7-2



Automatic transmission (A/T) vehicle

What follows is an explanation of special handling methods for vehicles with automatic transmissions. These A/T vehicles have a number of special characteristics. Make sure you understand the basics of driving such a vehicle and that you have developed correct driving habits.

1 Things to know before driving

1.1 Creep phenomenon

Power is connected whenever the range selector lever is set anywhere outside the P or N range. In this condition, even if you do not step on the accelerator, the A/T vehicle will start to move slowly. This movement, called "creep," is unique to A/T vehicle.

1.2 Brake operation

Step on the brake pedal with your right foot to operate the brake securely. If you use your left foot, which is not accustomed to stepping on the brake pedal, your response might be too slow in an emergency.

1.3 Before starting the engine

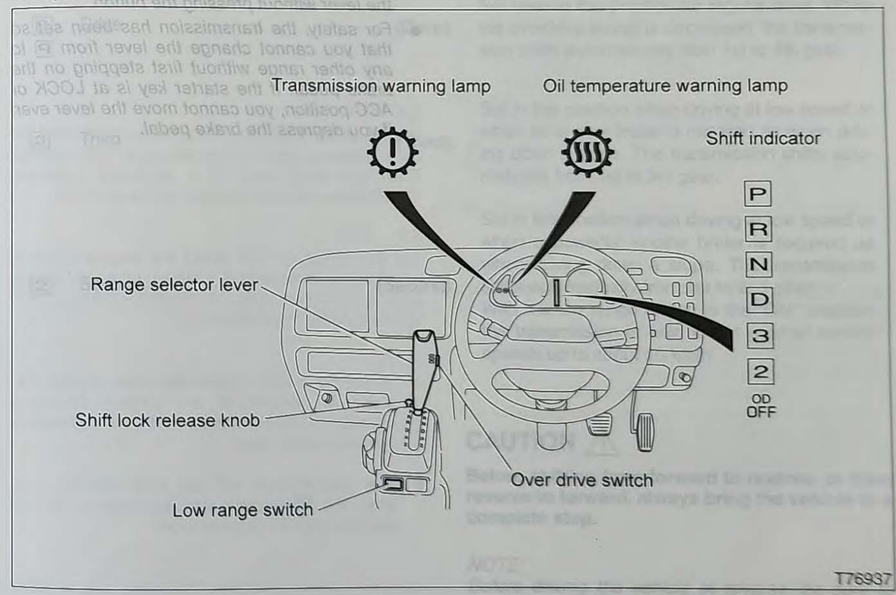
Step on the accelerator pedal and the brake pedal with your right foot to confirm their positions.
To prevent error in stepping on the pedals, it is crucial to practice stepping on them, using your right foot only, until you are thoroughly familiar with their relative positions without looking at them.

1.4 Exhaust brake

- The auxiliary brake will be released automatically if the vehicle's speed drops below 10 km/h. It will begin functioning again if the vehicle's speed rises.
- The auxiliary brake may be released temporarily during shifting of gears.
- If the warning lamp lights up, it indicates that the auxiliary brake has stopped functioning. If it goes off, it indicates that the auxiliary brake is functioning normally.
  This system is installed exclusively in automatic transmission vehicles.

NOTE:
Depress the brake pedal firmly so that the vehicle will not move once it has been stopped. If necessary, put the range selector lever at P or N.

2 Special devices for A/T vehicle

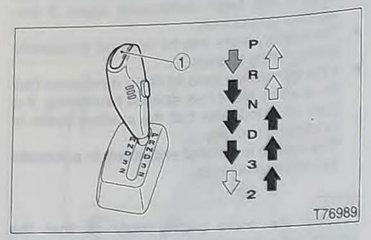


3 Range selector lever

This lever operates the automatic transmission. Set it to the position of each range securely.

3.1 How to move the range selector lever

➡ :While stepping down on the brake pedal, push the button ① to move the lever.
The lever will not move unless the starter key is at ON.
⇨ :Press the button to move the lever.
➡ :Lever moves without pressing this button.



NOTE:

- *If you always press the button on the range selector lever to move it, you might accidentally move it to the P, R or 2 range. For ➡ operations, develop the habit of moving the lever without pressing the button.*
- *For safety, the transmission has been set so that you cannot change the lever from P to any other range without first stepping on the brake pedal. If the starter key is at LOCK or ACC position, you cannot move the lever even if you depress the brake pedal.*

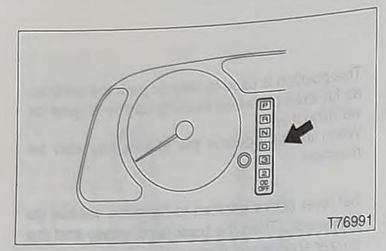
3.2 Each range position

P	Parking (Parking):	This position is used to stop or park the vehicle, as for example when starting up the engine or warming it up. When in this position the starter key can be removed.
R	Reverse (Reverse):	Set lever in this position to have the vehicle go backwards. Then the back lamp glows and the buzzer sounds simultaneously.
N	Neutral (Neutral):	At this position, the engine can be started, but for safety, start the engine with the lever at P.
D	Drive (Drive):	Set lever in this position for regular drive. While the overdrive switch is depressed, the transmission shifts automatically from 1st to 4th gear.
3	Third (Third):	Set in this position when driving at low speed or when an engine brake is required as when driving down a slope. The transmission shifts automatically from 1st to 3rd gear.
2	Second (Second):	Set in this position when driving at low speed or when a powerful engine brake is required as when driving down a slope. The transmission shifts automatically from 1st to 2nd gear. With the low range switch in the "ON" position, the transmission is held in 1st gear at vehicle speeds up to about 10 km/h.

CAUTION ⚠

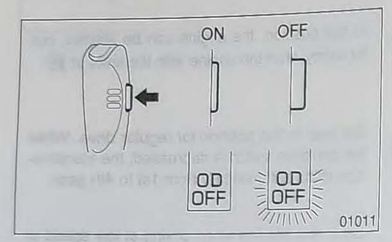
Before shifting from forward to reverse, or from reverse to forward, always bring the vehicle to a complete stop.

NOTE:
Before driving the vehicle in reverse, be sure to confirm safety at right and left and to the rear.



4 Shift indicator

Located in the meter cluster, this indicator enables you to confirm the range selector lever position.



5 Overdrive switch

This switch changes between "ON" and "OFF" each time it is pressed.
When the switch is at "OFF", the indicator lamp glows.

5.1 ON

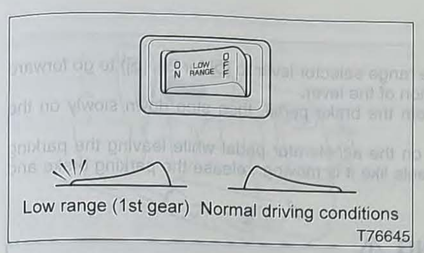
Set the switch to ON for driving on a normal road. Be sure to always use it when driving at high speeds. Then the switch acts as a six-speed automatic transmission, and fuel savings can be obtained.

5.2 OFF

Set the switch to OFF when the engine brake is required for descending a slope, or when driving up a long inclined road. The switch acts as a four-speed automatic transmission.

NOTE:

- *When the engine speed becomes so high that there is danger of the engine becoming damaged, the transmission automatically switches to 5th gear.*
- The transmission will not shift into 6th gear when the warning lamp lights up. It will shift into 6th gear if this lamp is off.



6 Low range (1st gear) switch

Placing the low range switch in the "ON" position when the range selector lever is in the "2" position causes the transmission to be held in 1st gear at vehicle speeds up to about 10 km/h. Use this switch on steep hills, when extricating the vehicle from soft ground, and when you need more engine braking than the "2" range (2nd gear) provides.

NOTE:

- *The low range (1st gear) switch causes the transmission to be held in 1st gear only when the range selector lever is in the "2" (2nd gear) position. It is not possible to hold the transmission in 1st gear with the range selector lever in any other position.*
- *Keep the switch in the "OFF" position when you do not want the transmission to be held in 1st gear. If you leave the switch in the "ON" position, the transmission may unexpectedly shift to 1st gear when you place the range selector lever in the "2" (2nd gear) position.*
- *The transmission automatically shifts to 2nd gear when the vehicle speed becomes high enough to pose a risk of engine damage.*

7 Caution when starting the engine

- Engage the parking brake securely.
- Set the range selector level to [P] range and start the engine.
- Warm up the engine, then allow it to return to normal idling speed before driving.

NOTE:

- *The engine can be started only with the range selector lever at [P] or [N] . It cannot be started at any other position. For safety, start the engine with the selector at [P] . Start in the [N] range only when emergency action is required, as when stopped on railroad tracks.*
- *When idling speed is too high, the vehicle will move suddenly if you shift to the [D] or [R] range. Conversely, when idling speed is too low, the engine might stop after shifting from [N] to another range.*

8 Driving method

8.1 Startup

- While stepping down on the brake pedal, move the range selector lever to D (or 3, 2) to go forward and to R to go in reverse. Confirm the range position of the lever.
- Release the parking brake, slowly lift your foot from the brake pedal, then step down slowly on the accelerator pedal to start up.
- When starting up on a steep incline, slowly step on the accelerator pedal while leaving the parking brake engaged. After confirming that the vehicle feels like it is moving, release the parking brake and start up.

WARNING ⚠

- **When the range selector lever is at R, D, 3, or 2 the vehicle will start to move due to creep phenomenon. Move the range select lever while the brake pedal is depressed.**
- **When starting-up, do not move the range selector lever while stepping on the accelerator pedal.**
  Doing so is dangerous because the vehicle can start moving suddenly.

NOTE:

- *For safety when starting up, confirm the range selector lever position by looking at the shift indicator in the meter cluster.*
- *In a vehicle with manual transmission, the startup speed is adjusted by operating the clutch at half position together with the accelerator. In an A/T vehicle, this is accomplished by operating the accelerator alone, so operate the accelerator very carefully.*

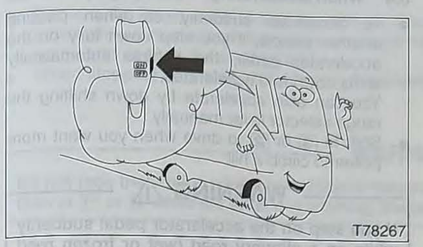
8.2 Driving on a normal road

- Drive the vehicle in the D range. Operate the overdrive switch in accordance with running conditions.
- The vehicle can also be driven by starting up at 2 and shifting from 3 to D by manual operation.

CAUTION ⚠

Do not shift to the N range while driving. Otherwise an accident could occur because then the engine brake is totally ineffective. The transmission itself also might malfunction. Even at N fuel consumption is the same.

NOTE:
When driving at high speed, always turn the overdrive switch to ON (switch is pressed down).



8.3 Driving down a slope

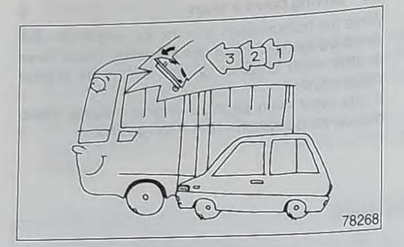
While the transmission is in the D range, turn the overdrive switch OFF or use the range select lever to shift down to 3 or 2 and utilize the engine brake effect.
If you need even stronger engine braking, place the low range switch in the "ON" position.

WARNING ⚠

If the exhaust brake is used on a slippery road (wet or frozen road surface) while the vehicle is empty or has only a few passengers, the rear wheels might lock and the vehicle might skid sideways. Be very careful, especially when going down a hill.

NOTE:

- *Give priority to shifting downward. More powerful engine brake action takes place when shifting downward.*
- *When the vehicle is running at excessive speed, a safety device activates and you cannot shift downward. Step on the brake pedal and reduce speed.*
- *If you drive down a long or steep slope at D range, the engine brake will lose effectiveness and speed will increase excessively. Also if you use the foot brake too much, fading can occur and the brake will become ineffective. Turn the overdrive switch to OFF and engage the engine brake. On a steep slope, set the range selector to 3 or 2 and engage the engine brake.*
- *At the 3 range or the 2 range, reduce speed with the foot brake so that engine speed does not rise excessively.*



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8.4 When accelerating or climbing a hill

- To accelerate suddenly, as when passing another vehicle, if you step down fully on the accelerator pedal, the vehicle automatically shifts down and accelerates.
  You can also accelerate by down shifting the range selector lever manually.
- Shift to 3 or 2 to drive when you want more power to climb a hill.

WARNING ⚠

If you step on the accelerator pedal suddenly while on a slippery road (wet or frozen road surface, etc.,), the tires might spin in place and you might lose control of vehicle direction.

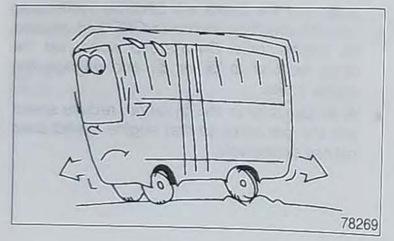
CAUTION ⚠

If the warning lamp lights up in climbing, stop promptly or do shift down.
if the lamp stillstays on after shift down, stop promptly.

⇨ P.7-13

NOTE:
If you depress the accelerator pedal in order to maintain a constant speed, as when climbing a hill, the A/T might shift down and engine speed will rise.

8.5 Escape from muddy or snow-covered road or from sandy area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Step on the accelerator pedal about half way and shift the range selector alternately between forward and reverse in line with vehicle movement so as to roll the vehicle until it can escape.

WARNING ⚠

In rolling the vehicle back and forth in order to free it, be sure to confirm safety all around the vehicle.

CAUTION ⚠

In attempting to free the vehicle from mud, a snow-covered road, or a sandy area, do not step down on the accelerator pedal all the way. Doing so causes the transmission fluid temperature to rise sharply. Do not continue depressing on the pedal for more than 5 minutes.

8.6 Temporary stop

- Depress the brake pedal to stop the vehicle. Step on the brake pedal firmly so that the vehicle cannot move while it is stopped due to creep phenomenon. As necessary, set the range selector in the N range and engage the parking brake.
- When stopping on a steep hill, step on the brake pedal firmly and engage the parking brake.

WARNING ⚠

Do not race the engine while the vehicle is stopped. If the range selector lever is set anywhere other than at P or N while the engine is running, the vehicle could start-up suddenly.

CAUTION ⚠

If stopped upward on a slope, do not step down on the accelerator pedal to keep the vehicle stopped, when stopped on a steep upward slope, the force pulling the vehicle in reverse is stronger than the force acting to move it forward, due to creep phenomenon, and the vehicle might go in reverse. Step on the brake pedal and engage the parking brake securely.

8.7 Parking

- When parking or stopping the vehicle, while stepping down on the brake pedal firmly pull out the parking brake lever and put the range selector lever in P .
- Whenever you remove yourself from the vehicle, be sure to always stop the engine.

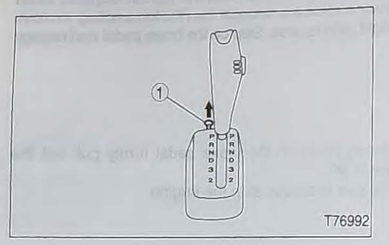
CAUTION ⚠

- **Do not leave the vehicle while the engine is running. If the range selector lever is not at P or N , the vehicle might move due to creep phenomenon, or you might step on the accelerator pedal accidentally while leaving or boarding the vehicle, causing it to start-up suddenly.**
- **Apply the parking brake fully.**
- **Avoid parking on slopes. When you cannot avoid parking on a slope, apply the parking brake fully, and then apply chocks to the wheels. Depending on the method used, there is a possibility that the P range parking function is disabled.**

NOTE:
Unless the range selector is set at P, the starter key cannot be turned to the "LOCK" position and it cannot be removed.

9 Special situations

- To move the vehicle even slightly, sit in the driver's seat in proper posture for stepping securely on the brake pedal or accelerator pedal.
- When going in reverse, you may have to twist your body around, but make sure you can still depress the brake securely.
- After moving the vehicle just a little in reverse, for instance, you might forget that the range selector was put at R . Develop the habit of always returning the selector lever to N after driving in reverse, and check the range selector position before starting up.
- In switching from forward to reverse, or from reverse to forward, step on the brake pedal firmly, and move the range selector lever only after the vehicle has come to a complete stop.
- If the range selector lever cannot be moved from the P range to any other range, even while stepping down on the brake pedal, you can move the lever by pulling the shift lock release knob ① forward.
  This condition indicates a failure in the electrical system. Request inspection at the nearest authorized MITSUBISHI FUSO dealer as soon as possible.



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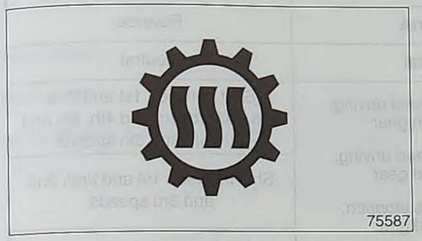
CAUTION ⚠

- **In A/T vehicles, you cannot start the engine by having the vehicle towed because it contains an hydraulic system.**
- **To have an A/T vehicle towed, use a special towing vehicle to lift the rear wheels, or remove the propeller shaft.**
  If the vehicle is towed as is, it could damage the automatic transmission.

10 When warning lamp glows

If the warning lamp glows indicating a problem in the automatic transmission, immediately stop the vehicle at a safe location and engage the parking brake securely, then proceed to the next corrective measure.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10.1 Oil temperature warning lamp

- This lamp glows when the temperature of transmission oil becomes too high. If this warning lamp glows, stop the vehicle at a safe location, set the range selector to P or N , and continue running the engine at slightly higher than idling speed.
  If the warning lamp extinguishes, you can drive the vehicle. If the lamp does not extinguish, or if it glows periodically, the electromotive cooling fan at the front side of the left front wheel might have failed or there might leakage of oil, etc., somewhere. Consult your nearest authorized MITSUBISHI FUSO dealer.
- If the warning lamp lights up while climbing a hill, it may go off if the transmission is shifted down. If the warning lamp remains lighted up even when the transmission is shifted down, stop the vehicle as quickly as possible in a safe place, then carry out the same measures as described above.

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10.2 Transmission warning lamp

This lamp glows whenever something goes wrong with the A/T electronic control system.
Stop the vehicle at a safe location. Turn the starter key to the ACC position, stop the engine, then start it again. The computer program is reset at this time. After this, the system may return to the normal state. If it does not return to normal, or if it fails periodically, have it inspected at the nearest authorized MITSUBISHI FUSO dealer.

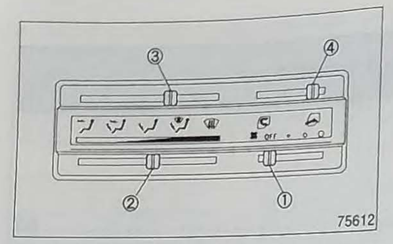
- Even if the electronic control system fails, gears can be shifted as indicated in the table below by manipulating the range selector lever, and the vehicle can be moved.

Range selector lever position	Gear levels when system fails	Gear levels when system is normal
P	Parking	Parking
R	Reverse	Reverse
N	Neutral	Neutral
D	During high-speed driving: held in 5th gear	Shift between 1st and 2nd, 2nd and 3rd, 3rd and 4th, 4th and 5th, 5th and 6th speeds
3	During low-speed driving: held in 3rd gear After vehicle is stopped: held in 3rd gear	Shift between 1st and 2nd, 2nd and 3rd speeds
2	System failure: held in 2nd or 4th gear	Shift between 1st and 2nd speeds

How to use heater and air conditioner

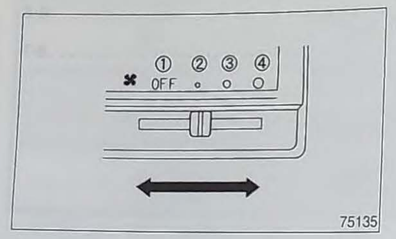
Front heater 8-2
Rear heater 8-6
Air conditioner 8-7

Front heater



1 Control panel

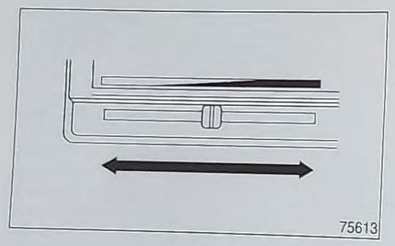
① Fan switch
② Temperature control lever
③ Mode selector lever
④ Air selector lever



1.1 Fan switch

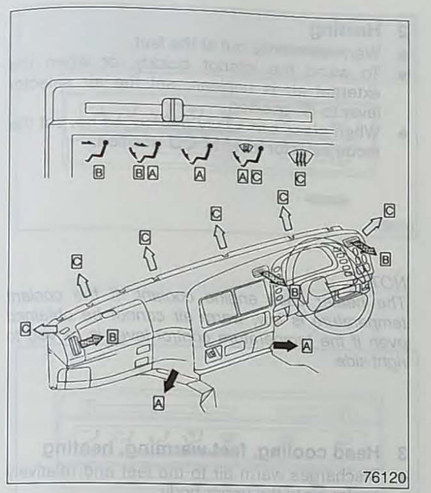
The fan speed can be adjusted in three stages.

① OFF: Off
② ○ : Low
③ ○ : Medium
④ ◯ : High



1.2 Temperature control lever

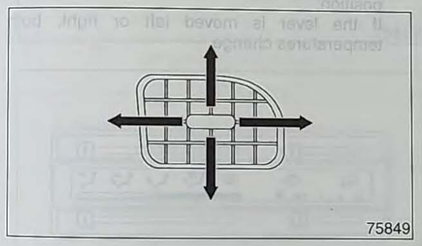
Controls the temperature of outflow air.
As the temperature control lever is moved further to the right, the discharge air temperature rises; as it is moved to the left, the temperature falls.

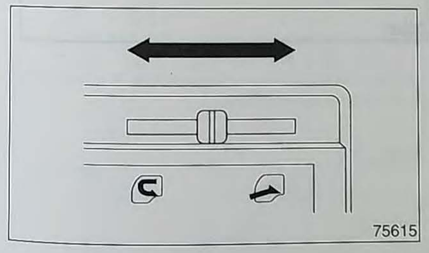


1.3 Mode Selector Lever

Lever position	Air outlets	Purpose of use
	B	Ventilation: Sends air to the upper body.
	B + A	Cooling head, warming feet, heating Sends air to upper body and to feet.
	B	Heating: Sends air to feet.
	A + C	Heating to prevent frosting. Sends air to feet and from defroster.
	C	Defrosting Discharges air from the defroster.

B Change the direction of air flow at the air outlet by manipulating the louvre.

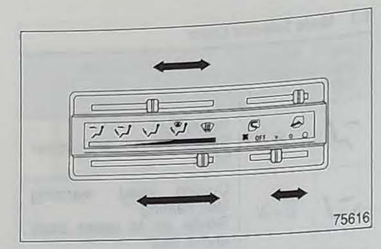




1.4 Air selector lever

: Circulates indoor air. Use to heat the interior quickly or when external air is unclean.
: External air is taken in. Normally used at this position during heating.

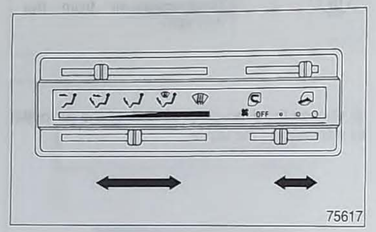
NOTE:
If used at the position for a long time in winter, the glass can easily become fogged, so please be careful.



2 Heating

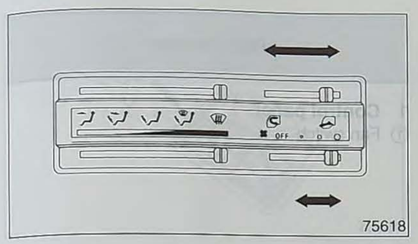
- Warm air comes out at the feet.
- To warm the interior quickly, or when the external air is unclean, set the air selector lever to position.
- When glass can easily get fogged up, set the mode selector lever to position.

NOTE:
The heater uses engine coolant. If the coolant temperature is low, warm air cannot be obtained even if the temperature control lever is moved to right side.



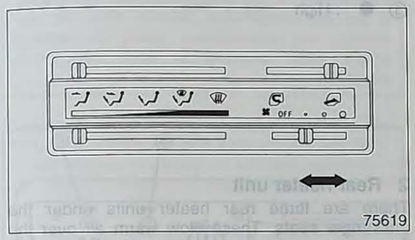
3 Head cooling, feet warming, heating

- Discharges warm air to the feet and relatively cooler air to the upper body.
- Set the temperature control lever at medium position.
  If the lever is moved left or right, both temperatures change.



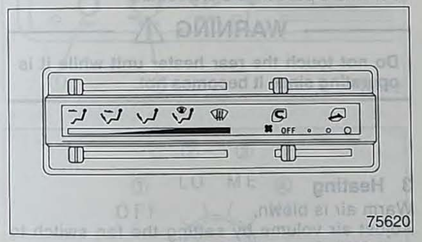
4 Defrosting

- Blows warm air onto the windshield, the front door glass and the side window glass at the assistant driver's seat.
  For rapid defrosting, turn the fan switch to right side.
- To melt ice on the outside of the windshield, set the air selector to for quick melting.
- If the mode selector lever is set to position, your feet are warmed at the same time that defrosting occurs.



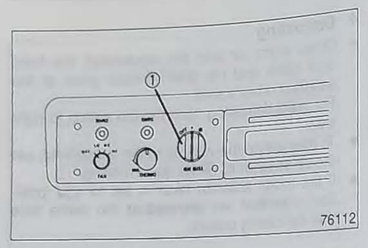
5 Ventilation

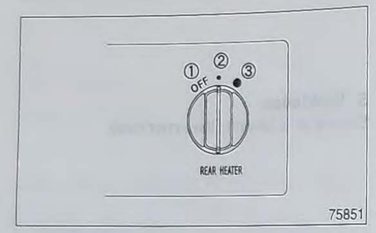
External air is blown to the upper body.

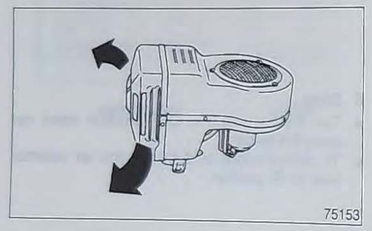


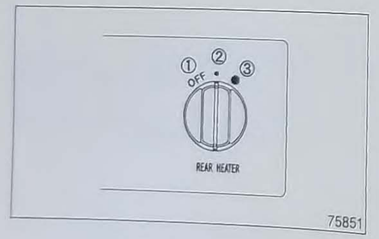
6 Stop

- Turn the fan switch to OFF position when not using the heater.
- To prevent intake of dust, set the air selector lever to position.









Rear heater

1 Control panel

① Fan switch

1.1 Fan switch

The fan speed can be adjusted in two stages.

① OFF : Off
② • : Low
③ ● : High

2 Rear heater unit

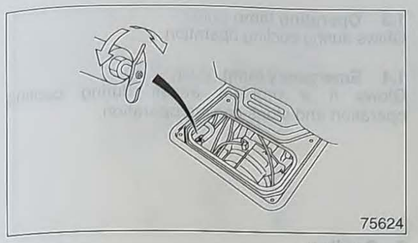
There are three rear heater units under the passenger seats. These blow warm air over the floor where passengers are seated.

WARNING ⚠

Do not touch the rear heater unit while it is operating since it becomes hot.

3 Heating

Warm air is blown.
Adjust air volume by setting the fan switch to • (LOW) ② or ● (HIGH) ③.
The temperature inside the vehicle is controlled by changing air volumes.

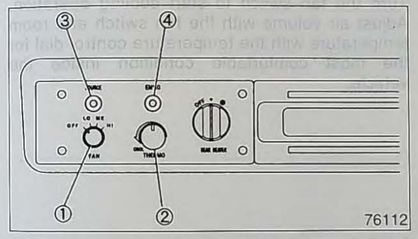


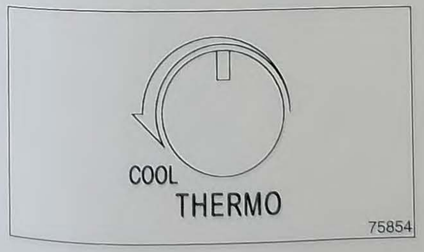
The rear heater is a hot water type unit that uses engine coolant. To use the heater, open it by turning the the water cock fully to the left.
When not using the heater, close it by turning the water cock fully to the right.

