

COACH (BUS)

VISIGO

INTRODUCTION AND USER MANUAL

ISUZU

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PREAM

This handbook is prepared in order to inform you about the use and maintenance of your Isuzu vehicle and to provide necessary safety information. We kindly recommend you to read this handbook carefully and to abide by all of the warnings stated herein in order that your vehicle can be used with joy and without any problem.

Please remember when your vehicle's maintenance time comes that your Authorized Isuzu Service knows your vehicle very well and ready to make you satisfied.

We hereby would like to thank you for choosing an Isuzu product and guarantee that your joy and satisfaction in driving will be continued.

This handbook must be perceived as an integral part of the vehicle and preserved until the vehicle is sold.

Issues related to caution.

- 1. The issues related to personal injury are given under the title of "WARNING" and they are stated in a shadowed frame.*
- 2. The issues related to the potential of giving mechanical damage to vehicle are given under the title of "CAUTION".*
- 3. Other information – which are not related to personal injury and mechanical damage, but which must be considered important – are given under the title of "NOTE".*
- 4. The "V" symbol means that this feature is an option of the vehicle and that this feature may not be available on your vehicle.*

All information, drawings, technical specifications in this handbook are based on the latest product information available during the publishing of the handbook. The right to make modifications without any prior notice is reserved.

**Anadolu Isuzu Otomotiv Sanayi ve Tic. A.Ş.
Çayirova / KOCAELİ**

The Symbols Used In This Manual



DANGER

If any problem occurs in the implementation of the instructions below, which are defined with this symbol, it may lead to the emergence of situations that may result in death or serious injury of you and/or other people.



WARNING

If any problem occurs in the implementation of the instructions below, which are defined with this symbol, it may lead to the emergence of fire in your vehicle in addition to the situations that may result in death or serious injury of you and/or other people.



CAUTION

If any problem occurs in the implementation of the instructions below, which are defined with this symbol, it may lead to injuries or an accident.



RECOMMENDATION





If any problem occurs in the implementation of the instructions below, which are defined with this symbol, it may lead to the breakdown or damage of your vehicle.



NOTE

This symbol shows what you need to know.
This symbol explains the information that may be useful when using the vehicle, as well.

Moreover, the symbols given below are also used in this user manual.

-  : Certain type of equipment (Your vehicle may not have the equipment bearing this symbol.)
-  : 4HK1 engine model
-  : Manuel transmission model
-  : Automatic transmission model



The abbreviations explained below are used in this manual.

Abbreviations	Description
ABS	Anti-lock Brake System
ACEA	Association des Constructeurs Europeens d'Automobiles (European Automobile Manufacturers Union)
API	American Petroleum Institute
ASR	Anti Slip Regulation
ASTM	ASTM American Society for Testing and Materials
BS	British Standard
DIN	German Industrial Standards
DPD	Diesel Particulate Diffuser
EBD	Electronic Brake-force Distribution
ELR	Emergency Locking Retractor
FMVSS	Federal Motorized Vehicle Safety Standards
GVM	Gross Vehicle Mass
HBB	Hydraulic Brake Booster
JASO	Japanese Automobile Standards Organization
JIS	Japanese Industrial Standards
LLC	Long Life Coolant
LSD	Limited Slip Differential
LSPV	Load Sensing Proportioning Valve
M/T	Manual Transmission
MID	Multi-Information Display
MIL	American Defence Standard (Military Standard)
PM	Particulate Material
PTO	Power Take-Off
d/dak	Revolutions per minute
SAE	Society of Automotive Engineers
SRS	Supplemental Restraint System
SVS	Service Vehicle Soon

USE OF THIS USER MANUAL AND FINDING A CERTAIN TITLE

0

• SECTION DESCRIPTION	0-2
• PICTURE INDEX	0-3
• WARNING/INDICATOR LAMP INDEX	0-6

VEHICLE INFORMATION..... 1**IMPORTANT INFORMATION 2**

It defines the necessary information that you need to know beforehand so that you can start the vehicle in a safe and smooth way.

DOORS, WINDOWS AND SEATS..... 3

It indicates the appropriate way which must be used in order to open/close the doors, windows and fuel filler cap. Moreover, it also defines the adjustment of mirrors and seats, as well as wearing the seatbelts in a correct way.

CONTROLS AND INDICATORS 4

It describes how the engine should be started and stopped; it describes versatile controls and instruments; it describes special equipment such as leveller and HSA.

COMFORT AND PRACTICALITY 5

Information about the audio system, climate control system and other comfort and practicality features are given here.

SAFE AND SMOOTH USE TACTICS..... 6

It describes the points that you need to know in order to use the vehicle in a safe and smooth manner under several conditions and different seasons.

SERVICE AND MAINTENANCE..... 7

It describes the daily and regular checks and other vehicle protection and maintenance information required for keeping your vehicle malfunction-free.

EMERGENCY CASES 8

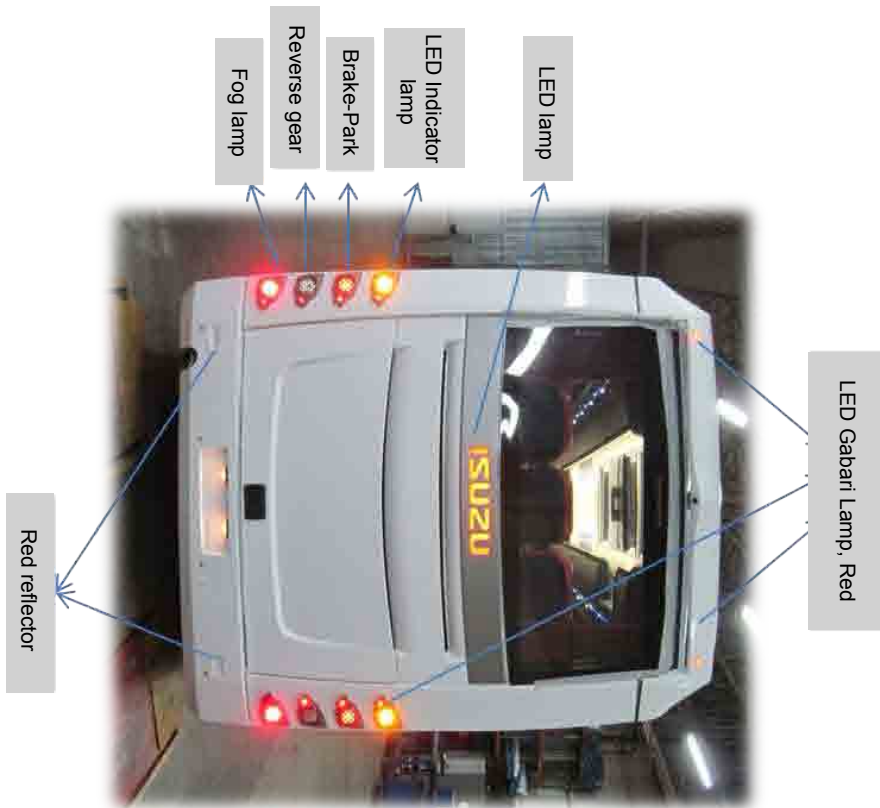
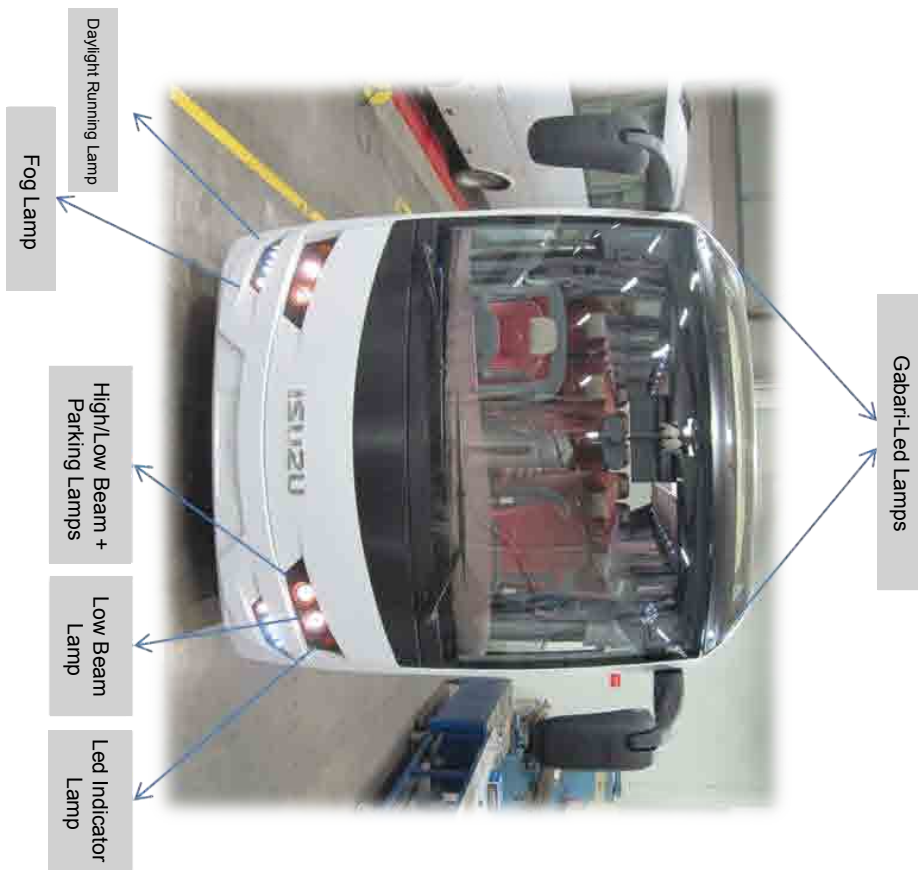
It lists the possible emergency cases and describes the procedures that you need to follow in any one of the emergency cases.

MAIN DATA..... 9**LIST OF AUTHORIZED SERVICES.....10**

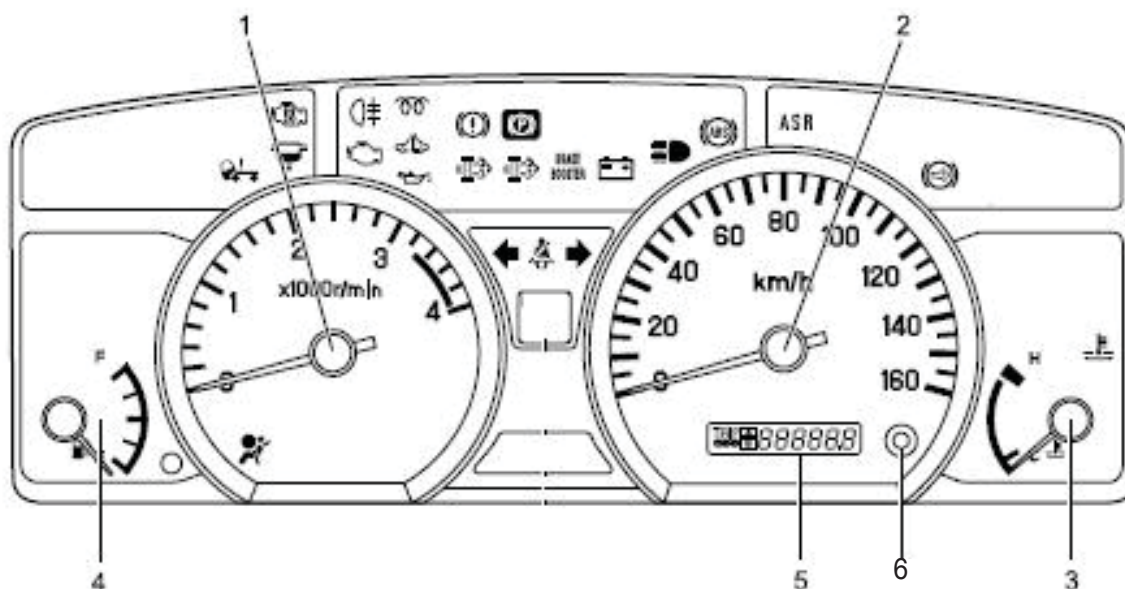


Control switches and their functions

No	Function
1	SWITCH; WARNING LAMP
2	TRUNK ILLUMINATION
3	ROOF LIGHTNING
4	SWITCH, DRIVER ROOF
5	SWITCH, MIRROR HEATER
6	SWITCH, WINDSHIELD HEATER
7	SWITCH, SUSPENSION ELEVATION
8	SWITCH, RETARDER
9	SWITCH, ENGINE HEATING
10	SWITCH, FRONT FOG LAMP
11	SWITCH; FRONT DOOR
12	SWITCH; REAR DOOR
13	SWITCH, LCD TV
14	WARNING LENS, COMPLETE
15	SWITCH, TEA-COFFEE
16	SWITCH, DPD
17	SWITCH, MIRROR
18	SWITCH, ROOF LIGHTNING
19	SWITCH, TRUNK LOCK
20	SWITCH, AUTOMATIC WINDOW
21	SWITCH, READING LAMP
22	SWITCH, POWER CURTAIN








Instrument Panel






No.	Equipment
1	Tachometer
2	Speedometer
3	Engine Temperature Indicator
4	Fuel Level Indicator
5	Odometer
6	Odometer reset









WARNING LAMPS

Name	Symbol	Colour
Engine warning lamp control		Dark Yellow
Engine oil pressure warning lamp		Red
Engine overheat warning lamp		Red
ABS warning lamp		Dark Yellow
Charge warning lamp		Red

Name	Symbol	Colour
Water sedimenter (fuel filter) warning lamp		Red
Brake system warning lamp		Red
Hand brake warning lamp		Red
Brake booster warning lamp		Red
Seatbelt warning lamp		Red

INDICATOR LAMPS

Name	Symbol	Colour
Glow plug indicator lamp		Dark Yellow
High beam indicator lamp		Blue
v ASR indicator lamp		Green / Dark Yellow

Name	Symbol
Exhaust brake indicator lamp	
Turn signal and hazard flasher indicator lamp - left	
Turn signal and hazard flasher indicator lamp - right	
Rear Fog Lamp Indicator Lamp	
SVS indicator lamp	
DPD automatic regeneration indicator lamp	
DPD manual regeneration indicator lamp	
Low fuel warning lamp	

VEHICLE INFORMATION

1

-
- VIN and Engine Number
-

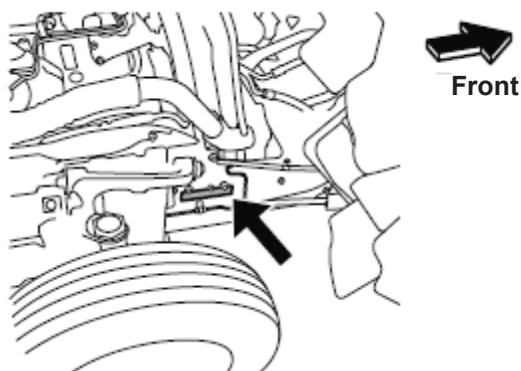
1-2

VIN and Engine Number

VIN and engine number is required for your vehicle's registration. Additionally, these numbers are required when your vehicle goes through official audit processes. Please inform these numbers to your Isuzu Dealer when having your vehicle repaired or when ordering spare parts. The Dealer will be able to provide a faster and better service with the help of these numbers.

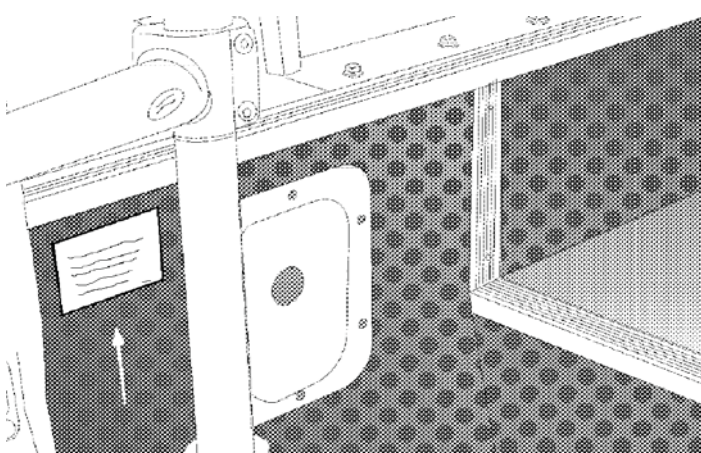
VIN Number

Location of the VIN number on the body



The VIN number is written on the right-front side of the chassis.

Identification plate



The identification plate located on the lower section of the left door lock indicates the VIN number along with other information such as vehicle model code.

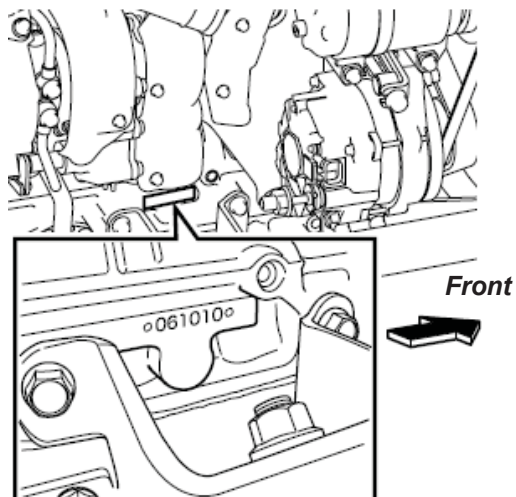
VEHICLE INFORMATION

This sole number contains several information including the vehicle and engine model codes as shown below.

VEHICLE IDENTIFICATION NUMBER SYSTEM																
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
N	N	A	M	K	A	7	L	E	0	2	0	0	0	0	0	0
(EXAMPLE)																
1 - 3	Place of production					NNA:	(AIOS) ANADOLU ISUZU OTOMOTIV SANAYI VE TICARET ANONIM SİRKETİ									
4	MODEL					M:	0									
5	PASSENGERS AND CAPACITY					N:	14									
						D:	27 PASSENGER SEATS									
						M:	26 PASSENGER SEATS									
						K:	31 PASSENGER SEATS									
						H:	17 PASSENGER SEATS									
						G:	20 PASSENGER SEATS									
						B:	22 PASSENGER SEATS									
						C:	23 PASSENGER SEATS									
						E:	25 PASSENGER SEATS									
						F:	19 PASSENGER SEATS									
						L:	21 PASSENGER SEATS									
						A:	43 PASSENGER SEATS									
						R:	28 PASSENGER SEATS									
P:	29 PASSENGER SEATS															
T:	30 PASSENGER SEATS															
6	MODEL EXTENSION					S:	STANDARD									
						A:	AIR SUSPENSION									
						L:	SPRING AIR DOOR, STANDARD									
						B:	MUNICIPALITY TYPE									
						H:	AIR DOOR, STANDARD									
E:	MUNICIPALITY TYPE (EXPORT)															
7	ENGINE TYPE					1:	4HF1 (ISUZU DIESEL)									
						2:	4HF1-DE-RATED (ISUZU DIESEL)									
						3:	4HE1-T (ISUZU TURBO DIESEL)									
						4:	4HE1-XS (ISUZU TURBO INTERCOOLER DIESEL)									
						5:	4HG1-T (ISUZU TURBO DIESEL)									
						6:	D0834 LFL 03 (MAN TURBO INTERCOOLER DIESEL)									
						7:	4HK1-XS (ISUZU TURBO INTERCOOLER DIESEL)									
						9:	4BD1 (ISUZU DIESEL)									
8	DRIVE SYSTEM					L:	LEFT HAND DRIVE									
						R:	RIGHT HAND DRIVE									
9	WHEELBASE					G:	2765mm									
						L:	3365mm									
						M:	3065mm									
						E:	3815mm									
10-11	Place of production					01:	AIOS KARTAL PLANT									
						02:	AIOS GEBZE PLANT									
12-17	PRODUCTION SERIAL NO															

Engine Number

4HK1 engine



Engine number is written
on the right-front section of the
engine block.

-
- **Before Driving the Vehicle**
 - **Driving**
 - **Stop and Parking**
 - **Safe Status**
 - **Prevention of Failures**
 - **DPD Diesel Particulate Diffuser (DPD)**
-

In this section, the information and warnings required for safe and comfortable driving are available. Please make sure that you read this section before driving the vehicle.

CONTROLS THAT SHOULD BE MADE BEFORE DRIVING YOUR VEHICLE

[1. Checks conducted while the engine maintenance cover is open]

Items to be checked
Fan belt tension and damage
Engine oil level check
Engine coolant level check

[2. Checks conducted on the driver seat]

Items to be checked
Brake fluid level
Brake pedal play
Clutch pedal play
Operation of the counters, indicators and warning/indicator lamps
Engine activation, unusual sounds and colours of the exhaust gas
Hand brake lever stroke and operation
Windshield washer liquid status and windshield wiper
Windshield Washer Liquid
Steering wheel location and play
Operation of horn and turn signal lamps
Fuel level
Operation of door locks

[3. Checks to be conducted when walking around the vehicle]

Items to be checked
Illumination, blinking or dirty or broken lamps
Battery liquid level
Leaf spring damage
Oil, coolant, fuel, brake fluid, hydraulic steering wheel oil leakage
Water accumulation in the fuel filter (lower)

[4. Checking of wheels and tyres]

Items to be checked
Tyre air pressure
Cracks and other damages
Abnormal wear
Tread depth
Rim mounting status

[5. Checks conducted during driving]

Items to be checked
Brake operation
Checking the engine at low speeds and speed increases

Please Use the Specified Fuel

 **CAUTION**

- Please only use low-sulphur diesel fuel (50 ppm or lower sulphuric content) or super low-sulphur diesel fuel (10 ppm or lower sulphuric content) always for the engine of the model with diesel particulate diffuser (DPD). Use of low quality diesel fuel, addition of a substance such as cleaner into the fuel in the tank or filling the fuel tank with a fuel or diesel fuel based on gasoline, kerosene or alcohol will damage the fuel filter and lead to lubrication problems in the injector components that are lubricated with fuel. In addition, this practice may damage the operation of the engine and DPD, and the exhaust emission cleaning system, and this may lead to the breakdown of the systems related to the engine. In an inappropriate fuel is filled into the tank accidentally, please empty the fuel from the system. If this measure is not performed, a fire or permanent damages may occur when the engine is started.
- If any other fuel apart from low-sulphur diesel fuel or super low-sulphur diesel fuel is used in the vehicle with DPD, the resulting malfunctions will not be covered by the warranty.
- Open the fuel tank filler cap slowly. If you open it quickly, the fuel may splash.