NOTE:
The rear heater uses engine coolant. If the coolant temperature is low, the heater rear units cannot discharge warm air.

4 Off

When not in use, set the fan switch to "OFF" ①.





Air conditioner

1 Control panel

① Fan switch
② Temperature control lever
③ Operating lamp
④ Emergency lamp

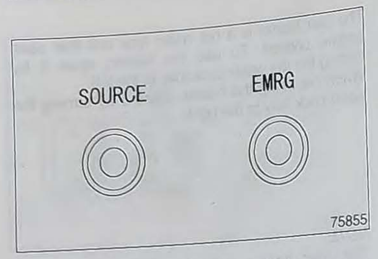
1.1 Fan switch

Turns cooling operation ON and OFF and adjusts fan air volume in three stages.

① OFF : Stop, stops cooling operation
② LO : Low
③ ME : Medium
④ HI : High

1.2 Temperature control dial

Adjusts indoor temperature.
As the dial is turned to the left, the temperature lowers.



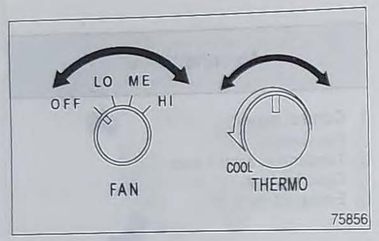
1.3 Operating lamp SURCE
Glows during cooling operation.

1.4 Emergency lamp EMRG
Glows if a problem arises during cooling operation and stops cooling operation.

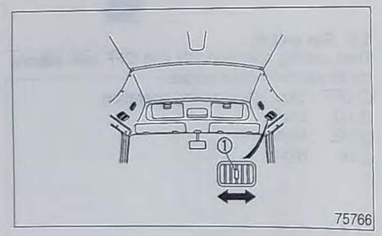
2 Cooling

WARNING ⚠

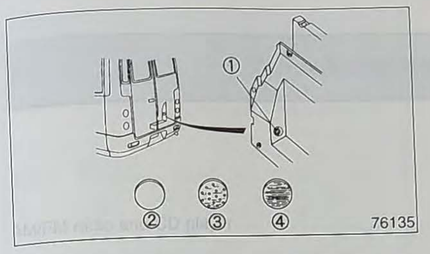
Do not leave the vehicle with the air conditioner on while children are still inside. If the air conditioner should stop for any reason, the temperature inside the vehicle might rise, causing a very dangerous situation.



Turn the fan switch to start cooling operation. Adjust air volume with the fan switch and room temperature with the temperature control dial for the most comfortable condition inside the vehicle.



Cold air is discharged from the ceiling air outlet. Air flow direction can be changed by moving the louvre ①.



3 Refrigerant inspection

If refrigerant is insufficient, cooling function becomes poor. Check refrigerant volume periodically. When the air conditioner is operating, check through the sight glass ① (refrigerant inspection window). Normally you should not be able to see air bubbles. If air bubbles do appear, refrigerant volume is inadequate. Have it replenished at the nearest authorized MITSUBISHI FUSO dealer.

② No refrigerant
③ Insufficient refrigerant
④ Normal

CAUTION ⚠

- **For environmental protection, the air conditioner uses a refrigerant (HFC-134a) which does not damage the ozone layer. Consequently the method of replenishment is different from previously. Consult with the nearest authorized MITSUBISHI FUSO dealer before replenishing.**
- **If a freon gas other than HFC-134a is put in the air conditioner, it can cause breakdown. Use HFC-134a refrigerant only.**

4 Air filter cleaning

Clean the air filter once every six months.
If the air filter becomes solid with dust, etc., the air conditioner will lose its effectiveness and the blower motor might fail.

⇨📖 P. 11-65

Interior equipment and accessories

AM/FM radio and CD player 9-2

Microphone 9-16

Cigarette lighter 9-18

Ashtray 9-19

Sun visor 9-19

Room lamp 9-20

Step lamp 9-20

Clock 9-21

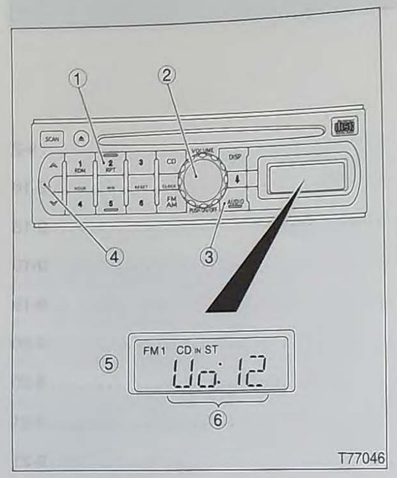
Inside rear view mirror 9-21

Fire extinguisher 9-22

Small article compartments 9-22

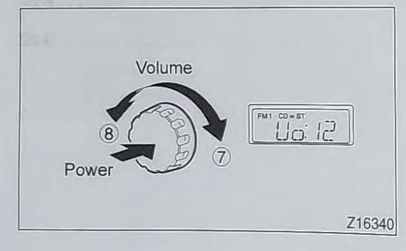
AM/FM radio and CD player

1 Volume and tone adjustment



T77046

① Repeat button
② Power/volume knob
③ Audio adjustment mode selection button ("AUDIO" button)
④ Tuning button
⑤ Display
⑥ Volume and adjustment mode indication

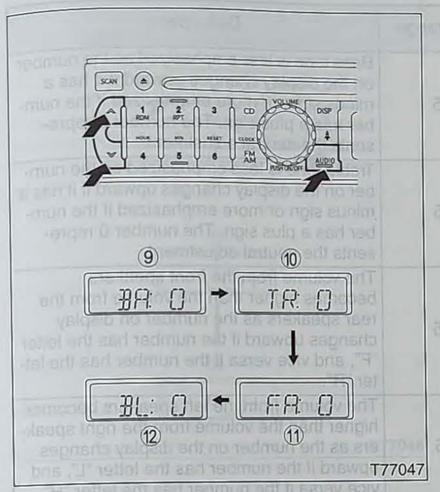


Z16340

1.1 Adjusting the volume

Use the power/volume knob to adjust the volume.

1. Press the knob to turn on the audio system. Press the knob again to turn off the system.
2. Turn the knob to the right ⑦ to increase the volume, or to the left ⑧ to decrease the volume. You can select any volume level between 0 and 20.
3. The selected volume level is indicated on the display. The example in the figure shows the indication for volume level 12.



T77047

1.2 Adjusting the tone and the volume balance

Use the audio adjustment mode selection button ("AUDIO" button) and the tuning button (the "∧" or "∨" side) to adjust the tone and the front-rear or left-right volume balance.

1. Press the "AUDIO" button to display the desired adjustment mode.
   - Each time you press this button, the adjustment mode indication on the display changes as follows:
     BA (bass ⑨) → TR (treble ⑩) → FA (fader or front-rear volume balance ⑪) → BL (left-right volume balance ⑫) → Adjustment mode cancelled

NOTE:
Front-rear volume balance adjustment (fader) will not be possible if you have selected the 2-channel operation (sound from the front speakers only) as explained later.

⇨📖 P. 9-5

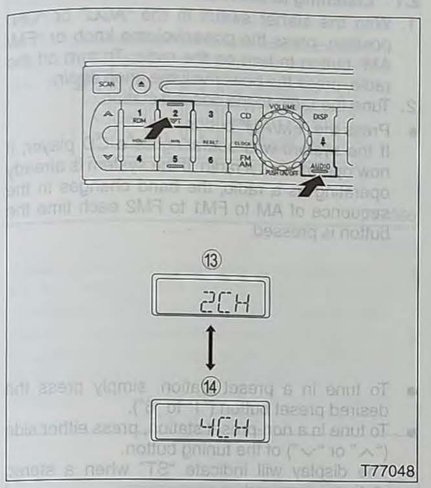
2. With the desired adjustment mode indicated on the display, press the "∧" or "∨" side of the tuning button for the necessary adjustments.

• Adjustment modes

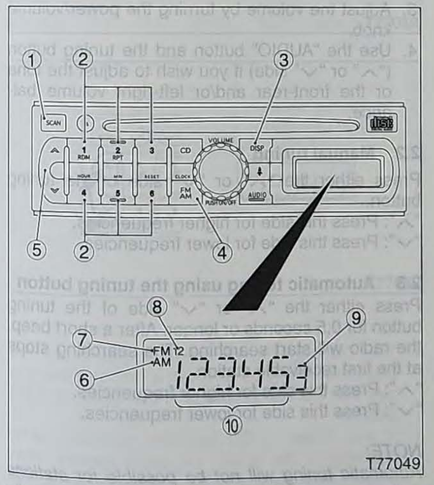
Mode	Display indication	Adjustable range	Description
Bass tone adjustment (bass)	BA:	–5 to +5	Bass tone is less emphasized as the number on the display changes upward if it has a minus sign, or more emphasized if the number has a plus sign. The number 0 represents the neutral adjustment.
Treble tone adjustment (treble)	TR:	–5 to +5	Treble tone is less emphasized as the number on the display changes upward if it has a minus sign or more emphasized if the number has a plus sign. The number 0 represents the neutral adjustment.
Front-rear volume balance adjustment (fader)	FA:	R5 to F5	The volume from the front speakers becomes higher than the volume from the rear speakers as the number on display changes upward if the number has the letter "F", and vice versa if the number has the letter "R".
Left-right volume balance adjustment (balance)	BL:	R5 to L5	The volume from the left speakers becomes higher than the volume from the right speakers as the number on the display changes upward if the number has the letter "L", and vice versa if the number has the letter "R".

NOTE:
If your audio system has no rear speakers connected, the overall speaker volume becomes too low as you increase the rear speaker volume with the front-rear volume balance adjustment (fader) mode selected. To obtain a sufficient volume level for listening, select the neutral or any "F" number level while in the front-rear balance adjustment mode, or select the 2-channel audio as explained later.

⇨ P. 9-5



T77048



T77049

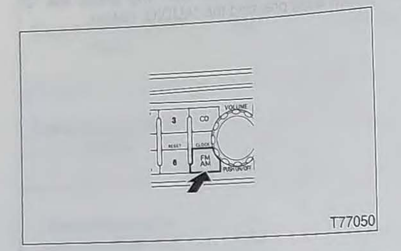
1.3 Selecting 2- or 4-channel audio

You can switch the speaker channel configuration between 2-channel (sound from the front speakers) ⑬ and 4-channel (sound from both the front and rear speakers) ⑭ each time you press the "2" button while pressing the "AUDIO" button.

NOTE:
Front-rear volume balance adjustment (fader) will not be possible if you have selected the 2-channel audio.

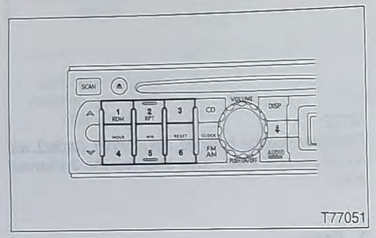
2 Radio

① Scan search button ("SCAN" button)
② Preset buttons
③ Display selection button
④ AM/FM1/FM2 button ("FM/AM" button)
⑤ Tuning button
⑥ AM indication
⑦ FM indication
⑧ FM band indication
⑨ Preset button number (channel) indication
⑩ Frequency/time-of-day indication


T77050

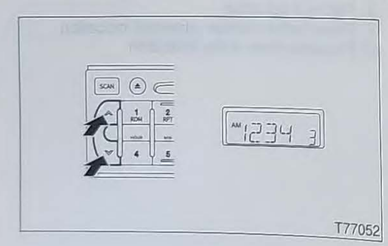
2.1 Listening to the radio

1. With the starter switch in the "ACC" or "ON" position, press the power/volume knob or "FM/AM" button to turn on the radio. To turn off the radio, press the power/volume knob again.
2. Tune the radio to the desired station.
- Press the "FM/AM" button.
  If the system was operating as a CD player, it now operates as a radio. If the system is already operating as a radio, the band changes in the sequence of AM to FM1 to FM2 each time the button is pressed.


T77051

- To tune in a preset station, simply press the desired preset button ("1" to "6").
- To tune in a non-preset station, press either side ("∧" or "∨") of the tuning button.
- The display will indicate "ST" when a stereo station is received.

3. Adjust the volume by turning the power/volume knob.
4. Use the "AUDIO" button and the tuning button ("∧" or "∨" side) if you wish to adjust the tone or the front-rear and/or left-right volume balance.


T77052

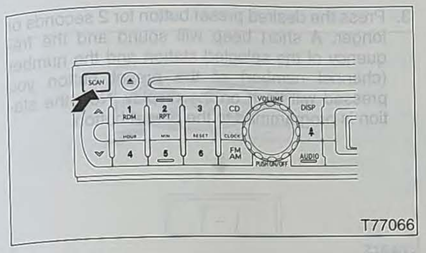
2.2 Manual tuning

Press either the "∧" or "∨" side of the tuning button.
"∧": Press this side for higher frequencies.
"∨": Press this side for lower frequencies.

2.3 Automatic tuning using the tuning button

Press either the "∧" or "∨" side of the tuning button for 0.5 seconds or longer. After a short beep, the radio will start searching. The searching stops at the first receivable station.
"∧": Press this side for higher frequencies.
"∨": Press this side for lower frequencies.

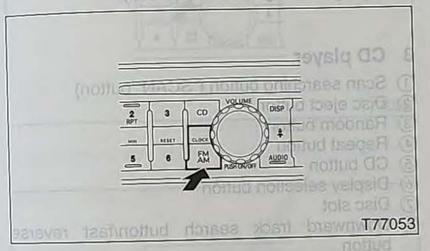
NOTE:
Automatic tuning will not be possible for stations with poor reception. In such a case, tune the radio manually.

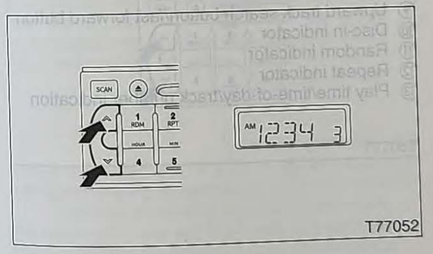

T77066

2.4 Automatic tuning using the "SCAN" button

- Press the "SCAN" button. The radio will automatically tune in to higher frequencies.
- When the radio tunes in a station, the frequency indication flashes on the display. The radio stays tuned in to the station for 5 seconds before restarting scan searching for the next receivable station.
- Press the "SCAN" button again to stop the scan searching.
  If you press the "SCAN" button while the radio is still searching for a station, the radio will tune in the previous received station.

NOTE:
Automatic tuning will not be possible for stations with poor reception. In such a case, tune the radio manually.


T77053

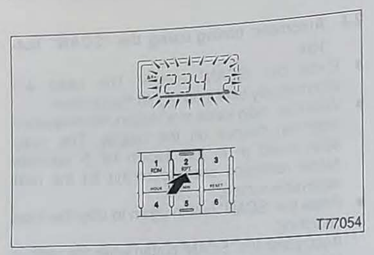

T77052

2.5 Programming stations to preset buttons

1. Press the "AM/FM" button until the display indicates the desired band (AM, FM1 or FM2).

2. Press either the "∧" or "∨" side of the tuning button until the frequency of the desired station is indicated on the display.
   "∧": Press this side for higher frequencies.
   "∨": Press this side for lower frequencies.
   You can also search a desired station by pressing either side of the tuning button for more than 0.5 seconds. After a short beep, the searching stops and the radio will tune in a receivable station.

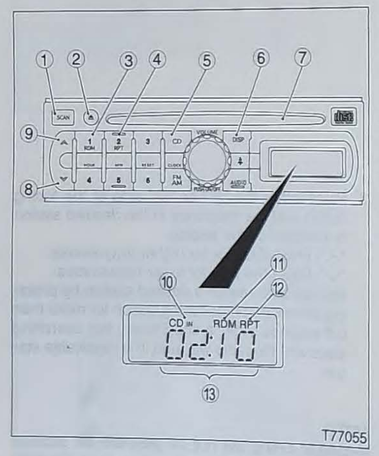
NOTE:
Automatic tuning will not be possible for stations with poor reception. In such a case, tune the radio manually.



3. Press the desired preset button for 2 seconds or longer. A short beep will sound and the frequency of the selected station and the number (channel number) of the preset button you pressed will flash on the display. Now the station is programmed to the preset button.

NOTE:

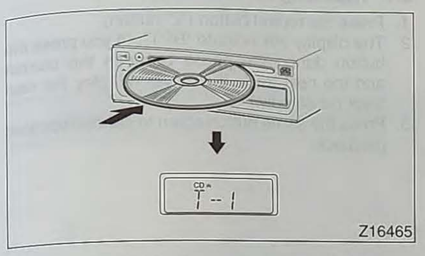
- *If you program a new station to a preset button to which another station was programmed, the original station will automatically be cancelled.*
- *If the vehicle battery is disconnected or the fuse protecting the audio system is removed, all stations programmed to preset buttons will be erased from the memory. Should this occur, reprogramming will be necessary.*

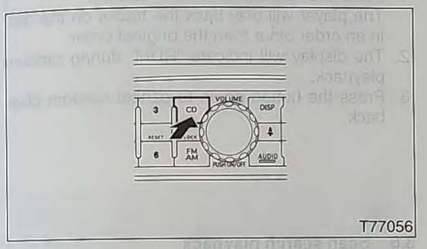


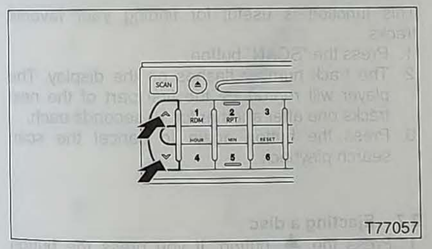
3 CD player

① Scan searching button ("SCAN" button)
② Disc eject button
③ Random button
④ Repeat button
⑤ CD button
⑥ Display selection button
⑦ Disc slot
⑧ Downward track search button/fast reverse button
⑨ Upward track search button/fast forward button
⑩ Disc-in indicator
⑪ Random indicator
⑫ Repeat indicator
⑬ Play time/time-of-day/track number indication

- The CD player turns on when you press the power/volume knob or insert a disc into the disc slot with the starter switch in the "ACC" or "ON" position.
- If you insert a CD into the disc slot while listening to the radio, the audio system then stops radio reception and operates as a CD player.







3.1 Playing a CD

1. Insert the CD into the disc slot with the labeled side up.
   This CD player can also play a single CD (8-cm disc) without using an adapter. Simply insert a single CD into the central part of the slot.
2. Upon insertion of a disc, the CD player will automatically turn on and start playback.
   The display indicates the track number followed by the time-of-day.

3.2 Switching to CD playing when listening to the radio

If the CD player is already loaded with a disc, simply press the CD button. Playback will start, beginning with the track that was last played.

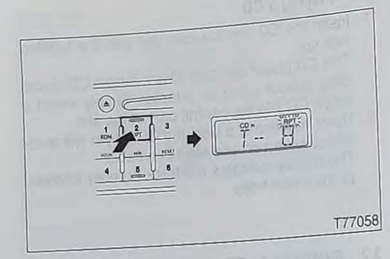
3.3 Switching to CD playing when listening to the radio

Fast forwarding/fast reversing

- Press either the "∧" or "∨" side of the tuning button for as long as necessary. Rapid disc reading continues forward or backward until the button is released.
  "∧": Press this side for fast forwarding.
  "∨": Press this side for fast reversing.
- For the first 3 seconds after pressing the button, the speed of fast forwarding/reversing is 3 times as fast as the normal playback speed; afterwards, it increases to 30 times the normal playback speed.
- Normal playback resumes as soon as you release the tuning button.

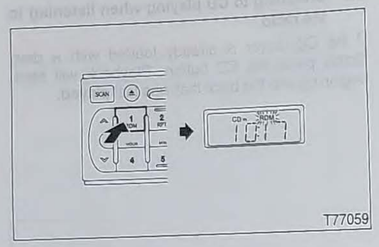
Track searching

Press either the "∧" or "∨" side of the tuning button until the number of the desired track is indicated on the display.
"∧": Press this side for higher track numbers.
"∨": Press this side for lower track numbers.



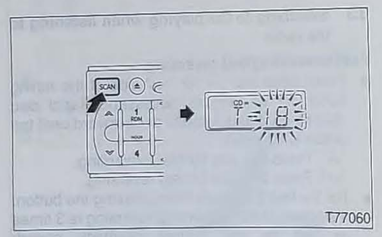
3.4 Repeating the same track

1. Press the repeat button (“2” button).
2. The display will indicate “RPT”. (If you press the button during the pause between the current and the next track, the player will play the next track repeatedly.)
3. Press the same button again to cancel repeated playback.



3.5 Playing tracks in random order

1. Press the random button (“1” button). The player will play back the tracks on the disc in an order other than the original order.
2. The display will indicate “RDM” during random playback.
3. Press the button again to cancel random playback.



3.6 Scan search playback

The player reproduces the first 10-second part of each track.
This function is useful for finding your favorite tracks.

1. Press the “SCAN” button.
2. The track number flashes on the display. The player will reproduce the first part of the next tracks one after another for 10 seconds each.
3. Press the button again to cancel the scan search playback.

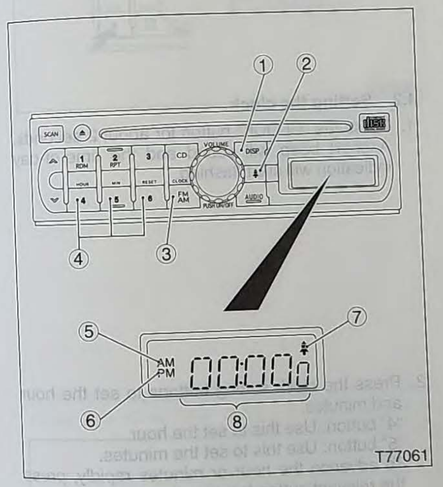
3.7 Ejecting a disc

1. Press the ⏏ button. If you press the button while the disc is still being played back, the player stops playback and ejects the disc.
2. Remove the disc from the slot. The radio will automatically start receiving the station you last listened to.

3.8 Error indication

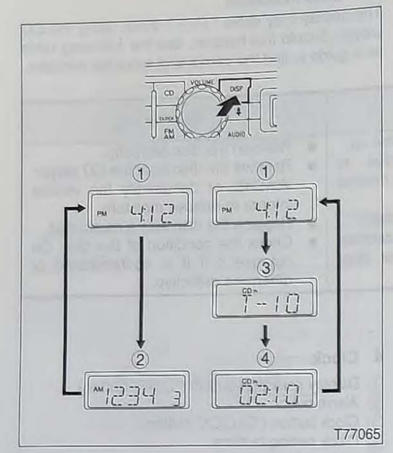
The display may show “Err” when using the CD player. Should this happen, use the following table as a guide to find the cause and solve the problem.

Indication	Probable cause	Remedy
Err	• Disc is inserted with wrong side up. • Disc cannot be read due to condensation on it or on the internal mechanism of the player. • Inserted disc is not a music disc. • Disc cannot be read due to scratches, contamination, deformation or other defects.	• Reinsert the disc correctly. • Remove the disc from the CD player. Ventilate or dehumidify the vehicle interior to remove moisture. • Replace the disc with a music disc. • Check the condition of the disc. Do not use it if it is contaminated or otherwise defective.

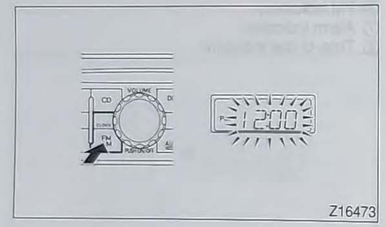


4 Clock

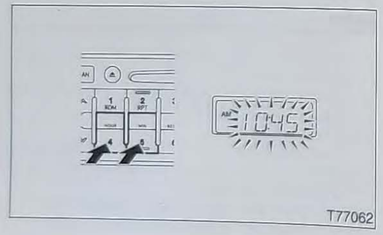
① Display selection button (“DISP” button)
② Alarm button
③ Clock button (“CLOCK” button)
④ Clock setting buttons
⑤ AM indication
⑥ PM indication
⑦ Alarm indication
⑧ Time-of-day indication



T77065



Z16473



T77062

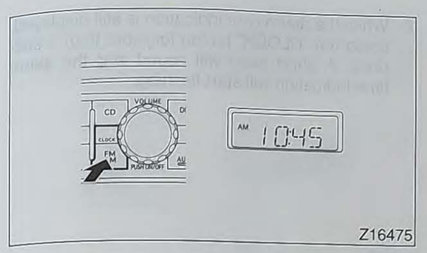
4.1 Viewing the time

- When listening to the radio:
  Press the "DISP" button. Each time the button is pressed, the indication will alternate between the time-of-day indication ① and frequency indication ②.
- When playing a CD:
  Press the "DISP" button. Each time the button is pressed, the indication will change in this sequence: time-of-day indication ① → track number indication ③ → playback time indication ④.
- Any indication other than that for time-of-day will automatically change to the time-of-day indication after a lapse of 5 seconds.

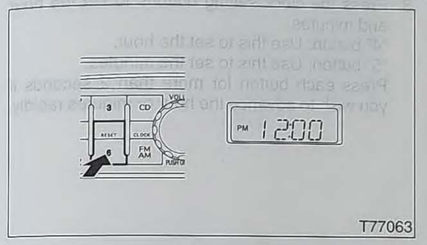
4.2 Setting the clock

1. Press the "CLOCK" button for about 2 seconds. A short beep will sound and the time-of-day indication will start flashing.

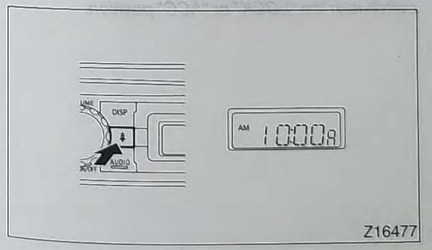
2. Press the clock setting buttons to set the hour and minutes.
   "4" button: Use this to set the hour.
   "5" button: Use this to set the minutes.
   To advance the hour or minutes rapidly, press the relevant button for more than 2 seconds.



Z16475



T77063



Z16477

3. Press the "CLOCK" button again to complete the setting.

4.3 Setting the clock to time signal

1. After first pressing the "CLOCK" button for clock setting, press the "6" button. The hour will remain unchanged and the minutes will change to "00" if the minutes are less than 30. The hour will advance by one and the minutes will change to "00" if the minutes are at or more than 30.
   Example:
   If the original indication is 12:00 to 12:29, it will change to 12:00.
   If the original indication is 12:30 to 12:59, it will change to 1:00.

2. Push the "CLOCK" button simultaneously with the time signal.

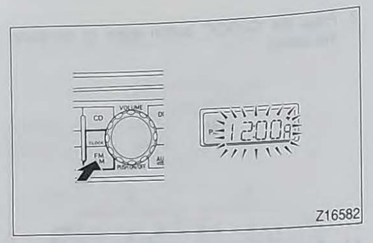
5 Alarm

If you set the alarm to a desired time of day, a buzzer will sound at the set time.

NOTE:
The time setting will be cancelled if the vehicle's battery is disconnected or if the fuse protecting the audio system is removed. You must then set the alarm time again.

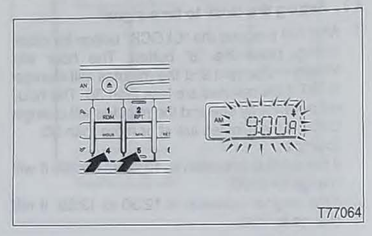
5.1 Setting the alarm

1. Press the ⏫ button (less than 2 seconds). The display will change to the alarm time indication. If you do nothing in the 5 seconds after pressing the button, the display will return to the time-of-day indication.