**NOTE**

- Diesel fuel specifications change as per the season and the region.

Refuelling at Fuel Stations



WARNING

[When refuelling your vehicle, please make sure that you follow the instructions given below]

- Stop the engine and close the doors and windows of the vehicle.
- Do not approach the vehicle with cigarette and other burning items.
- Before opening the fuel tank filler cap, touch a metal in order to discharge the static electricity on your body. If statistic load accumulates on your body when refuelling, a spark – caused by the discharge of this load – may lead to burns by igniting the fuel.
- When refuelling the vehicle, fully insert the fuel filler nozzle to the filling neck. Trying to fill more fuel by pumping fuel with a partially retracted nozzle is dangerous; because the automatic stopping mechanism may lead to the fuel spill by not working.
- All parts of the refuelling procedure (ranging from the opening of the fuel filler cap to the closure of the fuel filler cap after the completion of the refuelling operation) must be performed by the same person.
Other persons may be carrying static electricity. Do not allow others to approach to the fuel tank.
The person who performs the refuelling should not return to their chair in the cabin in the middle of the filling operation. By doing this, he/she may accumulate static electricity again.
- Do no use any fuel filler cap which is not an original Isuzu part.
- Please follow all warnings hung on the filling stations.

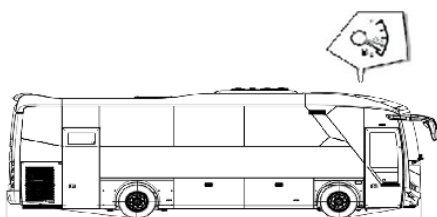


CAUTION

[Be careful when refuelling the vehicle]

- Pay attention not to inhale the fuel vapour when refuelling.

Economic Driving



Driving at very high speeds, driving at very low speeds which cause knocking in the engine, driving when the exhaust brake is constantly active, driving in the status when the engine brake is always open and using the exhaust brake frequently in order to adjust your speed may lead to low fuel economy. Please drive with a constant speed as much as possible.

During acceleration, increase your speed smoothly and slowly, and step up the gear beforehand. Warming the engine longer than it is necessary and revving up the engine to high speeds lead to fuel wastage. Driving with an excessively loaded vehicle, too, leads to fuel wastage. Check the tyre pressures frequently and always make sure that they are at accurate level.

Do not stock any Fuel can and Injection Box in the cabin.



WARNING

- It is very dangerous to carry fuel can and injection box in the cabin. Ignition or cracking of such containers may lead to a fire or explosion.

Usage of the Curtains



CAUTION

- Please preserve the curtains in a way in which they will not hinder your field of view and driving.

Keep the surface around the driver seat clean and tidy



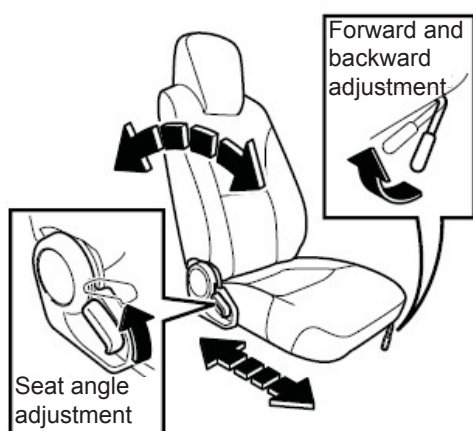
WARNING

- Presence of empty boxes, empty bottles or other items rolling over the surface is very dangerous; because they may get stuck under the brake pedal and hinder the braking operation. It is also very important to lay the floor mats properly for optimum pedal operation. Wrongly laid floor mats will hinder the easy movement of the pedals.
- Do not use the front panel glove box or the upper section of the front panel as a place for putting the rolling items which may constitute a hindrance for your driving.

Correct Driving Position

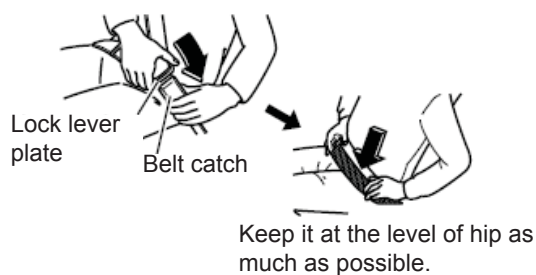
WARNING

- Before driving, make sure that you adjusted the seat, steering wheel and mirrors to the positions which provide the correct driving position for you. Make sure that the seat is firm by trying to shake it to the front and to the rear, and put on your seatbelt. Other passengers, too, must put on their seatbelts.



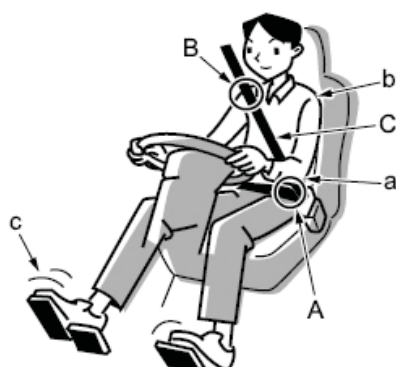
Seat Adjustment

Adjustment of the seat to the correct driving position is the core element of a safe driving.



Fastening the Seatbelt

Always fasten your seatbelt. Sit up straight by pushing down the chair with the lower part of your back and in a way in which the lap belt will cover your hips as much as possible.



	Seat adjustment recommendations
a	Make the adjustments in a way that will allow you to turn the steering wheel with your elbows slightly bent.
b	Always position the seatbacks in a way that they will contact your shoulders.
c	Make sure that you can press each pedal sufficiently.

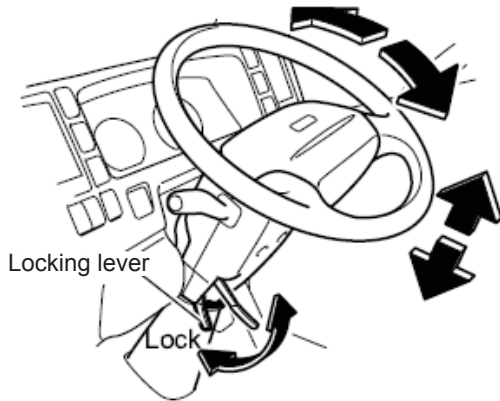
	Warnings for fastening the seatbelt	Reason
A	Fasten the lap belt in a way in which it will be close to your hip level as much as possible.	If the seatbelt is fastened in a wrong way, the pressure applied by the seatbelt as a result of a collision will be dangerous.
B	Fasten the shoulder belt in a way that it will be on your shoulder (it should not contact with your neck, jaw or face). If the belt is fastened in a wrong way, it will be dangerous.	
C	When you fasten the seatbelt, make sure that it does not get entangled.	In order to be sure that the seat belt is fully effective.

Passengers and Seatbelts

Only one person must use each seatbelt.

WARNING

- Always adjust the seat before driving. Take your correct driving position, rock the seat slightly in order to make sure that it fits its place and fasten your seatbelt before beginning to drive. All passengers must fasten their seatbelts.
- Use a child safety seat or an appropriate support for a child, who is too small for the seatbelt to touch his/her face or extend to his/her hips. In such cases, use of regular seatbelt may be dangerous.



Adjustment of the Steering Wheel Position

You can adjust the steering wheel at the directions of up-down and forward-backward. After making an adjustment, make sure that the steering wheel and locking lever are locked safely.

WARNING

- When you adjust the steering wheel, try to pull the steering wheel on up and down directions before driving in order to check whether it is locked safely or not.
- Before beginning to drive, adjust the position of the steering wheel. Adjustment of steering wheel position during driving may be very dangerous, because the steering wheel may create vibration in a way that will hinder accurate driving.

Driving

Check the perimeter of the vehicle before starting the engine

Make sure that there are no children or obstacles around the vehicle by making a complete safety check before moving.



WARNING

- Before starting the engine, make sure that there are no flammable materials under or around the vehicle. Such materials may lead to fire. If there is any wooden material near 50 cm (approximately 20 inches) of the vehicle's heat source, the structure and the colour of the wood may decline or this may constitute a serious danger due to the fact that the wood may get ignited.

Pay attention to exhaust emissions



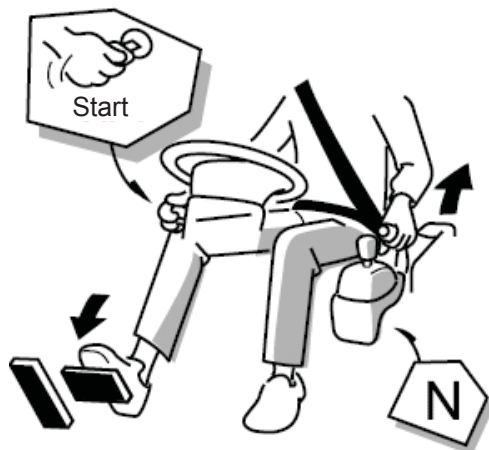
WARNING

- Exhaust emissions contain colourless, odourless and poisonous carbon monoxide. If you inhale exhaust emissions, you may be exposed to carbon monoxide poisoning.
- Do not leave the engine in operation in a place which is ventilated poorly. It may be especially dangerous to start the engine in a garage or other indoor areas which can easily be filled up with the exhaust emissions of the engine; because you may be exposed to carbon monoxide poisoning.
- Examine the exhaust pipe from time to time. If you see any damage (for example, a damaged connection component or hole or crack caused by wear), have your vehicle checked and maintained at the closest Isuzu Dealer. Using the vehicle without having the damage repaired will be dangerous; because exhaust emissions may get into the cabin and lead to carbon monoxide poisoning.
- If exhaust emissions enter into the cabin, open all windows completely and adjust the internal/external air selector of the heater or the air conditioner to the external air option. Have the necessary checks and maintenance operations performed at the closest Isuzu Service. Using the vehicle without having the damage repaired will be dangerous; because exhaust emissions may get into the cabin and lead to carbon monoxide poisoning.

Pay attention to exhaust emissions **WARNING**

- Exhaust emissions contain colourless, odourless and poisonous carbon monoxide. If you inhale exhaust emissions, you may be exposed to carbon monoxide poisoning.
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Starting the engine

**CAUTION**

- Make sure that handbrake lever is pulled safely. Before starting the engine in the manual transmission model, make sure that the gear lever is in the "N" position, and then keep the clutch pedal fully depressed
- Remember that you must be seated on the driver seat in order to start the engine. If you are not seated on the driver seat (for example; if you try to start the engine by overhanging from the window or door opening), you can not set the "N" position. If you start the engine of the model with the manual transmission when the gear lever is another position apart from the "N" position, the vehicle may move.

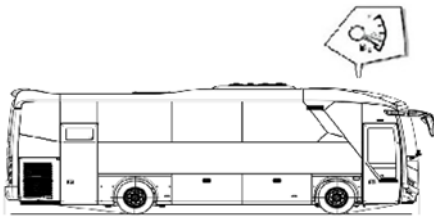
If the vehicle is not used for a long period



RECOMMENDATION

- Before driving a vehicle which has not been driven for a long period, check the engine, transmission and the transfer case against lubricant leakage potential. If the lubricant is not sufficient, the components will not receive sufficient lubricant, the available lubricant will not be sufficient for the parts and this situation will lead to malfunctions.
- Start the engine and leave it in the idle mode for at least 5 minutes. Check for abnormal sounds.
- See the “Engine Start” section on the page 4-4 for the instructions related to the issue of heating the engine.

Recommendations for Heating the Engine



Movement of the engine coolant temperature indicator shows that the engine is heated sufficiently.



RECOMMENDATION

- Do not rev up the engine to high speeds before it is heated sufficiently (in other words, when the engine is cold). If the lubricant cannot reach to the parts and provide lubrication for the parts, a malfunction will occur.
- Exhaust pipe gets extremely warm when the engine is in the idle mode. Before warming the engine, make sure that there are no items near the exhaust pipe which may get ignited (for example; dry leaf, paper, oil or old tires).

Do not start the engine in a garage.**WARNING**

- Starting the engine in a poorly ventilated place may lead to carbon monoxide poisoning. Choose a well ventilated place to start and warm the engine. Moreover, do not operate manual DPD regeneration indoors in a model with diesel particulate diffuser (DPD). During the burning of particulate matter (PM), the DPD regeneration process emits a white smoke.

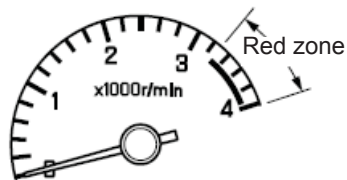
Do not forget to release the hand brake lever**RECOMMENDATION**

- Pulling the hand brake during its application may damage the braking system.
- Before pulling the hand brake, make sure that it is not adjusted by checking whether the hand brake warning lamp is ON or not.

Pulling the hand brake in the model with manual transmission**RECOMMENDATION**

- Make a smooth start in the second gear or a lower gear (in the first gear on hills). Making a start with a high gear will lead to a very fast start or grabbing the clutch too long when making a start will damage the clutch.

Appropriate Gears



RECOMMENDATION

- Down-shifting is conducted for two reasons
 - For an engine that brakes on steep hill and/or when climbing down the hill
 - For creating a quick solution and economy when climbing up the hill

[Points to be taken into consideration when down-shifting]

- Revving up the engine excessively may lead to engine failure. Do not rev up the engine excessively during down-shifting.
- Uphill driving
Conduct the down-shifting beforehand in order to prevent heavy engine load.
- Downhill driving
In principle, you should use the gear(s) that you used when driving uphill. Please drive at a speed which will not lead to excessive revving of the engine (exceeding the rpm limit) and will prevent the tachometer from entering into the red zone.

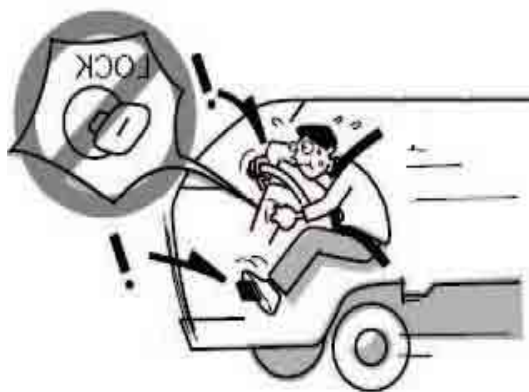
Drive at a speed which will not lead to the entry of the tachometer indicator into the red zone.
The green zone is a guide for economic driving.



NOTE

[What is engine brake?]

- Engine brake is the braking effect which occurs when you release the throttle during driving. As the gear is downshifted, the decelerating engine brake builds up.

Do not stop the engine during driving**⚠ WARNING**

- When driving the vehicle, do not switch the starter key to another position apart from the "ON" position.
If the engine stops when the vehicle is moving, the brakes will not operate properly and the steering wheel and the clutch pedal will get harder and stiffer to be used. Moreover, the engine may get damaged, as well.
- Stopping the engine during driving may be extremely dangerous; because the operation of the power steering wheel stops in a way that makes turning the steering wheel harder.
- Stopping the engine during driving may be extremely dangerous; because the warning lamps, indicator lights and other electrical circuits.
- Switching the starter key to "LOCK" position during driving may be extremely dangerous; because the key may lead to the locking of the steering wheel, thus making it impossible for you to turn the steering wheel.

Driving Down on a Long Hill

When driving down on a long hill, use the foot brakes, engine brake and the exhaust brake together. Use of the exhaust brake and the engine brake in the first gear reduces the workload of foot brakes and provides a higher level of braking power. Nevertheless, use the foot brakes properly in order to prevent excessive revving up of the engine.

- Frequent use of the foot brakes may cause weakening of the vapour lock and the brake which may result in reduced brake effectiveness. Be very careful when using the engine which brake as low gears despite this; because the engine is prone to be at a very high engine speed.
- Do not adjust the exhaust brake valve.



NOTE

[What is engine brake?]

- Engine brake is the braking effect which occurs when you release the throttle during driving. As the gear is downshifted, the decelerating engine brake builds up.



NOTE

[What is exhaust brake?]

- The exhaust brake is a system which closes the exhaust pipe in order to increase the effectiveness of the engine brake and in which the power of exhaust emissions is used.

[What is vapour lock?]

- If the brakes overheat due to frequent use, the heat may create air bubbles in the brake fluid by boiling it. Depressing the brake pedal only compresses the air bubbles; so the pressure is not transmitted to the wheel cylinders, and the brake effectiveness is significantly reduced. This phenomenon is called vapour lock.

[What is brake fade?]

- Frequent use of the brakes may lead to the overheating of the brakes; for this reason, the friction power of the brake pads is reduced and the brake effectiveness becomes lower than usual. This phenomenon is called brake fade.

[What is engine overrun?]

- Engine overrun is an increase of engine speed which causes the tachometer indicator to enter into the red zone.

Driving Under Adverse Weather Conditions (Rain, Icy Roads, Snowy Roads, etc.)



CAUTION

- Field of vision is reduced under adverse weather conditions and the slippery road surfaces increase the braking distances. Drive at a lower speed than your speed under fair weather conditions. Moreover, do not turn the steering wheel suddenly and do not brake abruptly. Use engine brakes along with the foot brakes in order to reduce the speed. Using the exhaust brake on a slippery road surface will make the tyres slide.



RECOMMENDATION

- There is a risk of aquaplaning (reduced contact on a wet surface) in places where especially the water accumulates on the road surface. Drive at speeds which will allow full control for you.
- If you have to drive on a road which is fully covered with water, check the depth of the water first and then, pass through the water slowly with a constant speed. There is a risk of water getting into the engine's cylinders and causing an engine failure (water hammering). Keep your speed low and drive very carefully.

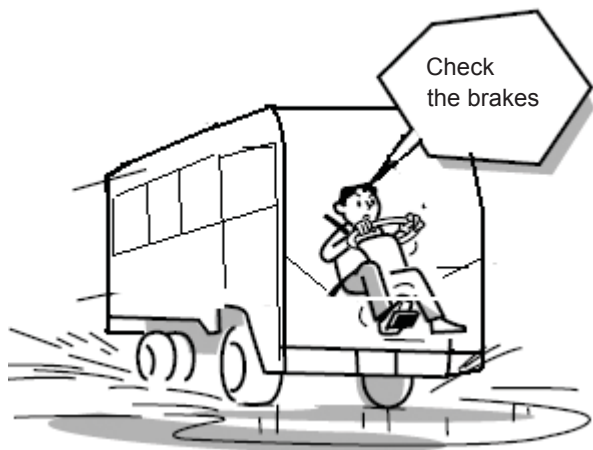


NOTE

[What is aquaplaning?]

- If a vehicle is driven at high speed on a road which is covered with water, a water layer - which may lead to the decrease of tyre's grip and to the sliding of the tyres on the water – may occur. This phenomenon is called aquaplaning. This is dangerous; because it will render the steering wheel and the brakes useless.

The Effectiveness of the Brakes when the Vehicle is driven on a Road Covered with Water or Washed



CAUTION

- When the vehicle is driven on a road covered with water, parked on a road covered with water or washed, the water may leak into the brakes and it may reduce the effectiveness of the brakes. If the brakes do not operate well in such cases, drive slowly and depress the pedal a few times until the brakes dry out and work properly. Before parking the vehicle in winter, depress the pedal a few times in the same manner in order to get rid of the moist in the brakes. Otherwise, the moisture in the brakes may get frozen and immobilize the vehicle. In addition, have the water entry checks made at the closest Isuzu Dealer as soon as possible, and if necessary, have the components of the brakes, engine, electrical circuits, differential and transfer case lubricated.

Crosswinds



RECOMMENDATION

If the vehicle gets caught in a crosswind and gets swayed, hold the steering wheel firmly, lower your speed to a speed that will allow full control over the vehicle, and make manoeuvres. The vehicle may get caught in strong crosswinds in the following conditions:

- When exiting a tunnel; when driving on a bridge; when driving on dam or passage
- When being overtaken by a big truck or bus
- When overtaking a big truck or bus

Dealing with a flat or deflated tyre when driving



WARNING

- If you feel any abnormality in relation to the tyres during driving, stop at a safe place immediately. If you continue driving with a deflated tyre, this may lead to the breaking of the bolts and to the dislocation of the tyre due to excessive force on the wheel studs.



RECOMMENDATION

- If the tyre blows-out or gets deflated during driving, hold the steering wheel calmly and depress the brakes gradually in order to decrease the speed. (Hard braking may be dangerous due to the fact that it may cause the steering wheel to be turned to one side.) Stop the vehicle in a safe place and change the tyre.

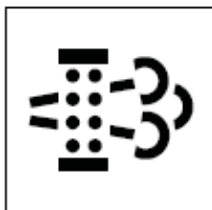
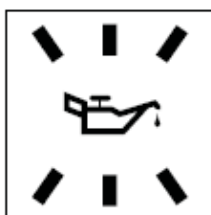
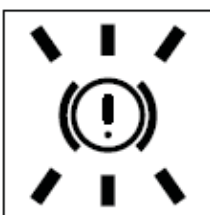
If the lower section of the vehicle suffers a hard impact



RECOMMENDATION

- If the lower section of the vehicle suffers a hard impact, stop the vehicle at a safe place where it will not be blocked by the traffic, and check for brake fluid leakage, fuel leakage or part malfunction. If any part of the vehicle fails or breaks down, have the vehicle examined and repaired by the closest Isuzu Service.