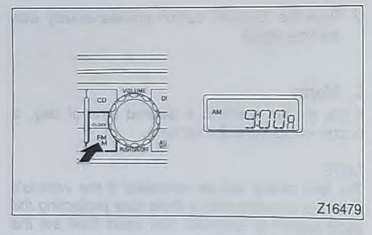
Z16582

2. While the alarm time indication is still displayed, press the "CLOCK" button for more than 2 seconds. A short beep will sound and the alarm time indication will start flashing.



T77064

3. Press the clock setting buttons to set the hour and minutes.
"4" button: Use this to set the hour.
"5" button: Use this to set the minutes.
Press each button for more than 2 seconds if you wish to advance the hour or minutes rapidly.



Z16479

4. Press the "CLOCK" button to complete the alarm time setting.

NOTE:
You can check the alarm time setting on the display by pressing the ⏶ button even when the starter switch is in the "LOCK" or "ACC" position.

Z16480

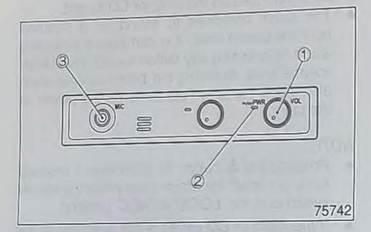
5.2 Turning on and off the alarm

- The alarm turns on and turns off alternately each time you press the ⏶ button (for more than 2 seconds). A short beep will sound when the button is pressed.
- The alarm ON state can be identified by the ⏶ mark appearing on the display. The mark does not appear when the alarm is turned off.
- The alarm sounds even when the radio or CD player is in operation. The alarm sound then will be superposed on the radio or CD sound.
- The alarm continues to sound for 3 minutes from the preset time. You can stop a sounding alarm by pressing any button except the power/volume knob. Pressing the power/volume knob also stops the alarm but turns off the power of the radio.

NOTE:
- *Pressing the ⏶ button for more than 2 seconds turns on or off the alarm even when the starter switch is in the "LOCK" or "ACC" position.*
- *If the radio or CD player is not operated or the vehicle is not used (the starter switch is not placed in the "ON" or "ACC" position) for a period of a week or longer, the alarm time setting is automatically cancelled.*
- *Unless the alarm is turned off, it continues to operate irrespective of the starter switch position. Turn off the alarm function when you do not need it.*

Microphone

Use the microphone to address passengers inside the vehicle.
When not using the microphone, store it in the glove compartment, or elsewhere.
The microphone can be used when the starter switch is at ON or ACC position.

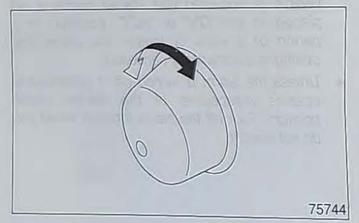


75742

1 Microphone amp

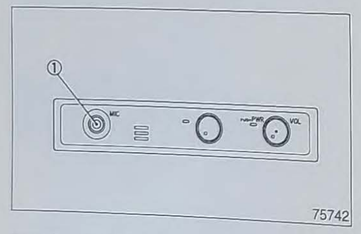
1.1 Names, Functions

① ON-OFF switch/volume control knob
② Power supply indicator
③ Microphone jack


75744

- ON-OFF switch/volume control knob

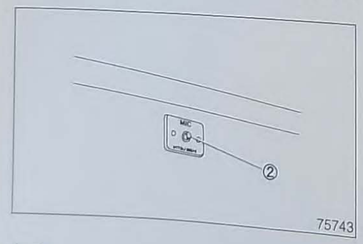
The power goes ON or OFF each time you press this knob. When the power is on, the power supply indicator glows.
If you are listening to the radio or cassette player, the sound disappears and only the voice at the mic can be heard. Press the knob again to return the radio or cassette player.
Turn the knob clockwise to increase sound volume, and to counterclockwise to decrease it.



75742

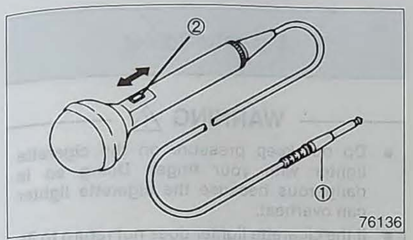
- Microphone jack

Insert the microphone plug into the jack ① indicated "MIC".



75743

There is another microphone jack ② in the ceiling of the passenger compartment.

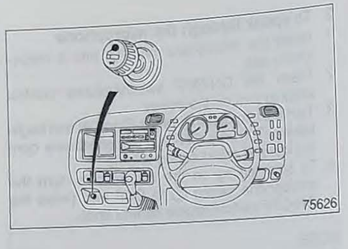


76136

2 To speak through the microphone

1. Insert the microphone plug ① into a microphone jack.
2. Press the ON-OFF switch/volume control knob to turn on the power.
3. Turn the microphone switch ② to ON and begin talking. Turn the ON-OFF switch/volume control knob to adjust sound volume.
4. To stop talking on the microphone, turn the microphone switch ② to OFF and press the ON-OFF switch/volume control knob.

NOTE:
Adjust the sound volume so that you do not hear any howling sound.


75626

Cigarette lighter

WARNING ⚠

- Do not keep pressure on the cigarette lighter with your finger. Doing so is dangerous because the cigarette lighter can overheat.
- If the cigarette lighter does not return to its original position after more than 30 seconds, something is wrong. Remove it by hand immediately. If it is left as is, the cigarette lighter might overheat and breakdown or cause a fire.
  Do not use the cigarette lighter if it malfunctions. Have it repaired at the nearest authorized MITSUBISHI FUSO dealer as soon possible.
- Do not leave the vehicle with the cigarette lighter pressed.
- Do not allow children to touch the cigarette lighter.
- Do not use a cigarette lighter from another vehicle. You must use appropriate voltage cigarette lighter.
- If the cigarette lighter becomes deformed, it will not pop back to its original position well. Replace a deformed lighter with a MITSUBISHI genuine cigarette lighter. Do not use a lighter that is not a MITSUBISHI Fuso genuine part.
- Do not use the cigarette lighter cylinder as a power source for other electrical appliances. Doing so will lead to current overload, which can cause overheating of electrical wires.

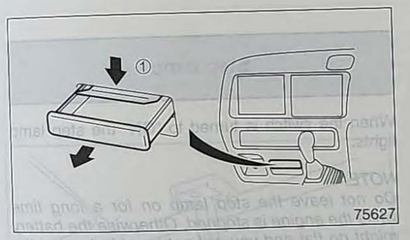
Use when the starter key is at ON or ACC position. Press in the cigarette lighter. In a short while it becomes red hot and returns to its original position. Take it out and use it.

Ashtray

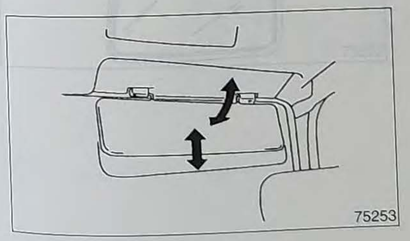
WARNING ⚠

- **Do not put cigarettes or matches in the ashtray until the fire is completely extinguished. Always close the ashtray with the lid.**
- **Do not put anything other than cigarette butts into the ashtray, and do not let the ashtray become overfilled with cigarette butts since there is danger that fire from a cigarette could spread.**
- **Do not tap the ashtray with a hard thing when cleaning it. The ashtray may be damaged.**
  Do not use the broken ashtray as it is but replace it with new one as soon as possible. If you keep up using the broken ashtray, there is a danger of fire.

When cigarette butts accumulate, clean out the ashtray.
Press the spring ① at the center to remove it.



75627


75253

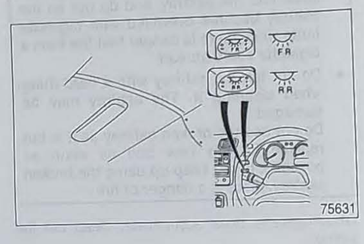
Sun visor

The sun visor blocks out direct sunlight and protects your eyes. Change the angle of the visor to optimum position. You can also slide the sun visor up or down, so set it to the best position.

Room lamp

CAUTION ⚠

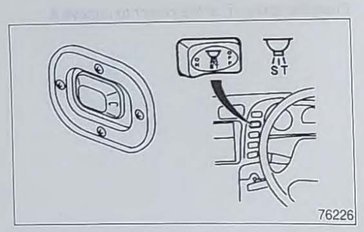
Do not leave the room lamp on for a long time while the engine is stopped. Otherwise the battery might go flat and you will not be able to start the engine. Always turn the lamp off before leaving the vehicle.



75631

1 Room lamp

- Switch (FR) : When this switch is turned to "ON" the front lamp lights.
- Switch (RR) : When this switch is turned to "ON" the two rear lamps light.

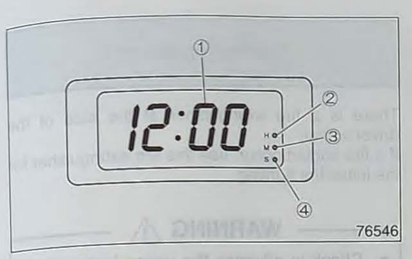


76226

Step lamp

When the switch is turned to "ON" the step lamp lights.

NOTE:
Do not leave the step lamp on for a long time while the engine is stopped. Otherwise the battery might go flat and you will not be able to start the engine. Always turn the step lamp off before leaving the vehicle.



76546

Clock

<BE64DJRMDFAC/FAD>

1 Setting procedure

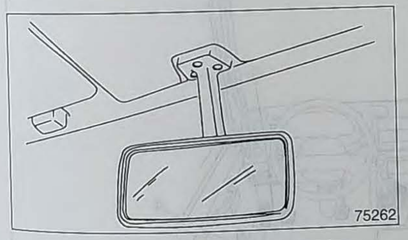
① Digital time display
- Indicates present time

② Time Fixing Button (H)
③ Time Fixing Button (M)
④ Time Set Button

- Press the Time Fixing Button (H) ② to match up hours. Press the Time Fixing Button (M) ③ to match up minutes. The values can be made to change quicker by holding down the Time Set Button.
- Press the Time Set Button ④ to reset the time to the nearest hourly value.
- Resetting at minute values from 0 to 29 will cause the display to move back to the previous hour. Resetting at minute values from 30 to 59 will cause the display to move forward to the next hour.

Example:

9:00 ~ 9:29 → 9:00
9:30 ~ 9:59 → 10:00


75262

Inside rearview mirror

Adjust this mirror to the proper angle so you can see to the rear.

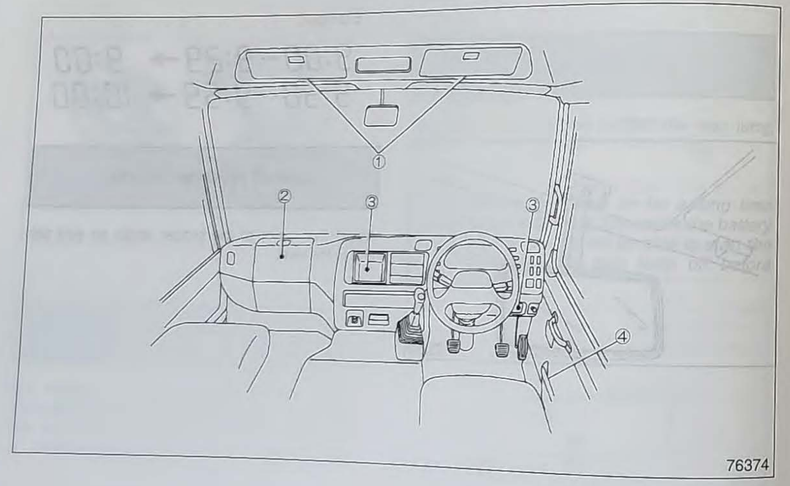
Fire extinguisher

There is a fire extinguisher at the side of the driver's seat.
If a fire should occur, use this fire extinguisher for the initial fire fighting.

WARNING ⚠

- **Check in advance the usage instructions and applications on fire extinguisher warning labels.**
- **Do not use a fire extinguisher if its effective period has expired. Either replace the contents of the extinguisher, or the extinguisher itself, beforehand.**

Small article compartments



76374

WARNING ⚠

Do not put items that roll easily in a compartment or pocket for small articles. If such items should fall on the floor, they can interfere with driving.

CAUTION ⚠

Do not drive the vehicle with the lid of the small-article compartment left open. Otherwise the lid might get damaged and articles could fall out. Always close the lid before driving.

① Roof glove compartment
Keep this compartment shut while driving the vehicle.
② Glove compartment
Keep this compartment shut while driving the vehicle.
③ Pocket
④ Door pocket

Cold weather handling

Coolant 10-2

Engine oil 10-2

Fuel 10-3

Other recommendations for cold weather operation 10-3

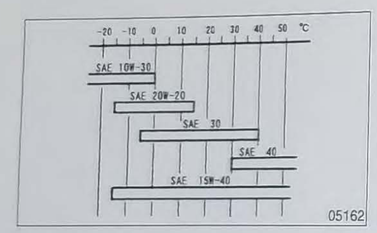
Installing tire chains 10-5

Coolant

- When the vehicle was shipped from the factory, MITSUBISHI genuine FUSO DIESEL LONGLIFE COOLANT was added to the coolant water. This COOLANT serves as both antifreeze and rust inhibitor, so there is no need to be concerned about freezing. Just to be sure, however, before driving in cold climates, have the COOLANT concentration checked by the nearest authorized MITSUBISHI FUSO dealer.
- After the vehicle has been used for a prescribed period, add antifreeze or FUSO DIESEL LONGLIFE COOLANT at the prescribed concentration.

⇨📖 P. 11-34

NOTE:
You do not need to add antifreeze when using FUSO DIESEL LONGLIFE COOLANT.



Engine oil

The viscosity of the engine oil increases in cold temperatures, sometimes making it hard to start the engine, especially early in the morning. Therefore, use an engine oil of a viscosity which suits the weather conditions.

⇨📖 P. 11-14

Fuel

Regular light oil freezes and you cannot start the engine.
Before departing for a cold climate area, fill the tank with fuel so that the tank is no more than half full when you arrive at your destination. Then refuel with light oil for the local area as soon as possible.

Other recommendations for cold weather operation

- Start the engine by the method given on page 4-7.
  If the engine does not start, turn the stater key to the ACC or LOCK position, wait a little while for the battery to restore, then start again.
- When air temperature drops, battery performance also declines. Check battery fluid volume and specific gravity.
- Have window washer fluid at a concentration suited for winter.
- While parked or driving on snow-covered roads, the brake might freeze and lose its effectiveness. While driving the vehicle, watch out for road conditions and for other vehicles to the front and rear from time to time, step lightly on the brake pedal to confirm brake effectiveness. If braking action is poor, step on the brake pedal a number of times while driving at slow speed until brake effectiveness is restored.
- Check the outer casing and boots of the parking brake cable and accelerator cable for damage and replace them if necessary.
- Remove snow and ice from the vehicle bottom and from the inner side of the fender so that they do not cause damage to components.

- Park the vehicle at a location where it will not be directly exposed to wind or snow. As much as possible, park the vehicle with its back to the wind.
  1. Stop the vehicle and engage the parking brake.
  2. Stop the engine and set the gear shift lever to 1st gear or reverse.
     Put the range selector lever at P for the automatic transmission vehicle.
  3. Place chocks (option) behind the wheels so the vehicle will not move.
  4. Release the parking brake.
- When you do not use the air conditioner, operate it once a month so as to maintain its functioning.

NOTE:

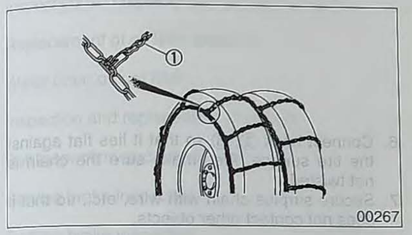
- *If the door freezes, do not attempt to open it forcefully, as you might tear the rubber around the door and cause it to crack. Pour hot water on the door to melt away the ice. Afterwards, be sure to wipe away the moisture adequately.*
- *In cold weather, the door keyhole and rubber parts can freeze so you cannot open the door. After washing the vehicle, be sure to wipe away moisture from the door thoroughly. Also, coat the keyhole and rubber parts with silicone or another good antifreeze agent.*

Installing tire chains

Be careful in attaching tire chains that the chains do not slip while driving the vehicle or interfere with other components.
Attach tire chains which match the size of your tires. For double tires (rear wheels) use triple chain.

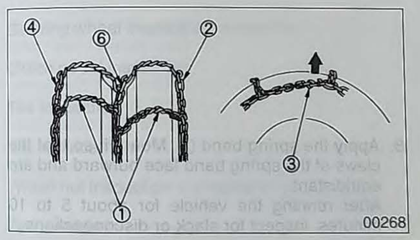
NOTE:

- *Do not use tire chains on front tires. Mount snow tires or studless tires.*
- *Inspect the chain and spring band for wear or damage.*



00267

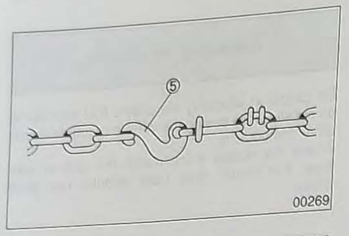
1. Attach to tire so that the cross chains ① bend around the outside of the tire.



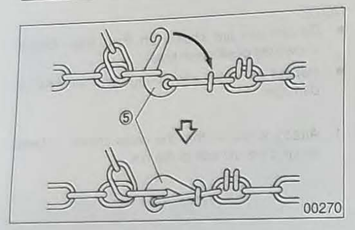
00268

2. Connect the inside chain ② to hooks ③ so that there is no surplus chain. Take up any slack in the inside chain by pulling the inside tire cross chain ① to the outside.

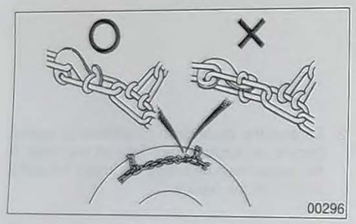
NOTE:
Pull the hooks as far as possible to the outside of the tire.



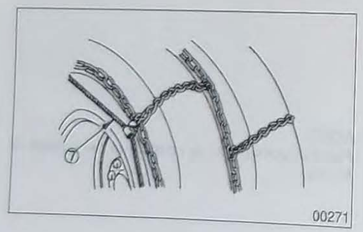
3. Provisionally stop the hook ⑤ of the outside chain ④ as shown in the diagram.



4. Connect the intermediate chain ⑥ by closing the hook all the way.
5. Stretch both ends of the outside chain ④ fully and connect hook ⑤.



6. Connect hook ③, ⑤ so that it lies flat against the tire surface. Also make sure the chain is not twisted.
7. Secure surplus chain with wire, etc., so that it does not contact other objects.



8. Apply the spring band ⑦. Mount it so that the claws of the spring band face outward and are equidistant.
   After running the vehicle for about 5 to 10 minutes, inspect for slack or disconnections.

NOTE:

- *When tire chains are used, try to drive at speeds no faster than 30 km/h.*
- *Avoid driving on dry road with tire chains. Otherwise the chains can be damaged.*

Simple inspection and service

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Onboard tools 11-3
Pre-operational (daily) checks 11-4
Greasing 11-12
Inspection and replacement of oils and fluids 11-14
Replacement of oil filter elements 11-27
Water drain of fuel filter 11-33
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Wheel nut inspection and tightening 11-58
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General precautions for servicing the vehicle

- Stop engine and always remove starter key.
- Apply the parking brake securely and set the gear shift lever to neutral.
- Apply chocks to the tires.
- The engine, exhaust pipe and other components get very hot after running the vehicle, so be careful not to get burnt. Perform inspection and care after allowing the vehicle to cool down.
- After completing inspection or care, check to be sure you have not left cleaning rags, paper or tools in the engine room.
  Be especially careful not to leave combustibles as they can cause a fire.
- After inspection or care, always inspect for leakage of oils, fluids or water.

CAUTION ⚠

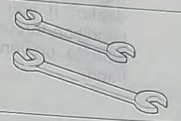
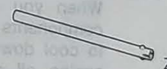
- **Never break the seal on the engine fuel injection pump. The fuel pump has been adjusted for optimum condition at the factory. If you break the seal and adjust the pump improperly, output will drop, black smoke will be produced, exhaust will become more harmful, and other adverse effects on the environment will arise. Warranty cannot be applied to breakdowns resulting from improper adjustments.**
- **Various types of covers are attached to reduce noise.**
- **Use genuine parts for replacement of filters or elements, etc. Use oils and greases recommended by MITSUBISHI FUSO.** ⇨📖P. 13-3

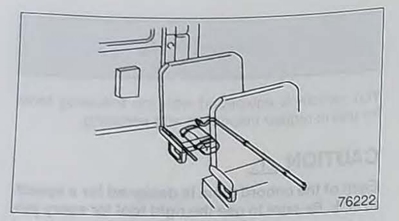
Onboard tools

You vehicle is equipeped with the following tools for use in regular inspection and servicing.

CAUTION ⚠

Each of the onbord tools is designed for a specific task. Be sure to use the right tool for every job.

Name	Tool	Application	Reference page
Tool bag	76369	-	-
Spanners (set of two)	 Z09405	-	-
Screwdriver	76350	-	-
Pliers	76351		
Socket wrench	76352	Removes wheel nuts	11-54
Wrench handle	 Z09207	Used together with wheel nut wrench or hydraulic jack.	11-51, 11-54
Crank handle	76353	Removal and installation of spare tire	11-60
Hydraulic jack	76354	Used to jack up the vehicle	11-50
Wheel chocks(a set)	76355	-	-


76222

1 Locations of on-board tools

Tools are located under the rear seat at the left of the vehicle.

Pre-operational (daily) checks

For safe, comfortable driving, always inspect the vehicle each day before you begin driving it. If an anomaly is discovered during inspection, have it repaired before driving. If you cannot repair the vehicle yourself, request servicing from the nearest authorized MITSUBISHI FUSO dealer. If you constantly check the vehicle's condition through simple inspection, you will be able to prevent unexpected problems beforehand.

WARNING ⚠

- **In conducting inspection, be careful to avoid injury from vehicle body edges, etc.**
- **Do not leave tools or combustible material such as cloth in the engine room.**

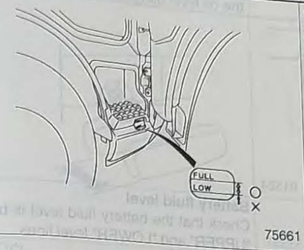
CAUTION ⚠

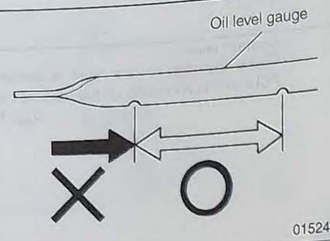
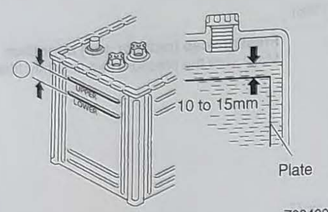
When you have just finished driving, engine components are extremely hot. Allow the engine to cool down before inspecting. Items such as engine oil and coolant volumes and tire air pressures cannot be inspected accurately immediately after driving.

1 Preparations before inspection

1. Select level ground where inspection can be conducted safely.
2. Apply the parking brake securely and apply chocks for safety.

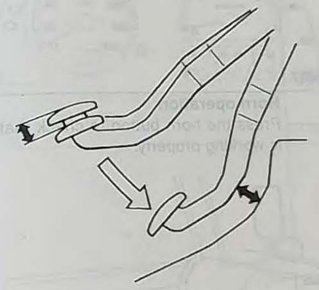
2 Before starting the engine

①	 75661	**Coolant level** Check that the coolant level is between the FULL and LOW marks on the reservoir tank. ⇨ P. 11-37
②	Z06677	**Pressure cap (radiator cap) condition** Make sure the pressure cap is tightly fitted.
③	01489	**V-belt tension and damage** Check the belt for proper deflection when a force of 98 N (10 kgf) is applied to the point midway between the pulleys. Check also that the belt is not nicked or otherwise damaged. ⇨ P. 11-40

4	 01524	**Engine oil level** Check that there is sufficient engine oil using the oil level gauge. ⇨📖 P. 11-15
5	 Z00409	**Battery fluid level** Check that the battery fluid level is between the "UPPER" and "LOWER" level lines. ⇨📖 P. 11-62
6		**Leakage of coolant, fuel and oil** Check the underneath of the vehicle for any sign of leakage.

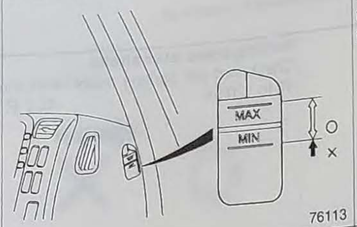
3 In the driving seat

Start the engine and perform the following checks while allowing it to warm up.

7	76227	**Parking brake lever stroke** Check that the parking brake lever stroke is 80 to 120mm. ⇨📖 P. 11-44
8	 01496	**Service brake pedal** Make sure that the brake pedal has 10 to 15mm free play when pressed by finger. Check that when the brake pedal is depressed fully, the pedal-to-floor clearance is greater than 45mm. ⇨📖 P. 11-43
9	01493	**Engine conditions** Check the engine for smooth starting and quiet running.

Brake fluid level
Check that the brake fluid level is between the MAX and MIN marks on the reservoir tank.

⇨ P. 11-24



76113

Steering wheel free play
Gently turning the steering wheel, check that the play is 5 to 50mm.

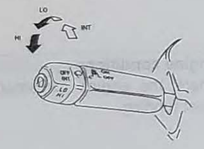
75897

Horn operation
Press the horn button to check that the horn is working properly.

76095

Windshield wiper and washer operation
Check the washer for proper fluid spray direction and the wipers for normal action.

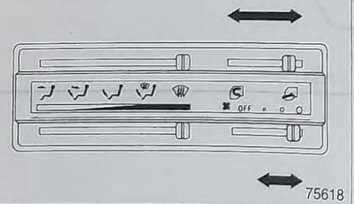
⇨ P. 4-20



76108

Defroster
Make sure that warm air blows properly onto the windshield.

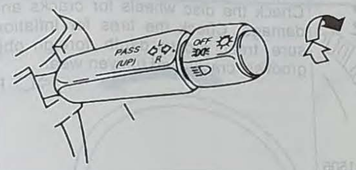
⇨ P. 8-5



75618

Lighting system
Make sure that each lamp lights up or flashes properly. Check lamp lenses for dirt and damage.

⇨ P. 4-17



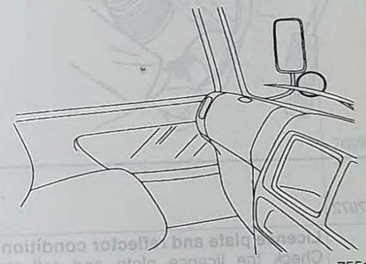
76115

Gauge, warning/indicator lamp operation
Check that all gauges, warning lamps and indicators are working properly.

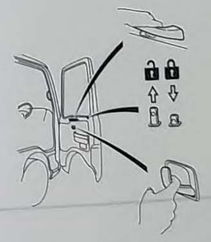
⇨ P. 5-2, 5-5

T77078

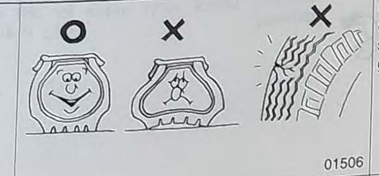
Rearview mirrors
Sitting in the driver's seat, adjust the angles for clear views of the sides and rear.
Make sure the mirrors are clean.


75513

Door locks
Push down the lock knob and verify that the door does not open even when the inner handle is operated.

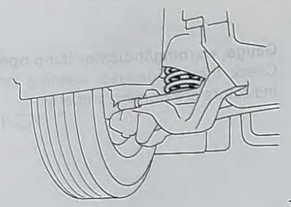

T77125

4 While walking around the vehicle



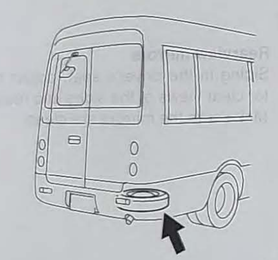
01506

Wheels and tires
Check the disc wheels for cracks and other damage. Check the tires for inflation pressure, tread groove depth, foreign objects in grooves, cracks and uneven wear.
⇨ P. 11-48



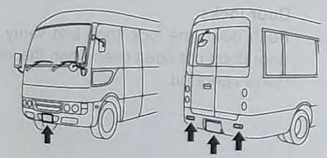
76372

Suspension springs
Check for broken springs and tilt of vehicle body toward either side.