If a warning lamp or indicator light goes on or lights

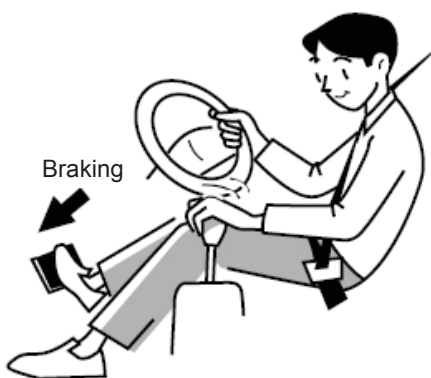


RECOMMENDATION

- If a warning lamp works or lights, please do not disregard it and do not keep on driving. Remember that you must conduct corrective actions by referring to the description of the counters, warning lamps and indicator lights.

Use the brakes with your right foot**RECOMMENDATION**

- Be seated at the correct driving position and use your right foot in order to operate the brake and accelerator pedals. In order not to depress the wrong pedal unintentionally, check the pedal positions and make exercises for putting your foot on the pedal that you desire.
- In order to ensure safe brake application, make sure that you use your right foot in order to depress the brake pedal.

Start

1. Check the surroundings of the vehicle in order to make sure that the area is clear; check the position of gear lever position and gear position indicator, and then lower the handbrake lever.
2. Take your foot of the brake pedal and then, depress the accelerator pedal gradually.

**WARNING**

- Right after starting the engine, when the air-condition is in operation or during the replacement of the diesel particulate diffuser (DPD) (if the vehicle has DPD), the engine speed increases automatically. Keep the brake pedal fully depressed.

Driving on Snowy and Icy Roads

Drive at a constant speed on snowy and icy roads, and keep your speed at a level which will allow full control for you. When applying the brakes, depress the brakes a few times smoothly instead of depressing it hard one time. Depressing the brake hard one time might be dangerous, because this action will render the wheel useless and may cause the vehicle to slide.



RECOMMENDATION

- Use tyre chain and winter tyres on snowy and icy roads.

Driving on Sandy or Muddy Roads

When driving on a sandy or muddy road, drive slowly as much as possible and refrain from hard braking, sudden acceleration and turning the steering wheel abruptly.

When driving on a sandy or muddy road, it is difficult to determine the state of the road; therefore, there is a risk for getting stuck. When necessary, get off the vehicle and check the status of the road surface.

**NOTE**

- In cases where you have to drive through deep muddy roads, using the tyre chain is an effective way for preventing getting stuck.

Driving through Water

The vehicle is not fully water-proof. Refrain from driving through water. After driving through water, check the effectiveness of the brakes.

In addition, have the water entry checks made at the closest Isuzu Dealer as soon as possible, and if necessary, have the components of the engine, electrical components, transmission, drive shaft, differential and transfer case lubricated.

Stop and Parking

Parking



RECOMMENDATION

- Prefer a flat surface where it is not forbidden to stop and park, and where the vehicle does not block the traffic. Pull the handbrake and make sure that the vehicle is not moving.
- Refrain from parking for long periods when the vehicle is loaded.
- Clean all dirt on the headlamps and reflectors in order to enable the visibility of the vehicle by the other vehicles.

Parking



RECOMMENDATION

- Apart from emergencies, do not pull the handbrake before the vehicle stops fully. Pulling the handbrake before the vehicle stops may lead to a failure.

**CAUTION**

- Try not to park your vehicle on a hill as much as possible, and opt for flat and aclinic place. If it is inevitable to park your vehicle on a hill, remember to fully adjust the handbrake, make sure that the vehicle is not moving and put a chock under the tyres as an additional safety measure. Moreover, leave the vehicle in gear as a further measure in order to guarantee that it does not move.
- Leave the steering wheel as turned to a direction in which the vehicle can stop by hitting an obstacle (such as kerbside) if it moves unintentionally.

Sleeping In The Vehicle For A Short Period**WARNING**

Before sleeping in the vehicle for resting, make sure that you stopped the engine and put the starter motor to the "LOCK" position. Otherwise, if you unintentionally touch the gear lever or accelerator pedal when sleeping, this may lead to an accident by moving the vehicle.

- If you leave the engine operational and keep the accelerator pedal depressed unintentionally during your sleep, the engine and exhaust pipe may be heated abnormally and this may lead to a fire.
- If you leave the engine on when sleeping after parking the vehicle at a place where exhaust gases can get into the vehicle (for example, somewhere which is poorly ventilated), you may get poisoned due to carbon monoxide.

Keep the inflammable materials away from the vehicle.**CAUTION**

- The exhaust pipe will be very hot right after use of the vehicle. Before parking, make sure that there are no inflammable materials around the vehicle (for example; dry grass, paper wastes, oil or old tyres). Be more careful when parking in a garage.
- Take the warning related to the exhaust gases into consideration when the engine is operating in the idle mode. When the power take-off (PTO) is working or the diesel particulate diffuser (DPD) is being replaced (if your vehicle has DPD) when the engine is in the idle mode, be extra careful.

Stopping and Parking the Vehicle when the Engine is On**WARNING**

- When stopping and parking the vehicle when the engine is on: If your vehicle has manual transmission, make sure that you put the gear lever to the position of "N" in order to select the neutral position. Afterwards, pull the handbrake fully. If you do not apply these steps, any undesired pressure on the accelerator pedal may lead to an accident.

**CAUTION**

- In the model with diesel particulate diffuser (DPD), the DPD initiates the regeneration automatically when the vehicle is stopped and parked while the engine is on. In order to prevent fire, make sure that there are no inflammable materials near the exhaust muffler, DPD and the exhaust pipe. Be careful in order not to be burned by the hot exhaust gases.

When The Vehicle Is Immobile, Do Not Touch The Gear Lever



WARNING

- When the vehicle is immobile, do not touch the gear lever. If you touch the gear lever in this situation, a gear may be selected and the vehicle may move even when the handbrake is pulled. The risk of hitting the gear lever and causing an accident is very high especially when sitting on your seat or when getting of the seat.

When The Vehicle Is Mobile, Make Sure The Engine Is Working



CAUTION

- When the engine is not working, the power steering system does not operate; therefore, it gets harder to turn the steering wheel. Moreover, the brake booster, too, will not work, and the braking power is reduced for this reason. If you drive down the hill without starting the engine, you cannot control the vehicle fully and this may lead to an accident.

Check The Surrounding Area Before Opening The Door



CAUTION

- Check the area around the vehicle by looking at the forward, backward and sides before opening the door. If you open the door suddenly without checking the surroundings, the vehicle coming from behind or a pedestrian may hit the door.

Getting Of The Vehicle



WARNING

- When getting off the vehicle, make sure that you pulled the handbrake, stopped the engine and locked the doors. Do not leave your valuable articles on places where they can be seen from outside of the vehicle.
- If you are travelling with a child, do not leave the child in the vehicle alone. If the child touches the switches or the equipment, an accident may happen. (For example; the vehicle may move or a fire may break-out.) Moreover, under hot weather conditions, the interior of the cabin may get heated to a level which may be dangerous.
- Do not leave an eyeglass or lighter in the vehicle. If the interior of the vehicle gets heated, the lighter – which was left in the cabin – may explode and the plastic eyeglass' glasses or its frame may get deformed or cracked.

Metallic Clinking Sounds Coming From The Muffler



NOTE

- You may hear a metallic clinging sound from the muffler right after stopping the engine. This sound is not an abnormality or an indicator of failure.

Starting The Driving When The Vehicle Is Parked

Make sure that there are no children or obstacles around the vehicle by making a complete safety check before moving.

Reverse Gear

When driving backwards, leave the vehicle and check the rear to see whether it is safe or not, if you cannot see the area behind the vehicle.

Take-Off After Stopping Temporarily



CAUTION

- After stopping temporarily (for example; at traffic lights), make a habit of looking around and confirming that it is safe to take-off.

Safe Situation**When The Engine Coolant Is Hot****WARNING**

- When the engine coolant is hot, do not loosen or remove the radiator cap. Conducting these actions will create danger due to the fact that steam and hot air may come out suddenly.

When The Muffler And The Exhaust Pipe Is Hot**CAUTION**

- When the engine is on and right after use of the vehicle, the diesel particulate diffuser (DPD), muffler and the exhaust pipe will be extremely hot. When working near these parts, pay attention not to touch these parts unintentionally (for example; roll of the cabin or operating an connection piece). You may get burned if you do not pay attention.

After Using The Ashtray**WARNING**

- After using the ashtray
Make sure that you closed it. Otherwise, a cigarette end, which is not put out, may ignite other cigarette ends and this situation may end with a fire. Make sure that the ashtray is not filled with too many cigarette ends. Moreover, do not put inflammable materials on the ashtray.

Do Not Hang Accessories On The Windshield Or The Windows.**WARNING**

- Do not place ornaments, films or other accessories on the windshield or the windows. Moreover, plastic windshield suction cups and glasses – that are used to hang accessories – may lead to fire or other accidents.

Do Not Use Your Mobile Phone During Driving.**CAUTION**

- The drivers must not use their mobile phones or vehicle phones in a mode apart from the hands-free mode. Otherwise, it may be dangerous.
- During driving, using a mobile phone may lead to accidents; because you will not be able to pay attention to your surroundings fully.
- If you wish to use your mobile phone when driving the vehicle, you must first stop the vehicle in a safe place.

Use of Jack

**WARNING**

- It is very dangerous to lift the vehicle with a jack on an inclined surface. Make sure that you lift the vehicle with a jack on a hard and flat surface.
- Adjust the jack on a correct position. First of all, remember to pull the handbrake and to place a chock under the tyres.
- When one of the rear wheels is being lifted with the jack, the handbrake has no effect. Placing a chock on the correct places before the lifting may be dangerous; because, the vehicle may move.
- When the vehicle is lifted with a jack, do not look under or go under the vehicle. Otherwise, it may be dangerous.

When the Battery is Fully Discharged

**CAUTION**

- Do not try to start the engine by pushing or pulling the vehicle. You may damage the engine.

Preventing Failures

Do Not Keep Your Foot On The Clutch Pedal During Driving.



RECOMMENDATION

- If you put your foot on the clutch pedal during driving, the connection of the clutch may be cut partially without you noticing it, and this may cause the clutch plates to be worn and the clutch to grab. Moreover, apply the clutch on time as a way to keep the vehicle in a position similar to an uphill road.

Is The Oil Contaminated?



RECOMMENDATION

- Engine oil performs the significant functions given below:
 - It prevents the wearing of the engine parts.
 - It cools down the engine parts.
 - It cleans the engine parts.
 - It enables the sealing of the combustion chambers and prevents oxidation.Change the engine oil regularly.

Do Not Step On The Engine



RECOMMENDATION

- Do not step on or stay on top of the engine. For example, you may cause an engine failure by damaging the cylinder head or various connectors.

Do Not Leave The Steering Wheel As Fully Turned For A Long Period Of Time



WARNING

- If you leave the steering wheel as fully turned for a long period of time, the fluid in the power steering wheel fluid pump will get very hot. This situation may lead to insufficient lubrication, oil tank damage or breaking of the seal which may cause damage on the power steering oil pump, power steering unit and power steering air duct. As a result, it becomes very hard to turn the steering wheel; fires and other accidents may happen.

Make Sure That You Examine The Vehicle Regularly



RECOMMENDATION

- Examination and maintenance operations enables you to use the vehicle with peace of mind. Moreover, they extend the service life of the vehicle.

Do Not Make Any Modifications On The Vehicle**CAUTION**

- Using parts - which are not suitable for the performance and functions of the vehicle – may lead to a failure or accident. Consult to Authorized Isuzu Service for tuning (for example; engine tuning) and equipment installations.
- Araca aksesuarlar takmak isterseniz Isuzu Yetkili Servisine danışınız.

**CAUTION**

- Do not make the engine tunings on your own.

Remember to consult to an Authorized Isuzu Service.

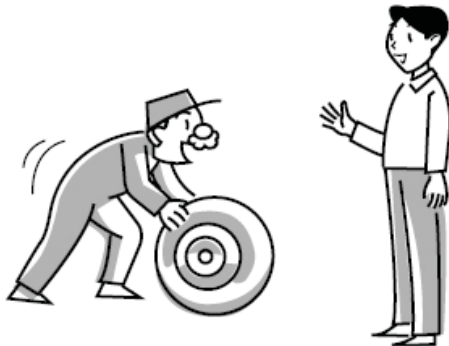
Power Source



RECOMMENDATION

- The power source of the vehicle parts – which is mounted recklessly in the vehicle – may cause the power current to flow back to the vehicle's ground circuit and may cause damage which will hinder the normal operation of the electrical and electronic parts. If necessary, have the power source replaced at the Isuzu Service.

Changing Tyres and Wheels



CAUTION

- Consult to an Isuzu Service before changing the tyres or wheels. Never use the wheels which are not designed for the vehicle, different tyre at the same moment or tyre which is not of a certain dimension. These situations will hinder the safe driving.

Mounting the Electrical Equipment



CAUTION

- Wrong mounting or removal of the audio, wireless or other electrical equipment may affect other electrical equipment negatively or may lead to a failure or fire. Moreover, it may lead to unexpected and dangerous activation of the air bags. Make sure that you have the electrical equipments mounted at the Isuzu Dealer.

**RECOMMENDATION**

[Mounting wireless equipment]

- Do not mount any unlicensed wireless or any wireless or antenna which does not meet necessary standards. The noise caused by the wireless may lead to electromagnetic interference with electronic equipment and other systems of the vehicle. If you wish to have a wireless equipment mounted, please consult to an Isuzu Service.

DPD Diesel Particulate Diffuser (DPD)

DPD reduces the particulate materials (PM) in exhaust emissions. DPD filter captures the PM. When a certain amount of PM accumulates in the DPD filter, the filter is renewed automatically. (PM is burned.) Make sure to examine the points given below in order to prevent DPD failure:



WARNING

- During the renewal of the DPD filter (burning of the PM) and after vehicle use, the DPD and exhaust pipe will be very hot when the engine is working. Be careful about not to touch these components. Otherwise, you may get burned.
- Dry leaves, paper litters or other inflammable materials near the vehicle may burn.
- Shut down the engine and wait for it to cool down before making any maintenance work on the vehicle. Otherwise, you may get burned.



RECOMMENDATION

- Use engine oil which is suitable to the DPD. Using an engine oil which is not compatible with the DPD shortens the time required to cleaning the DPD filter and may cause the fuel consumption to increase.
- Make sure that you use diesel fuel with extra low-sulphur (10 ppm or lower sulphuric content) or low-sulphuric diesel fuel (50 ppm or lower sulphuric content).
- If you use low-quality fuel, additive for cleaning the water or other additives, gasoline, kerosene or alcohol fuel; these fuels will damage the fuel filter and will cause failure by blocking the proper movement of the part which are lubricated by the fuel in the injector or by affecting the engine parts negatively.
- Do not make any changes on the DPD or the exhaust pipe.
Changing the alignment, length or the diameter of the exhaust pipe will affect the exhaust emission reducing function of the exhaust system negatively. If any change is required for the part to be mounted on the rear of the vehicle, please consult to an Isuzu Service.
- Driving conditions may hinder the completion of the renewal process when a certain amount of PM is accumulated even though the DPD filter conducts the renewal process automatically (burning of the accumulated PM). In such situations, DPD manual renewal indicator lamp flashes. Please conduct the manual renewal process in accordance with the appropriate procedure.

This process is for renewing the DPD function and it is normal.

**NOTE**







- If the vehicle is immobile during the DPD renewal while the engine is idle running, exhaust brake or exhaust passage works. When the exhaust brake or exhaust passage is activated and deactivated, operation sound will be heard. These sounds are not an indicator of failure.
- Burning of the PM during DPD renewal may cause a white smoke to come out of the exhaust pipe. This white smoke is not an indicator of failure. Do not apply manual renewal operation in an indoor area which is not ventilated well.
- When a certain distance is driven with a new vehicle, this vehicle may emit white smoke during DPD renewal. This white smoke is not an indicator of failure. The vehicle may not emit white smoke during its first use when it is new.
- The odour of the exhaust emissions emitted from the exhaust pipe is different from the emissions emitted from the exhaust pipes or previous diesel vehicles due to the exhaust emission reducing function.
- The exhaust brake is activated automatically in order to prevent the emit of white smoke if the engine is operated in idle mode for a long period of time.

Examination and Maintenance

Making regular examinations and maintenance prevents damage. Make sure that the examinations and maintenance are made regularly. Besides, fix any malfunction immediately in order to prevent it from turning into a more serious problem (even if it is a small malfunction).

If any of the symptoms given in the table below occurs, make the necessary examinations and conduct the corrective actions in accordance with the table.

If you are not able to make the repair, if the corrective action given in the table does not remove the symptom or if you are not able to locate the malfunction, please refer to the nearest Isuzu Service.

Symptom	Reason	Corrective action
White exhaust smoke	The engine does not warm up sufficiently	Wait for the engine to warm up
	There is too much engine oil	Correct the oil level
	Engine control system error	
	Fuel system malfunction	
	Constant idling for a long period of time (more than two hours)	Keep the accelerator pedal depressed when the vehicle is immobile in a place where there is not traffic and make sure that white smoke is emitted.
Black exhaust smoke	Engine control system error	
	Air filter is clogged	Clear the element or replace it.
	Fuel system malfunction	
	Exhaust system is clogged	
	DPD malfunction	



RECOMMENDATION

Any item whose information is given in the "corrective action" column requires repairing or adjustment. Refer to nearest Isuzu Service.

DOORS, WINDOWS AND SEATS

3

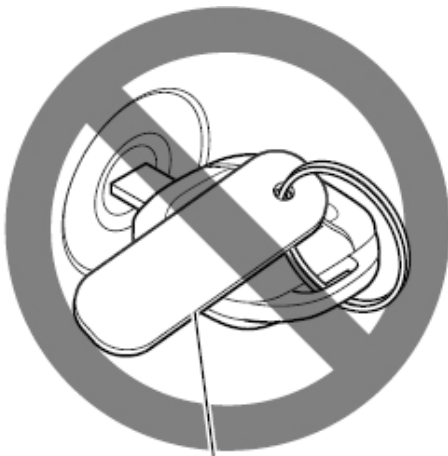
-
- **Chip Immobilizer, Transponder Key**
 - **Keyless Entry System**
 - **Opening and Closing of the Doors**
 - **Fuel Tank Filler Cap**
 - **Seats**
 - **Fully Adjustable Steering Wheel**
 - **Mirrors**
 - **Seatbelts**
-

Chip Immobilizer, Transponder Key

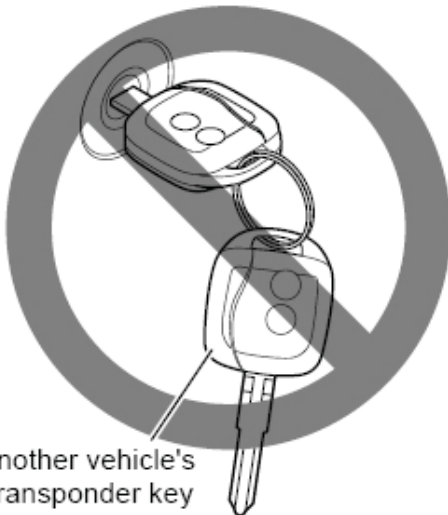
The key has an immobilizer transponder chip.

Immobilizer theft prevention system enables the engine to operate only when the signals - coming from the transponders registered beforehand - are received.

However, you may not be able to start the engine in the situations stated below even if the registered key is used. If the engine does not start due to the metal key holder, remove the key holder and try again; in order to start the engine, set the starter key to the "ACC" or "LOCK" position first and then to the "START" position.



Metal key ring, etc.



Another vehicle's transponder key

If the engine does not start;

- There may be a facility emitting powerful radio waves nearby.
- A metal object may be in contact with or covering the holding part of the key.



WARNING

- Do not keep the starter key in the "START" position for more than 10 seconds. Operating the starter key for a long period of time may lead to battery malfunction or a fire due to overheating.

- You may have the transponder key of another vehicle.



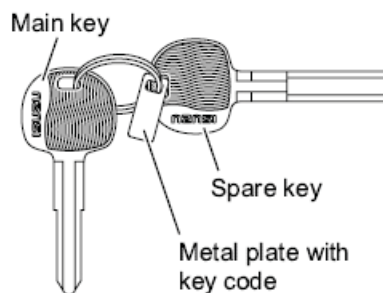
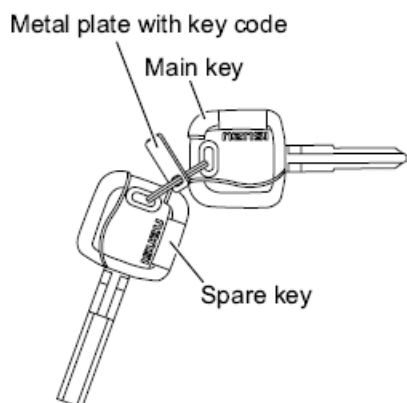
RECOMMENDATION

- If you lose your transponder key, please refer to the nearest Isuzu Service.
- Do not leave the transponder key on the front panel or another surface where it may be exposed to high temperatures (more than 60°C).
- Do not place a magnetic object near the transponder key.

Key Types

Chip Immobilizer, transponder key

Chip immobilizer, key without transponder



Both sides of the key are the same; for this reason, you can use both sides of the key without having to think which side to use.

The key code is given in a separate plate in order to prevent the key from being taken by unauthorized persons.

Where Is The Key Used?