T77072

Spare tire stowage condition
Make sure that the spare tire carrier is free from damage and the tire is held securely on the carrier.

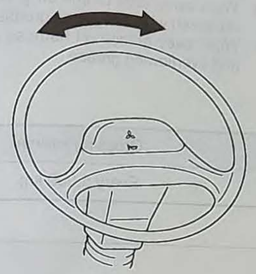


T77073

Licence plate and reflector condition
Check the licence plate and reflectors for loose installation, damage and dirt.

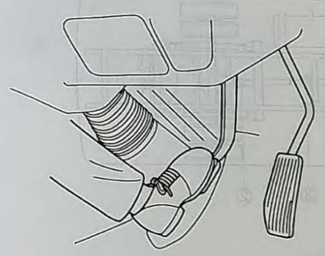
5 While driving at slow speeds

Perform the following checks while driving in a safe place at speed lower than 20 km/h.



75897

Steering wheel operation
Check that the steering wheel does not vibrate or pull to one side and that it is not unduly heavy. Also make sure that the steering wheel returns to its neutral position smoothly.
⇨ P. 11-45



76099

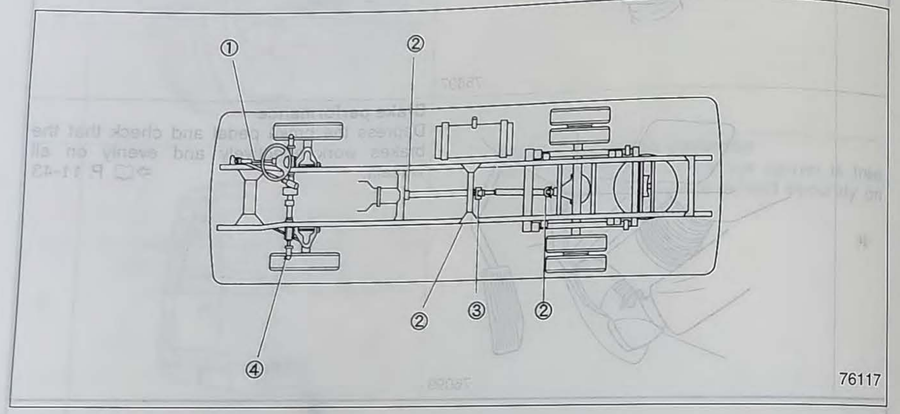
Brake performance
Depress the brake pedal and check that the brakes work effectively and evenly on all wheels.
⇨ P. 11-43

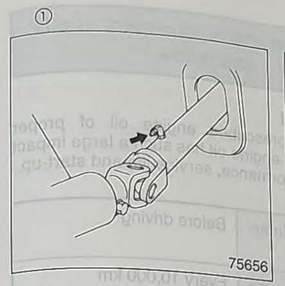
Greasing

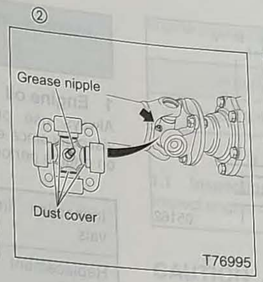
1 Grease nipple

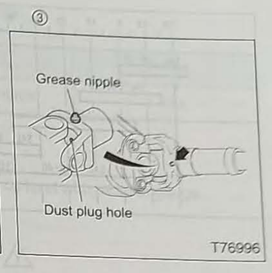
- Wipe away dust or soil on grease nipples and replenish with prescribed grease.
- Wipe away grease on harness or rubber hose, and overflowing grease.

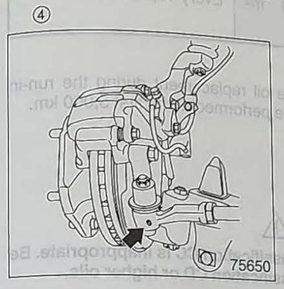
Greasing interval
Every 5,000 km









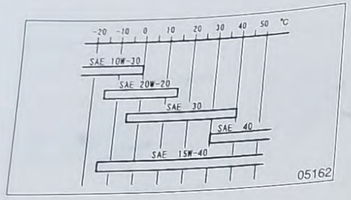


Recommended lubricant:
Chassis grease NLGI No. 1 (Li soap)

④ Tie rod
(two locations left and right)

Recommended lubricant:
Wheel bearing grease NLGI No. 2 (Li soap)

① Steering shaft
② Universal joint of propeller shaft
Supply grease until it emerges from the dust covers (four places) on the universal joint.
③ Slip joint of propeller shaft
Supply grease until it emerges from the slip joint dust plug hole.



Inspection and replacement of oils and fluids

1 Engine oil

Always use prescribed engine oil of proper viscosity since engine oil has such a large impact on engine performance, service life and start-up.

Inspection intervals	Before driving
Replacement intervals	Every 10,000 km

The first engine oil replacement during the run-in period should be performed at the first 5,000 km.

CAUTION ⚠

An oil of API classification CC is inappropriate. Be sure to use classification CD or higher oils.

Recommended oil:

Engine oil

Engine oil should have a 1.5% or higher ash level (in weight percentage)
API classification CD, CD/SF, CE, CE/SF, CF-4 or JASO classification DH-1
SAE40, 30, 20W-20, 10W-30, 15W-40

Engine oil quantity:

oil pan	oil filter
Approx. 8 litres	1 litre

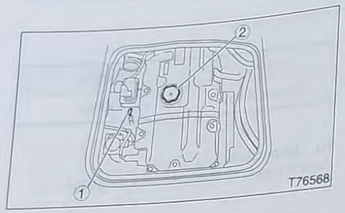
1.1 Inspection

Inspect engine oil level with oil level gauge.

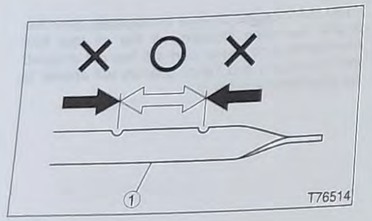
CAUTION ⚠

Conduct inspections on level surfaces with the engine stopped. Engine oil level cannot be measured accurately if the vehicle is tilted, or if the engine is running or has just been turned off. Wait at least 30 minutes after stopping the engine to inspect.

NOTE:
If you check engine oil level immediately after the engine has been stopped, all the oil that has travelled to each engine part still has not dropped into the oil pan, and the oil quantity will appear to be less than it actually is.



1. Pull out the oil level gauge ① and wipe oil from it.
2. Insert oil level gauge again, then slowly pull it out.
3. If the oil on the gauge is in the range illustrated, the oil level is adequate.
   If inadequate, replenish with prescribed oil.
   Also, if the engine oil is dirty, replace it.
4. After inspection, insert the oil level gauge all the way in to return it.



1.2 Replenishing

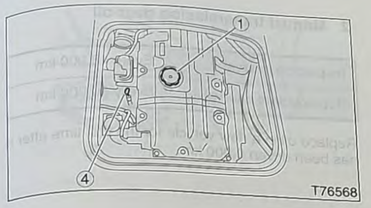
WARNING ⚠

Be careful not to spill engine oil when replenishing it. If oil gets on the exhaust manifold or other components, the heat could cause a fire.
If you should spill oil, wipe it off thoroughly.

1. Clean the area around the oil filler cap ② so that dirt, etc. does not get in the oil while replenishing.
2. Remove oil filler cap and replenish engine oil.
3. After replenishing, close the oil filler cap.
4. Wait at least five minutes, then check with the oil level gauge. If you check the oil level immediately after replenishing, it will appear lower than the actual volume because the oil has not had time to seep all the way down.
   If the oil level is excessive, drain oil from the oil pan through the drain cock. If the oil level is inadequate, replenish again.

CAUTION ⚠

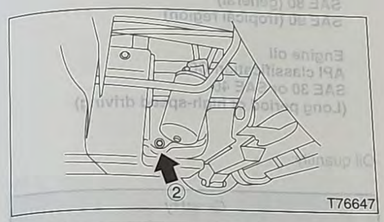
Replenish with oil of the same grade and viscosity as the oil currently in use.



1.3 Replacement

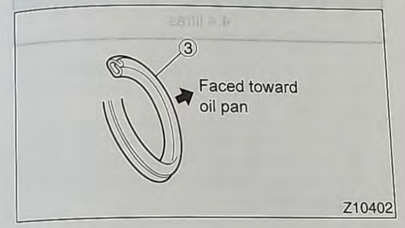
WARNING ⚠

- **Oil can be very hot after the engine has been run. When draining oil, be careful to avoid getting burnt.**
- **Be careful not to spill engine oil when replenishing it. If oil gets on the exhaust manifold or other components, the heat could cause a fire. If you should spill oil, wipe it off thoroughly.**



1. Before supplying oil, clean around the oil filler cap ① so that dirt will not get inside, then remove the cap.
2. Remove the oil pan drain plug ② and replace the oil filter. Then drain the oil.
⇨📖 P. 11-27

NOTE:
If the oil is replaced while it is still slightly warm after the engine has been stopped, it will drain out quickly. Be careful to avoid burns.



3. Install the drain plug with a new gasket ③. The side indicated on the figure of the gasket must be faced toward the oil pan.

Drain plug tightening torque
39 Nm (4.0 kgfm)

4. Carefully pour fresh engine oil through the oil filler.
5. Wait at least 10 minutes, then check with the oil level gauge ④.
6. Let the engine idle until oil can seep throughout, then stop the engine, wait for at least 30 minutes and check the oil level again. Also, inspect to see if there is any oil leakage.
7. Confirm that the drain plug, oil filler cap and oil level gauge have all been properly reinstalled after oil replacement.

CAUTION ⚠

Be careful not to put in too much engine oil.

2 Manual transmission gear oil

Inspection interval	Every 15,000 km
Replacement interval	Every 30,000 km

Replace oil in a new vehicle for the first time after it has been driven 5,000 km.

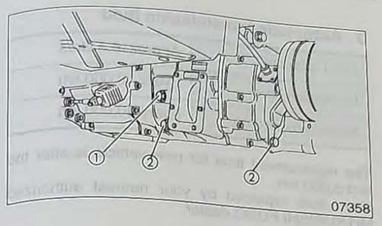
Recommended lubricant:

Gear oil
API classification GL-3,
SAE 80 (general) or 90 (warm region)
SPI classification GL-4,
SAE 80 (general)
SAE 90 (tropical region)

Engine oil
API classification CC,
SAE 30 or SAE 40
(Long period of high-speed driving)

Oil quantity:

Quantity
4.4 litres



2.1 Inspection

1. Remove the inspection plug ① from the plug port and check if the oil is up to the brim or not.
2. If not, add oil until it does.

CAUTION ⚠

Replenish with oil of the same grade and viscosity as the oil currently in use.

3. Attach inspection plug.

Inspection plug tightening torque
69 ± 15 Nm (7 ± 1.5 kgfm)

2.2 Replacement

1. Remove the inspection plug ① and the drain plug ② and drain the oil.

WARNING ⚠

Since the oil reaches very high temperature after operation of the vehicle, exercise extreme care when draining the oil.

NOTE:
If you replace oil shortly after the engine has been stopped, while the oil is still slightly warm, it will drain out faster.

2. The drain plug is fitted with a magnet. Wipe off any metal particles sticking to the magnet.
3. When all of the transmission gear oil has drained out, install the drain plug.

Drain plug tightening torque
69 ± 15 Nm (7 ± 1.5 kgfm)

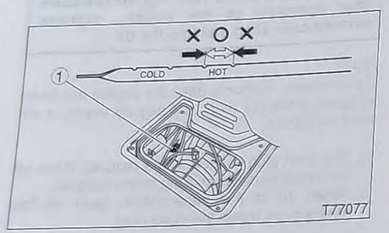
4. Add oil through the inspection plug port until it reaches the brim.
5. Attach inspection plug.

3 Automatic transmission fluid

Fluid quantity	Approx. 6.4 litres
Inspection time	Every 10,000 km
Replacement time	Every 40,000 km

The replacement time for new vehicle is after the first 5,000 km.
Have fluid replaced by your nearest authorized MITSUBISHI FUSO dealer.

Recommended transmission fluid:
Automatic transmission fluid
Exxon Mobil: Mobil ATF3309 or equivalent



3.1 Inspection

To check the oil level, check the "HOT" side of the oil level gauge ①.

1. Park the vehicle on level ground, firmly apply the parking brake, and apply chocks to the tires.
2. With the engine idling, step on the brake pedal and shift the range selection lever in order through all the ranges and then place the lever in neutral [P]. Open the transmission inspection door.
3. With the engine running, pull out level gauge and wipe it clean. Carefully reinsert and remove the level gauge and then read the fluid level from the gauge by noting how far up the gauge is coated with fluid.
4. The level is satisfactory if the fluid position is within the "HOT" level range.
5. When the fluid level is low, add more transmission fluid through the fluid level gauge port.
6. Make a final check of the fluid level when the fluid is hot after the vehicle has been driven.

CAUTION ⚠

- **As the temperature of the fluid increases, so does the fluid level, so do not add transmission fluid above the specified level gauge range.**
- **When checking the fluid level, first remove the debris and muck from around the level gauge.**
- **Use a clean funnel, etc., when adding more transmission fluid. Do not use a funnel, etc., that has been used for another type of oil, such as gear oil. If foreign matter gets into the transmission fluid it could cause problems.**

NOTE:

- *The automatic transmission oil cannot checked if it is not at a high temperature. Be sure to drive the vehicle before performing this check.*
- *Conduct the fluid level inspection while the engine is idling. The fluid level cannot be correctly read if the engine is stopped or if the engine speed is increased.*

4 Differential gear oil

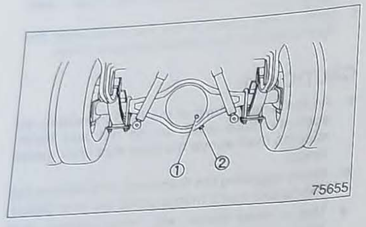
Inspection interval	Every 15,000 km
Replacement interval	Every 30,000 km

Replace oil in a new vehicle for the first time after it has been driven 5,000 km.

Recommended lubricant:
Gear oil API classification
GL-5 SAE90 (below 40°C) or 140 (above 40°C)

CAUTION ⚠

For high load conditions, such as continuous uphill climbs, use GL-5 SAE 140. However, use it only when the air temperature is at least 10°C.



Oil quantity
4.5 litres

4.1 Inspection

1. Remove inspection plug ① and inspect to see if oil reaches to the brim.
2. If oil volume is inadequate, replenish till full through the inspection plug port.

CAUTION ⚠

Replenish with oil of the same grade and viscosity as the oil currently in use.

3. Attach inspection plug.

Inspection plug tightening torque
98 to 115 Nm (10 to 12 kgfm)

4.2 Replacement

1. Remove drain plug ② and inspection plug ① and drain out oil.

WARNING ⚠

The oil is hot after the vehicle has been driven. When draining the oil, be careful not to get burnt.

NOTE:
If you replace oil shortly after the engine has been stopped, while the oil is still slightly warm, it will drain out faster.

2. The drain plug is fitted with a magnet. Wipe off any metal particles sticking to the magnet.
3. When all of the differential gear oil has drained out, install the drain plug.

Drain plug tightening torque
98 to 115 Nm (10 to 12 kgfm)

4. Replenish from inspection plug port up to the brim.
5. Attach inspection plug.

5 Brake fluid and clutch fluid

Inspection interval	Before driving and after every 5,000 km
Replacement interval	After every 25,000 km or every 12 months

Consult the nearest authorized MITSUBISHI FUSO dealer for replacement work.

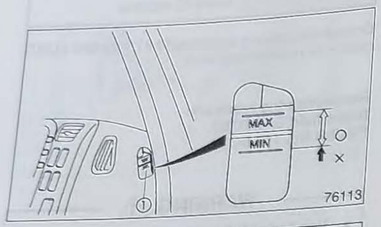
Recommended lubricant:
Brake fluid SAEJ1703,
FMVSS No. 116 DOT3

WARNING ⚠

- **Use brake fluid of the recommended brand name.**
- **If two or more different types of brake fluid are mixed, brake fluid properties might change, the fluid boiling point might drop and fluid might damage brake components. If you want to use fluid of a different brand name than the fluid currently in use, replace all the fluid completely.**
- **If even small quantities of engine oil, diesel fuel, gear oil, AT fluid or other mineral oils get mixed in with the brake fluid, brake unit rubber components will expand, the brake will lose its effectiveness, and the brake will drag. Never allow such fluids to mix with brake fluid. Never use brake fluid from a container that was used for mineral oil.**
- **Since the brake fluid is strongly hygroscopic, made sure that moisture does not get in when storing or replenishing brake fluid. If moisture is absorbed, the fluid boiling point will drop, and vapour lock can be produced, a condition which is extremely dangerous.**
- **If brake fluid is used for a long time, moisture can be absorbed, causing the fluid boiling point to drop sharply so that vapour lock can occur, which is very dangerous.**
  Replace brake fluid every 12 months.

CAUTION ⚠

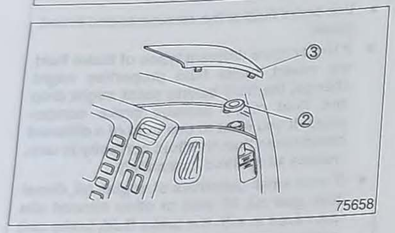
Brake fluid will remove paint.
Replenish the brake fluid so as not to spill it.
If any fluid spills, be sure to wipe it up immediately.



5.1 Inspection

If the brake fluid level in the reservoir tank ① lies anywhere between "MAX" and "MIN", the level is adequate.
Inspect the reservoir tank interior for impurities. If impurities have precipitated, have the tank inspected and cleaned at the nearest authorized MITSUBISHI FUSO dealer.

NOTE:
When the fluid level falls below the "MIN" line, the ① warming lamp lights.



CAUTION ⚠

When inspecting brake fluid or clutch fluid, do not open the reservoir tank cap ②.

5.2 Replenishment

1. When the fluid level falls below the "MIN" line, remove the cover ③. thoroughly clean the area around the reservoir tank cap, then open the cap ② and supply prescribed brake fluid up to the "MAX" line.
2. After replenishing, close the cap securely.

NOTE:
When attaching the cover, first hook the door-side claws, then insert the cover.

WARNING ⚠

- **Use a clean container for replenishing, that is, a container with no moisture, mineral oil, dirt, etc., on its inside.**
- **Make sure that dirt and other impurities do not get in the reservoir tank. A mixture of impurities can cause the brakes to fail.**
- **Do not supply brake fluid over the "MAX" line.**
- **If the fluid level falls abnormally low, there could be leakage from the brake pipe, etc. Request inspection at the nearest authorized MITSUBISHI FUSO dealer.**

6 Power steering oil

Inspection interval	Every 5,000 km
Replacement interval	After every 50,000 km or every 12 months

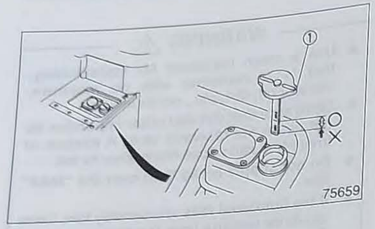
For a new vehicle, the first replacement should be made after driving for 5,000 km.
Consult the nearest authorized MITSUBISHI FUSO dealer for replacement work.

Recommended lubricant
Automatic transmission fluid
DEXRON, DEXRON II or DEXRON III type

CAUTION ⚠

Replenish with fluid of the same brand name as the fluid currently in use. Do not mix fluid brands. If two or more types of power steering fluid are mixed, properties will deteriorate, which could cause breakdowns.

NOTE:
When checking the power steering fluid level after turning off the engine, wait until the fluid has cooled down. The measurement will be incorrect if the level is checked while the fluid is still hot because the level rises with higher fluid temperature.



6.1 Inspection

1. On a level ground, set the front wheels to forward and stop the engine.
2. Open the inspection port inside the vehicle and remove the filler cap ① of the reservoir tank. ⇨ P. 2-13
3. Wipe away oil from the level gauge on the inside of the filler cap ①, then insert the gauge in the cap port. Do not twist the filler cap.
   Lift up the filler cap again and inspect the position of fluid on the level gauge. If the position lies anywhere between "MAX" and "MIN", the fluid volume is adequate.
4. If fluid volume is inadequate, first thoroughly clean the area around the filler cap of the reservoir tank, then replenish fluid.
5. If fluid is abnormally inadequate, there may be an fluid leakage. Request inspection at the nearest authorized MITSUBISHI FUSO dealer.
6. Check the power steering fluid in the reservoir tank for contamination. If the fluid is contaminated, have it changed by an authorized MITSUBISHI FUSO dealer.
7. Firmly close the filler cap after replenishing the fluid.

CAUTION ⚠

- **Use a clean container for replenishing. Do not use a container that was used for gear oil or other oil. Impurities can cause breakdowns.**
- **Do not refill the reservoir tank above the "MAX" line on the level gauge, as this will cause leakage.**
- **If the fluid is far below the prescribed range, there might be a fluid leakage. Request inspection at the nearest authorized MITSUBISHI FUSO dealer.**

WARNING ⚠

If the filler cap becomes loose, power steering fluid might spill out, causing a fire. If fluid has spilt, wipe it away thoroughly.

Replacement of oil filter elements

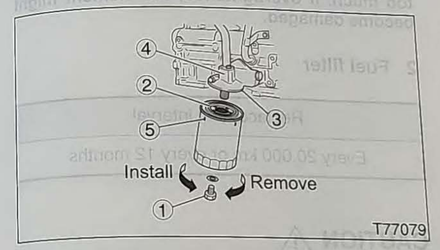
1 Oil filter

Replacement interval
Every 10,000 km

The first oil filter replacement during the run-in period should be performed at the initial 5,000 km point.

CAUTION ⚠

- **The element cannot be cleaned and used again.**
- **Replace oil filter element each time engine oil is replaced.**



1.1 Replacement

WARNING ⚠

Be careful not to spill engine oil when replenishing it. If oil gets on the exhaust manifold or other components, the heat could cause a fire. If you should spill oil, wipe it off thoroughly.

1. Place an oil pan under the oil filter.
   Remove the drain plug ① from the bottom of the oil filter, and allow the oil in the filter to drain out.
2. Rotate the element assembly ② and remove it.
   If it is tight, use a filter wrench (sold separately) to easily remove it.
3. Replace element assembly with a new product. Use MITSUBISHI FUSO genuine parts for replacements.
4. Attach element assembly.
   Lightly coat engine oil over the gasket ③ on the element assembly surface, then gently twist in reverse direction by hand until the gasket contacts the seal surface of the filter head ④. There are four marks ⑤ equally spaced on the periphery of element assembly. Twist the element as follows with these marks as reference.

Number of turns after seal surface is contacted
3/4 turn

5. Replenish engine oil from the oil filler.
After replacing the element assembly alone without replacing the engine oil, replenish engine oil from the oil filter as indicated in the table below.

Engine oil replenish quantity
Approx. 1 litre

6. Start the engine and check to be sure there are no oil leaks.
7. Stop the engine and wait for at least 30 minutes, then inspect oil level.

CAUTION ⚠

Be careful not to tighten the element assembly too much. If overtightened, the element might become damaged.

2 Fuel filter

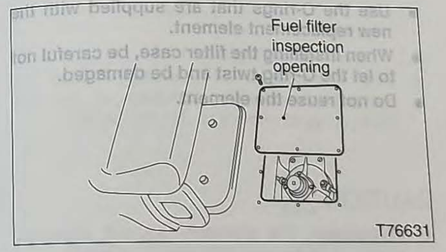
Replacement interval
Every 20,000 km or every 12 months

CAUTION ⚠

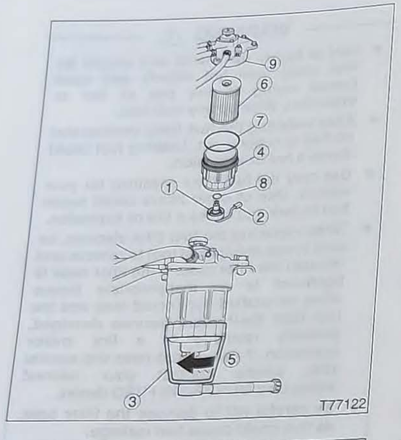
- **The element assembly cannot be cleaned and reused.**
- **Always replace with a new, genuine fuel filter element. Do not use the filter element beyond the recommended replacement intervals. Failure to observe these may damage the fuel injection parts.**

WARNING ⚠

- **Fuel is highly flammable and should be kept away from hot objects and open flames owing to the risk of fire or explosion. Wipe up any spilt fuel.**
- **After installing the fuel filter, confirm that no fuel is leaking out. Leaking fuel could cause a fire or explosion.**
- **Use only the fuel filter specified for your vehicle. Use of other filters could cause fuel to leak and cause a fire or explosion.**
- **When replacing the fuel filter element, be sure to use the special tool to remove and reinstall the filter case. If the filter case is tightened to an inappropriate torque when reinstalled, fuel could leak and the fuel filter itself could become damaged, possibly resulting in a fire and/or explosion. If you do not have the special tool, please contact your nearest authorized MITSUBISHI FUSO dealer.**
- **Be careful not to damage the filter case, as this could cause fuel leakage.**
- **Keep cigarettes and other sources of heat away from the vehicle while replacing the filter. They are dangerous because they could set fire to the fuel.**
- **When replacing the filter, you will be working in a tight space. Be careful not to injure yourself on the edges of nearby components.**



1. Open the fuel filter inspection opening on the floor of the seat near the door.



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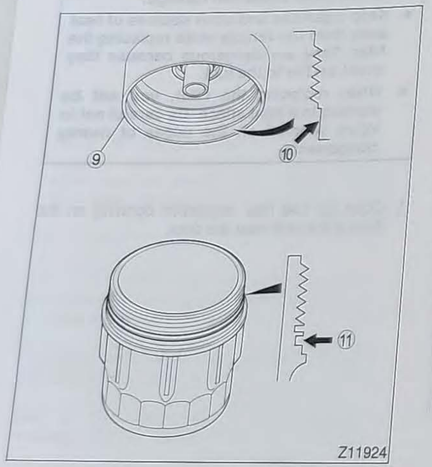
2. Clean the filter and the surrounding area to prevent dirt from entering the new element.
3. Place a can under the fuel filter to catch fuel.
4. Disconnect the connector ② on the sensor ①.
5. Turn the sensor counterclockwise to loosen it, and then extract all of the fuel from the filter case ④. After the fuel has been extracted, tighten the sensor by turning it clockwise.
6. Place the sensor and its harness inside the special tool ③ (available from an authorized dealer).
7. Remove the filter case using the special tool (available from an authorized dealer), by turning it in the direction of the arrow ⑤. Drain the fuel from the filter case.
8. Remove the element ⑥ and the sensor from the filter case.
9. Replace the O-ring ⑦ and O-ring ⑧ with new ones. Apply a thin coat of engine oil to each of the new O-rings and install the O-ring ⑦ on the filter case and the O-ring ⑧ on the sensor.



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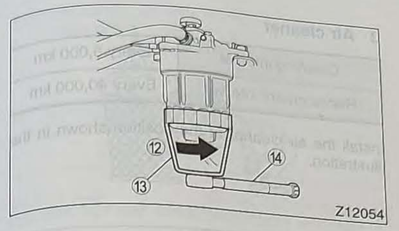
10. Clean the surfaces ⑩ of the filter head ⑨ and filter case that will come in contact with the O-ring ⑦. The O-ring groove ⑪ on the filter case should also be cleaned.
11. Install the element with the hole of its end facing upward. Be sure to use a genuine replacement element.

CAUTION ⚠

- **Use the O-rings that are supplied with the new replacement element.**
- **When installing the filter case, be careful not to let the O-ring twist and be damaged.**
- **Do not reuse the element.**



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12. Install the filter case by turning it in the direction of the arrow ⑫. Tighten the filter case using the special tool ⑬ (available from an authorized dealer) and a torque wrench ⑭ to within the following torque range.

Tightening torque
30 ± 2 N·m (3 ± 0.2 kgf·m)

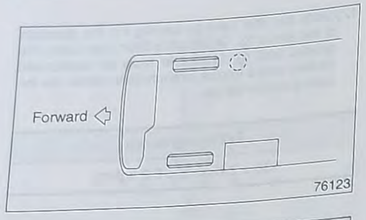
CAUTION ⚠

Do not tighten the filter case too strongly. Overtightening could damage the filter case.

13. Install the sensor to the filter case and connect the connector.

Sensor tightening torque
5 ± 1 N·m (0.5 ± 0.1 kgf·m)

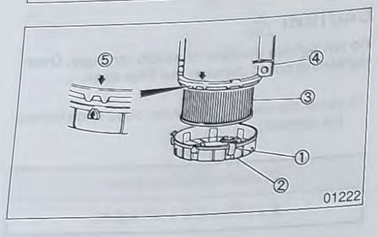
14. Bleed the fuel system. ⇨ P.12-20
15. Start the engine to test for fuel leakage.



3 Air cleaner

Cleaning interval	Every 5,000 km
Replacement interval	Every 40,000 km

Install the air cleaner at the position shown in the illustration.



3.1 Removal and installation

1. Remove clamp ① and take off cover ②.
2. Pull out element ③ while moving it slightly up and down, right and left.
3. When installing, press until the element tip touches the case ④. Align the cover with the case alignment mark ⑤ and attach cover, then secure it firmly in place with clamp.

CAUTION ⚠

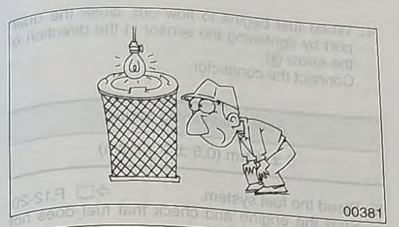
Install the element securely. If packing is torn, or if there is slack in the clamp, dust can be sucked up inside the engine causing the piston lining to wear quickly, etc.

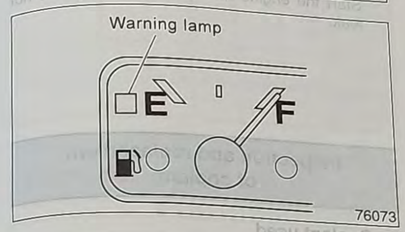
3.2 Cleaning and replacement

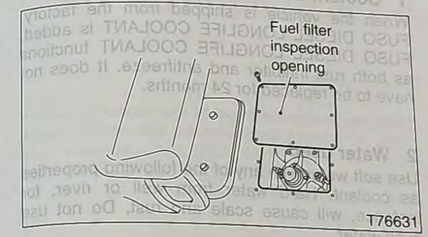
1. Blow compressed air vertically through the element interior along the folds of the filter paper so as to remove all dirt completely.

CAUTION ⚠

- **In cleaning the element, do not allow air pressure to exceed 700 kPa (7 kg/cm^2).**
- **Do not beat or strike the element forcefully.**
- **If the element has been blackened by oil, smoke or soot, replace it with a new product regardless of the time period.**
- **When cleaning air cleaner element, wear goggles and a mask to product your eyes and respiratory organs from dust.**
  And, use a dust collector to prevent dust from dispersing into the surroundings.







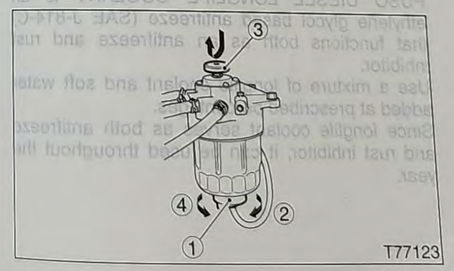
2. Put a light inside the element and inspect for damaged or thinned out portions of the filter paper. Also check to see if the packing has been damaged.
3. Clean the case and the inside with cleaning rag, etc.
4. If the element is found to be defective after inspection or the prescribed replacement interval has arrived, replace the element.
   Replace element with a MITSUBISHI FUSO genuine part.

Water drain of fuel filter

Since the water is accumulated beyond the specified amount in the fuel filter when the warning lamp in the fuel gauge is lit, drain the water from the fuel filter.

WARNING ⚠

- **Be careful not to spill fuel. If you accidentally spill fuel, wipe it all up.**
- **Keep cigarettes and other sources of heat away from the vehicle while draining water from the fuel filter. They are dangerous because they could set fire to the fuel.**
- **Be careful not to injure yourself on the edges of nearby components while draining water from the fuel filter.**
- **The drain contains not only water but also fuel.**
  Be sure to wipe clean the surface around the fuel filter to remove all splashed fuel. Fuel remaining on the surfaces could cause a fire.
- **After draining the water, make sure fuel does not leak from the filter or from related parts. Any fuel leakage could cause a fire.**



1. Prepare receiver for water.
2. Open the fuel filter inspection opening on the floor of the rear seat near the door.
3. Disconnect the connector on the sensor ①, then turn the sensor in the direction of the arrow ② to loosen it; the water will flow from the pipe at the end of the sensor.
   You can speed up the draining by pressing the handle of the priming pump ③ at this time.

4. When fuel begins to flow out, close the drain port by tightening the sensor in the direction of the arrow ④.
Connect the connector.

Sensor tightening torque
5 ± 1 Nm (0.5 ± 0.1 kgfm)

5. Bleed the fuel system. ⇨ P.12-20
Start the engine and check that fuel does not leak.

Inspection and replacement of coolant

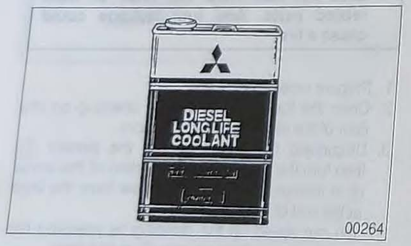
1 Coolant used

When the vehicle is shipped from the factory, FUSO DIESEL LONGLIFE COOLANT is added. FUSO DIESEL LONGLIFE COOLANT functions as both rust inhibitor and antifreeze. It does not have to be replaced for 24 months.

2 Water used

Use soft water with any of the following properties as coolant. Hard water from well or river, for instance, will cause scale and rust, Do not use such water.

Total hardness	300 ppm or less
Sulfate SO_4^-	100 ppm or less
Chloride CL^-	100 ppm or less
Total dissolved solids	500 ppm or less
pH	6 to 8



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3 Handling of FUSO DIESEL LONGLIFE COOLANT

FUSO DIESEL LONGLIFE COOLANT is an ethylene glycol based antifreeze (SAE J-814-C) that functions both as an antifreeze and rust inhibitor.
Use a mixture of longlife coolant and soft water added at prescribed percentages.
Since longlife coolant serves as both antifreeze and rust inhibitor, it can be used throughout the year.

DANGER ⚠

- FUSO DIESEL LONGLIFE COOLANT is toxic. If a person has accidentally swallows it, forge him/her to vomit and consult a doctor immediately. If it splashes in the eyes, immediately flush the eyes with water for more than 15 minutes, and seek medical attention.
- Should FUSO DIESEL LONGLIFE COOLANT come in contact with your skin, immediately wipe it off, and then thoroughly wash your skin with lots of clean water and soap, if you feel unwell or pain on your skin, immediately seek medical attention.
  In the event of contact with your clothes, immediately flush FUSO LONGLIFE COOLANT with water and soap.
- Do not use FUSO DIESEL LONGLIFE COOLANT in a closed or poorly ventilated space. Should you inhale a large amount of gas of FUSO DIESEL LONGLIFE COOLANT, move to a place with fresh air and keep yourself warm and at rest. If you feel nauseous or otherwise abnormal, immediately seek medical attention.
- Close the cap of the FUSO DIESEL LONGLIFE COOLANT container immediately after using the product.
- Always store coolant at a location out of the reach of children.
- The longlife coolant is inflammable. Be careful to never expose it to fire.
- When handling FUSO DIESEL LONGLIFE COOLANT, wear an organic gas mask, protection goggles, oil-resistant gloves, and/or protective apron as necessary.

CAUTION ⚠

Never mix FUSO DIESEL LONGLIFE COOLANT with another brand of longlife coolant, or with antifreeze or rust inhibitor. If another brand of longlife coolant has been used, or if FUSO DIESEL LONGLIFE COOLANT is to be used, always clean the cooling system first.

Figure the coolant mixing ratio based on the lowest temperature for the area the vehicle will be operating in with the chart below.

FUSO DIESEL LONGLIFE COOLANT mixture percentages

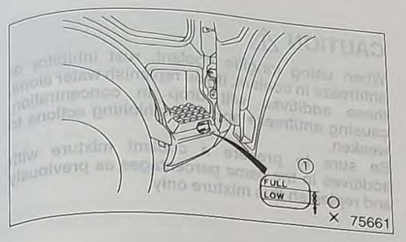
Lowest temperature	-10 °C or above	-15 °C	-20 °C	-25 °C	-30 °C	-35 °C	-40 °C
Concentration	30 %	35 %	40 %	45 %	50 %	55 %	60 %

Coolant quantity	Approx. 22 litres

For coolant replenishing procedures ⇨ P. 11-37

CAUTION ⚠

Longlife coolant is used in the range of 30% to 60%. At normal temperature, the rate is about 30%. At lower than 30% the coolant's rust inhibition effect diminishes and at more than 60%, its antifreeze action drops.



4 Inspection

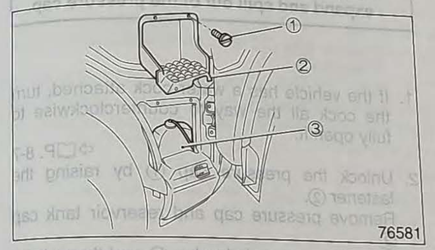
Inspection interval	Pre-operational check

1. Open the front door and inspect through the inspection window at the step.
2. If the coolant level in the reservoir tank ① lies between "FULL" and "LOW", the coolant volume is adequate. Inspect before starting the engine when the water temperature is low.
3. Inspect for leaks from radiator and radiator hoses.
   If water remains on a surface where the vehicle was parked, there may be water leakage.
   If there is water leakage, consult the nearest authorized MITSUBISHI FUSO dealer.

CAUTION ⚠

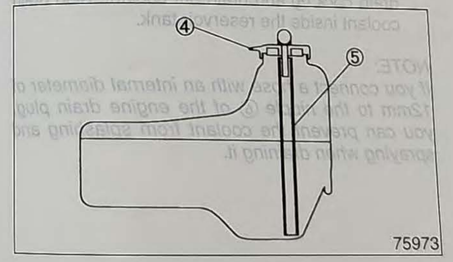
Conduct inspection when the water temperature is low, prior to starting the engine.

NOTE:
Deposition may occur in the reserve tank but this will not cause any problem.



5 Replenishment

1. Remove screw ① and step plate ②, then replenish.
2. If the volume is lower than "LOW", remove the reservoir tank ③ cap and replenish a mixture of longlife coolant and soft water until the level reaches "FULL".
3. After replenishing, attach the cap ④ securely, and confirm that the hose ⑤ attached to cap ④ has been inserted all the way to the tank bottom then attach the step plate.

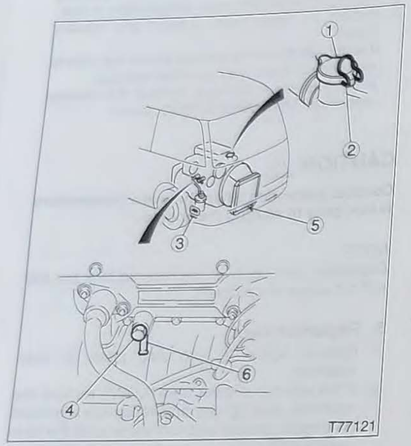


WARNING ⚠

- **Replenish coolant at the reservoir tank. Do not open the pressure cap on the engine side.**
- **Open the pressure cap only after the water temperature drops. If the cap is opened while the water is hot, the water could spurt out and cause scalding.**

CAUTION ⚠

When using longlife coolant, rust inhibitor or antifreeze in coolant, if you replenish water alone, these additives will drop in concentration, causing antifreeze and rust inhibiting actions to weaken.
Be sure to prepare a coolant mixture with additives in the same percentages as previously and replenish this mixture only.



6 Replacement

Replacement intervals	Every 50,000 km Every 24 months

WARNING ⚠

- **In replacing coolant, there are times when the coolant may be very hot. Be careful to avoid burns.**
- **Close the pressure cap before running the engine.**
  If the pressure cap is left open, when engine speed increases, the rise in water temperature will cause the coolant to expand and spill out of the pressure cap.

1. If the vehicle has a water cock attached, turn the cock all the way to counterclockwise to fully open it.
   ⇨📖P. 8-7
2. Unlock the pressure cap ① by raising the fastener ②.
   Remove pressure cap and reservoir tank cap ③.
3. Open the engine drain plug ④ and the radiator drain cock ⑤ and drain out coolant. Also drain coolant inside the reservoir tank.

NOTE:
If you connect a hose with an internal diameter of 12mm to the nipple ⑥ of the engine drain plug, you can prevent the coolant from splashing and spraying when draining it.

4. After draining is completed, close the drain plug and the drain cock.

Engine drain plug tightening torque
24 Nm (2.5 kgfm)

Radiator drain cock tightening torque
2 Nm (0.2 kgfm)

5. Wash the cooling system.
   Pour tap water (preferably warm water) into the pressure cap port and start the engine. Increase engine RPM until the water temperature reaches 90°C or above, operate the engine for about 10 minutes, then drain out coolant. The coolant becomes very hot, so please be careful. Repeat the above procedure until the water drained out becomes clear.

CAUTION ⚠

If the coolant is extremely dirty, have it inspected at the nearest authorized MITSUBISHI FUSO dealer.

6. Pour coolant (longlife coolant + soft water) through the pressure cap port until it reaches the brim.
7. Run the engine a while with the pressure cap left open and bleed air from the cooling system.
8. Stop the engine. If the coolant volume is inadequate, replenish until it reaches the brim.
9. Close the pressure cap securely.
   Lock the pressure cap by pressing down the fastener.
10. Replenish coolant (longlife coolant + soft water) until it reaches the "FULL" line in the reservoir tank, then attach the cap.
11. Run the engine and inspect for water leakage.

7 Clean the radiator core.

If the entire radiator becomes clogged with mud or dust, its cooling performance will drop, and it could become rusted, so clean it periodically.

CAUTION ⚠

If the tank cap is not closed securely, high-temperature coolant may burst out when overheated.

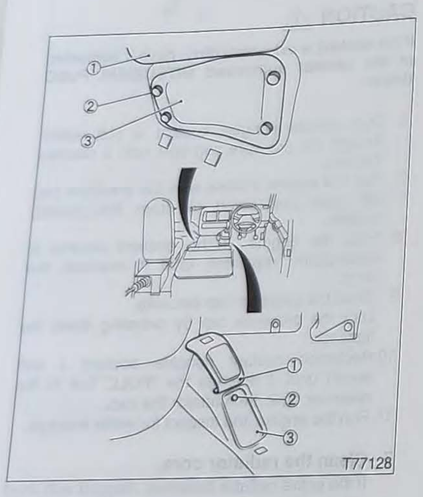
Belt inspection and adjustment

A loose or too tight belt can cause the battery to charge improperly and damage the alternator, water pump, etc. Always adjust the belt to the proper tightness.

Inspection interval	Pre-operational check and every 5,000 km

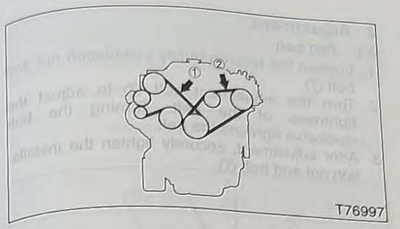
CAUTION ⚠

Be careful not to let oil or grease get on the belt during inspection or adjustment, since they can cause the belt to slip.



1 Inspection

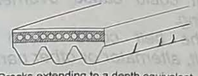
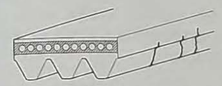
1. Open engine inspection ports (at engine and pressure cap). P. 2-12
2. Open the belt inspection panel.
   Roll back the carpet ① flap, loosen the screw ② on the inspection lid ③ and remove the inspection lid.
3. Press the belt centre with your finger [at a force of about 98N (10 kgf)] and inspect the amount of deflection.
4. Press the belt at the centre with your finger. If the deflection is within the range given in the following table, the belt is at proper tension.

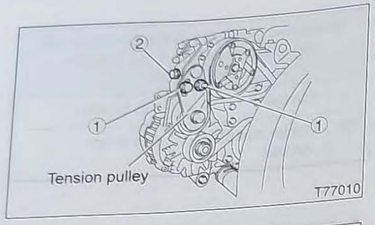


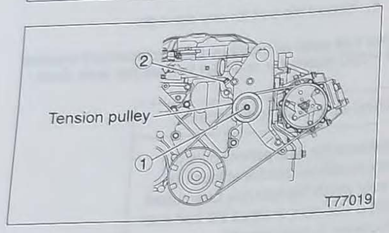
Tension per single belt (Deflection when belt centre is pressed at a force of about 98N (10 kgf))		
①	Fan belt	8 to 10 mm
②	Cooler compressor belt	6 to 8 mm

5. Inspect the belt for any damage.

If a belt is cracked or otherwise damaged, have it replaced it as soon as possible. Belt replacement requires component disassembly. Please contact a MITSUBISHI FUSO distributor or dealer to have the work done.

Belt condition	Remaining service life (reference)
No abnormality; or tiny cracks in tips of ribs Z14706	The driving distance (or time period) over the which the belt can still be used is at least as long as that over which the belt has been used since the vehicle was new or since the belt was replaced (whichever is more recent).
 Cracks extending to a depth equivalent to half the height of the ribs Z14707	The driving distance (or time period) over the which the belt can still be used is about half of that over which the belt has been used since the vehicle was new or since the belt was replaced (whichever is more recent).
 Cracks extending to base of ribs Z14708	The driving distance (or time period) over the which the belt can still be used is about a quarter of that over which the belt has been used since the vehicle was new or since the belt was replaced (whichever is more recent).
Piece(s) missing from rib(s) Z14709	The belt has reached the end of its service life and must be replaced.





2 Adjustment

2.1 Fan belt

1. Loosen the tension pulley installation nut and bolt ①.
2. Turn the adjustment bolt ② to adjust the tightness of the belt. Turning the bolt clockwise tightens the belt.
3. After adjustment, securely tighten the installation nut and bolt ①.

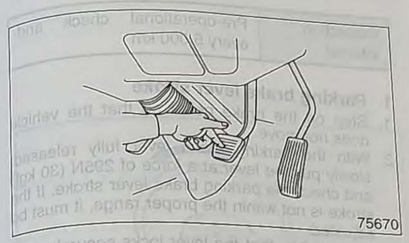
2.2 Air conditioner compressor belt

1. Loosen the tension pulley installation nut ① about half a turn.
2. Adjust the tightness of the belt by turning the adjustment bolt ②. Turning the bolt clockwise tightens the belt.
3. After adjustment, securely tighten the installation nut ①.

NOTE:
Take precautions to avoid getting oil and grease on the belts during inspection and adjustment. If the belt slips, it could cause overheating or insufficient charging.
Overtightening the belt could cause serious damage to the belt, alternator or other parts.

Service brake inspection

Inspection interval	Pre-operational check and every 5,000 km



1 Brake pedal play

1. Stop the engine and step on the brake pedal several times so that the (©) warning lamp lights, then step on the pedal several times again.
2. Push the pedal with your finger and note how far the pedal moves (play) before you can feel resistance in it.

Brake pedal play	10 to 15 mm

3. If play exceeds the prescribed limit, request inspection and adjustment at the nearest authorized MITSUBISHI FUSO dealer.

2 Brake pedal stroke

Gap between floor and pedal when brake pedal has been depressed	45 mm or higher

1. Start the engine and step down fully on the brake pedal. Check the gap between the pedal and the floor.
2. If the gap between pedal and floor is shortened, or if the brake feels soft when you step on it, there may be brake fluid leakage or air may have mixed in with the fluid.
   If there are any anomalies, have the vehicle checked at the nearest authorized MITSUBISHI FUSO dealer.

3 Brake effectiveness

After confirming that the (©) warning lamp has extinguished, drive the vehicle at a safe location and test the brake to see if it is adequately effective, or if it is effective only on one side. It is dangerous if there are any anomalies. Consult your nearest authorized MITSUBISHI FUSO dealer.

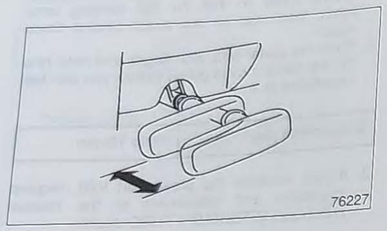
WARNING ⚠

Perform brake test at a safe place where the view is good, and pay careful attention to surrounding conditions.

Parking brake inspection

Check the parking brake. If there are any anomalies, have it inspected by the nearest authorized MITSUBISHI FUSO dealer.

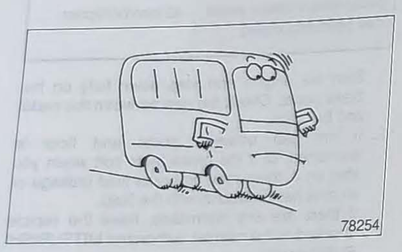
Inspection interval	Pre-operational check and every 5,000 km



1 Parking brake lever stroke

1. Step on the brake pedal so that the vehicle does not move.
2. With the parking brake lever fully released, slowly pull the lever at a force of 295N (30 kgf) and check the parking brake lever stroke. If the stroke is not within the proper range, it must be adjusted.
3. Also confirm that the lever locks securely after it has been pulled.

Parking brake lever stroke	80 to 120 mm



2 Parking brake effectiveness

Engage the parking brake while the vehicle faces downward on a dry slope and see if the vehicle can be stopped at this location. If there is no slope nearby, engage the parking brake while driving the vehicle at a slow speed of 5 km/h or less, and inspect for braking action.

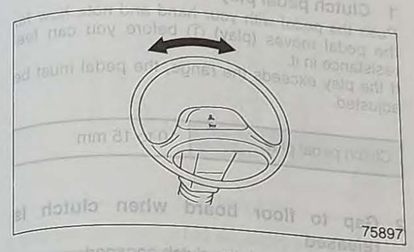
WARNING ⚠

Perform brake test at a safe location where the view is good, and pay careful attention to surrounding conditions.

Steering wheel inspection (operability)

Inspection interval	Pre-operational check and every 5,000 km

Conduct the following inspections. If there are any anomalies, have them inspected at the nearest authorized MITSUBISHI FUSO dealer.

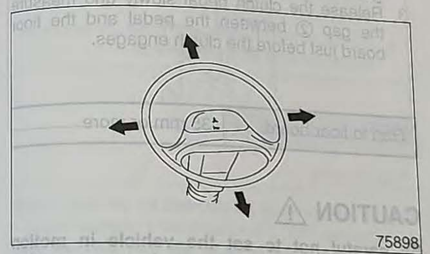


1 Steering wheel play

1. Make sure the parking brake is firmly engaged.
2. Start the engine. After warming it up, confirm that the engine runs at a suitable idling speed.
3. Set the steering wheel for going straight ahead.
4. Turn the steering wheel lightly to left and right, and check for amount of movement (play) before you can feel resistance.

Steering wheel play	5 to 50 mm

NOTE:
Always check the steering wheel while the engine is running.



2 Steering wheel looseness

1. Make sure the steering wheel adjusting lever is securely locked.
2. Move the steering wheel up and down, back and forth, left and right, and check for steering wheel looseness.

3 Steering wheel operability

WARNING ⚠

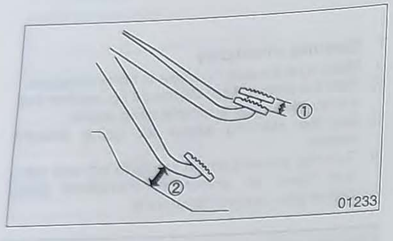
Conduct inspections at a safe location with good visibility. Pay careful attention to surrounding conditions.

At a safe location, drive the vehicle slowly [at about 10 km/h] and check the operability of the steering wheel. Check to see if the steering wheel vibrates, turns to one side, becomes unusually difficult to turn or does not return properly.

Clutch pedal inspection

Inspection interval	Every 5,000 km

If anomalies appear when conducting inspection, consult the nearest authorized MITSUBISHI FUSO dealer.



1 Clutch pedal play

Push the pedal with your hand and note how far the pedal moves (play) ① before you can feel resistance in it.
If the play exceeds the range, the pedal must be adjusted.

Clutch pedal play	10 to 15 mm

2 Gap to floor board when clutch is released

Inspect the pedal with the clutch engaged.

1. Let the engine idle and engage the parking brake.
2. Step down on the clutch pedal and shift the gear lever to the highest gear in forward.
3. Release the clutch pedal slowly and measure the gap ② between the pedal and the floor board just before the clutch engages.

Gap to floor board	35 mm or more

CAUTION ⚠

Be careful not to set the vehicle in motion suddenly. Also watch out for surrounding conditions.

NOTE:
The clutch is self-adjusting. The clutch engagement position cannot be adjusted.

3 Clutch operation

Check if there is abnormal sound when the clutch pedal is depressed, then check if the pedal is abnormally heavy. Next, stop on the pedal and see if the gear lever can be shifted easily. Slowly release the pedal and check for sliding and for smooth clutch engagement.
If there are any anomalies, consult the nearest authorized MITSUBISHI FUSO dealer.

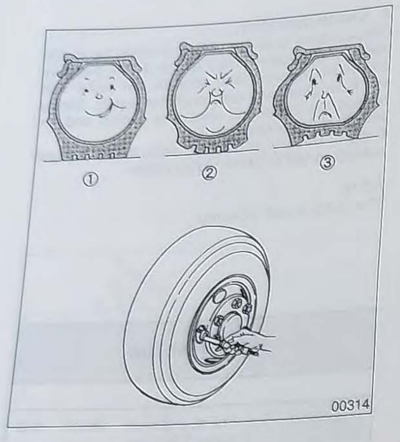
NOTE:
The clutch is self-adjusting.

Tire inspection

Inspection interval	Pre-operational check and every 5,000 km

1 Tire information sticker

- A tire information sticker is attached to the door at the driver's seat.
  It shows the correct tire sizes, rim sizes, and tire information pressures as well at the front and rear wheel's load carrying capacities. Keep the tires inflated to the pressures shown on the sticker.



2 Air pressure inspection

- Always check and adjust air pressure before driving the vehicle, while the tires are cool.

Air pressure can be checked by observing that part of the tire that contacts the ground, but a more accurate method is to use an air pressure gauge.

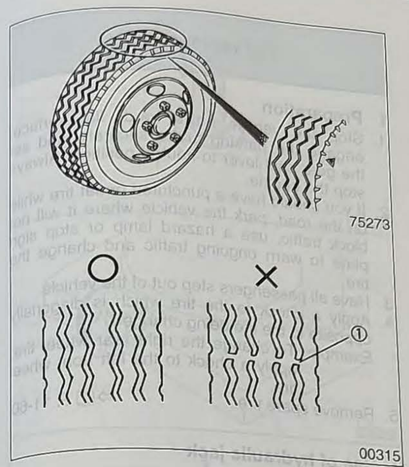
① Suitable air pressure
② Excessive air pressure
③ Poor air pressure

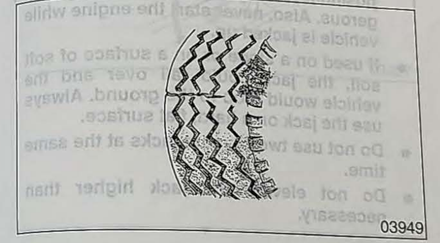
WARNING ⚠

- **If the tire pressure is too high or too low, riding comfort will be poor. If the pressure is too low, the tire will overheat, which might cause it to burst.**
- **In the case of dual tires, make sure that the air pressure is the same in both the inner and outer tires.**
- **There is no need to increase air pressure when driving at high speeds.**

CAUTION ⚠

Tire air pressure is as defined by JATMA (Japan Automobile Tire Manufacturer's Association). If the tires on your vehicle are not JATMA tires, adjust air pressure as stipulated by the tire maker or as required by standards set in your country.