Where	Why
Starter key	To start and stop the engine
Front doors	To unlock and lock the doors

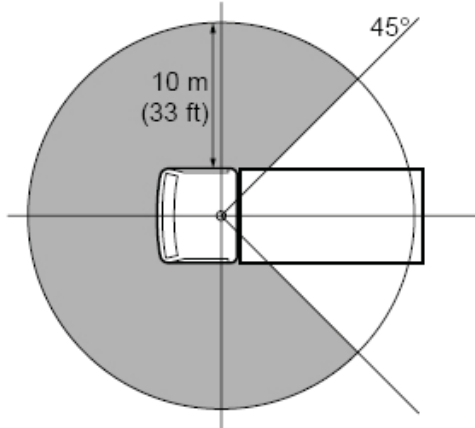


NOTE

- Keep the metal plate - on which the key code is written – in another place apart from the vehicle in order to prevent theft.
- If you lose the key, give your key number to the nearest Isuzu Service. Isuzu Seller is able to copy your key.
- If you sell your vehicle, remember to provide the new owner of the vehicle with the plate on which the key code is written.

Keyless Entry System v

Remote control operating range

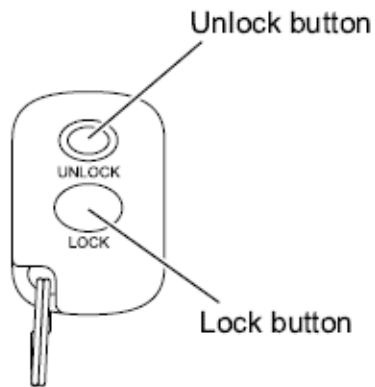


You can open/lock the doors with keyless entry system by simply pushing on the remote control button without inserting the key into the lock.

Remote control unit operates within the 10 m. (33 feet) perimeter of the cabin centre as shown in the diagram.

Unlocking And Locking The Door Locks

Remote control unit



Unlocking

Push the door unlock button of the remote control for more than 1 second. The keyless entry system of the vehicle causes the right and left indicator lamps of the vehicle to flash two times simultaneously after the receipt of the signals from the remote control unit. If the doors are unlocked by using the roof lamp key on the "DOOR" position, the roof lamp flashes approximately for 10 seconds.

Locking

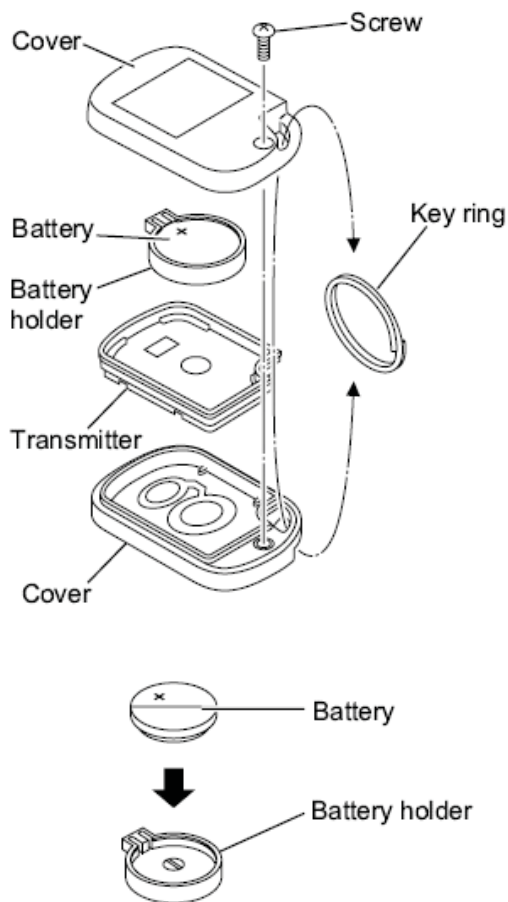
Push the door lock button of the remote control for 1 second or longer. The keyless entry system of the vehicle causes the right and left indicator lamps of the vehicle to flash two times simultaneously after the receipt of the signals from the remote control unit. If the roof lamps are opened with the key on the "DOOR" position, the roof lamp turns off.

**RECOMMENDATION**

- If you lose the remote control unit, refer to the Isuzu Service.
- After locking the doors by using the remote control unit, check whether they are locked or not by pulling the door handles.
- Prevent water from entering into the remote control unit, do not drop the unit, do not hit it against another object or do not step on the unit; otherwise, remote control unit may get broken down.
- Do not leave the remote control unit on the front panel or another surface where it may be exposed to high temperatures (more than 60°C/140°F). This may cause its battery life to be diminished or the remote control unit to be broken.
- Unlocking and locking the doors repeatedly for more than 10 times with the remote control unit will cause the protection circuit in the system to be activated and prevent the unit from operating. If this happens, wait for a certain period of time. Then, the system will operate normally.
- If the keyless entry system does not operate normally, unlock and lock the doors by using the key and take the system to the Isuzu Service.

**NOTE**

- In order to operate it, the lock and unlock buttons on the remote control unit must be pushed on fully for more than 1 second.
- If you do not open any door within approximately 30 seconds after pushing the unlock button in order to unlock the doors, the system's automatic lock function will lock the doors again in order to prevent theft.
- The remote control use distance may change or keyless entry system may not operate in areas near TV towers, electricity plants, base stations, etc. or under conditions including severe electrical disturbances.
- Keyless entry system will not operate in situations stated below:
 - When the starter key is on the ON position.
 - When the key is inserted in the starter key.
 - When one of the doors is open.

Changing the Batteries on the Remote Control Unit

1. Remove the key holder from the remote control unit. Remove the screw via a small screwdriver and open the cap.
2. Remove the battery cap and take the batteries from the box.

3. Put the new battery in the battery box in a way that "+" side will face the upper side and place the battery box in its position in the cap.

**RECOMMENDATION**

- When closing the cap, check for dust, hair or other things under it. A remote control unit with low seal may get broken down.

4. Close the cap and fix it with the screw. Put the key holder on the remote control unit.

**CAUTION**

- When replacing the battery, use the same type battery of the original battery or use an equivalent battery. Otherwise, it may explode.
- Do not place the battery directly under the sunlight or near other heat sources.
- Make sure that you place the battery in a way that its "+" side faces upside and "-" side faces downside. Incorrect placement of the battery will lead to the leakage of the chemicals from the battery or to other operational problems.

**RECOMMENDATION**

- Dispose of an old battery in accordance with the environment protection regulations and pay extra attention for any danger that they may cause to the children.

**NOTE**

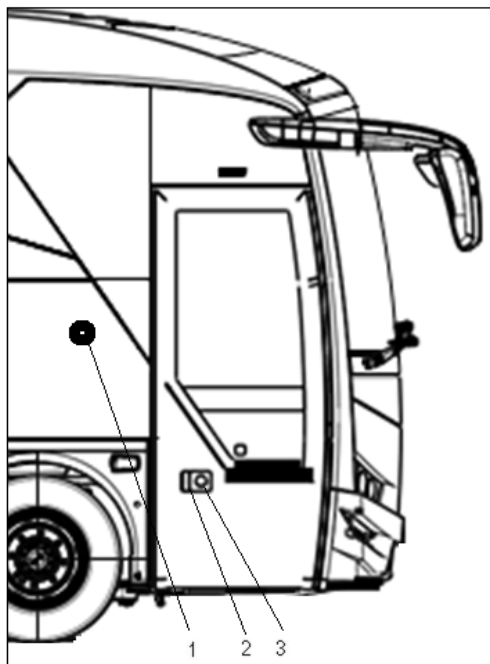
- The battery life differs in accordance with the use type of the remote control unit.
- When the remote control unit operates intermittently or does not operate at all, this means that the battery life is over. When this happens, replace the battery immediately.

Unlocking and Locking the Doors

**CAUTION**

- Make sure that you make the following procedures each time you leave the vehicle:
1) Pull the handbrake fully. 2) Stop engine. 3) Lock the doors.
- When you close the door after getting behind the steering wheel, check whether the door is fully closed or not. It is very dangerous to drive when the door is not fully closed.
- Check the perimeter of the vehicle and particularly the back of the vehicle carefully for safety before entering into the cabin or opening the door when leaving the door.
- Never leave the key in the vehicle.

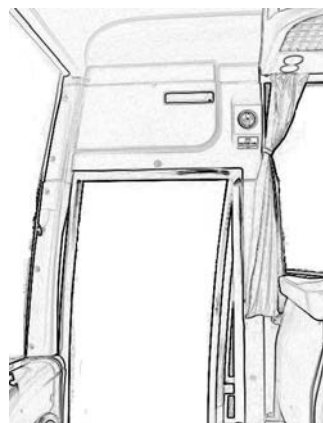
Front Door



1. Emergency valve (exterior)
2. Handle
3. Door lock

Locking and Unlocking the Door by Using the Key from the Outside of the Vehicle

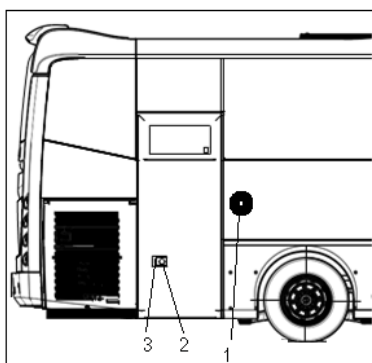
Turn the key to the front side of the vehicle in order to lock the door and turn the key to the rear side of the vehicle in order to unlock the door.



1. Emergency valve (interior)

- You can open an unlocked door by turning the emergency valves located inside and outside near the door.
- The doors are operated pneumatically. For this reason, the doors will not operate if there is not sufficient air in the vehicle. In this case, open the door manually by turning the safety valves.

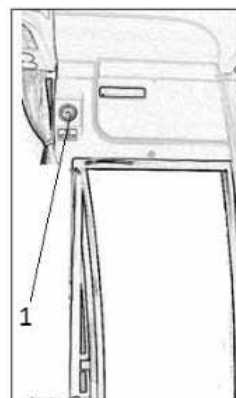
Rear Door



1. Emergency valve (exterior)
2. Handle
3. Door lock

Locking and Unlocking the Front and Rear Doors from the Inside of the Vehicle

Lower the lock button in order to lock the door; uplift the lock button in order to unlock the vehicle. After unlocking the door, open the door by pulling the door handle.



1. Door lock (interior)

Opening and Closing the Driver Window



In order to open the driver window, you can adjust the window at the desired position by pushing the window open/close button located on the control panel.



Fuel Tank Filler Cap



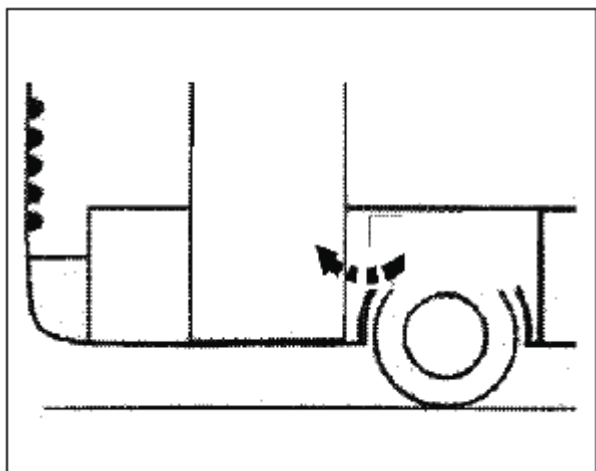
WARNING

- Before refuelling, remember to place the starter key on the "ACC" or "LOCK" mode in order to stop the engine. Refuelling when the engine is working may lead to a fire in the vehicle.
- Do not smoke or place any heat source nearby when refuelling. There is a fire risk.
- After refuelling, make sure that the fuel tank filler cap is closed tightly.



CAUTION

- Please only use low-sulphur diesel fuel (50 ppm or lower sulphuric content) or super low-sulphur diesel fuel (10 ppm or lower sulphuric content) always for the engine of the model with diesel particulate diffuser (DPD). Use of low quality diesel fuel, addition of a substance such as cleaner into the fuel in the tank or filling the fuel tank with a fuel or diesel fuel based on gasoline, kerosene or alcohol will damage the fuel filter and lead to lubrication problems in the injector components that are lubricated with fuel. In addition, this practice may damage the operation of the engine and DPD, and the exhaust emission cleaning system, and this may lead to the breakdown of the systems related to the engine. In an inappropriate fuel is filled into the tank accidentally, please empty the fuel from the system. If this measure is not performed, a fire or permanent damages may occur when the engine is started.
- If any other fuel apart from low-sulphur diesel fuel or super low-sulphur diesel fuel is used in the vehicle with DPD, the resulting malfunctions will not be covered by the warranty.
- Make sure that you open the fuel tank filler cap slowly. If you open it quickly, the fuel may splash.



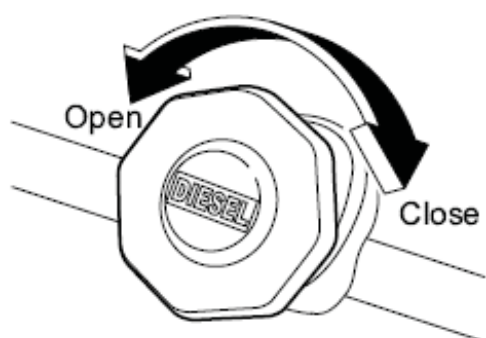
Fuel Tank Filler Cap

1. When you turn the key to left, the outer cap of the fuel tank will be opened. Turn the fuel tank filler cap counter clockwise in order to open it.



CAUTION

- If you need to change the fuel tank filler cap, use only the original Isuzu fuel tank filler cap. Use of an improper fuel tank filler cap can cause fuel to spill in case of an accident. Besides, it may affect the fuel system.



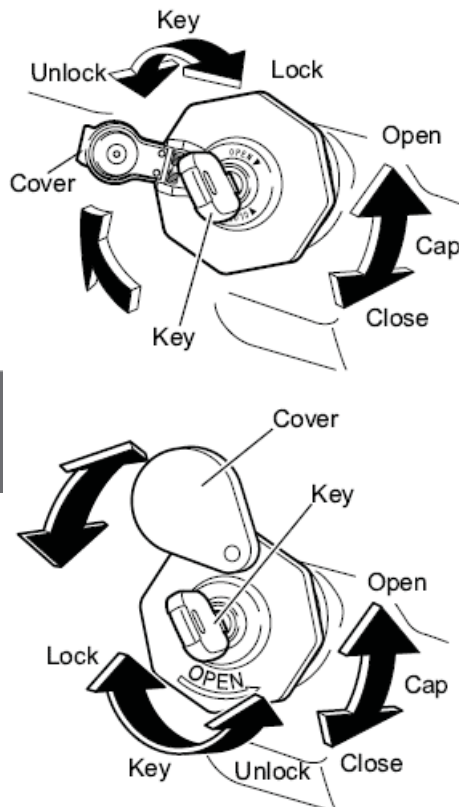
Opening and Closing the Fuel Tank Filler Cap (without Key Lock)

1. Before opening the fuel tank filler cap, get rid of the static electricity on your body.
2. Turn the cap counter clockwise in order to open it.
3. Fill the tank.
4. Align the spouts of the cap and tank and turn the cap clockwise in order to close it.
5. Make sure that the cap is closed tightly.



CAUTION

- If the fuel tank filler tank is not closed tightly, the fuel leakage may cause fire during driving.



Opening and Closing the Fuel Tank Filler Cap (with Key Lock)

1. Before opening the fuel tank filler cap, get rid of the static electricity on your body.
2. Open the cap and insert the key fully and turn it to the "OPEN" position.
3. Turn the cap counter clockwise in order to open it.
4. Fill the tank.
5. Fix the fuel tank filler cap on the fuel tank safely.
6. Turn the key to the "CLOSE" position in order to lock the fuel tank filler cap.
7. Pull and remove the key and then, make sure that the fuel tank filler cap closed safely.



CAUTION

- If the fuel tank filler tank is not closed tightly, the fuel leakage may cause fire during driving.



RECOMMENDATION

- When opening or closing the fuel tank filler cap, make sure that you hold not only the key but also the whole fuel tank filler cap. If you try to turn the fuel tank filler cap by using the key, you may damage the key.

Seats

The seat must be adjusted in a way that allows you to depress the pedals without having to come closer to the front when you lean back and to use the steering wheel easily and comfortably. After making the adjustments, make sure that the seat is fully locked.

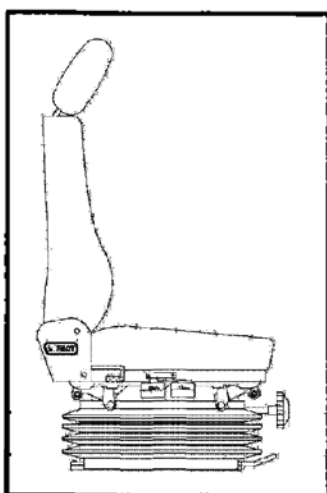
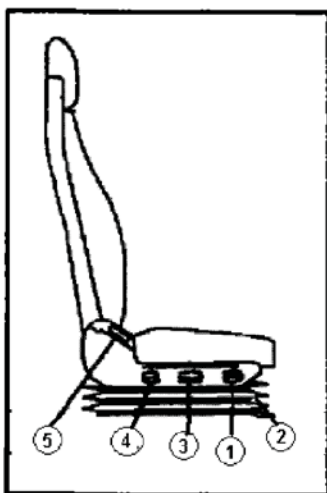
Adjustment of the seat to the correct driving position is the core element of a safe driving.



CAUTION

- Adjust the seat before starting to drive. Adjusting the seat when the vehicle is mobile should be avoided; because unlocked seat will move forward and backward immoderately and prevent you from finding the correct position and besides, it may cause you to lose the control over your vehicle and lead to potential accidents.
- In order to check whether it is fully locked or not, try to move the seat without unlocking it after making the adjustments. Loosely clocked seat moves unexpectedly and may cause your position to become unbalanced and lead to an accident.
- Do not place an object such as a cushion between your back and the seat. Otherwise, this will not only affect your driving position but also prevent effective operation of the seatbelt in case of an accident.
- Before making the adjustments, make sure that there are no obstacles on the seat rails which will hinder the locking of the seat. When adjusting the seat, pay attention in order not to get your hand or foot stuck to the seat or its rails.

Driver Seat



Driver Seat

1. Seat inclination adjustment :

The seating inclination can be adjusted between 2 degrees and 12 degrees.

2. Forward and backward adjustment:

It can be adjusted up to 160 mm with 10 mm intervals. For the adjustment, pull up handle.

3. Stepless height adjustment:

When the handle is up, seat will rise; when the handle is down, seat will lower within 100 mm stroke length.

4. Fast lowering function:

It makes it easier to get on and off the seat. If you lower the handle when you are seated, the seat will take the normal driving position. Before you get off the seat, if you pull up the handle it will take lowest position and allows you to get off easily.

5. Seat rest adjustment:

Pull up the handle. When the seat rest in desired position then release the handle.

CAUTION

* After the manual adjustment of a seat, check adjustment mechanism in right position by applying body weight front and rear. Movement of the seat indicates at least one latch is out of position. This may increase the potential and/or level of injury during an accident. If the seat adjustment mechanism is out of position, please take your vehicle to Authorized Isuzu Service.

* Do not adjust driver seat when driving. Seat may suddenly moves then you may loose your control.

* If it's driven always by fast lowering switch is on, it may cause piston oversize in valve block, air bulges may damage or tear off.

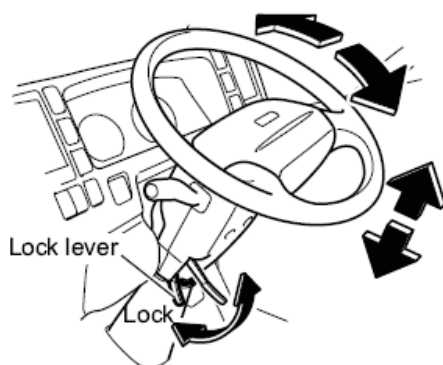
Fully Adjustable Steering Wheel

The steering wheel may be adjusted upwards and downwards, as well as forward and backward.



WARNING

- In order to make sure that the steering wheel is fully locked before starting to drive after adjusting the steering wheel, try to move the steering wheel upwards and downwards.
- Adjust the steering wheel only when the vehicle is immobile. Adjusting the steering wheel when the vehicle is mobile is very dangerous, because a steering wheel – which moves vertically – prevents the driver from controlling the vehicle appropriately.



Adjustment

1. Pull the locking arm to yourself in order to unlock the steering wheel column.
2. In order to choose the optimum steering wheel position, be seated in the correct driving position and then move the steering wheel downwards and forward.
3. Lock the steering wheel tightly in the preferred position by moving the locking arm towards the locking position.

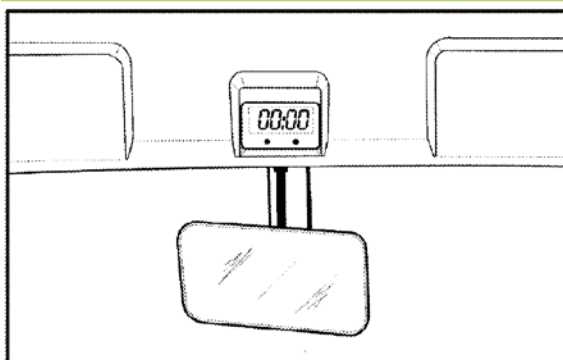
Mirrors

Be seated at the correct seating position on the appropriately adjusted seat and then, check each mirror in a way that will allow full vision of the rear, sides, the area before the vehicle and the directly in front of the driver seat. Make adjustments if necessary and clean the dirty mirrors.

Inside mirror

Adjustment

Move the mirror to the position which will allow full vision of the rear.



CAUTION

- Adjust the vehicle when the vehicle is immobile.

External Rear View Mirrors

After adjusting your seat for the correct driving position, make the following adjustments; thus, the mirrors will be able to provide you with the sufficient field of vision in order to control the sides and areas in front.

External Rear View Mirror

Lateral direction: Adjust the mirror in a way that will allow you to see the vehicle's side including the load in the one third of the mirror's inner side.

Vertical direction: Adjust the mirror in a way that will allow you to see view of the rear - lower corner of the vehicle in the half of the mirror's height.

Lower View Mirror

Adjust the mirror in a way that will allow you to see view of the edge of the bumper in the middle of mirror and the corner of the windshield along the top edge of the mirror.