3 Tread depth

Inspect tires to see if tread depths are still adequate.

Tire tread depth limit	1.6 mm

When residual tread depth becomes shallow, a slip sign ① (means part of tread is disappeared) appears on the slip sign indication position (△mark) of the tire.
Tires with slip sign appearing are dangerous. Replace them with new tires.

⇨P. 11-50

CAUTION ⚠

If tire treads are too shallow, the vehicle can slip and hydro-planing can easily occur at high speeds.
Hydro-planing denotes the following phenomenon. While driving at high speed over a road covered with water puddles, once you exceed a certain speed, the tires rise up from the road surface so that your vehicle glides and you can no longer steer it.

4 Inspection for cracks, damage and embedded foreign matter

- Inspect tires for cracks or damage on tire contact surfaces and on sides and for locations of extreme wear.
- Inspect tires for nails, stones or other obstructions penetrating tire rubber or lodged in tire tread.

Tire replacement

1 Preparation

1. Stop the vehicle on a hard, flat surface, engage the parking brake securely, and set the gear shift lever to neutral position. Always stop the engine.
2. If you should have a punctured or flat tire while on the road, park the vehicle where it will not block traffic, use a hazard lamp or stop sign plate to warn ongoing traffic and change the tire.
3. Have all passengers step out of the vehicle.
4. Apply a chock to the tire which is diagonally opposite to the tire being changed.
   Example: To change the right rear wheel tire, apply a chock to the left front wheel tire.
5. Remove spare tire.

⇨📖 P. 11-60

2 Use of hydraulic jack

WARNING ⚠

- **Never get under the vehicle while it is jacked up since the jack could get out of position, which would be extremely dangerous. Also, never start the engine while vehicle is jacked up.**
- **If used on a slope or on a surface of soft soil, the jack could fall over and the vehicle would drop to the ground. Always use the jack on a hard, flat surface.**
- **Do not use two or more jacks at the same time.**
- **Do not elevate the jack higher than necessary.**

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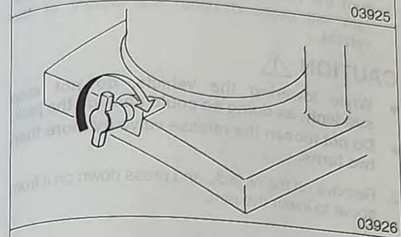

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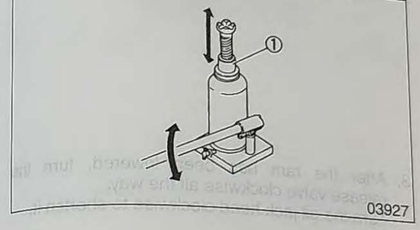

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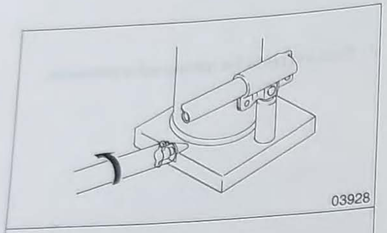
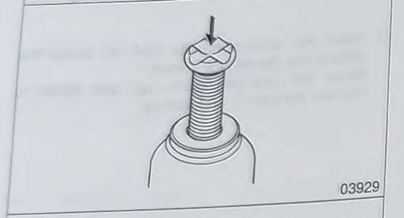
2.1 Jacking up

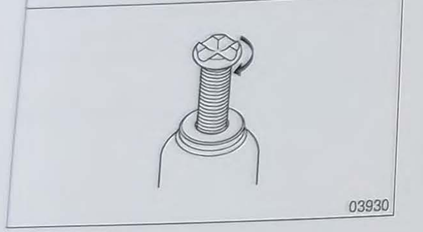
1. When the jack-up point is high, turn the jack head (ram) counterclockwise to elevate the jack.

2. Twist and press the release valve clockwise.

3. Insert the wrench handle tool on board the vehicle into the oil jack socket.
   Move the wrench handle up and down to elevate the ram ① and jack up.







2.2 Jacking down

WARNING ⚠

Turn the release valve slowly. If it is turned rapidly, the vehicle will drop suddenly and the jack could get out of position.

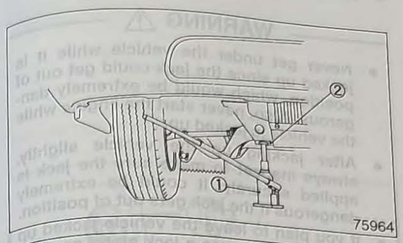
1. Use the notch at the tip of the wrench handle to turn the release valve counter-clockwise. The ram will descend under the weight of the vehicle.

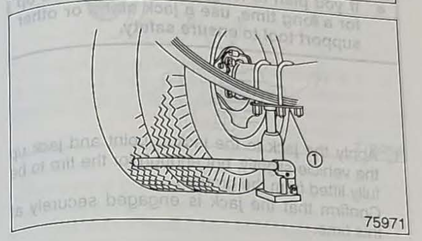
CAUTION ⚠

- **While lowering the vehicle, do not stop suddenly, as doing so could damage the jack.**
- **Do not loosen the release valve by more than two turns.**

2. Remove on the oil jack, and press down on it from above to lower the ram.

3. After the ram has been lowered, turn the release valve clockwise all the way. Turn the oil jack head clockwise to shorten it.





3 Jackup point

3.1 Front wheel

Set the jack ① so that it contacts the jack plate ② at the point where lower arm is attached to suspension.

3.2 Rear wheel

Lower face of U-bolt seat.

WARNING ⚠

After jacking up the vehicle slightly, inspect to make sure the jack is applied securely. It could be extremely dangerous if the jack gets out of position.

CAUTION ⚠

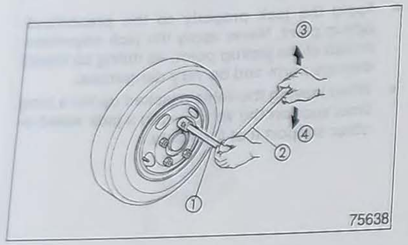
- **Apply the jack properly to the prescribed jackup point. Never apply the jack anywhere except at the jackup point, as doing so could damage parts and be very dangerous.**
- **When leaving the vehicle jacked up for a long time, support the vehicle with a jack stand or other support tool for safety.**

4 Tire removal

WARNING ⚠

- **Never get under the vehicle while it is jacked up since the jack could get out of position, which would be extremely dangerous. Also, never start the engine while the vehicle is jacked up.**
- **After jacking up the vehicle slightly, always inspect to make sure the jack is applied securely. It could be extremely dangerous if the jack gets out of position.**
- **If you plan to leave the vehicle jacked up for a long time, use a jack stand or other support tool to ensure safety.**

1. Apply the jack to the jackup point and jack up the vehicle slightly, not enough for the tire to be fully lifted from the ground.
   Confirm that the jack is engaged securely at this time.



2. Use the socket wrench ① and wrench handle ② on board the vehicle to loosen the wheel nut slightly. Just loosen the nut, do not remove it. Loosen in the direction of the arrows in the diagram.

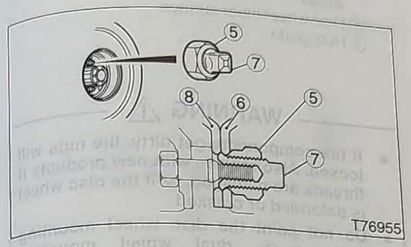
③ Right side tires
④ Left side tires

CAUTION ⚠

Right nut (R mark) for right side tire and left nut (L mark) for left side tire.

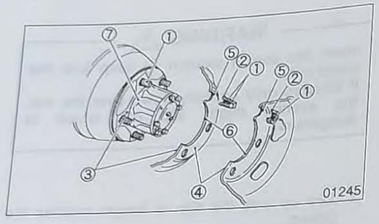
WARNING ⚠

Insert the socket wrench ① deep into the wheel nut.
If inserted only partially down over the nut, the wrench might slip off, which is dangerous.



3. Jack up until the tire no longer touches the ground.
4. Remove wheel nuts, then take off tire.

5. When taking off the rear double tire, first loosen the outer wheel nuts ⑤ and take off the outer tire ⑥. Then, let the jack down, and with the socket wrench's other side (the square hole), loosen the inner wheel nuts ⑦ and take off the inner tire ⑧.



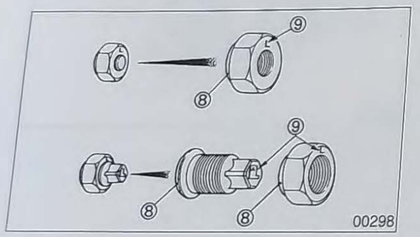
5 Tire mounting

1. Before mounting a tire, clean the following locations. If any are left dirty the wheel nuts might become loose.
   ① Threads of wheel nut and wheel bolt
   ② Curved surface of wheel nut
   ③ Disc wheel attachment surface
   ④ Disc wheel alignment surface
   ⑤ Wheel nut attachment surfaces on disc wheel
   ⑥ Disc wheel inner surface
   ⑦ Hub guide

WARNING ⚠

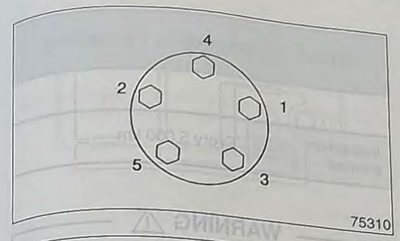
- **If tire components get dirty, the nuts will loosen. Also replace with new products if threads are damaged, or if the disc wheel is deformed or cracked.**
- **Do not paint the disc wheel mounting surfaces ③, dual wheel mounting surfaces ④, wheel nut seating surfaces ⑤ and thee wheel hub mounting surfaces as thicker paint film can cause loosening.**

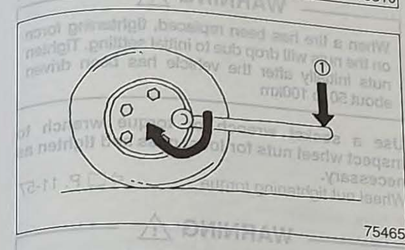
2. Set tire so that each wheel bolt lies at the centre of the disc wheel bolt hole, then tighten wheel nuts enough that there is no slack.
   If the wheel nut has a curved surface portion ⑧, this portion should be on the disc wheel side.



CAUTION ⚠

Right nuts are for right side tires and left nuts for left side tires.
Mark ⑨ "L" has been stamped for identification of wheel nuts and wheel bolts. An "R" mark is shown for right side tires and an "L" mark for left side tires.





3. Lower jack and slowly lower tire.
4. Tighten wheel nuts in two or three sessions in the sequence shown in the illustration. At last, tighten nuts to the prescribed torque.

Wheel nut tightening torque	440 to 540 Nm (45 to 55 kgfm)

The best method of tightening is to use a torque wrench. If no torque wrench is available, add a force of 784 N(80 kgf)① to the tip of the wrench handle for tightening to the prescribed torque.

5. In the case of double tires, mount the inner tire first, then jackup again and mount the outer tire in similar fashion.
   Mount tires to that the air valves of the inner and outer tires are at different locations.
6. When replacing only the outer tire, tighten the inner wheel nuts to prescribed torque first, then mount the outer tire.

WARNING ⚠

- **Insert the wheel nut wrench deep into the wheel nut.**
  If it is inserted only partially and force then applied to it, it could slip out, causing injury.
- **Always tighten wheel nut to prescribed torque. If tightened too severely the bolt might extend or cause deformation of the disc wheel contact surface.**
- **After a tire has been replaced, tightening torques drop due to initial setting. After driving the vehicle 50 to 100 km, tighten nuts to prescribed torque.**
  Thereafter, tighten nuts periodically.

⇨ P. 11-58

Wheel nut inspection tightening

Inspection interval	Every 5,000 km

WARNING ⚠

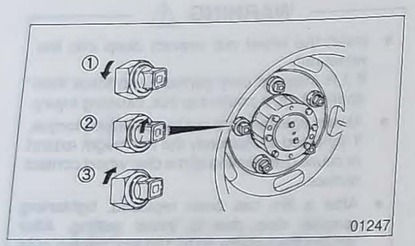
When a tire has been replaced, tightening force on the nuts will drop due to initial settling. Tighten nuts initially after the vehicle has been driven about 50 to 100km

Use a socket wrench or torque wrench to inspect wheel nuts for looseness and tighten as necessary.

Wheel nut tightening torque ⇨📖 P. 11-57

WARNING ⚠

Loose wheel nuts can cause wheel bolts to break off and the disc wheel to crack, so that a wheel might come off. Inspect nuts very carefully.

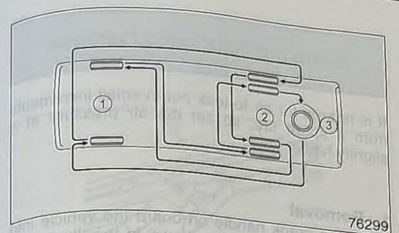


1 Tightening wheel nuts of rear double tire

Tighten in the following sequence.
① Loosen outer wheel nut.
② Tighten inner wheel nut to prescribed torque.
③ Tighten outer wheel nut to prescribed torque.

CAUTION ⚠

In tightening double tires, there is a tendency to tighten the outer wheel nuts, but to forget the inner wheel nuts.
Always tighten in accordance with the aforementioned procedure.



Tire rotation

Each tire wears differently depending on its location. Rotate the tires so they will wear uniformly and have longer service life.

Placement change interval	Every 10,000 km

1 Tire rotation procedure

Always use the same type of tire on the same axle. If tires of a different type are used on an axle, the vehicle will go left or right upon braking and the steering wheel will turn by itself.
① Front tires
② Rear tires
③ Spare tire

WARNING ⚠

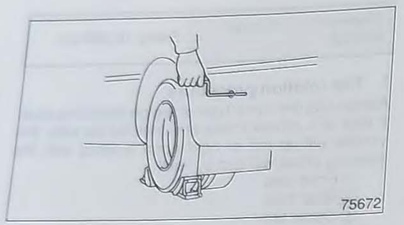
Never use bias tire and radial tire together. Otherwise stability in driving will be be poor.

CAUTION ⚠

New tires generate heat easily. After rotation, drive the vehicle at a slow speed of not more than 60 km/h for at least 200 km to facilitate settling, then inspect air pressure in tires.

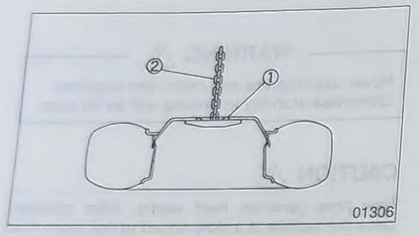
Spare tire installation / removal

It is natural for air to leak out in small increments from a spare tire, so set the air pressure at a slightly higher level.



1 Removal

Insert the crank handle on board the vehicle into the spare tire carrier as shown in the illustration and turn it counterclockwise to lower the spare tire.



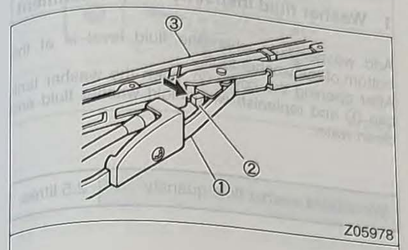
2 Installation

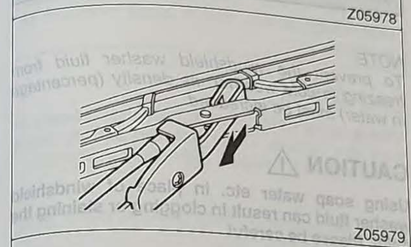
1. Set the protruding part of the disc wheel facing upward and attach the hanger ① securely as shown in the illustration.
2. Turn the crank handle clockwise to hoist the spare tire.
   Wind up slowly while confirming that the chain ② is not twisted and that the hanger is not out of position. If the chain is twisted, it might loosen while driving.
3. After lifting, tighten the crank handle by a force of about 295N (30 kgf) or more, then remove crank handle, being careful not to turn it in the opposite direction.

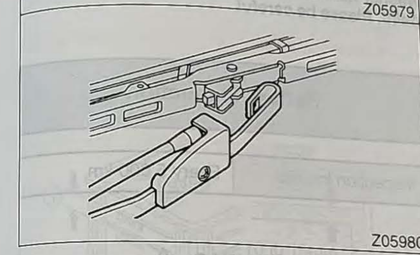
CAUTION ⚠

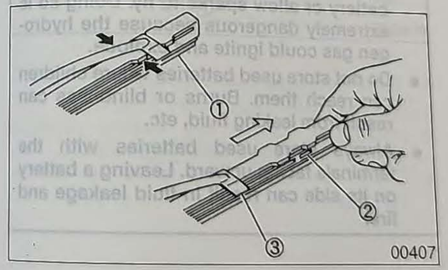
Excessive tightening with a powerful force can cause damage to the spare tire carrier.

Wiper blade replacement









1 Wiper blade replacement

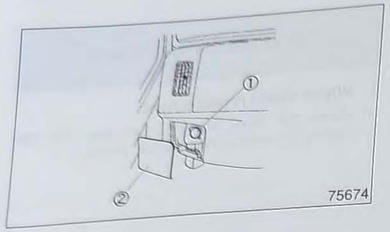
1. Raise the wiper arm ①, then keep the clip spring ② pressed in the arrow direction.
2. In this condition, press the wiper blade ③ into the wiper arm.
3. The wiper arm and wiper blade can be separated.
   When attaching the wiper blade, confirm that it is locked to the wiper arm.

CAUTION ⚠

- **If the arm is lowered with the wiper blade removed, and the arm is operated, the windshield will be damaged.**
- **Do not move the wiper with the wiper arm lifted up. Otherwise the wiper arm might be damaged.**

2 Replacing blade rubber only

1. Erect the wiper arm.
   Press the two sides (➡ marks) of the blade rubber ① with your fingertips, pull out the blade rubber to undo the claw ③ from the slot ②.
2. Pull out and remove the blade rubber as such.
3. Replace wiper blade rubber with new product. Use MITSUBISHI FUSO genuine parts for replacement.
   Repeat the above procedure in reverse to attach. Insert the claw securely into the slot.



Inspection and replenishment of windshield washer fluid

1 Washer fluid inspection, replenishment

Add washer fluid when the fluid level is at the bottom of the washer tank.
After opening the cover ②, open the washer tank cap ① and replenish windshield washer fluid and clean water.

Windshield washer fluid quantity	2.5 litres

NOTE:
To prevent the windshield washer fluid from freezing in cold weather, its density (percentage in water) must be increased.

CAUTION ⚠

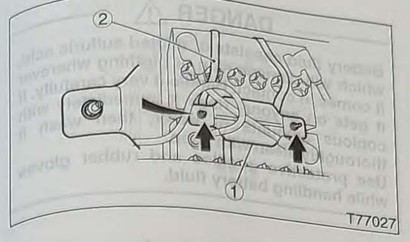
Using soap water etc. in place of windshield washer fluid can result in clogging or staining the paint. Please be careful.

Battery inspection

Inspection interval	Every 5,000 km

WARNING ⚠

- **Flammable hydrogen gas is produced in the battery. Do not use flame near the battery or allow sparks to fly. Doing so is extremely dangerous because the hydrogen gas could ignite and explode.**
- **Do not store used batteries where children can reach them. Burns or blindness can result from leaking fluid, etc.**
- **Always store used batteries with the terminals facing upward. Leaving a battery on its side can result in fluid leakage and fire.**



1 Battery removal

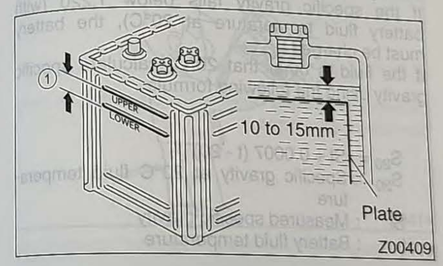
WARNING ⚠

In removing battery, always begin at the battery cable negative terminal, and in installing battery, finish at the battery cable negative terminal. When the negative terminal is connected, if a tool, for instance, should contact the positive terminal and frame, a dangerous spark could be generated.

To remove the battery for inspection or replacement, proceed as follows.
1. Open the battery inspection port. ⇨ P. 2-12
2. Remove battery support ① attachment nuts (at two locations shown by arrows).
3. Lift up suspension band ② and remove battery.
4. To install battery, repeat the above procedure in reverse.

CAUTION ⚠

Install the battery securely. If it is not installed completely, the case or plate might be damaged by vibration while the vehicle is running, and battery service life would be shortened.



2 Battery fluid level inspection

- Fluid level is adequate if it lies between the "UPPER" and "LOWER" level lines ① on the side of the battery case.
  If inadequate, add battery fluid supplement or distilled water until the fluid level reaches the "UPPER" level line.
- If the battery has no level line displayed, the normal range lies from 10 to 15 mm above the plate.

DANGER ⚠

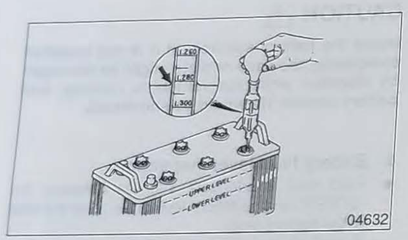
Battery fluid consists of diluted sulfuric acid, which will damage skin or clothing wherever it comes in contact. Handle it very carefully. If it gets on anyone, rinse it immediately with copious amounts of water, then wash it thoroughly clean with soap.
Use protective goggles and rubber gloves while handling battery fluid.

WARNING ⚠

Do not use the battery with the fluid below the "LOWER LEVEL" line. The battery would deteriorate rapidly, and it could overheat or explode.

CAUTION ⚠

After adding fluid, always recharge battery or drive the vehicle. Otherwise the battery might freeze and be damaged, especially in winter.



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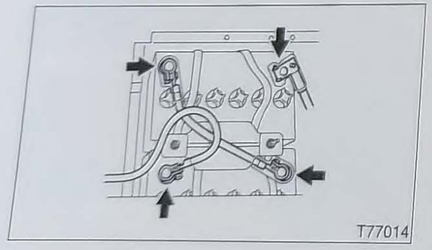
3 Inspection of battery fluid specific gravity

The battery condition can be confirmed by the specific gravity of the battery fluid.
Use a specific gravity meter to measure the battery fluid specific gravity.
If the specific gravity falls below 1.220 (with battery fluid temperature at 20°C), the battery must be charged.
If the fluid is other that 20°C, calculate specific gravity using the following formula.

$S_{20} = St + 0.0007 (t - 20)$
S_{20} : Specific gravity at 20°C fluid temperature
St : Measured specific gravity
t : Battery fluid temperature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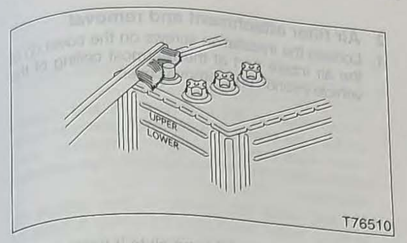
4 Terminal connection status

Inspect periodically (about every 3 months)

- *Inspect to confirm that battery cable is attached securely to battery terminals.*
- *Clean terminals where there is dirt or corrosion.*



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5 Terminal cleaning

Clean the terminals whenever there is dirt or corrosion on them.
When there is white powder on terminals due to corrosion, pour warm water on them and wipe them clean. If the corrosion is conspicuous, remove battery cable and clean affected parts with wire brush or sandpaper. After cleaning, apply a light coat of grease over terminals.

CAUTION ⚠

- **Install the battery securely. If it is not installed completely, the case or plate might be damaged by vibration while the vehicle is running and battery service life would be shortened.**
- **To charge battery, remove the battery from the vehicle whenever possible and remove cap. If the battery must be charged while left inside the vehicle, be sure to remove the negative terminal battery cable.**

NOTE:
There is a way to start the engine from the battery of another vehicle, using a booster cable when your battery is flat. ⇨ P. 12-18

00414

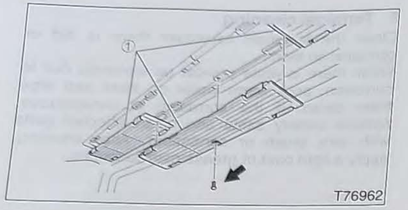
Cleaning air filter for air conditioner

1 Cleaning

Periodically (about once every 6 months) remove air filter and clean dust and dirt from it with water or air blowing.
Clean the air filter whenever the effectiveness of cooling becomes poor, since the filter can clog up quickly if the vehicle is driven frequently in places where there is a lot of dust.
When the air filter clogs up, cooling loses effectiveness, and the motor could break down.

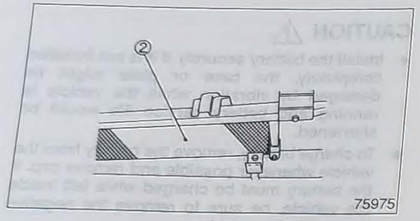
CAUTION ⚠

If the vehicle is driven frequently in areas of extensive dust, the air filter will clog up quickly. Clean the air filter sooner than usual.



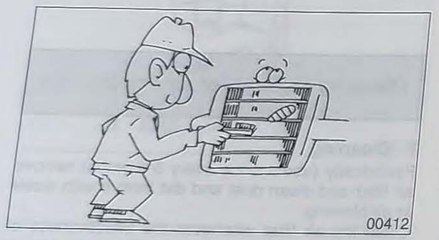
2 Air filter attachment and removal

1. Loosen the installation screws on the cover ① of the air intake port at the rearmost ceiling of the vehicle interior, and remove cover.



2. Lift air filter ② slightly and slide it backwards to remove it.

Cleaning of inter-cooler

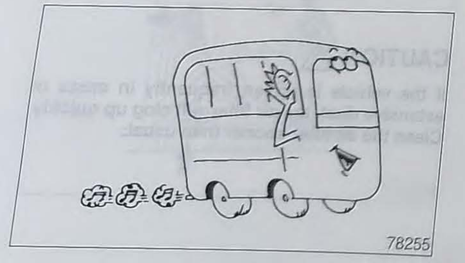


If dirt or mud adheres to the inter-cooler front surface in large quantities, it will affect engine performance. Periodically clean the front surface with a brush, etc.

CAUTION ⚠

Do not use pointed objects for cleaning, as they can cause scratches.

Muffler inspection



After starting and warming up the engine, change engine speed and check for strange noises in the exhaust.

CAUTION ⚠

- **The muffler contains a catalytic converter. Do not kick or knock the muffler since the catalytic converter could be damaged.**
- **Water emitted by the exhaust pipe is slightly acidic and should not be touched. If you touch this water, rince it off under a faucet.**

NOTE:
The catalytic converter in the muffler may cause white smoke to be emitted from the muffler when the vehicle makes a standing start and accelerates after the engine has idled for a long time.

Vehicle care

1 Washing

Be sure to wash the vehicle whenever it

- has been driven near the sea;
- has been driven on a road covered with an antifreeze agent;
- has coal tar, soot, tree sap, or bird droppings on it; or
- has dust or mud on it.

WARNING ⚠

Be careful not to injure yourself on the edges of metal plates, for instance, when washing around the bottom of the vehicle.

CAUTION ⚠

- Avoid getting water on engine air intake port or engine connections.
- When cleaning the engine room and chassis bottom, be careful not to apply steam or water from high-pressure cleaner directly onto starter, alternator, connectors or other electrical devices.
- Do not wash the inside of the vehicle by putting water on it directly using a hose or other means, as this could produce rust in the floor, or corrosion of floorboards. Also if water gets on the electric relays, computers or door engines, it can lead to malfunction or faults in electronic control devices.
- When using washing equipment with high water pressure, do not hold the nozzle close to the window glass, as water could leak into the vehicle.
- Do not bring the nozzle of a high-pressure cleaning machine or any other high-pressure water outlet close to the steering joints or suspension ball joints when washing an independent suspension vehicle.
- Do not use thinner, gasoline, or any other organic solvent to clean the vehicle. It could damage the paintwork and cause discoloration and cracking of plastic or resin parts.
- When the vehicle has been driven near the sea or on a road covered with an antifreeze agent, give the vehicle a particularly careful wash in the wheel housings and on the underside of the chassis. Otherwise, salt or large amounts of antifreeze agent on the vehicle may cause premature rust.

NOTE:
In cold climates, the door key hole and rubber parts can freeze up so that the door cannot be opened. After washing the vehicle, therefore, be sure to wipe away all moisture from around the door. Also, coat the keyhole and rubber parts with silicone or other effective antifreeze agent.

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1. Wash dirt off the vehicle by spraying water on the vehicle with a hose. Pay attention not only to the bodywork but also to the wheel housings and the underside of the chassis.
2. Use car shampoo to remove any stubborn dirt. Wash the dirt and car shampoo off thoroughly with water.
3. Wipe water off the vehicle so spots do not remain.

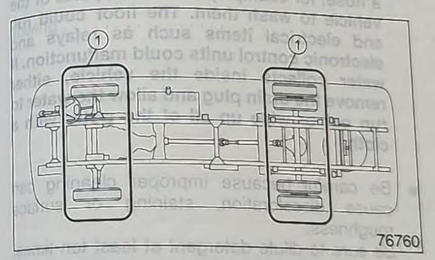
2 Waxing

To protect the paintwork, we recommend you apply protective wax approximately once per month. Wax the paintwork after washing the vehicle, while the paintwork is no warmer than body temperature, and with the vehicle parked out of direct sunlight.

NOTE:
- *Applying wax when the paintwork is hot could result in stains.*
- *Do not use wax that contains polishing compound. It would scratch the paintwork and destroy the luster. We recommend you use only genuine Mitsubishi wax.*

3 Inspecting the vehicle for rust

3.1 Inspection intervals



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Location		Inspection interval	Rust inhibitor application interval
①	Inside of front and rear wheel housings and surrounding areas of chassis underside	Every 6 months	Annually
Other areas of chassis underside		Annually	Every 2 years

3.2 Inspection, and application of rust inhibitor

- Check for rust and rust perforation visually and using an inspection hammer.
- Remove any rust using a wire brush and/or a grinder, then apply rust inhibitor. Even if there is no rust, be sure to apply rust inhibitor at the specified intervals.
- If you find rust perforation, have corrective work performed promptly by your nearest authorized MITSUBISHI FUSO dealer.

4 Care of internal components

WARNING ⚠

In replacing the floor mat after cleaning, make sure it does not interfere with operation of the accelerator pedal or brake pedal.

CAUTION ⚠

- **Do not use any organic solvent (for example, thinner or gasoline) or any acidic or alkaline solvent. It could cause discoloration and/or stains.**
- **Do not directly spray or splash water (using a hose, for example) on internal parts of the vehicle to wash them. The floor could rot, and electrical items such as relays and electronic control units could malfunction. If water collects inside the vehicle, either remove the drain plug and allow the water to run out or wipe up all of the water with a cloth.**
- Be careful because improper cleaning can cause discoloration, staining or surface roughness.
  Be sure to dilute detergent at least ten times, to wipe with water and to wipe again with a dry cloth.
- Remove floor mats from the vehicle before washing them. After washing, dry the felt material on the back of mats before placing mats inside the vehicle.

1. Remove dust using a vacuum cleaner.
2. Wipe dirt away using a soft cloth soaked in a water-diluted neutral detergent.
3. Soak a cloth in clean water, wring it thoroughly, and use it to wipe up any remaining detergent.
4. Dry the cleaned item in a shaded, well-ventilated place.

Useful advice for emergencies

Possible failures, causes and remedies 12-2
Stopping your vehicle in an emergency 12-8
Overheating 12-9
When a fuse has blown 12-10
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When braking is sluggish 12-17
If the engine stalls while the vehicle is in motion 12-17
If a tire goes flat while the vehicle is in motion 12-18
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When the fuel has run out (bleeding the fuel system) 12-20
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Possible failures, causes and remedies

If vehicle inspection and care are conducted regularly, breakdowns or accidents can be prevented. Be sure to implement vehicle inspections and maintenance on a regular basis.
If breakdown should occur in the vehicle, execute inspection and remedies as indicated in the following table.
In the case of electrical system failure, first inspect the fuses.
If you cannot repair the vehicle by yourself, or if the problem has not been corrected by the following measures, consult the nearest authorized MITSUBISHI FUSO dealer.

1 Engine does not start, the starter does not turn, or the starter is slow at turning.

Probable cause	Remedy	Ref. page
The starter switch fuse or the high current fuse has blown.	Replace with rated amperage fuse or high current fuse.	12-10
Battery has run down.	Charge or replace the battery.	12-18
Battery cable is detached, loose or corroded.	Repair corroded areas and attach cable securely.	11-64
Ground terminal is detached.	Attach terminal securely.	—
Engine oil viscosity is too high.	Replace with oil of suitable viscosity.	11-14
Starter fails.	Have starter repaired at the nearest authorized MITSUBISHI FUSO dealer.	—

2 Engine does not start, the starter operates normally.

Probable cause	Remedy	Ref. page
No fuel	Replenish fuel and bleed air.	12-20
Air has entered the fuel system.	Bleed air.	12-20
Fuel filter is clogged.	Replace element.	11-28
Fuel has frozen.	Warm fuel pipe with hot water (not more than 60°C)	—
Preheating time is inadequate.	Adjust for proper pre-heating.	4-7
Preheating circuit fuse has blown.	Replace fuse.	12-10
The air cleaner is clogged.	Clean or replace the element.	11-32
Fuel injection system failure.	Have it repaired by your nearest authorized MITSUBISHI FUSO dealer.	—

3 Engine starts but soon stops.

Probable cause	Remedy	Ref. page
Idling speed is too low.	Have it adjusted at the nearest authorized MITSUBISHI FUSO dealer.	—
Fuel filter is clogged.	Replace element.	11-28
Air cleaner is clogged.	Clean or replace element.	11-32
Fuel injection system failure.	Have it repaired by your nearest authorized MITSUBISHI FUSO dealer.	—

4 Black emissions.

Probable cause	Remedy	Ref. page
Air cleaner is clogged.	Clean or replace element.	11-32

5 Engine is overheated.

Probable cause	Remedy	Ref. page
Front surface of radiator is clogged with refuse, etc.	Clean with a soft brush, etc.	12-9
Coolant is inadequate.	Replenish coolant.	11-34
Pressure cap is not attached completely.	Attach cap securely.	11-34
Fan belt is loose.	Adjust belt tension.	11-40
Coolant is contaminated.	Clean cooling system and replace coolant.	11-34

6 Engine oil pressure does not rise.

Probable cause	Remedy	Ref. page
Engine oil quantity is inadequate.	Replenish engine oil.	11-14
Engine oil viscosity is inappropriate.	Replace with engine oil of suitable viscosity.	11-14
Oil is leaking.	Request inspection and repair at the nearest authorized MITSUBISHI FUSO dealer.	—

7 Too much fuel consumption.

Probable cause	Remedy	Ref. page
There is a fuel leakage.	Request inspection and repair at the nearest authorized MITSUBISHI FUSO dealer.	—
Air cleaner is clogged.	Clean or replace element.	11-32
Tire air pressure is inadequate.	Adjust to proper air pressure.	11-47
The clutch slips.	Have it inspected and adjusted at the nearest authorized MITSUBISHI FUSO dealer.	—

8 Engine consumes too much oil.

Probable cause	Remedy	Ref. page
Used oil is not the correct type.	Replace with correct type of engine oil.	11-14
Engine oil level is too high.	Drain to proper oil level.	11-14
Oil is leaking.	Request inspection and repair at the nearest authorized MITSUBISHI FUSO dealer.	—
Engine oil was not replaced soon enough.	Replace oil at proper interval.	11-14
Oil filter is clogged.	Replace element.	11-27

9 Insufficient power.

Probable cause	Remedy	Ref. page
The parking brake is applied.	Release parking brakefully.	11-44
Air cleaner is clogged.	Clean or replace element.	11-32
Fuel filter is clogged.	Replace element.	11-28
Clutch disc is worn.	Inspect responsiveness of clutch pedal.	11-46
Air has entered the fuel system.	Bleed air from the system.	12-20

10 Clutch disengages poorly.

Probable cause	Remedy	Ref. page
Vacuum pressure is inadequate.	Increase engine speed to increase vacuum pressure.	—
Clutch fluid is inadequate.	Replenish clutch fluid.	11-23
Play in clutch pedal is excessive.	Adjust at the nearest authorized MITSUBISHI FUSO dealer.	—

11 Brake effectiveness is poor.

Probable cause	Remedy	Ref. page
Vacuum pressure is inadequate.	Increase engine speed to increase vacuum pressure.	—
Brake fluid is inadequate.	Replenish brake fluid.	11-23
Vacuum pressure leaks.	Request inspection and repair at the nearest authorized MITSUBISHI FUSO dealer.	—
The brake lining is worn, and the gap between the brake drum and brake lining is too large.	Have it adjusted and/or replaced at the nearest authorized MITSUBISHI FUSO dealer.	—

12 Brake is effective only on one side.

Probable cause	Remedy	Ref. page
Tire pressure among tires is not uniform.	Adjust tires to proper air pressure.	11-47
Tire has worn unevenly.	Replace tire.	11-50
The gap between the brake drum and brake lining is not uniform.	Have it adjusted at the nearest authorized MITSUBISHI FUSO dealer.	—

13 Steering is hard to perform.

Probable cause	Remedy	Ref. page
Power steering fluid is inadequate.	Replenish power steering fluid.	11-25
Air pressure in front tire is inadequate.	Adjust to correct air pressure.	11-47
Oil is leaking.	Request inspection and repair at the nearest authorized MITSUBISHI FUSO dealer.	—

14 Steering wheel shakes.

Probable cause	Remedy	Ref. page
Wheel nut is loose.	Tighten nut to prescribed torque.	11-58
Tire pressure among tires is not uniform.	Adjust tires to correct air pressure.	11-47
Tire has worn unevenly.	Replace tire.	11-50
Tires are not balanced.	Have tires adjusted by the nearest authorized MITSUBISHI FUSO dealer.	—
Tires are damaged.	Replace tire	11-50

15 Steering wheel returns poorly.

Probable cause	Remedy	Ref. page
Parts are not greased adequately.	Grease parts thoroughly.	11-12

16 Lamp does not go on.

Probable cause	Remedy	Ref. page
Bulb failure.	Replace bulb.	12-12
Fuse has blown.	Replace with fuse of rated amperage.	12-10
Wire disconnection or poor grounding of components.	Request inspection and repair at the nearest authorized MITSUBISHI FUSO dealer.	—
Switch fails.	Have switch repaired at the nearest authorized MITSUBISHI FUSO dealer.	—

17 Battery frequently runs down.

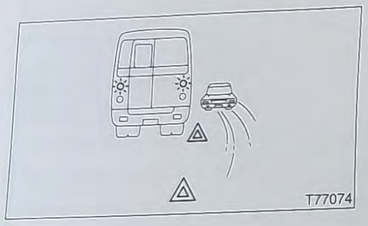
Probable cause	Remedy	Ref. page
Battery terminal is loose or corroded.	Repair corroded areas and attach terminals securely.	11-62
Fan belt is loose.	Adjust belt tension.	11-40
Battery fluid is inadequate.	Replenish battery fluid.	11-62
Battery service life has expired.	Replace battery.	11-62
Idling speed is too low.	Have it adjusted at the nearest authorized MITSUBISHI FUSO dealer.	—
Vehicle is driven mainly at night.	Charge battery.	12-18
Switches have been left on.	Turn off all switches diligently.	—

Stopping your vehicle in an emergency

If the vehicle should fail to operate properly, stay calm and slowly reduce its speed while carefully watching vehicles behind you. Stop at a safe location where you do not block other traffic.

WARNING ⚠

- **It is dangerous to stop the vehicle inside a tunnel. Try as much as possible to stop it outside any tunnel.**
- **After stopping the vehicle because of a breakdown, be sure to apply chocks to the wheels. There can be breakdowns in which the parking brake is no longer effective.**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1 Notification of breakdown

After stopping the vehicle, give notice of breakdown. Otherwise you might be hit in the rear by a vehicle behind you.

- Set the hazard lamp so that it blinks.
- Position emergency triangles at the prescribed locations.

2 Repairs

Inspect problem areas. If they can be repaired, perform work while being careful of other vehicles passing by.
If repairs cannot be made, consult the nearest authorized MITSUBISHI FUSO dealer.

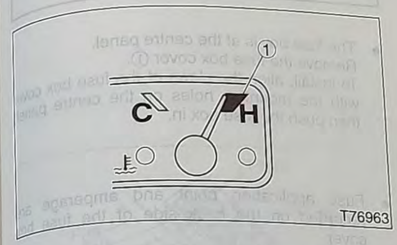
WARNING ⚠

It is extremely dangerous to perform repair work on expressways or in tunnels. Never attempt repairs at such locations.

Overheating

WARNING ⚠

Remove pressure cap after water temperature has lowered.
To remove pressure cap, cover the cap with cloth, etc., and open it slowly. If you remove the cap recklessly, hot water or steam could spurt out and cause burns.



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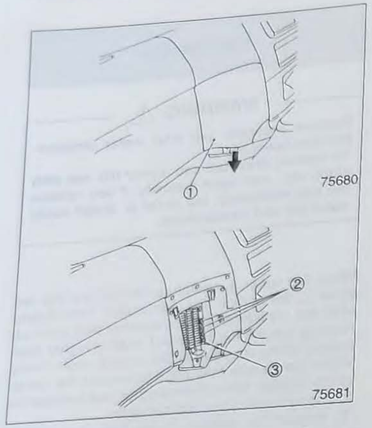
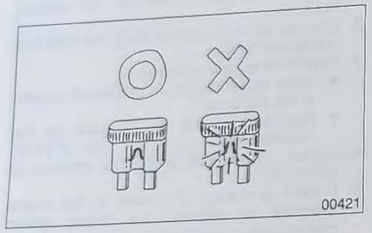
When the water temperature needle is in the red zone ①, the engine has overheated. Immediately stop the vehicle at a safe location and continue running the engine at speed slightly higher than engine idling speed until the engine cools down. When the needle falls back to around the center of the display, turn off the engine and execute the following inspections and remedies.

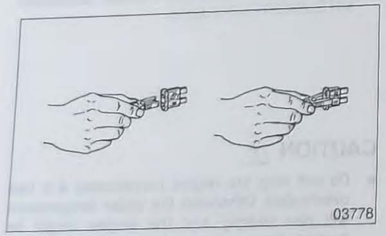
1. Inspect for coolant leaks from the radiator hose, etc.
2. Check to see if the fan belt is cut and if the belt is at proper tension.
3. Inspect the volume of coolant.
   - Open pressure cap and replenish coolant to the cap brim.
   - Replenish to the "FULL" mark on the reservoir tank. ⇨ P. 11-37
4. Inspect radiator front surface for adhesion of refuse, etc.
5. If there is leakage of coolant or the engine overheats on occasion, the cooling system malfunctions. Consult your nearest authorized MITSUBISHI FUSO dealer.

CAUTION ⚠

- **Do not stop the engine immediately if it has overheated. Otherwise the water temperature will rise sharply and the engine might be burned. Be sure to run the engine at slightly higher speed than idling speed, and do not stop it until it has cooled down.**
- **If cold water is poured into the engine while it is overheated, it can cause cracks in the engine. Replenish cold water slowly and in small increments.**







When a fuse has blown

1 Fuse Replacement

Always turn the starter key to LOCK position and turn all switches to OFF before replacing a fuse.

WARNING ⚠

Use only a genuine component fuse of correct rated amperage. Fuses of any other rated amperage can cause a fire.

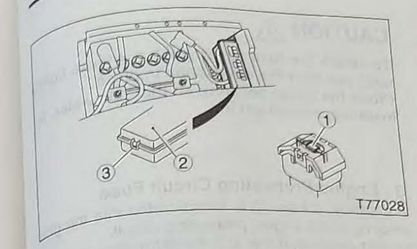
- The fuse box is at the centre panel.
  Remove the fuse box cover ①.
  To install, align the claws of the fuse box cover with the mounting holes on the centre panel, then push the fuse box in.

- Fuse application point and amperage are recorded on the back side of the fuse box cover.
- If a fuse has blown, replace it with a spare fuse ② of recorded amperage. In replacing a fuse, clamp the fuse with a fuse puller ③ on the fuse box and pull it out.

NOTE:
When a spare fuse has been used, obtain another fuse as soon as possible.

CAUTION ⚠

- **If you cannot determine why a fuse has blown, or if the fuse blows repeatedly, have it inspected at the nearest authorized MITSUBISHI FUSO dealer.**
- **Do not splash water or other fluids near the fuse box cover. If water should get on the fuse box, check inside the fuse box to be sure there are no droplets, etc.**



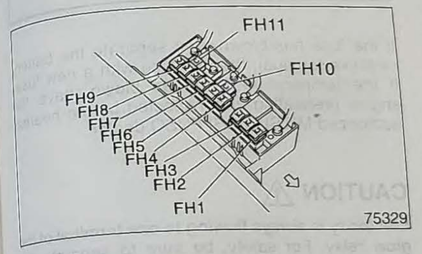
2 High current fuse replacement

High current fuse fulfiling the same function as regular fuses are attached in the circuits between battery and fuse box and between the battery and alternator.
If the electrical devices are not operating, the high current fuse must also be inspected.

1. Release the two locks ③ on the fuse cover ② and take off the cover.
2. Look through he high current fuse inspection port ① to see if the fuse has blown. When it has blown, consult the nearest authorized MITSUBISHI FUSO dealer immediately and have it inspected and replaced.

WARNING ⚠

Use only a genuine high-current fuse of correct rated amperage. Fuses of any other rated amperage can cause fire.

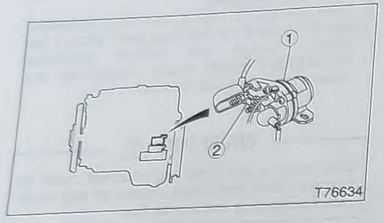


If high current fuses FH1 to FH9 are pulled out, they can be removed.
To remove FH10 and FH11 fuses, first loosen the two installation bolts.

Number	Amperes	Major application points
FH1	40A	Headlamp, Turn signal lamp
FH2	50A	Room lamp
FH3	60A	Radio, cigarette lighter
FH4	40A	Swing door
FH5	—	Spare
FH6	60A	Air conditioner
FH7	—	Spare
FH8	30A	ABS
FH9	30A	ABS
FH10	—	Spare
FH11	120A	Alternator

CAUTION ⚠

To attach the fuse cover, push the locks lightly until you hear the cover snap in place. Close the cover securely so that rain water, for instance, cannot get in.



3 Engine Preheating Circuit Fuse

For safety, a fuse ② is incorporated into the glow relay ① of the engine preheating circuit.
In cold weather, if the 00 indicator lamp does not glow, check to see if the glow relay ① fuse ② has blown.

WARNING ⚠

Use only a genuine fuse of correct rated amperage. Fuse of any other rated amperage can cause a fire.

If the fuse has blown, first separate the battery negative terminal, then replace with a new fuse. If the temperature fuse has blown, have the engine preheating unit inspected by the nearest authorized MITSUBISHI FUSO dealer.

CAUTION ⚠

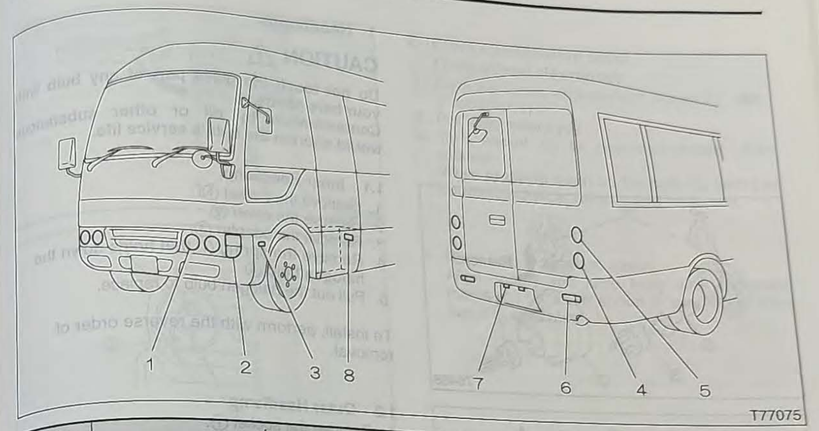
Electricity is always flowing to one terminal of the glow relay. For safety, be sure to separate the battery negative terminal before you replace the fuse.

When a lamp burns out

Be sure to turn the starter key to LOCK position and turn all of the switches OFF before replacing the lamp.

WARNING ⚠

Always use a bulb of the rated voltage and wattage. Other bulbs can cause excessive current to flow so that the fuse blows or a fire is caused by overheating wires.

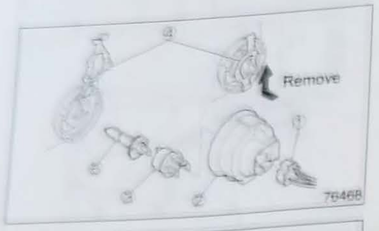


Number	Lamp name			Bulb wattage	No. of lamps
1	Headlamp	4 spherical lamps	(inner side)	24 V - 70 W	2
			(outer side)	24 V - 75 / 70 W	2
2	Front combination lamp	Turn signal		24 V - 21 W	2
		Clearance		24 V - 5 W	2
3	Front side turn lamp			24 V - 10 W	2
4	Stop/tail lamp			24 V - 21 / 5 W	2
5	Rear turn signal lamp			24 V - 21 W	2
6	Backup lamp			24 V - 21 W	2
7	Licence plate lamp			24 V - 5 W	2
8	Step lamp			24 V - 6 W	1

1 Headlamps

CAUTION ⚠

Do not touch the glass part of any bulb with your bare hands. Contamination by oil or other substances would shorten the bulb's service life.



1.1 Inner Headlamp

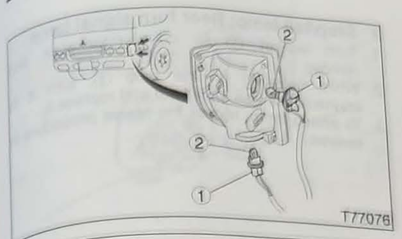
1. Remove the socket ①.
2. Remove the cover ②.
3. Remove the adapter ③.
4. Remove the spring ④ that holds down the halogen bulb ⑤.
5. Pull out the halogen bulb to replace.

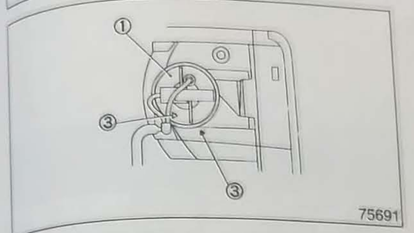
To install, perform with the reverse order of removal.

1.2 Outer Headlamp

1. Remove the socket ①.
2. Remove the cover ②.
3. Remove the spring ③ that holds down the halogen bulb ④.
4. Pull out the halogen bulb to replace.

To install, perform with the reverse order of removal.

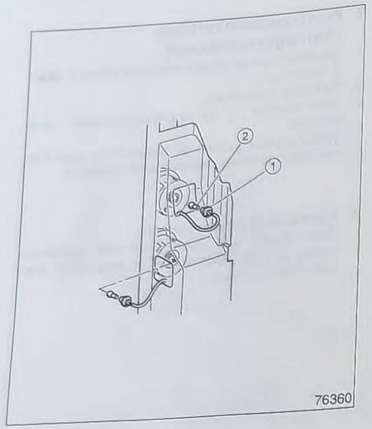




2 Front combination lamp (Turn signal clearance)

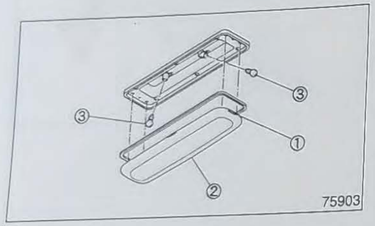
1. Remove lamp attachment screws (⬅ 2 locations).
2. Pull lamp toward you.
3. Turn socket ① to counterclockwise, then remove.
   While pressing down on the bulb ②, turn it to counterclockwise, remove and replace it.

4. Place bulb in socket to attach.
   Align socket and lamp body with alignment marks (△) ③, insert socket in lamp body, then turn it to clockwise.



3 Stop/tail lamp; Rear turn signal lamp

1. Turn socket ① to counterclockwise and remove.
2. While pressing on the bulb ②, turn it to counterclockwise, pull it out and replace it.
3. To attach lamp, repeat the above procedure in reverse.



4 Room lamp

1. Insert negative screwdriver into lens ② notch ①, press the pawls and remove lens ②.
2. Turn the bulb ③ to counterclockwise while pressing on it, then remove and replace it.
3. To attach lamp, repeat the above procedure in reverse.

5 Replacement of other lamps

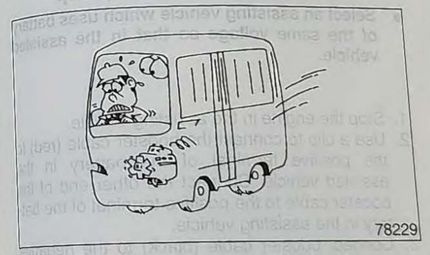
1. Loosen screws holding down lens, then remove lens.
2. While pressing the bulb, turn it to counterclockwise and pull it out.
3. Press in new bulb and turn it to clockwise to install.
4. Attach lens while paying special attention to the packing. If packing is attached while it is offset or twisted, water can get in. Be especially careful.

When braking is sluggish

Stop on the brake pedal more forcefully, shift gear down further, and use both engine brake and exhaust brake together to stop the vehicle.
Use the parking brake according to circumstances.
After stopping, inspect each component and contact the nearest authorized MITSUBISHI FUSO dealer.

WARNING ⚠

- **Do not use the parking brake while driving the vehicle except in an emergency. If the parking brake is pulled up with full force while the vehicle is running, the vehicle could spin or overturn.**
- **The brake is comprised of two systems: front wheel and rear wheel. So if one brake system fails, you can still stop the vehicle with the other normal system. In this condition, however, braking force drops sharply. Never drive the vehicle under this condition since it is extremely dangerous.**



If the engine stalls while the vehicle is in motion

1. Since the following dangerous conditions may arise, stop the vehicle immediately and start the engine.
   - Because vacuum pressure is not being supplied, the brake booster stops operating and brake effectiveness falls drastically.
   - Because the power steering unit stops operating, it becomes extremely difficult to turn the steering wheel. Use strong force to move the steering wheel.
2. If people are nearby, ask them to push the vehicle to a safe location.
3. Shift the gear lever to second or third gear and turn the starter without pressing down on the clutch so you can move the vehicle to a safe location.
   Automatic transmission buses cannot be moved even if the ignition is turned.

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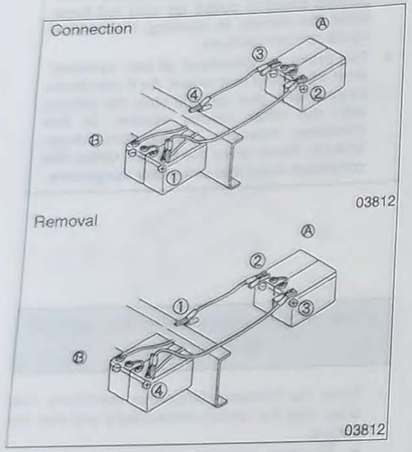
If a tire goes flat while the vehicle is in motion

Do not apply the brakes suddenly. Grip the steering wheel firmly, slowly reduce speed and stop the vehicle at a safe location.
Replace tire on a flat surface where you will not interfere with other traffic.