External Rear View Mirror

Lateral direction: Adjust the mirror in a way that will allow you to see the vehicle's side in the one third of the mirror's inner side.

Vertical direction: Adjust the mirror in a way that will allow you to see view of the rear - lower corner of the vehicle in the half of the mirror's height.

**CAUTION**

- Adjust the vehicle when the vehicle is immobile.
- When checking the vehicle's rear with your mirrors, make sure that this process does not detract your attention from the traffic.
- Rear view mirrors may cause the vehicle behind you to seem farther away than it actually is. Use these mirrors carefully until you are able to determine the distances correctly.
- Pay attention to the mirrors when passing by another vehicle on a tight road, when parking the vehicle in a garage or when passing by the pedestrians.
- Do not drive when the mirrors are folded.

Seatbelts



The protection provided by the seatbelts may be reduced significantly if the seatbelts are not fastened appropriately; in certain cases, improperly fastened seatbelts may play a role in the injury of the relevant person. Before the vehicle moves, not only the driver but also the passengers' must fasten their seatbelts. You must be aware of the use of the seatbelts appropriately and of the significant points that must be paid attention as defined in the pages below. Getting use to the correct use of the seatbelts is a must for your safety.

**WARNING**

- The seatbelts must be fastened always BEFORE each driving.
- The seatbelts provides full protection only when the driver and passengers fasten their seatbelts when they are seated vertically and fully leant against the seat.
- Fastening the seatbelt when the seatback is leant against back excessively may be very dangerous during a collision or sudden stop due to the fact that the seated person may slip under the seatbelt and suffer a serious injury. The seatbelts operates best only when the seated person is seated by fully leaning against the seat and vertically.
- Make sure that the locking latch's plate is inserted into the seatbelt lock until a clicking sound is heard. The locking latch plate which is not fully inserted will be dangerous during a collision or a sudden stop.
- Do not fasten the seatbelt around your face, jaw or neck.
- Do not fasten the seatbelt around your waist; fasten it as lower as possible around your hips. The seatbelt that is fastened around the waist will put pressure on the stomach with a great force and may increase the potential of injury during a collision or sudden stop.
- For a small child, if the seatbelt is very near to the child's neck or jaw, do not use the seatbelt. Moreover, if the seatbelt is not fastened around the child's hips safely, do not use a seatbelt; because limiting the child under these conditions may be dangerous during a collision or sudden stop. Instead, use an appropriate child restraint system which can be obtained from the market. Contact to Isuzu Seller for more detailed information. Use a child restraint system which is suitable to the baby's or child's dimensions. Mount the system as per the instructions of the manufacturer.
- Fix the entangled seatbelts before fastening them. An entangled seatbelt will not provide full protection; because it cannot prevent the impacts effectively during a collision or a sudden stop.
- Pregnant women or people with chest or stomach problem must take special recommendations from their doctors in relation to the fastening of their seatbelts.
- Do not use one seatbelt for more than one person. If the seatbelt is fastened by more than one person, the seatbelt will not operate effectively during a collision or sudden stop.
- Have the seatbelts examined at the nearest Isuzu Service and have it replaced when its strap is worn or eroded and /or when the seatbelt lock or other mechanic parts does not operate properly.
- If your vehicle had an accident, the seatbelt may have lost its original endurance with the effect of the impact even if they seem sturdy. These seatbelts must be checked and if necessary, they must be replaced by the nearest Isuzu Service.
- Make sure there are no dust and foreign matters in the seatbelt lock and seatbelt rewinding mechanism.

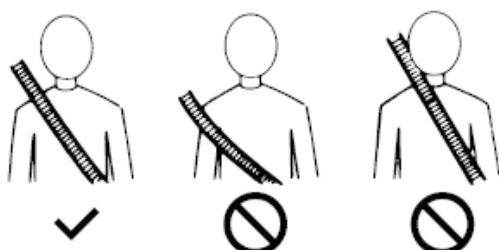
WARNING (cont.)

WARNING (cont.)

- It is a legal obligation to fasten the seatbelts. The driver is responsible from not only fastening his/her seatbelt but also from fastening of all passengers' seatbelts. However, a doctor must be consulted on the subject of whether it is appropriate for a pregnant women or people with chest/stomach problem to fasten the seatbelt or not.

Three-Point Seatbelts

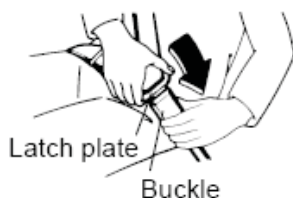
Each seat apart from the middle seat in your vehicle has a three-point seatbelt. If the person wearing the seatbelt moves slowly, the seatbelt is extended or rewind; however, after a powerful impact, it stops the person and keeps him/her immobile during a forward force caused by the seated person's body. In order to obtain an appropriate driver shoulder strap position, make adjustments via shoulder fixation point.

**WARNING**

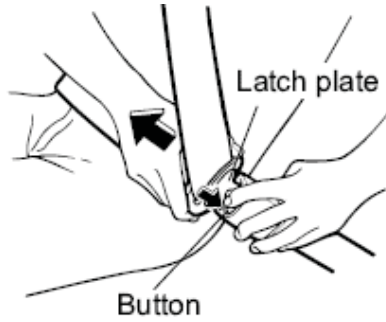
- The shoulder strap must be adjusted in a way in which it is fully put on the shoulder; however, it should not be in contact with your neck and/or your face. If the shoulder strap is in contact with your shoulder and/or your face, it may give damage to you during a collision or sudden stop.

In order to fasten the seatbelt

1. Be seated with the correct driving position.
2. Pull the seatbelt by holding from the locking latch plate. After checking whether there is entanglement on the seatbelt or not, insert the locking latch plate into the seatbelt lock until a clicking sound is heard.
3. Place the lap belt near the hip level as much as possible in order that it can be seated safely.



Keep as low on hip bone
as possible

**In order to remove the seatbelt**

Kemer kilidindeki düğmeye basınız. Kemer otomatik olarak geri saracağı için kemer tamamen geri sarıncaya kadar kilit mandalı plakasından tutarak yavaşça kısalmasına izin veriniz.

**RECOMMENDATION**

- When the seatbelt is rewinding automatically, it may damage a window or another internal layout until the locking latch plate is held appropriately. In order to make sure that it shortens slowly, hold the locking latch plate.
- Before closing the door, make sure that the rewind seatbelt is tight. A loose seatbelt may get stuck in the door or seat rail.
- When the seatbelt is fully shortened (or not pulled out), make sure that arrester keeps the seatbelt fully tight or not.

**NOTE**

- The driver and the passenger seatbelts have the pretension feature (if there is passenger air bag in the vehicle) and load limiter functions.
- The three-point seatbelts are provided with an emergency locking retractor (ELR) function.

[ELR function]

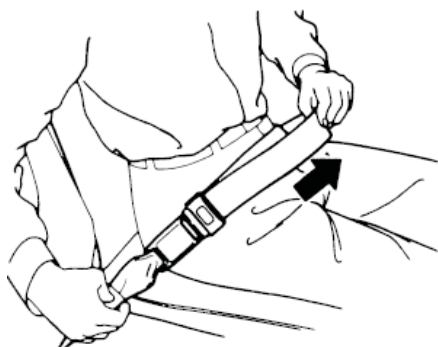
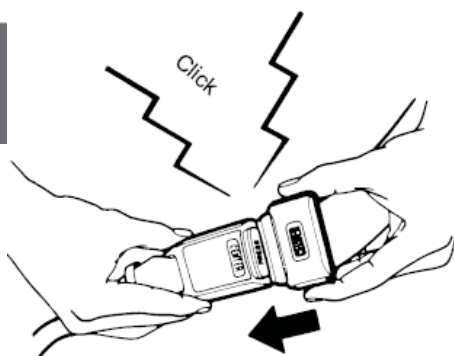
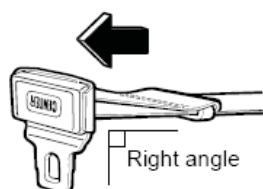
- The ELR function enables the seatbelt to move inwards and outwards when the seated person moves. However, this function locks the seatbelt in order to keep the seated person stable during the forward force caused by the effect of the collision or sudden stop on the seated person.
- Besides, the ELR function locks the seatbelt when it is pulled very fast. If this happens, make the seatbelt rewind for one time and then pull it outwards slowly.

[Load limiter function]

- Load limiter enables the extension of the seatbelt while keeping the load on the seatbelt at a stable level. This reduces the impact on the seated person's chest.

Two-Point Seatbelt (Passenger seats)**In order to fasten the seatbelt**

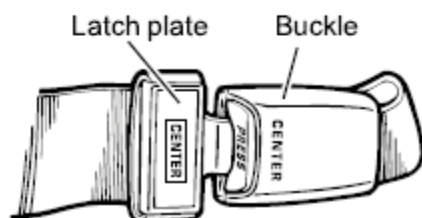
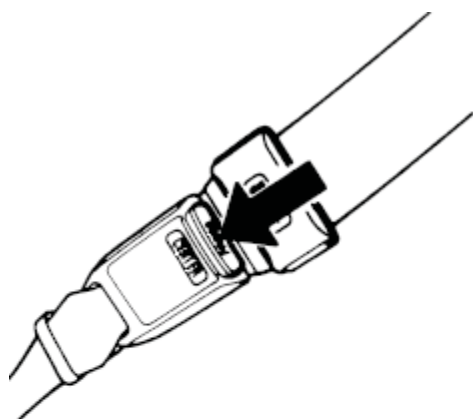
1. Be seated with the correct driving position.
2. Pull the seatbelt locking latch plate longer than usual. (Placing the locking latch plate in correct degrees with the seatbelt will make this easier.)
3. After checking whether there is entanglement on the seatbelt or not, insert the locking latch plate into the seatbelt lock until a clicking sound is heard.



4. Fasten the lap belt in a way in which it will be close to your hip level over your lap as much as possible. Pull the seatbelt's re-folding end (top side) until the seatbelt is adjusted to the safe fastening position.



Keep as low on hip bone as possible

**In order to remove the seatbelt**

Push on the button on the seatbelt lock in order to unfasten the seatbelt.

**NOTE**

[Middle seat seatbelt is designed in order to prevent improper fastening]

- Middle seat seatbelt (length adjustable two-point seatbelt) is designed in a way in which it will not be fastened to any window-side seatbelt (three-point seatbelts with ELR function).

Additionally, the middle seat seatbelt has "CENTER" signs on both the locking latch plate and the seatbelt lock in order to prevent the improper fastening of the middle seat seatbelt.

CONTROLS AND INDICATORS

4

STARTING AND STOPPING THE ENGINE

4-3

INDICATORS, WARNING LAMPS AND
INDICATOR LAMPS

4-6

SWITCHES

4-28

DRIVING CONTROLS

4-44

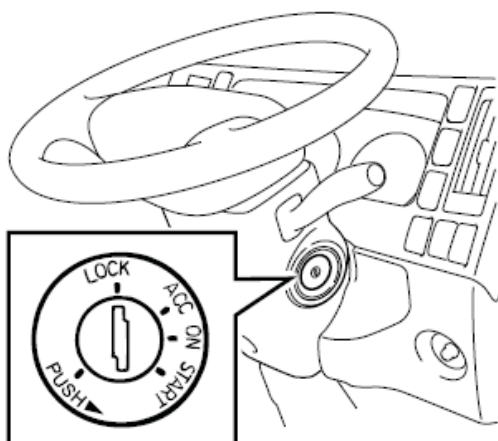
STARTING AND STOPPING THE ENGINE

- Starting the engine
- Stopping the engine

Starting the engine

Make sure that all switches are on the "OFF" position including the windshield wiper, headlamp control and climate control switches.

Put the starter key to the "ON" position in order check whether the warning and indicator lamps are operated normally and the fuel level is appropriate or not.



WARNING

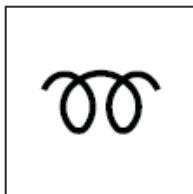
- Do not keep the starter key in the "START" position for more than 10 seconds. Operating the starter key for a long period of time may lead to battery malfunction or a fire due to overheating.



CAUTION

- Pull the handbrake fully before starting the engine when you are seated on the driver seat. Besides, make sure that you start the engine when you are depressing the clutch pedal and after making sure that the gear lever is in the neutral position.

Glow plug indicator lamp



1. When the starter key is turned "ON", the glow plug indicator lamp flashes and it turns off in 0.5 second when the engine is warmed up or in 4 seconds when the engine cools down.
2. After confirming that the glow plug indicator lamp is turned off, turn the starter key to "START" position in order to start the engine. If your vehicle has an idling control button, use the button in order to balance the engine speed when the engine is operating rigorously during warm-up by disregarding the position of the key. When your vehicle is warmed-up, turn the idling control button fully counter clockwise and operate the engine in the idling mode.



- In low temperatures, the cold engine may emit more smoke (white smoke) than usual.
- If you set the warm-up switch to "ON" position, the engine may warm-up faster and exhaust emissions may be reduced.
- In certain cases where the brake pedal is depressed for more than one time when the starter key is set to the "ON" position or during idling, the vacuum is reduced and an audible warning may be heard.

**NOTE**

[Pre-heating]

- Diesel engines are pressure ignited, which makes it difficult to start when it is cold, because the pressure cannot create required heat in order to ignite the fuel on its own. "Pre-heating" refers to the heating of the compressed air in the combustion chambers in order to ease starting the engine. Make sure that you start the engine after the glow plug indicator lamp is turned off.


Stopping the Engine

Pull the handbrake fully. Set the starter key to "ACC" or "LOCK" position when the accelerator pedal is released.

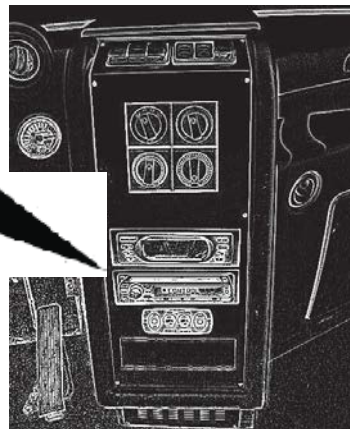
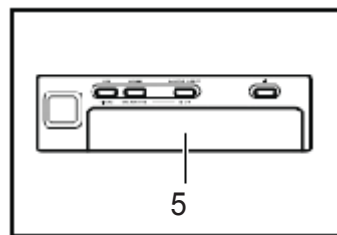
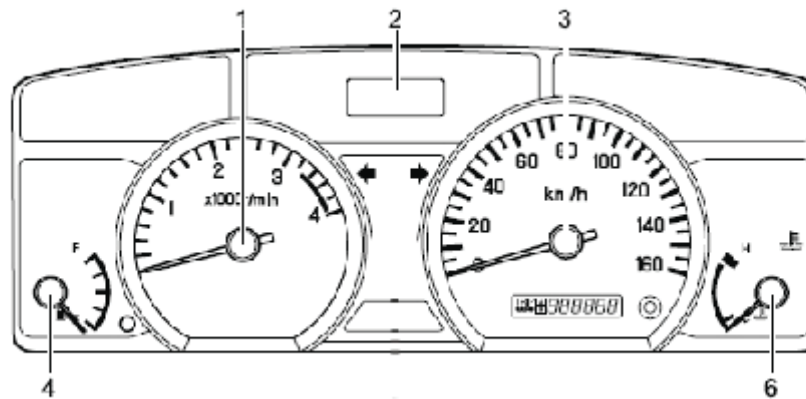
**RECOMMENDATION**

- Do not stop the engine immediately after driving. The turbo shaft may get damaged due to lack of oil since it will continue rotating for a little longer.
- In order to prevent battery from dying, place the starter key on the "ACC" or "LOCK" mode after stopping the engine. If you are leaving the vehicle for a period of time, set the starter key to the "LOCK" position.

INDICATORS, WARNING LAMPS AND INDICATOR LAMPS

-
- Reading of Measurement Tools (Vehicle Design)
-
- Odometer
-
- Analogue tachometer 
-
- Tachometer
-
- Engine Coolant Temperature Indicator
-
- Fuel Indicator
-
- Design of the Warning and Indicator Lamps
-
- Warning and Indicator Lamps
-

Reading of Measurement Tools (Vehicle Design)

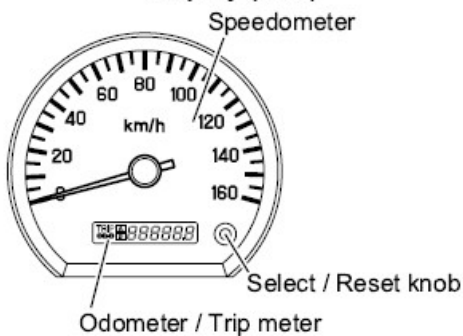


No.	Name	Reference page
1	Tachometer	4-11
2	Odometer	4-9
3	Fuel indicator	4-13

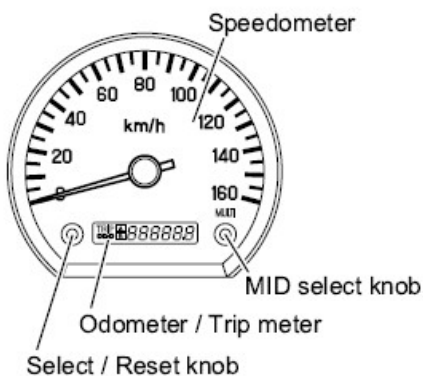
No.	Name	Reference page
4	Fuel level indicator	4-12
5	V Analogue Tachometer	4-11
6	Engine coolant temperature indicator	4-12

Odometer

Model without multi-information display (MID)



Model with MID



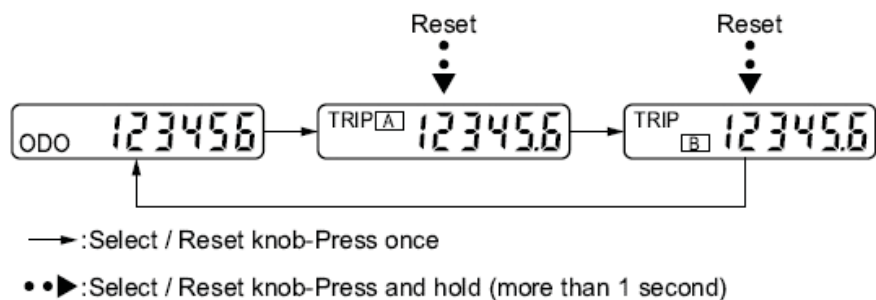
Odometer shows the vehicle speed as km/hour or MPH value. The odometer/mileage counter can be reset and they are integrated. Each time you push the reset button smoothly when the starter key is on the "ON" position, the kilometre is reset and the odometer shows the "ODO", "TRIP A" and "TRIP B" values in this section.

Odometer

If the odometer is graded as kilometre, total distance of your vehicle is shown as kilometre. If the odometer is graded as kilometre and mileage, total distance of your vehicle is shown as mileage.

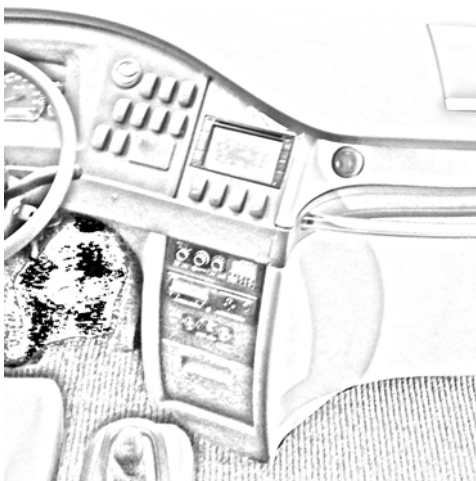
Odometer with reset feature

Use the odometer with reset feature in order to learn the distance between certain points or a distance covered in a certain period of time. If the odometer is graded as kilometre, the value on the right of the decimal point shows the 100 m units; however, if the odometer is graded as kilometre and mileage, this value shows 0,1 mile units. Additionally, it can be integrated as "TRIP A" and "TRIP B". Use the two-day kilometre measurement by making changes between "TRIP A" and "TRIP B". If you wish to reset the odometer with the reset feature, use the select/reset buttons in order to choose the kilometre measure that you desire and to view. The starter key should be on the "ON" position. Afterwards, keep the button pushed for at least one second.

**NOTE**

- When the starter key is turned "ON", the odometer/odometer with the reset feature shows whatever is displayed when the key is turned to "LOCK" or "ACC" position for the last time.
- Each time you turn the starter key to the "ON" position, you can adjust the odometer in order to display the value on the odometer/odometer with the reset feature. In order to do this, turn the starter key to "LOCK" or "ACC" position when the odometer is displayed and then, turn the starter key to "ON" position by pushing on the select/reset button. After turning the key to "ON" position, set the starter key to "LOCK" or "ACC" position once again after 3 seconds. Implement the same procedure in order to cancel the adjustment.

Analogue Tachometer



Analogue tachometer

Analogue tachometer records the vehicle speeds, driving time, distance and other information. Tachometer may provide assistance in reaching the most appropriate method for economic driving and processes. Please refer to the analogue tachometer use manual which is provided separately for details related to its usage.



RECOMMENDATION

- Stop the engine before opening the analogue tachometer in order to change the schedule or for other reasons. Otherwise, the tachometer may not operate properly.

Tachometer



The tachometer shows the engine speed as revolution per minute (rpm). ("1" grade in the scale shows the 1000 rpm value) The red zone indicates the dangerous engine speeds above the permissible level.

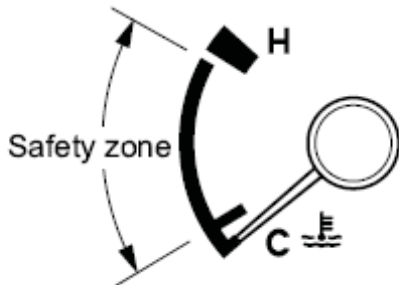
Do not use your vehicle when the tachometer indicator is in the red zone.



RECOMMENDATION

- Pay maximum attention when downshifting on a downhill road. The engine speed may exceed the critical speed easily; this may cause the engine to get damaged seriously.

Engine Coolant Temperature Indicator



When the starter key is in the "ON" position, this indicator shows the engine coolant temperature. "C" means cold and "H" means hot. If the engine overheats, engine overheat warning lamp flashes (model without multi-information display (MID)) or a warning message is displayed (model with multi-information display (MID)). During use, the indicator must stay in the safety zone.



RECOMMENDATION

- When driving, if the indicator goes into the "H" zone by exceeding the upper limit of the safety zone, overheating of the engine is probable. Park the vehicle to the side of the road safely as soon as possible and make necessary processes in order to resolve the overheating of the engine.
- If the indicator is getting closer to the "H" zone, but it is still in the safety zone, this does not lead to a problem. However, check the engine coolant level in the tank. Add coolant as much as required.
- If the engine is stopped immediately after driving, it may misfire. Please do proper operations for the engine not to overheat.

Fuel Indicator



When the starter key is in the "ON" position, this indicator shows the fuel level remaining in the fuel tank. "F" means that the tank is full and "E" means that the tank is almost empty".



NOTE

- Make a habit of filling the fuel tank with an appropriate amount of fuel before the indicator gets close to the empty sign.
- Upon filling the fuel tank, it will take some time for the fuel level indicator to be balanced after turning the starter key to the "ON" position.
- If the fuel tank is filled when the engine is stopped yet the starter key is on the "ON" position, some time is required so that the fuel level indicator can show the correct value. If this happens, set the starter key to the "LOCK" or "ACC" position and then, set it to the "ON" position once again.

Low Fuel Warning Lamp

Model without MID



Low fuel warning light

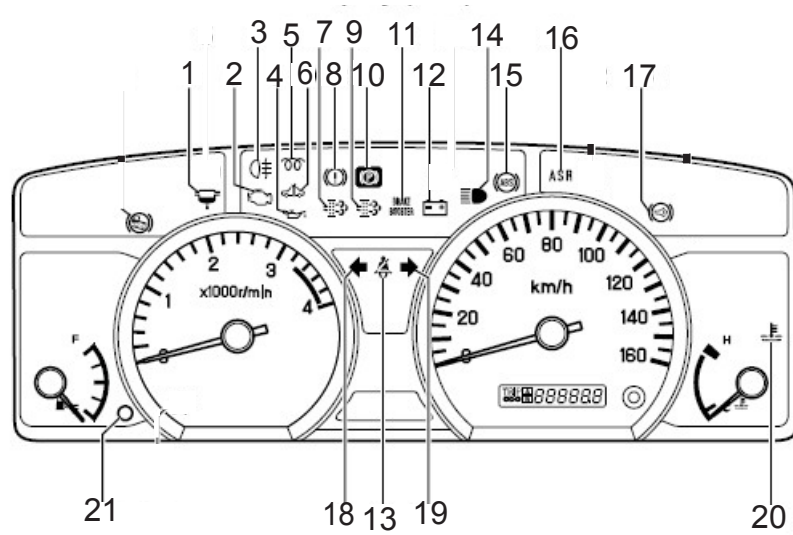
When the fuel of your vehicle is about to finish, the low fuel warning lamp flashes (model without multi-information display (MID)) or a warning message is displayed (model with multi-information display (MID)).








RECOMMENDATION

- If the vehicle runs out of fuel, airing procedure must be applied.



Design of the Warning and Indicator Lamps

No.	Name	Reference page	No.	Name	Reference page
1	Water sedimenter (Fuel Filter)	4-23			
2	Engine warning lamp control	4-22	12	Charge warning lamp	4-22
3	 Rear Fog Lamp Indicator Lamp	4-25	13	Seat belt warning lamp	
4	Engine oil pressure warning lamp	4-20	14	High beam indicator lamp	4-25
5	Glow plug indicator lamp	4-27	15	 ABS warning lamp	4-19
6	SVS indicator lamp	4-23	16	 ASR indicator lamp	4-27
7	 DPD automatic regeneration indicator lamp	4-64	17	Exhaust brake indicator	4-26
8	Brake system warning lamp	4-35	18	Turn signal and emergency flasher indicator	4-24
9	 DPD manual regeneration indicator lamp	4-64	19	Turn signal and emergency flasher indicator	4-24
10	Hand brake warning lamp	4-25	20	Engine overheat warning lamp	4-21
11	Brake booster warning lamp	4-18	21	Low Fuel Quantity Warning	4-24

Brake System Warning Lamp



This warning lamp must light when starter key is turned to "ON" position and then must go off when engine runs.

Brake system warning lamp lights while engine is running under the following conditions: (after the initial starting)

- Decrease in the level of brake fluid (occurring due to brake wear or brake fluid leak and etc.)
- Abnormality in the charging system (For example, generator malfunction or loosen, breakage of fan belt and etc.)
- Abnormality in the charging system (For example, generator malfunction or loosen, breakage of fan belt and etc.)



CAUTION

- If this warning lamp burns while engine is running, immediately bring the car to a safe place and contact to Isuzu Service in order to observe it.

Brake Booster Warning Lamp



Warning Lamp and aural warning will run simultaneously for all situations such as when brake booster vacuum is insufficient during driving or when starter key is turned to ON position, when brake fluid booster system is broke down or when there is a problem while exhaust brake is being used. Aural warning will stop when handbrake is pulled.

Auxiliary vacuum pump models

Brake booster warning lamp and aural warning must run for supporting brake power in order to show low vacuum source.

HBB models

Warning lamp must light when pressure of brake fluid booster is low and/or liquid of brake fluid booster is low. Do not use brake fluid in brake booster reservoir Only use ATF

- If this occurs while driving, do the followings:
 - Do not pump the brakes If the brake is pressed and held, system is designed to stop the truck via back-up power support. This back-up power largely decreases for all times when you use brake.
 - Stopping distance may be longer.
 - You may have to put on the brake pedal harder. Before continuing to driving, please have the vehicle repaired . Warning sound stops when hand brake in the manual transmission vehicle is pulled.

**CAUTION**

- If warning lamp lights and warning sound is heard while exhaust brake is being used, please bring the car to a safe place out of traffic and do the following operations:
 - Please close exhaust brake key while engine is keeping on running. If warning lamp goes off in a few seconds, problem in exhaust brake system will be confirmed.
 - If the warning lamp does not go off, problem will be in brake booster for brake pedal (main brake)
- Please have your vehicle controlled in Isuzu Service as soon as possible. This lamp must light in order for a lamp to be controlled when engine control key is turned to ON position. This lamp must go off upon starting of the engine. If the lamp does not light when engine control key is turned to ON position, this means that a lamp is cut or there has been a blow-out. Please have the system repaired if the lamp doesn't light during this control.

ABS Warning Lamp 

This warning lamp must light when starter key is turned to "ON" position and then must go off after approximately 2 seconds. This warning lamp lights together with brake system warning lamp whenever a problem occurs in anti-lock braking system. In this condition, ABS stops but brakes continue running as a normal service brakes.

**CAUTION**

- If this warning lamp lights while driving, please immediately bring the vehicle to a safe place and do the followings:
 - Stop engine.
 - Restart the engine. Please be sure that ABS warning lamp lights and then goes off. If it happens in this way, there is no problem. ABS runs normally.
- If indicator lamp does not go off or blink, please get Isuzu Seller to control the vehicle as soon as possible.
- Even if there has been a problem in ABS, brakes will continue to run as a normal brakes. In this condition, ABS has no effect on brake system.

Engine Oil Pressure Warning Lamp

This warning lamp must light when starter key is turned to "ON" position and then must go off when engine runs.

This warning lamp lights if there is an abnormal situation in engine oil pressure that oils engine components while engine is running.

**RECOMMENDATION**

- If this warning lamp lights while engine is running, please immediately bring the vehicle to a safe place out off traffic.
- Oiling system may be broken. Please immediately get Isuzu Service to control your vehicle.

Engine Overheat Warning Lamp**Model without MID**

This warning lamp lights when engine is overheated. If engine is overheated, heat panel needle go to red section and engine overheat warning lamp lights.

Please immediately bring the vehicle to a safe place and do required operations after controlling the vehicle.

**WARNING**

- If the coolant is still hot, do not open radiator cap. Hot vapour may rise and you may be scalded. Add coolant only when liquid heat decreases.

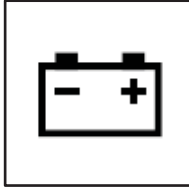
**CAUTION**

- If the engine is overheated, engine overheat warning lamp lights.

**RECOMMENDATION**

- Do not immediately close the engine that is overheated. Otherwise engine may seize up. Please do proper operations for the engine not to overheat.

Charge Warning Lamp



This warning lamp must light when starter key is turned to "ON" position and then must go off when engine runs.

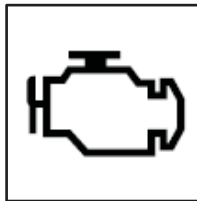
This warning lamp lights when a problem occurs in charge system while engine is running (loose or broken fan belt and etc.)



RECOMMENDATION

- If this warning lamp lights while engine is running, please immediately bring the vehicle to a safe place and contact to Isuzu Service in order to observe it.

Engine Warning Lamp Control



This warning lamp must light when starter key is turned to "ON" position and then must go off when engine runs.

If the warning lamp lights while engine is running, this is a warning about a problem regarding engine electronic control system.



RECOMMENDATION

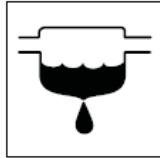
- If this warning lamp lights while engine is running, please do not drive fast and have Isuzu Service to control the vehicle immediately.

VBS (Vehicle Malfunction Service) Indicator or Lamp

VBS indicator lamp will light when starter key is ON and engine cannot be started. By the way, lamp also lights.

Indicator lamp will go off after engine runs.

If indicator lamp lights during driving, immediately contact with nearest Isuzu service.

Water Sedimenter (Fuel Filter) Warning Lamp

This warning lamp lights when it is necessary to pour the water in water sedimenter.(fuel filter)

Pour the water subject to the section of "Pouring of the water in fuel filter" and be sure that warning lamp goes off.

**CAUTION**

- If this warning lamp lights while engine is running please immediately pour the water out of fuel filter. Fuel pump may be damaged if you keep on driving while warning lamp is lighting.

Low Fuel Warning Lamp



Low fuel warning light

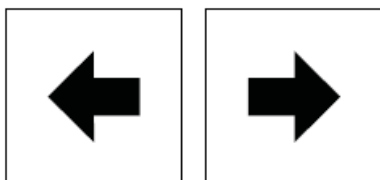
This warning lamp lights when it is necessary to pour the water in water sedimentor.(fuel filter)



RECOMMENDATION

- If low fuel warning lamp lights, please add fuel as soon as possible.
- If the vehicle runs out of fuel, breathe procedure must be applied.

Turn Signal And Emergency Flasher Indicator Lamp



One of these indicator lamps lights when turn signal key is run while starter key is ON.

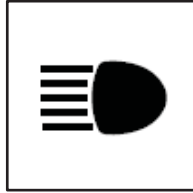
Both indicator lamp lights when emergency flasher is run no matter what the starter key's position is.



RECOMMENDATION

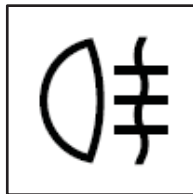
- These indicator lamps will not light if the lamps blow or indicator lamps may light in abnormal way if lamps in wrong Watt value are used.

Rear Fog Lamp Indicator Lamp



This indicator lamp remains open while rear fog lamp is open.

High Beam Indicator Lamp



This indicator lamp lights when high beam lamp is used or while headlamps is cycling between high and low beam lamp.

Hand Brake Warning Lamp



This warning lamp lights when hand brake is engaged



CAUTION

- That warning lamp lights doesn't mean that hand brake is completely applied. Hand brake lever must be engaged and locked.
- Do not forget that you mustn't drive while hand brake is engaged.

Exhaust Brake Indicator Lamp



This indicator lamp lights when exhaust brake key is opened.



RECOMMENDATION

- Exhaust brake indicator lamp lights if there is a problem in exhaust brake system. Please have your vehicle controlled in Isuzu Service as soon as possible.

ASR Indicator Lamp



Warning lamp must light when starter key is ON and 2 seconds before going off color of the lamp must turn from red to green.

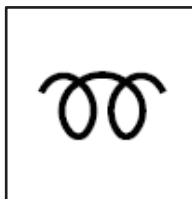
This indicator lamp remains as green while anti slip regulator is used. (ASR) This indicator lamp lights as orange colour if there is a problem regarding ASR or if you remove ASR out of the cycle by applying ASR key as OFF.



CAUTION

- If ASR key is not OFF while driving and ASR indicator lamp still lights as orange color, please bring the vehicle out of traffic and apply the followings:
 - Stop engine.
 - Turn the starter key to the ON position. System is normal if indicator lamp lights as dark yellow initially and then green before going off after 2 seconds. ASR runs properly.
- If indicator lamp does not go off or blink, please get Isuzu Seller to control the vehicle as soon as possible.

Glue Plug Warning Lamp



This warning lamp must light when starter key is turned to "ON" position and then must go off when engine runs. When indicator lamp goes off, engine can be started.



KEYS

- Starter Switches
- Idle Control Switch ☐
- Heater Switches ☐
- Combination Light Switches
- Headlamp Setting Switches ☐
- Front Fog Lamp Switches ☐
- Rear Fog Lamp Switches ☐
- Emergency Flasher Switches
- Exhaust Brake Switches
- Windshield Wiper and Windshield Wiper Switches
- Horn Button

Starter Keys



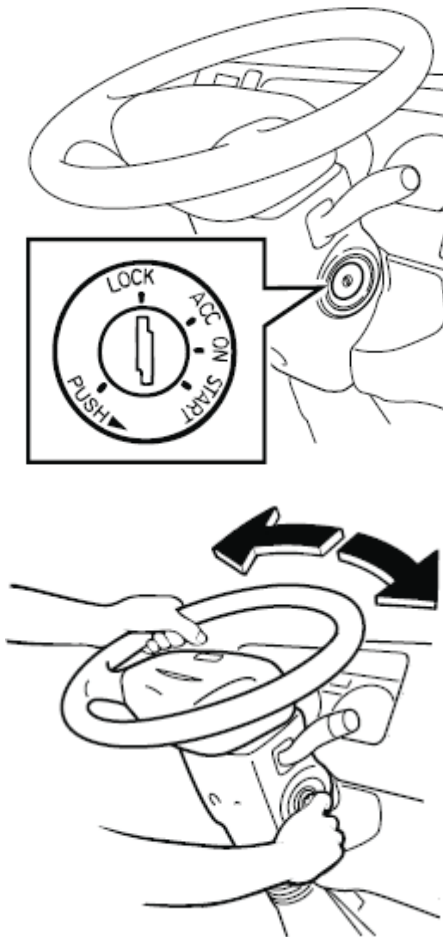
WARNING

- Do not bring the starter key to LOCK position during driving. Key can be removed out of the key pod and this causes steering wheel to be locked. This is extremely dangerous.



RECOMMENDATION

- After running the engine, do not turn starter key to START position. If you apply this, starter engine may be damaged.
- Usage of electronic devices such as audio system for long period while engine is not running may empty the accumulator

Starter Keys

LOCK: In this position, key can be put or removed. Remove the key and turn the steering wheel until it is locked. Steering wheel will be locked to prevent robbery. Press and hold the key on the ACC position in order to bring starter key to LOCK position and then turn LOCK position.

ACC : Audio system or other accessories can be used in this position.

ON: Key remains in this position while engine is running. This position is also valid for pre-heater before engine's run.

START Engine is run in this position. Leave the key the moment engine is run. Key automatically returns ON position.

**NOTE**

- If the key cannot be turned from LOCK to ON position, slowly move steering wheel clockwise and counter clockwise.

Idle Control Switch

This switch is used for heating the engine. You can increase the engine speed by turning the switch clockwise without having to use the accelerator pedal.

Completely turn the switch back in counter clockwise after it is used for engine heating application and keep on holding on this position.



Idle Control Switch



WARNING

- That the engine is run in an airless place may cause carbon monoxide poisoning. Choose a well ventilated place to start and warm the engine. If a diesel particle distributor exists in your vehicle, white fume may spread for a short period due to PM's burning during the renewal application. Choose well ventilated place in order to practice manual renewal.
- If you leave idle control switch on high speed position without turning it to the lowest speed position, your vehicle may move suddenly during the start-up.

Never forget to turn idle control switch to the lowest speed position before driving the vehicle.

Adjustment angle 300°



RECOMMENDATION

- Idle control switch has usage a range of 300 degree. Do not try turning the switch beyond this range. Otherwise, a problem can happen with the vehicle.

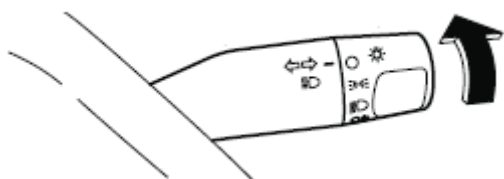
**NOTE**

- Use idle control switch to balance engine speed at start-up when the vehicle runs with irregular idle.
- If a DPD exists in your vehicle, if idle control switch is turned clockwise in order to increase engine speed; completely turn the idle control switch counter clockwise when DPD is renewed in order to decrease the engine speed manually.

Combination Light Switch


Lamp Control Switches

That lamp control switch is turned to the position visible in the table causes the related lamps to light.



RECOMMENDATION

- Lamp control key, starter key
It can be used when it is turned to LOCK or ACC position. Do not run combination lamps for a long period while engine is close. Otherwise, the vehicle may run out of accumulator and this causes engine impossible to start-up again.

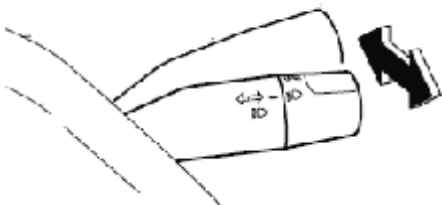
Name	Location			
				
Headlam	OFF	OFF	ON	ON
Park Lamp				
Stop Lamp				
Plate Lamp		ON		
Lighting Lamp Control				
Rear Fog Lamp <input type="checkbox"/>		OFF	OFF	

Transition between High and Low beam lamp

While head lamps are open, move the stick front and rear in order to make change between high and low beam lamp.

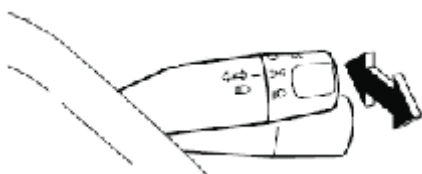
Moving the stick front provides you to choose high beam lamp, moving it rear provides you to choose low beam lamp.

High beam indicator lamp keeps on lighting when high beam lamp is active on headlamps.



**NOTE**

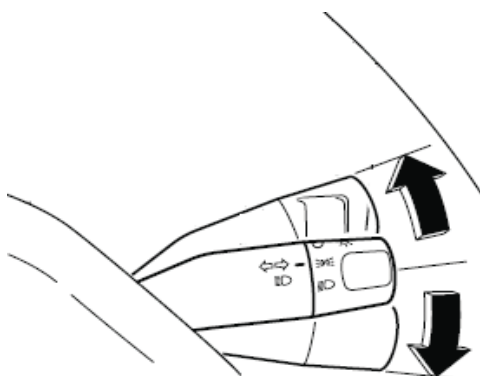
- When there is a vehicle beyond you in the same lane or there are vehicles on the counter lane, always use low beam lamps.A

**Transition between High and Low Lamp
(Passing Light Mark)**

Slowly pull and leave lamp control key stick and accordingly high beam blinks. At the same time, high beam indicator lamp in the indicator panel blinks. Use the function as a mark to pass a vehicle or other purposes.

Turn Signal Keys

While turning left or right, move the stick up or down to turn signal lamp blinks.

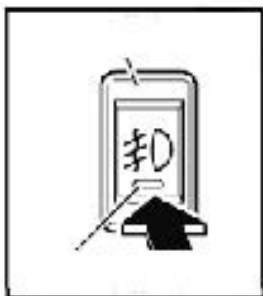
**RECOMMENDATION**



- Turn signal lamps can be used when starter key is on LOCK or ACC position. Do not run combination lamps for a long period while engine is close. Otherwise, the vehicle may run out of accumulator and this causes engine impossible to start-up again.

**NOTE**

- Close the signal manually if steering wheel is only turned a little bit. While passing a vehicle or changing lane, move and keep the stick up or down. Turn signal lamp keeps on blinking if it is remained up or down. The moment stick is left, it returns to neutral position.

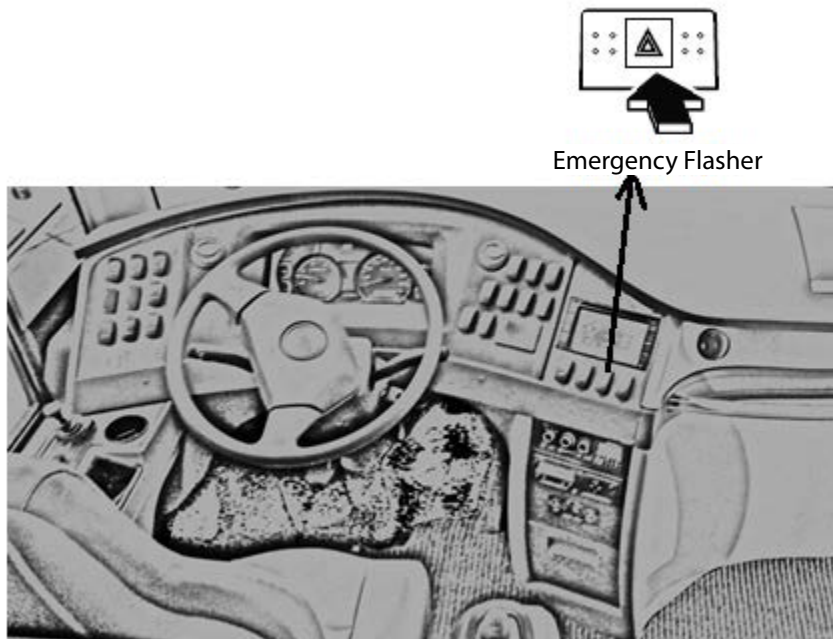
Front Fog Lamp Keys V



Lamp control keys when it is on  position or  key is pressed, front fog lamps light and front fog indicator lamps light. Press onto the switch again to turn off. Front fog lamps is useful both for fog and bad front visibility.