03812

03812

When the battery runs down

When the battery runs down execute the following procedure to connect the battery of another vehicle, using booster cable, and start the engine.

NOTE:
This vehicle is 24-volt specification.

CAUTION ⚠

- **Use a booster cable of large capacity.**
- **Select an assisting vehicle which uses battery of the same voltage as that in the assisted vehicle.**

1. Stop the engine in the assisting vehicle.
2. Use a clip to connect the booster cable (red) to the positive terminal of the battery in the assisted vehicle. Connect the other end of the booster cable to the positive terminal of the battery in the assisting vehicle.
3. Connect booster cable (black) to the negative terminal of the assisting vehicle battery. Connect the other end of the booster cable to the frame as far away as possible from the assisted vehicle battery.
   Ⓐ: Assisting vehicle
   Ⓑ: Assisted vehicle

WARNING ⚠

- **Check the battery's fluid level before connecting booster cables. If the fluid is below the 'LOWER LEVEL' line, add distilled water. If the battery was charged with an excessively low fluid level, it would deteriorate rapidly and could overheat or explode.**
- **Be sure to connect booster cable in the correct sequence. When connecting booster cable to the frame, there might be sparks. If you connect cable close to the battery, hydrogen gas generated from the battery could be ignited and explode. Connect as far away from the battery as possible.**
- **Never attempt to start the engine by having the vehicle towed, etc. brakes will not work because of the drop in brake vacuum pressure. It is also very difficult to turn the steering wheel.**

4. After completing connections, start the engine in the assisting vehicle and run it at slightly higher than idling RPM. Next, start the engine in the assisted vehicle. If this engine is difficult to start, as for example in a cold climate, or when the battery in the assisted vehicle has gone completely dead, wait for a few minutes after starting the assising vehicle engine before you start the other vehicle engine.
5. After the engine in the assisted vehicle has started, remove cable in the reverse sequence used for the connecting cable.

CAUTION ⚠

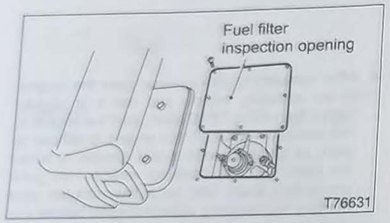
Remove battery from the vehicle before charging it.

When the fuel has run out (bleeding the fuel system)

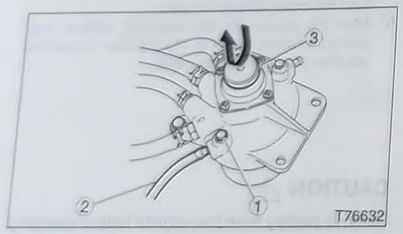
Air will be present in the fuel system after the vehicle has run out of fuel and the engine has stalled, the fuel filter has been replaced, or water has been drained out of the fuel filter. This air will prevent the engine from starting even after refueling sufficiently. You must bleed the fuel system as follows before the engine can be started.

WARNING ⚠

- **A fire could result if there is a fuel leak or if spilt fuel is not removed. Always wipe off spilt fuel after air bleeding. Also be sure to check for fuel leakage.**
- **The working space for air-bleeding is tight. Be careful not to injure yourself on the edges of nearby parts.**



1. Open the fuel filter inspection opening on the floor of the rear seat near the door.



2. Connect a hose ② with an inside diameter of 8 mm to one of the air vent plugs ① of the fuel filter.

NOTE:

- *Use whichever of the two air vent plugs is the most convenient; both plugs provide the same effect. Do not use both plugs together.*
- *Use a transparent hose so you can easily check for air bubbles in the drained fuel.*
- *If no hose is available, cover the air vent plug area with a clean cloth and perform air bleeding.*

3. Loosen air vent plug on the fuel filter by using a wrench.
4. Operate manual pump ③ to pump fuel.
5. Fuel containing air bubbles comes out from the air vent plug.
   Operate the manual pump a few dozen times more until the emerging fuel no longer contains bubbles.
6. When fuel is bubble-free, firmly tighten the air vent plug. Then, operate the manual pump several more times until it becomes hard to press. When the fuel is cold, the manual pump may not become hard to press. Even so, you must operate the manual pump several times after tightening the air vent plug.

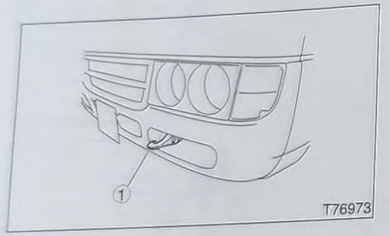
Tightening torque
10 ± 2 Nm (1 ± 0.2 kgfm)

7. After the fuel system has been completely bled, wipe off spilt fuel and start the engine.
8. Check that there is no fuel leakage.

Towing

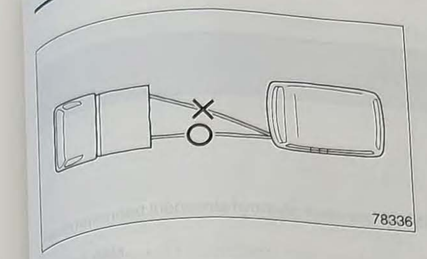
WARNING ⚠

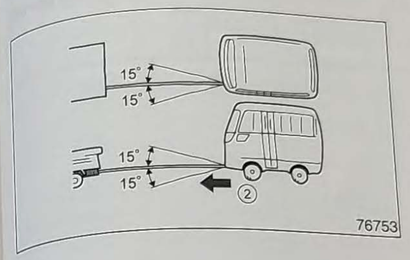
- **If the defective vehicle's engine will not run or if vacuum pressure will not rise, tow the vehicle with a special towing vehicle.**
- **If there is a breakdown in the transmission or differential, always hoist the rear wheels and tow the vehicle with a special towing vehicle.**
- **When towing automatic transmission vehicle, either remove the propeller shaft or use a special towing rig to tow the bus while elevating the rear wheels off the road. If the bus is towed without taking these precautions the automatic transmission will be damaged.**
  If the propeller shaft has been removed, the engine brake exhaust brake, and parking brake will not function. Be especially careful when towing.
- **Confirm that the brake system functions normally.**



When towing a defective vehicle, pay special attention to the following points:

- Use a sturdy towing rope and attach it so that it does not separate from the frame hook ①.
  There are no hooks at the rear of the vehicle.





- For safety, keep the towing angle within the range shown in the illustration.
  If a sudden violent force is applied to the vehicle (as when pulling it up from a ditch, for instance), the hook might break, so avoid such maneuvers.
  Also, never attempt to tow a defective vehicle that is heavier than your own vehicle.
  The maximum load permitted on the tow hook is 16,660 N {1,700 kgf} when applied in the direction of towing ②.
- Have all passengers in the defective vehicle deboard it.
- When towing without a special towing vehicle, the maximum speed is 30 km/h.
- Avoid starting up suddenly and make sure the rope does not slacken.

CAUTION ⚠

If the defective vehicle's engine will not run, tow the vehicle with a special towing vehicle.

- Perform the following measures on the defective vehicle.
  1. Set the gear shift lever to neutral.
  2. Turn on the engine and leave it running. If the engine is stopped, the brakes will lose effectiveness, and if the vehicle has power steering, the steering wheel will become very hard to turn.

CAUTION ⚠

If there is a problem inside the transmission or differential, do not tow the vehicle. Consult the nearest authorized MITSUBISHI FUSO dealer.

Service data

Recommended lubricants/hydraulic fluids and quantities 13-2
Service data 13-5

Recommended lubricants/hydraulic fluids and quantities

1 Lubricants/hydraulic fluids quantities

liters

Item		Quantity
Engine	Oil pan	Approx. 8
	Oil filter	1
Manual transmission		4.4
Differential		4.5

CAUTION ⚠

The aforementioned oil and fluid quantities are guides for replacement. Confirm that quantity levels are correct with an oil level gauge, inspection plug port or level line.

2 Recommended lubricants / hydraulic fluids

Be sure to use the specified lubricants.

Parts	Category	Classification	Viscosity		Remarks
			Atmospheric temperature	SAE viscosity number	
Engine	Engine oil	API CD, CD/SF, CE, CE/CF, CF-4 or JASO classification DH-1	Below 0°C	10W - 30	MIL-L-2104C Use engine oil with ash content of 1.5%(weight percent) or higher
			Above –15°C	15W - 40	
			–15 - 15°C	20W - 20	
			– 5 - 40°C	30	
			Above 30°C	40	
Manual transmission	Gear oil	API GL-3	General	80	—
			Warm region	90	
		API GL-4	General	80	MIL-L-2105
			Tropical region	90	
	Engine oil	API CC	Long period of high-speed driving	30 or 40	MIL-L-2104B
Automatic transmission	Automatic transmission fluid	—	—	—	Exxon Mobil: Mobil ATF3309 or equivalent
Differential gear*1	Gear oil	API GL-5	Below 40°C	90	MIL-L-2105B
			Above 40°C	140	
Power steering	Automatic transmission fluid	DEXRON, DEXRON II or DEXRON III type	—	—	MIL-H-5606B
Brake, Clutch	Brake fluid	SAEJ1703, FMVSS No. 116 (Type DOT 3)	—	—	—
Tie rods	Chassis grease	NLGI No. 1 (Li soap)	—	—	Consistency 310 to 340 (at 25°C) Dropping point 130°C or higher
Wheel hub bearing Propeller shaft (universal joint, slip joint) Steering shaft	Wheel bearing grease (Multi-purpose type grease)	NLGI No. 2 (Li soap)	—	—	Consistency 265 to 295 (at 25°C) Dropping point 185°C or higher

Parts	Category	Classification	Viscosity		Remarks
			Atmospheric temperature	SAE viscosity number	
Propeller shaft center bearing	Bearing grease	NLGI No. 3 (Li soap)	—	—	Consistency 220 to 250 (at 20°C) Dropping point 250°C or higher Usable temperature range – 40°C to 150°C

*1 At ambient temperatures higher than 10°C, use an oil conforming to SAE140 if the vehicle is used under such a heavy load conditions as continuous upgrade climbing.

Service data

Item		Standard value
Engine idling		Approx. 650 rpm
Belt tension Deflection when belt centre has been pressed at 10 kgf (98N)	Fan belt	8 to 10 mm
	Cooler compressor belt	6 to 8 mm
Brake pedal display		10 to 15 mm
Brake pedal stroke (Gap between floor and pedal when brake pedal has been depressed all the way)		45 mm or more
Clutch pedal play		10 to 15 mm
Gap between clutch pedal and floor when clutch has been disengaged		35 mm or more
Parking brake stroke		80 to 120 mm
Tire tread depth		1.6 mm or more
Wheel nut tightening torque		⇨□ P11-57
Coolant volume		22 litres
Battery fluid volume		The fluid level is okay if it lies anywhere between the level lines. If the battery has no level lines, the fluid should be 10 to 15 mm above the polar plate.
Play in the steering wheel (steering wheel's play)		5 to 50 mm

New vehicle inspection record

INITIAL SERVICE ON THE NEW VEHICLE DURING RUN-IN PERIOD
1st inspection at 1,000 km

Date

Total running distance

Servicing dealer's name

Address

INSPECTION OF NEW VEHICLE (For dealer's use) 1,000 km

Owner's name

Engine No.

Signature

Chassis No.

Address

Servicing dealer's name

Date

Address

New Vehicle Inspection Items

Lubrication

- ☐ Brake reservoir tank fluid level

Inspection and maintenance

- ☐ Retightening manifold nuts and engine support bolts
- ☐ Valve clearance
- ☐ Engine operating condition
- ☐ Fan belt tension
- ☐ Clutch pedal play
- ☐ Front and rear wheel nuts retightening
- ☐ Retightening of propeller shaft bolts and center bearing bolts
- ☐ Check steering wheel
- ☐ Check steering system
- ☐ Check service brake
- ☐ Check parking brake
- ☐ Battery fluid level check
- ☐ Overall leak check (water, oil, fuel)
- ☐ Retightening bolts of each body and chassis portion

INITIAL SERVICE ON THE NEW VEHICLE DURING RUN-IN PERIOD
2nd inspection at 5,000 km

Date _____

Total running distance _____

Servicing dealer's name _____

Address _____

INSPECTION OF NEW VEHICLE (For dealer's use) 5,000 km

Owner's name _____

Engine No. _____

Signature _____

Chassis No. _____

Address _____

Servicing dealer's name _____

Date _____

Address _____

New Vehicle Inspection Items

Lubrication

- ☐ Engine oil replacement
- ☐ Manual transmission gear oil replacement
- ☐ Automatic transmission fluid replacement
- ☐ Rear axle differential gear oil replacement
- ☐ Power steering oil replacement
- ☐ Brake fluid level
- ☐ Propeller shaft gearing (Universal joint, slip joint)
- ☐ Steering shaft lubrication

Inspection and maintenance

- ☐ Cleaning of the air cleaner element
- ☐ Replacement of the oil filter element
- ☐ Fan belt tension
- ☐ Engine operating condition
- ☐ Play in the clutch pedal
- ☐ Looseness of the wheel nut
- ☐ Steering system inspection
- ☐ Service brake inspection
- ☐ Parking brake inspection
- ☐ Battery fluid level
- ☐ Functioning of the lighting system
- ☐ Functioning of the gauges
- ☐ Fuel, oil, coolant leaks
- ☐ Propeller shaft center bearing inspection <double antivibration type>
- ☐ Propeller shaft dynamic damper inspection <automatic transmission vehicle>

Period inspection schedule

Periodic inspection schedule 15-2

Periodic inspection schedule

Perform the periodic inspection according to the established schedule and record the results on the "Periodic inspection record."
The inspection intervals and inspection items are shown in the following.

CAUTION ⚠

- Periodic inspections must be performed according to either the odometer reading or the period of use, whitchever is applicable.
- Even if you seldom drive your vehicle, you should inspect your vehicle at least once a month as indicated in the following inspection schedule table. If your vehicle is operated under strenuous conditions, the inspection intervals should be shortened accordingly.
- In the following inspection schedule table, the items that have parenthesized numbers are explained under NOTE at the end of the table by the descriptions designated by the same numbers.
  The maintenance items which can be done by the user are described in the "Simple inspection and service" of this manual, and are discriminated with the asterisk mark (*) in the table.
- During the "new vehicle period" when various parts are subject to initial seating, the vehicle requires special inspections. These inspections should be performed at the first 1,000 km and 5,000 km according to the new vehicle inspection schedule provided in the previous section.
- Rubber hoses, particulary for the brake system and for the fuel system, should be periodically inspected and serviced. Because they decay, swell, chafe, and crack over time, for the sake of safety it is necessary that they be inspected by technicians according to the periodic inspection schedule, and that they be replaced at regular intervals. The hoses must be replaced whenever they are deteriorated or broken.

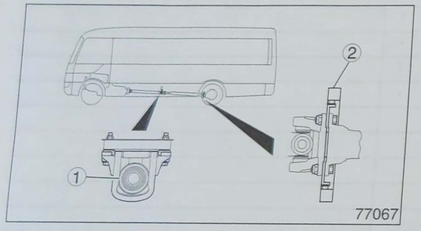
[Symbols]
*1: At the first 1,000 km
*5: At the first 5,000 km
I: Inspect and correct or replace as necessary.
A: Adjust
C: Clean
R: Replace or change
T: Tighten
L: Lubricate
●: No inspection needed
*: Inspection and service jobs that can be performed by the user
(XX): Refer to the corresponding number in the NOTE section for information on what should be done.

(When the odometer indication has exceeded 100,000 km or 20 months have elapsed, start again with the steps that must be performed after the first 5,000 km or month.)

Intervals: × 1 000 km (Months)		*1	*5	5 (1)	10 (2)	15 (3)	20 (4)	25 (5)	30 (6)	35 (7)	40 (8)
Engine											
* Engine oil		•	R	•	R	•	R	•	R	•	R
* Air cleaner		•	C	C	C	C	C	C	C	C	R
* Oil filter element		•	R	•	R	•	R	•	R	•	R
* Fuel filter element		•	•	R: Every 20,000 km or every 12 months							
Engine condition (1)		I	I	I	I	I	I	I	I	I	I
Manifold bolts and nuts, and engine support bolts		I	•	•	•	•	•	•	•	•	•
Valve clearance		A	•	•	•	•	•	•	•	•	•
Engine compression pressure (2)		•	•	•	•	•	•	•	•	•	•
Injection nozzle (3)		•	•	•	•	I	•	•	I	•	•
Injection timing		•	•	•	•	I	•	•	I	•	•
Glow plug (4)		•	•	•	•	•	•	I	•	•	•
Turbocharger (5)		•	•	•	•	•	•	•	•	•	•
* Fan belt (6)		I	I	I	I	I	I	I	I	I	I
* Coolant		I	I	R: Every 50,000 km or every 24 months							
Fuel hose	Inside engine compartment			R: Every 24 months							
	Outside engine compartment			R: Every 24 months							
Drive line											
* Manual transmission gear oil		•	R	•	•	I	•	•	R	•	•
* Automatic transmission fluid		•	R	I: Every 10,000 km R: Every 40,000 km							
* Propeller shaft (universal joint, slip joint)		•	L	L	L	L	L	L	L	L	L
Propeller shaft center bearing		•	•	•	•	•	•	•	•	•	•
* Rear axle differential gear oil		•	R	•	•	I	•	•	R	•	•
Front and rear wheel hub bearing grease (7)		•	•	•	•	•	•	•	R	•	•
* Clutch system (8)		I	I	I	I	I	I	I	I	I	I
Front wheel bearing (9)		•	•	•	•	I	•	•	I	•	•
Rear wheel bearing (10)		•	•	•	•	I	•	•	I	•	•
* Wheel nut		T	T	T	T	T	T	T	T	T	T

45 (9)	50 (10)	55 (11)	60 (12)	65 (13)	70 (14)	75 (15)	80 (16)	85 (17)	90 (18)	95 (19)	100 (20)	Remarks
•	R	•	R	•	R	•	R	•	R	•	R	
C	C	C	C	C	C	C	R	C	C	C	C	
•	R	•	R	•	R	•	R	•	R	•	R	
I	I	I	I	I	I	I	I	I	I	I	I	
•	T	•	•	•	•	•	•	•	•	•	T	
•	A	•	•	•	•	•	•	•	•	•	A	
•	I	•	•	•	•	•	•	•	•	•	•	
I	•	•	I	•	•	I	•	•	I	•	•	
I	•	•	I	•	•	I	•	•	I	•	•	
•	I	•	•	•	•	I	•	•	I	•	•	
•	I	•	•	•	•	•	•	•	•	•	I	
I	I	I	I	I	I	I	I	I	I	I	I	
I	•	•	R	•	•	I	•	•	R	•	•	
L	L	L	L	L	L	L	L	L	L	L	L	
•	L	•	•	•	•	•	•	•	•	•	L	
I	•	•	R	•	•	I	•	•	R	•	•	
•	•	•	R	•	•	•	•	•	R	•	•	
I	I	I	I	I	I	I	I	I	I	I	I	
I	•	•	I	•	•	I	•	•	I	•	•	
I	•	•	I	•	•	I	•	•	I	•	•	
T	T	T	T	T	T	T	T	T	T	T	T	

Intervals: × 1 000 km (Months)	*1	*5	5 (1)	10 (2)	15 (3)	20 (4)	25 (5)	30 (6)	35 (7)	40 (8)	45 (9)	50 (10)	55 (11)	60 (12)	65 (13)	70 (14)	75 (15)	80 (16)	85 (17)	90 (18)	95 (19)	100 (20)	Remarks
Propeller shaft flange yoke bolts	T	•	•	•	T	•	•	T	•	•	T	•	•	T	•	•	T	•	•	T	•	•	
Propeller shaft center bearing bolts	T	•	•	•	T	•	•	T	•	•	T	•	•	T	•	•	T	•	•	T	•	•	
Propeller shaft center bearing (11) <double antivibration type>	•	I	•	•	•	•	•	•	•	•	•	I	•	•	•	•	•	•	•	•	•	I	
Propeller shaft dynamic damper (12) <automatic transmission vehicle>	•	I	•	•	•	•	•	•	•	•	•	I	•	•	•	•	•	•	•	•	•	I	R: Every 150,000 km (90,000 miles)
Disc wheel (13)	•	•	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	R: Every 150,000 km (90,000 miles)
* Tires (14)	•	•	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
* Tire inflation pressure	•	•	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
* Tire rotation	•	•	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
Steering	•	•	•	R	•	R	•	R	•	R	•	R	•	R	•	R	•	R	•	R	•	R	
* Power steering fluid	•	R	I	I	I	I	I	I	I	I	I	R	I	I	I	I	I	I	I	I	I	I	
* Steering shaft	•	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	R	R: Every 50,000 km or every 12 months
* Steering wheel (15)	I	•	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	L	
Steering system (16)	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
Front wheel alignment	•	•	•	•	I	•	•	I	•	•	I	•	•	I	•	•	I	•	•	I	•	•	
Power steering hose			R: Every 24 months																				
Brakes																							
Brake fluid	I	I	I	I	I	I	R	I	I	I	I	R	I	I	I	I	R	I	I	I	I	R	R: Every 25,000 km or every 12 months
* Service brake system (17)	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
Brake drum and lining (18)	•	•	•	•	I	•	•	I	•	•	I	•	•	I	•	•	I	•	•	I	•	•	
* Parking brake (19)	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
Vacuum check valve (20)	•	•	•	•	I	•	•	I	•	•	I	•	•	I	•	•	I	•	•	I	•	•	
Brake hose			R: Every 24 months																				
Rubber parts and packing of brake system (21)			R: Every 12 months																				
Exhaust brake vacuum chamber			R: Every 12 months																				
Vacuum hose			R: Every 24 months																				
Brake fluid reservoir tank tube			R: Every 48 months																				
Suspension																							
Leaf spring U-bolts	•	•	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
* Leaf springs (22)	•	•	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
Electrical system																							
* Battery (23)	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
* Lighting system (24)	•	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
* Instrument panel (25)	•	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
Other chassis parts																							
Chassis parts (accelerator link shaft, accelerator pedal, transmission control linkage, gearshift select lever pin, parking brake ratchet bar, brake pedal link, wheel brake parts, door lock, door inside and outside handles)	•	•	•	•	•	•	L	•	•	•	•	L	•	•	•	•	L	•	•	•	•	L	
* Leaks-fuel, oil, coolant (26)	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
Bolts securing body and chassis parts (27)	T	•	•	T	•	T	•	T	•	T	•	T	•	T	•	T	•	T	•	T	•	T	



NOTE:

(1) Inspect the engine's starting condition, and any abnormal vibrations or noise while the engine is running.

(2) Check the engine compression pressure using the compression gauge.

(3) Using an injection nozzle tester, check the injection pressure and spray condition.

(4) Check the timing function for how long it takes for the engine preheating indicator lamp to extinguish. Remove the grow plug and clean the adhesives such as carbon, etc.

(5) Take off the compressor wheel side hose and check the play and turning condition of the turbine wheel's rotor shaft.

(6) Check the fan belt for tension and damage.

(7) Replace the wheel bearing grease. At the same time, replace the oil seal.

(8) Check the clutch pedal for the play, engagement and slippage.

(9) Jack up the front axle, spin the tire with your hands on the top and bottom, and check the wheel bearings for abnormal rubbing.

(10) Disassemble the rear wheel and check for wear and damage to the wheel bearings.

(11) Check the center bearing ① for free play. Also, check the center bearing for security and damage.

(12) Check the dynamic damper ② for looseness of installation and damage.

(13) Check the disk wheel for damage, corrosion and variation.

(14) Check the tires for cracks or damage. Also, check for pieces of metal, stones or other items that are stuck in the tire. Check for sufficient depth or unusual wear of the tire treads.

(15) Check for play in the steering wheel or unusual movement. When moving slowly check the steering wheel for unusual vibrations, catching, abnormal heaviness of operation or failure to return.

(16) Check for looseness in each part of the steering system. Also check for oil leaks in the steering gear box. Check looseness or leakage in the oil pipe and the installation section of the oil hose. Also, check for normal operation of the power steering.

(17) Check for play in the brake pedal, and for a correct gap between the pedal and the floor when the pedal is fully depressed. Also, make sure there is no damage or looseness in the pipes and hoses of the brake system, and no leaking brake fluid. Check the service brake for normal operation.

(18) After adjusting the brake shoe clearance, if there are any abnormalities carry out an inspection of the lining for wear and disassemble the brake and check for wear, cracks or damage to the brake drum.

(19) Engage the parking brake and check for normal operation. Make sure the parking brake's strokes are normal. If necessary in vehicles equipped with a center brake, disassemble the brake and inspect the drum for wear, cracks or damage. Also check for wear in the lining.

(20) Using air, check the functioning of the vacuum check valve.

(21) Replace the gaskets, dust seal, piston caps and other rubber parts in the inside of the following brake instruments. (Brake master cylinder, wheel cylinder)

(22) Check the leaf spring for cracks, damage or dislocation of the leaf.

(23) Check the battery fluid level. Also, measure the specific gravity of the battery fluid with a hydrometer.

(24) Check the condition and installation of each lamp and inspect for damage and proper light.

(25) Check for normal functioning of each gauge, indicator lamp and warning lamp.

(26) Check the fuel, oil, brake fluid and coolant for leakage or oozing.

(27) Check the bolts and rivets in the frame and cross members etc. for cracks, damage or looseness.

Periodic inspection record

Date km 5 000 km (or 1 month)	Date km 10 000 km (or 2 months)	Date km 15 000 km (or 3 months)
Date km 20 000 km (or 4 months)	Date km 25 000 km (or 5 months)	Date km 30 000 km (or 6 months)
Date km 35 000 km (or 7 months)	Date km 40 000 km (or 8 months)	Date km 45 000 km (or 9 months)
Date km 50 000 km (or 10 months)	Date km 55 000 km (or 11 months)	Date km 60 000 km (or 12 months)
Date km 65 000 km (or 13 months)	Date km 70 000 km (or 14 months)	Date km 75 000 km (or 15 months)
Date km 80 000 km (or 16 months)	Date km 85 000 km (or 17 months)	Date km 90 000 km (or 18 months)
Date km 95 000 km (or 19 months)	Date km 100 000 km (or 20 months)	Date km 105 000 km (or 21 months)

Date km 110 000 km (or 22 months)	Date km 115 000 km (or 23 months)	Date km 120 000 km (or 24 months)
Date km 125 000 km (or 25 months)	Date km 130 000 km (or 26 months)	Date km 135 000 km (or 27 months)
Date km 140 000 km (or 28 months)	Date km 145 000 km (or 29 months)	Date km 150 000 km (or 30 months)
Date km 155 000 km (or 31 months)	Date km 160 000 km (or 32 months)	Date km 165 000 km (or 33 months)
Date km 170 000 km (or 34 months)	Date km 175 000 km (or 35 months)	Date km 180 000 km (or 36 months)
Date km 185 000 km (or 37 months)	Date km 190 000 km (or 38 months)	Date km 195 000 km (or 39 months)
Date km 200 000 km (or 40 months)	Date km 205 000 km (or 41 months)	Date km 210 000 km (or 42 months)

Date ..... km 215 000 km (or 43 months)	Date ..... km 220 000 km (or 44 months)	Date ..... km 225 000 km (or 45 months)
Date ..... km 230 000 km (or 46 months)	Date ..... km 235 000 km (or 47 months)	Date ..... km 240 000 km (or 48 months)
Date ..... km 245 000 km (or 49 months)	Date ..... km 250 000 km (or 50 months)	Date ..... km 255 000 km (or 51 months)
Date ..... km 260 000 km (or 52 months)	Date ..... km 265 000 km (or 53 months)	Date ..... km 270 000 km (or 54 months)
Date ..... km 275 000 km (or 55 months)	Date ..... km 280 000 km (or 56 months)	Date ..... km 285 000 km (or 57 months)
Date ..... km 290 000 km (or 58 months)	Date ..... km 295 000 km (or 59 months)	Date ..... km 300 000 km (or 60 months)

Note (other repaires after accident, etc.)

Date	Replaced or repaired parts	Remarks	Dealer's stamp and signature

MITSUBISHI ROSA

Owner's Handbook

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