**WARNING**

- Do not use a lamp having watt value more than indicated while changing the front fog lamp. Otherwise, cable connection may burn.



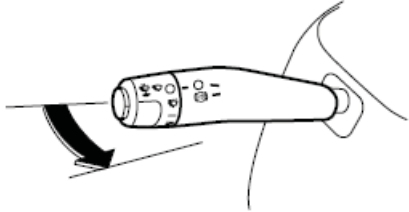
Emergency Flasher

Emergency flasher is used to signal other vehicles while you are stable on the road due to an accident or component malfunction. When this key is pressed while starter key is on any position, all turn signal lamps and all turn signal indicator lamps blink to show an emergency situation. Press onto the switch again to turn off the warning lamp.

**RECOMMENDATION**

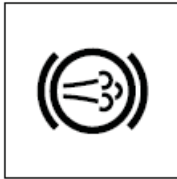
- Do not leave emergency flasher for a long period while engine is close. Otherwise, the vehicle may run out of accumulator and this causes engine impossible to start-up again.

Exhaust Brake Keys



Pull the stick rear to apply exhaust brake. Exhaust brake indicator lamp lights. Press accelerator clutch pedal (if your car has manual transmission) in order to remove exhaust brake out of cycle. If you leave the pedal, exhaust brake will keep on cycling again.

Exhaust brake indicator light



CAUTION

- Exhaust brake application is extremely dangerous for slippery roads as the tires may slip.(wet, frozen or snow covered roads)



RECOMMENDATION

- If a warning sound is heard while exhaust brake is running, immediately pull off the road and contact to nearest Isuzu Service for inspection.

When you pull exhaust brake key to your position, exhaust brake indicator lamp in indicator panel lights and strong engine brake is applied. In the following conditions exhaust brake does not apply even if exhaust brake indicator lamp lights:

- When accelerator clutch pedal is pressed.
- When shift lever is on N position.
- While the vehicle is going 5km/h or below the speed.

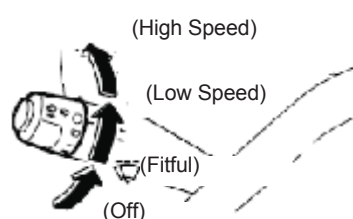
**NOTE**

- If your vehicle has anti-lock brake system, exhaust brake does not apply during ABS application even if exhaust brake key is on ON position and exhaust brake indicator lamp is open. Exhaust brake may temporarily remove off cycle while passing on hump even if brake pedal is not pressed.

Windshield Wiper and Windshield Wiper Keys

Starter key must be ON in order to use windshield wiper and windshield wiper key.

Windshield Wiper Key



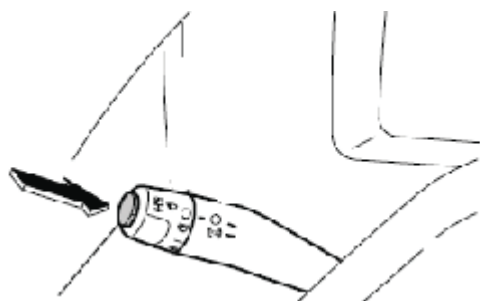
RECOMMENDATION

- Security system may stop the wiper while excessive power is applied to engine. In this situation, bring the key to OFF position and control in a few minutes whether the wiper works normally or not. If wiper works stopping occasionally, close and contact to nearest Isuzu seller.
- Before running the wiper, be sure that wiper blade does not stick on windshield. If wiper blade sticks on windshield and you keep on running it despite this situation, wiper may be broken or wiper engine may be damaged.
- Do not run the wiper on dry windshield surface. Otherwise, windshield surface may be damaged. While wiping a dry windshield surface, always use windshield wiper washer nozzle.

Windscreen wiper key is on the following situations that are suitable to wiper conditions.

Stick position	○		—	=
Wiper condition	Stops	Intermittent Works (Light Rain)	Slow (Medium intensity rain)	Fast (Heavy rain)

Windshield Washer Nozzle Key



Windshield Washing
Nozzle Key

Windshield washer water is ejected below the windshield when this key is pressed. At the same time windshield washer works.

Windshield washer nozzle is used to clean the windshield.



CAUTION

- In excessively low temperatures, after washer water is ejected, it may freeze on windshield that can be an obstacle for you to see the front. Heat windshield before using windshield washer nozzle in these kinds of situations.



RECOMMENDATION

- If windshield washer nozzle water doesn't come enough, immediately stop pressing the key. Otherwise, windshield surface may be damaged.
- Do not keep on pressing the key for more than 30 seconds. Otherwise, washer pump can be damaged.
- If windshield washer nozzle water does not come, stop pressing windshield washer nozzle key. Otherwise engine may seize up.
- While the vehicle is used in cold climate region, use washer water appropriate to the climate in order to prevent water to be frozen.

Horn Button



Press the surface with horn symbol on steering wheel to blow horn.

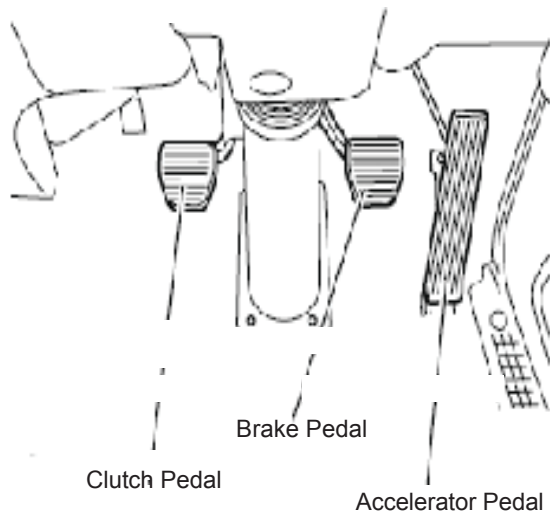




DRIVING CONTROLS

- Pedals
- Hand Brake Lever
- Gear Control Lever
- ABS (Anti Blockage Brake System) ☐
- Anti Slip Regulator ☐
- DPD Diesel Particulate Diffuser (DPD)

Pedals



Sit in seat with a proper driving position, run brake and accelerator pedal with your right foot. In order not to depress the wrong pedal unintentionally, check the pedal positions and make exercises for putting your foot on the pedal that you desire.



WARNING

- If a can, box or bottle that are on the ground squeeze under the pedal, they can block brake pedal to work properly. This situation is extremely dangerous. A floor mat must be placed properly. A floor mat having been placed improperly will block each pedals to move in ease.



RECOMMENDATION

- Do not run the engine with high speed. Engine components such as fuel economy and etc. may get affected due to this situation.
- Do not drive with your foot on clutch pedal. This situation may damage the clutch.

Hand Brake Lever



CAUTION

- Even if hand brake warning lamp lights, if hand brake is applied when starter key is ON; this does not mean that hand brake is completely applied. For this reason, be sure that lever is completely pulled.
- Pressing open switch simply does not bring the lever to its original position. You must always press open switch while pulling hand brake lever slowly.
- If the vehicle is parked on hill ascend position, bring the gear lever to 1.shift and if the vehicle is parked on hill descend position, bring the gear lever to R position. Additionally, mountings must be always used for each situations.
- Never park the vehicle on steep.

Usage of Hand Brake

Hand brake engaged condition



Hand Brake Lever

Completely pull hand brake lever while parking the vehicle. Hand brake warning lamp in indicator panel will light when hand brake is engaged. Press open switch while raising and lowering the lever in order to leave hand brake. Hand brake warning lamp in indicator panel will go off.

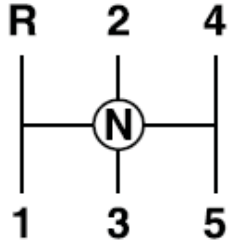
Hand brake warning lamp



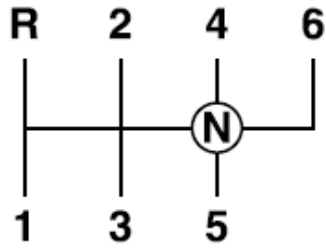
Gear Control Lever

Manual Transmission Model M/T

MYM model, 5-speed



MYM or MZZ model, 6-speed



Manüel şanzımanlı bir model, vites değıştirme yaparken debriyaj pedalına tamamen basmayı gerektirir.

Vites değıştirme kolu "R (Geri)" konuma getirildiğinde, geri vites lambaları yanar ve geri vites uyarısı olan bir modelde sesli ikaz da duyulacaktır.

**RECOMMENDATION**

- Only shift reverse gear from forward gear or forward gear from reverse gear when vehicle completely stops. Otherwise transmission may be damaged.

Brake Pressure Indicators (Air Brake)

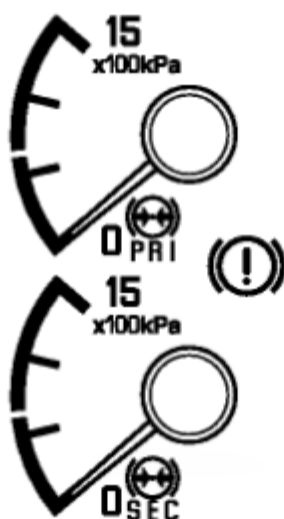
Brake pressure indicators show front and rear cycle's air pressure. Pay attention to your pressure before and during driving. Air brake system's pressure is 8 bar. Do not drive if each brake pressure indicator shows under 5bar. As rear brake system is spring brake type, it will step in the pressure below 5bar and rear tyres will be locked.



CAUTION

- If brake pressure warning lamp lights or a warning sound keeps on coming brake pressure is extremely low. Do not drive in this situation.
If this warning lamp lights while engine is running, immediately bring the car to a safe place and contact to Isuzu Service in order to observe it.

Manometer of Front brake circuit



Air pressure warning



Manometer of Rear brake circuit

Pressure range that system requires

780 - 890 kPa
(8.0 - 9.1 kgf/cm²/114 - 129 psi)

**NOTE****[HYDRAULIC BRAKE BOOSTER FEATURES]**

In HBB models, extra ordinary sound may be heard coming under the indicator panel in hydraulic system while brakes are applied. This is not a problem warning. This is not a malfunction warning.

- If you pump the brakes while engine is close, a clack sound may be heard. This sound comes from booster battery. This is not a malfunction. Same sound may be heard during a sudden braking while engine is running
- Another feature of HBB system is the fact that brake pedal can be pressed to the bottom while vehicle is stopping. This is not a malfunction.
- System automatically charges up the accumulator for all the times that pressure lowers after braking while engine is running.

Automatic charging operation may be activated subject to heat changes in accumulator without braking.

A whistle or click sound may be heard during automatic charging.

This is not a malfunction.

- A sough sound may be heard during strong braking while engine is running.

This sound comes from brake hydraulic pump. This is not a malfunction.

Strong braking for a long time cause a great increase in temperature in hydraulic booster pump. Over running of the brakes must be definitely prevented.

[BRAKES WITH VACUUM OR HYDRAULIC POWER BOOSTER]

If the brake is pressed and held, system is designed to stop the truck via back-up power booster. This back-up power largely decreases for all the times when you use brake. During braking, if the vehicle does not turn when you turn steering wheel, apply least pressure raising your foot out of brake pedal.

Vehicle can be stopped by pressing brake pedal strongly without power booster but stopping distance may be longer.

ABS (Anti Blockage Brake System) v

During sudden braking or braking on slippery road surfaces such as snowy road, tyres can be locked or slipped. ABS is a device used to prevent tyres from slip and to provide vehicle's direction stabilization and road handling balance by sensing a condition to cause slippery during braking. ABS is only to help in slippery conditions and if you exceed safe driving speed determined for road conditions it will not prevent you from accident. Always drive the vehicle carefully.

**CAUTION**

- Braking distance in slippery road surfaces of a vehicle having ABS is longer than in dry asphalt road. Additionally, braking distance may be a little longer when ABS is activated in heavy snow covered and gravel roads. For this reason always pay attention to road and tyre condition (tyre type and wear condition), apply safe driving routines and drive the car leaving a proper distance between other vehicles.
- If you do not drive carefully, ABS does not prevent the accidents. Drive the car in safe speed.
- Put the same size, brand and tread pattern tyres to the vehicle. (including winter tyres) If different tyres are used, braking distance will be longer and vehicle's direction control stabilization decreases. This situation is extremely dangerous.
- Steel wheel control during sudden braking a little bit different than its condition that no brake is applied. Use steering wheel paying attention to this condition.

**RECOMMENDATION**

- Driving in sandy or muddy road may affect brakes and ABS sensor negatively. Wash the car in order to clean sand and mud after using the vehicle in sandy and muddy conditions.
- Before washing the vehicle, take required protection precautions in order to prevent water splashed onto ABS components.(sensors and control group) Be careful to provide water to splash ABS components and cable connectors while high pressure washing is being applied.

**NOTE**

[These are not ABS malfunction signs.]

- After a short period, an engine sound may be heard coming from rear of the vehicle or under the interior. This sound comes from automatic control that ABS system does. Additionally, if you press brake pedal within this period, you feel a little bit vibration.
- While ABS is running, vibration is felt on brake pedal and steel wheel and you can hear system's running. This situation is normal while ABS is properly running.
- Exhaust brake may fail when ABS is activated while exhaust brake is being used.
- ABS activation possibility when braking while taking corner or passing on a hump is high. This is because tyres inside or tyres passing on a hump can be locked.
- ABS is not activated soon after vehicle is run. It can be activated only the vehicle's speed is over 10 km/h. ABS usage is not active when vehicle's speed decreases 5 km/h.

ABS Usage Displays and Signs**ABS warning lamp****ABS Usage Displays**

ABS warning lamp must light when starter key is turned to "ON" position and then must go off after approximately 2 seconds. If warning lamp goes off ABS is normal.

ABS Usage Displays

ABS warning lamp must light when starter key is turned to "ON" position and then must go off after approximately 2 seconds. If warning lamp goes off ABS is normal.

**NOTE**

- ABS may be damaged if ABS warning lamp does one of the followings: Please contact to nearest Isuzu Service.
 - If ABS warning lamp lights during driving
 - When starter key is turned to the ON position lamp does not light.
- Even if there is a problem related to ABS, brakes will keep on running properly. But ABS won't run.



Precautions Needed to Be Taken With the Vehicle Having ABS

ABS is not a device that provides driving and stopping the vehicle under the circumstances exceeding safe driving limits. Always drive the vehicle carefully.



CAUTION

- Braking distance in slippery road surfaces of a vehicle having ABS is longer than dry asphalt road. When ABS is activated for the following road conditions braking distance may be longer than the braking distance to be applied by the vehicles having no ABS. For this reason always pay attention to road and tyre condition (tyre type and wear condition), apply safe driving routines and drive the car leaving a proper distance between other vehicles.
 - While driving in a gravel covered road or heavy snow covered road.
 - When tire chains are used.
 - While passing road connections like light reflectors or humps.
 - While driving on rough road, stoned road or path.
 - While passing over an iron cover, manhole cover.
- ABS won't run while tyre is slipping during stable start-up, acceleration and taking corner that do not require braking. Tyres' road handling may be disappear in a very slippery, icy road and tyre turning cannot control the vehicle. This situation causes unbalanced driving. Always drive paying attention to safe speed value subject to road and tyre conditions and beware of applying sudden braking.
- If strong engine braking is applied on slippery, icy road, traction wheels can be locked and causes the vehicle's control to be disappeared. If this situation happens in manual transmission vehicle, remove your foot out of clutch or bring gear lever to N position in order to prevent engine braking of which effect is on traction wheels. Then shift a proper transmission and drive the car.
- When ABS is activated, a soft vibration may be felt on brake pedal and steering wheel. (especially when road surface is different between right and left tyres) Additionally, running sound comes from ABS control group. This sound is not a sign of abnormal situation. Use steering wheel properly protecting your equanimity.

Anti Slip Regulator (ASR)

ASR is a device helping to prevent traction wheels to slip or to develop vehicle move balance while driving on snowy or another slippery road surfaces. ASR automatically steps in when engine is run. You can cancel ASR usage using ASR OFF switch.



CAUTION

- When ASR steps in, ASR indicator lamp (green) lights. Road surface is now very slippery. If indicator lamp lights, Drive carefully before turning the corner and decrease your speed adequately.
- Even while driving on snowy or icy road with the vehicle model having ASR, drive carefully putting tyre chains or winter tyres.
- ASR is not a device to develop vehicle running performance seriously. Use accelerator pedal carefully while driving on icy ascend.
- When tyre chains are put while ASR is not stepped in, it can be easier to start-up the vehicle on icy ascend. However, do not forget that ASR is removed of cycle will cause decreased vehicle usage balance.



RECOMMENDATION

[These are not ASR malfunction signs.]

- Engine's speed may suddenly decrease but this situation happens due to ASR device.



NOTE

- Press ASR CLOSE switch to remove ASR out of cycle while speed test device or brake test device is being used.

ASR Running Control and ASR Running**ASR Indicator Lamp**

(Dark Yellow)

ASR Running Control

When starter key is on the ON position, ASR warning lamp lights as dark yellow and turns into green before going off in 2 seconds.

While ASR is running

While ASR is running, ASR indicator lamp (green) lights. When ASR CLOSE switch is pressed, ASR indicator lamp lights (dark yellow).

**NOTE**

- ASR may be damaged if ASR warning lamp does one of the followings: Contact to nearest Isuzu Seller.
 - When ASR indicator lamp (green) is open while driving on not-slippery, dry road.
 - When ASR indicator lamp (dark yellow) lights while driving.(when ASR CLOSE switch is not used.)
 - When starter key is turned to the ON position lamp does not light.
- If ASR is broken down, this will not be obstacle for a normal driving. But ASR won't run.

Precautions Needed to be Taken With the Vehicle Having ASR

ASR is not a device that provides driving and stopping the vehicle under the circumstances that exceed safe driving limits. Always drive the vehicle carefully.



CAUTION

- Although ASR develops start-up and acceleration performance on slippery road compared to the model having no ASR, it does not increase road handling features of the tyres. Tyres' handling power decreases in a way to decrease wheel control that can cause unbalanced vehicle move on icy or slippery road other than this. Always drive paying attention to safe speed value subject to road and tyre conditions and beware of applying sudden braking.
- Even if your vehicle has ASR, beware of sudden running of accelerator, clutch (special to manual gear model) and steering wheel. Especially while starting-up the vehicle in a slippery road, start-up it as in the vehicle having no ASR.

DPD Diesel Particulate Diffuser (DPD)

DPD cleans particles in exhaust gases. DPD catches PM in its filter and when P collects in the filter on the level that was determined before, DPD automatically removes PM via burning operation.(renewal of the filter) Following instructions need to be applied in order for DPD to be properly.

DPD Switch



DPD



DPD switch is used to renew DPD manually.(burning of PM)

While DPD manual renewal indicator lamp (dark yellow) is blinking (blinking happens in one second gap and additionally there is an aural warning as a short beep.) you must apply steps required to renew DPD manually. In order to renew DPD filter manually, for example while parking the car after daily running, you can apply it following the instructions under "DPD Manual Renewal Procedure" If you keep on driving while blinking or aural warning that is approximately one second gap, blinking gap will be shorter.(approximately 1/3 second gap) In this condition, if you keep on driving for a long period. DPD may be damaged. Stop the vehicle in a safe place as soon as possible and apply manual renewal operation.



(Dark yellow, blinks)

**RECOMMENDATION**

- Keeping on driving without renewal operation will cause engine control warning lamp to cut. After this warning DPD must be repaired by the nearest Isuzu Service.

**NOTE**

- When a definite amount of PM collects on DPD filter, DPD system automatically renews the filter.(PM burning) but automatic renewal operation may not be completed on some of the driving conditions.

When renewal operation is completed, DPD manual renewal indicator lamp (dark yellow) will blink. Immediately apply manual renewal steps subject to specified manual renewal instructions. Manual renewal operation is necessary for DPD function to operate again. It is not an operation that applied after a DPD malfunction.

DPD Manual Renewal Procedure



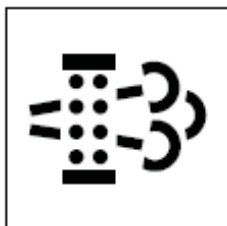
1. Stop the car in a safe place that there are inflammable material such as dry grass or waste paper .



CAUTION

- In order to prevent fire, make sure that there are no inflammable materials near the exhaust muffler, DPD and the exhaust pipe. Do not forget that exhaust gas's temperature is so hot to burn you.

2. In a manual transmission model, bring gear lever to N position and be sure that hand brake is pulled.
3. Restart the engine with idle running.
If there is a idle control switch on your vehicle, turn the switch counter completely counter clockwise in order to decrease engine speed when engine speed is increased using idle control switch.
4. If your vehicle has air conditioning, please stop it.



(Dark Yellow)

5. Press DPD switch.
6. While engine circuit is automatically increased in order to start manual renewal operation in your car, DPD renewal lamp in indicator panel will stop blinking and remain as lighted.
7. Do not leave the vehicle during renewal operation. Renewal operation lasts normally in 15-20 minutes.

8. When DPD manual renewal indicator lamp (dark yellow) goes off or "MANUAL REGEN" Manual Renewal warning (dark yellow) disappears, renewal operation ends. After that, normal driving is done.

**WARNING**

- During manual renewal operation, there can be a white fume, do not apply manual renewal operation in airless indoor places.

**NOTE**

- Time required for renewal operation differs subject to outdoor environment temperature.
- Exhaust brake or exhaust pipe is activated during DPD renewal operation.
- A sound will come from exhaust brake or exhaust pipe starting to run or removing out of the circuit but this is not a sign of malfunction.
- A white fume may be temporarily given away during renewal operation. This fume occurs as a result of PM's burning and it is not a sign of malfunction.
- Manual renewal operation will be quicker when operated immediately after driving contrary to the time engine is cooled.
- Engine coolant temperature may raise while manual renewal operation.

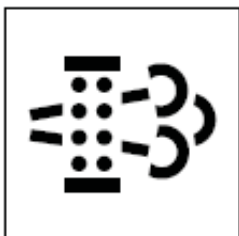
Stopping of Manual Renewal Operation

If you are required to drive the vehicle again or stop renewal operation due to an obligatory reason, press DPD switch again.

If your vehicle does not have MID, DPD manual renewal indicator lamp (dark yellow) starts blinking. And then you can drive the vehicle. If you stopped renewal operation, you need to apply it again. Apply manual renewal operation starting from first step as soon as possible.

DPD Automatic Renewal

Model including no MID



(Green, lights)

Engine speed can increase and exhaust brake can be active when vehicle is stopped while engine is running on idle.

If this happens, DPD is automatically renewed. This is not a malfunction.



NOTE

- Engine speed can increase and exhaust brake can be active when vehicle is stopped while engine is running on idle. If this happens, DPD is automatically renewed. This is not a malfunction.
- During automatic renewal operation and the cancellation of this operation, sound comes from the system. This is not a malfunction.

DPD Selective Renewal Operation Procedure

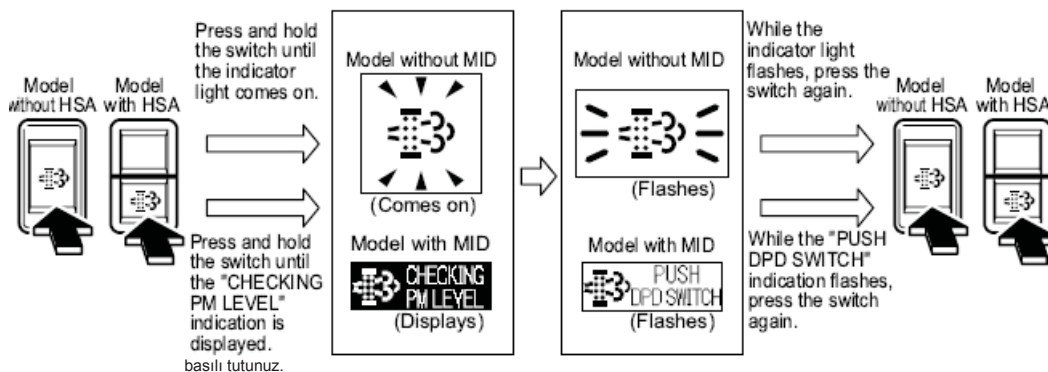
Apply DPD selective renewal operation while engine (coolant temperature) and exhaust pipe are keeping on their temperature, for example after the end of daily running.



CAUTION

- Apply selective renewal operation until it is completed uninterruptedly.
- Do not leave the vehicle during renewal operation.
- In order to prevent fire, make sure that there are no inflammable materials near exhaust muffler, DP and the exhaust pipe.
- Do not forget that exhaust gas's temperature is so hot to burn you.

1. Stop the car in a safe place that there are inflammable material such as dry grass or waste paper.
2. While engine is on idle, Be sure that gear lever is brought to N position for manual transmission models. Enable hand brake completely. When engine speed in the vehicle having idle control switch is increased by using this switch, turn engine speed to normal idle condition.



3. Keep on pressing DPD switch until DPD manual renewal indicator lamp (dark yellow) lights. DPD manual renewal indicator lamp (dark yellow) leaves lighting uninterruptedly and starts blinking.

4. Press DPD switch again.
5. DPD manual renewal indicator lamp (dark yellow) stops blinking and remains lighted and it automatically increases in order to start engine speed renewal operation.
6. Do not leave the vehicle during renewal operation. Renewal operation lasts normally in 15-20 minutes.
7. Renewal operation ends when DPD manual renewal indicator lamp (dark yellow) goes off. After that, normal driving is done.

**RECOMMENDATION**

- If selective renewal operation is stopped due to restart of driving, DPD manual renewal indicator lamp (dark yellow) will start blinking. For this condition, stop the car safely as soon as possible. Press DPD switch and wait until the end of cleaning(renewal) operation.
- When PM level in DPD filter is lower than the level that was specified before, even if DPD switch is pressed and hold, DPD manual renewal indicator lamp (dark yellow) does not leave "uninterruptedly lighting" position for "blinking" position. DPD does not require renewal operation, for this reason it doesn't require DPD switch usage .

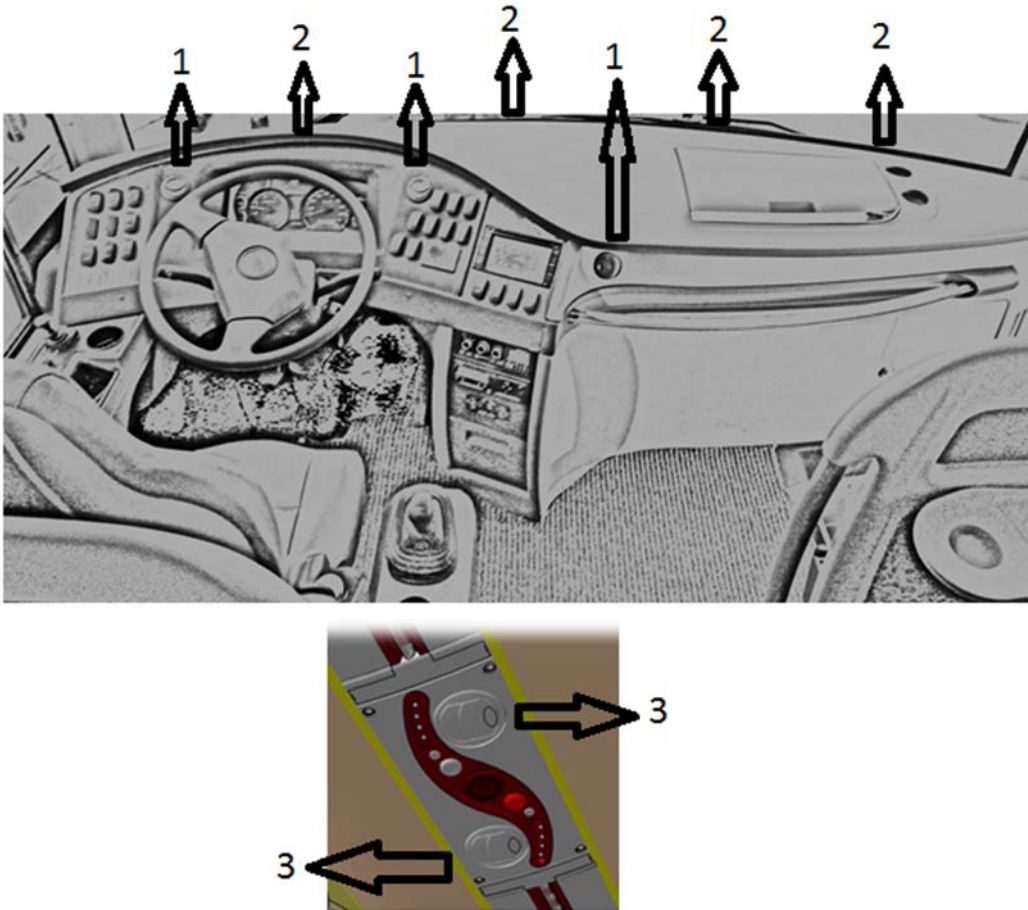
**WARNING**

- White fume may come out while renewal operation. Do not apply renewal operation in airless indoor place.

**NOTE**

- Time required for renewal operation differs subject to outdoor environment temperature.
- Exhaust brake or exhaust passage is activated during DPD renewal operation. A sound will come from exhaust brake or exhaust passage starting to run or removing out of the circuit but this is not a sign of malfunction.
- A white fume may be temporarily given away during renewal operation. This fume occurs as a result of PM's burning and it is not a sign of malfunction.
- Renewal operation will be quicker when operated immediately after driving contrary to the time that engine is cooled.
- Engine coolant temperature may raise while manual renewal operation.





No.	Outlet	Features
1	Glove box front outlets	Windshield demister air channels
2	Driver and passenger air outlets	Air flow direction can be adjusted with plug.
3	Passenger air outlets	Air flow direction can be adjusted with plug.

Heater/Digital Air Conditioner V

Usage of the Controls

ELECTRONIC AIR CONDITIONING SYSTEM SMART CONTROL PANEL



KEY PAD DEFINITIONS:

Rotary Switch K1



Rotary Switch	Function Definition
Turning	When ignition comes, driver side air management is controlled. Rightmost position is defrosting function for windshield, alternator must run for this function.

Rotary Switch K2



Rotary Switch	Function Definition
Turning	When ignition comes, fan speed of driving side is adjusted. While alternator is not running, only minimum fan speed can be run.

Rotary Switch K3



Rotary Switch	Function Definition
Turning	When ignition comes, temperature adjustment of driver side is done.

Button S1



Button	Function Definition
Short Pressing	Driver side cooling is activated. Passenger side cooling must be active in order for this function to run
Long Pressing	---
Double Click	---
Button Combination	---

Button S2



Button	Function Definition
Short Pressing	Driver side fresh air choke flap is opened and closed.
Long Pressing	---
Double Click	---
Button Combination	---

Button S3



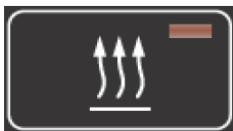
Button	Function Definition
Short Pressing	Automatic mode ON/OFF
Long Pressing	AUTO/HEAT/COOL functions are chosen.
Double Click	---
Button Combination	---

Button S4



Button	Function Definition
Short Pressing	Passenger side dehumidification function is activated.
Long Pressing	---
Double Click	---
Button Combination	---

Button S5



Button	Function Definition
Short Pressing	Auxiliary heater is activated.
Long Pressing	---
Double Click	---
Button Combination	---

Button S6



Button	Function Definition
Short Pressing	Passenger side fresh air choke flap is opened and closed.
Long Pressing	---
Double Click	---
Button Combination	---

Button S7



Button	Function Definition
Short Pressing	Passenger side fan speed is increased.(7 grade)
Long Pressing	---
Double Click	---
Button Combination	---

Button S8



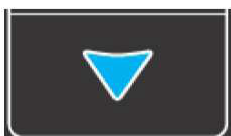
Button	Function Definition
Short Pressing	Passenger side fan speed is increased (7 grade).
Long Pressing	---
Double Click	---
Button Combination	---

Button S9



Button	Function Definition
Short Pressing	It increases passenger side SET temperature.
Long Pressing	---
Double Click	---
Button Combination	---





Button S10



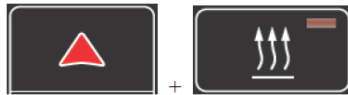
Button	Function Definition
Short Pressing	It decreases passenger side SET temperature.
Long Pressing	---
Double Click	---
Button Combination	---






ADJUSTING TIME SETTING:



- Time setting can be adjusted while IGNITION is close.
- Time setting is entered by pressing   buttons together.
-  Or  by using the button, time setting is adjusted.
- After pre heater start time is completed, you return main display when you do not press any button for 5

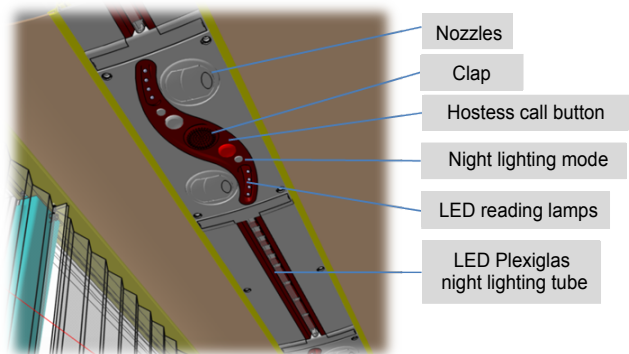
ADJUSTING PRE HEATER START TIME



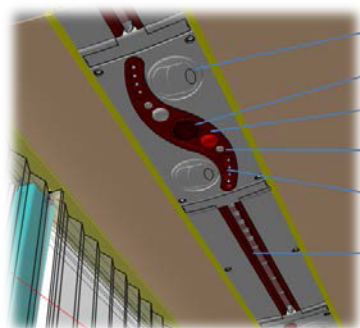
- Pre heater start time can be adjusted while IGNITION is close.
- Pre heater start time adjustment is entered by pressing   buttons together.
-  Or  by using the button, pre-heater start time is adjusted.
- With  button, pre heater can be started manually.
- After pre heater start time is completed, you return main display when you do not press any button for 5 seconds.

Ventilation Over the Seat

Direction and amount of the air can be adjusted independently by passenger.



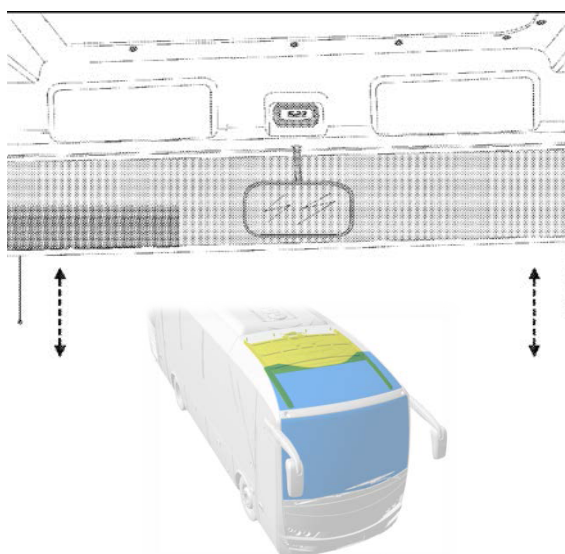
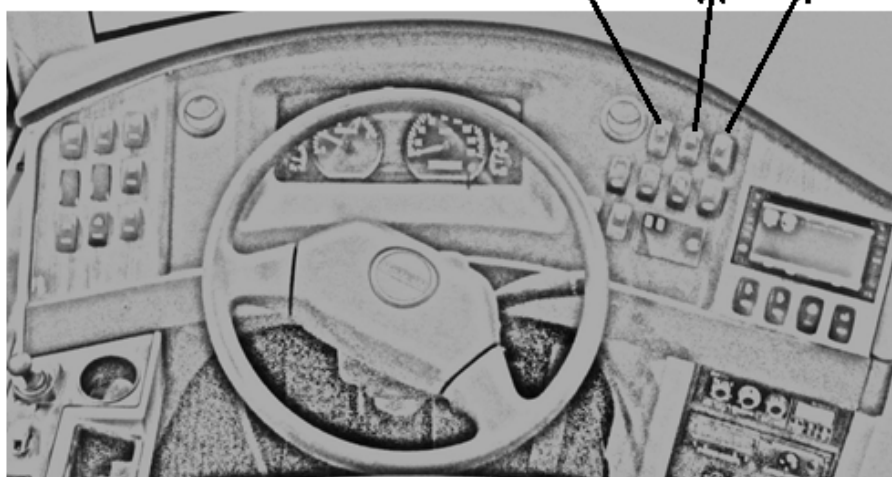
Okuma Lambası



- Nozzles
- Clap
- Hostess call button
- Night lighting mode
- LED reading lamps
- LED Plexiglas night lighting tube

Passenger can control over seat reading lamps independently.

Roller Blind



While driving towards the sun, lower the roller blind in a way that cannot prevent your visibility.

In order to lower roller blind with mechanic controller, pull it down. In order to raise it, first pull it down slowly and wait for it to raise to the point you would like to.

Controller button in electronic controller system is take place in the panel left side of the driver.

-
- **Safe and Secure Driving**
 - **On the Road**
 - **The Points to Take Into Consideration While Parking**
 - **The Points to Take Into Consideration While Driving In Hot Areas.**
 - **The Points to Take Into Consideration While Driving In Cold Areas.**
 - **Usage of Tyre Chains.**
-

Safe and Secure Driving**Rest Adequately**

If you drive when you are tired, you will feel sleepy and lose your attention. Have a rest adequately before driving.

Give Breaks In Long Journeys

Long distance driving is tiring. Give resting breaks occasionally.

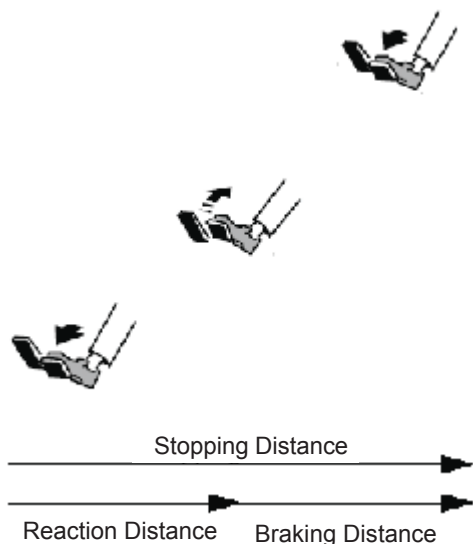
On The Road

The Points to Take Into Consideration While Driving



- Focus on safe driving obeying all speed levels, traffic signs and traffic lamps determined by law.
- While driving, do not switch the starter switch to another position apart from the "ON" position. Running of hydraulic steering wheel will stop in a way that makes wheel usage quite tough. Additionally, brakes will put you in danger as they will not run properly.
- If you recognise any abnormal sound, smell or vibration coming out of any part of the vehicle, immediately stop the vehicle in a safe place and control it.
- If a warning lamp or aural warning happens while driving, immediately stop the vehicle in a safe place and control it.
- Do not put your foot on clutch pedal while not using gear lever. If doing so, clutch will wear early.
- Speed down adequately while closing to a corner. The brakes are applied or steering wheel is turned strongly while turning the corner may cause load or tyres to slip and the vehicle to topple down.
- Do not put your hands on gear shift lever for no purpose except from shifting while driving. If doing so, transmission may be damaged.
- Prevent tyres sidewalls to rub the paving stone or prevent driving on humps and buckles on the road. You may cause tyres to blow or tyre air to lower as you damage the tyres.

Brake Application



Brakes provide strong braking as a result of only pressing the brake softly. Do not press brake pedal strongly other than an emergency condition.

1. Braking distances differ according to vehicle speed and road condition. At first speed down adequately by applying engine brake and exhaust brake.
2. Press brake pedal and keep on pressing the pedal until you are approaching the point you would like to stop.
3. Loosen brake pedal.



CAUTION



- Do not let brake pedal come back completely. If you let brake pedal come back completely, a short delay will happen before the running of the brakes when you press again.

4. Shortly before reaching the point you want the vehicle to stop, press brake pedal softly in order to stop the vehicle.

Stopping Distance

Vehicle's stopping distance consists of a reaction distance (from the point that driver feels the danger and press pedal until the point that brakes run) and a braking distance (from the point that brakes run until the point that the vehicle stops). Stopping distance must be taken into consideration while driving. Keep a speed or driving distance to provide you to stop safely even if a dangerous situation happens.

Clear Field Of Vision Protection**If Windshield Steams Up**

Use heater to blow air to windshield or remove humidity by using air conditioning and place ventilation switch to "  " or "  " position.

Bring interior/out air selector to outside-air position. Use anti-steam spray sold in the market.

Night Vision

If there is an oily layer on windshield, approaching traffic lights may reflect many direction and this makes it hard to see beyond of you. Use window cleaner to clean window and wiper blades.

**NOTE**

- Worn wiper blades cannot clean windshield and so visibility cannot be protected. Renew wiper blades whenever they are worn.

Driving at Night

Driving at night is more dangerous than driving in daytime because field of vision is more limited. Keep your speed low and keep adequate driving distance.

Driving on Foggy Weather

Open your fog lamps and drive slowly with the guidance of road lane line. It is dangerous to follow only the beyond vehicle's lamps because these lamps may cause optical illusion. Drive the vehicle carefully.

Highways

Tyres	<ul style="list-style-type: none"> Check whether tyres have adequate sidewall dept.
Engine	<ul style="list-style-type: none"> Check whether coolant leaks through radiator or other components of heating system. Check whether coolant level is adequate or not. Be sure that fan belt is properly tight and it is not damaged. Check whether engine oil level is accurate or not.
Fuel tank	<ul style="list-style-type: none"> Check whether fuel level is adequate or not.

- Speed limits in highways are higher than normal roads. That's why, it is more dangerous. A malfunction happening on highways can be dangerous for other vehicles and may cause accident. Do not forget applying observations before daily driving and using highway driving techniques. While applying observations before daily driving, especially fulfil the controls specified in the left table carefully.

Daily Controls (Before Driving)

- Use turn signal lamp to make you purpose clear in advance while you are joining in traffic on highways. Increase your speed adequately when you are on accelerating lane. Pay attention to the vehicles behind you and the conditions of the lane that you joined. Pass the lane in a way that does not hamper the vehicles already on this lane.
- Your opinion about how speed you drive may be unclear in long highway driving. Look at speedometer continuously and keep proper driving distance.

4. While driving with high speed, even a little turning of steering wheel cause the vehicle to move much more. Turn steering wheel slowly.
5. Excessive usage of brake pedal is dangerous because this cause brake pads to wear quite early and cause brake failure. When you want to speed up, provide engine and exhaust brake to be applied effectively.

**NOTE****[Brake Failure]**

- Frequent use of the brakes may lead to the overheating of the brakes; for this reason, the friction power of the brake pads is reduced and the brake effectiveness becomes lower than usual. This phenomenon is called brake fade.

6. Use turn signal lamp to make you purpose clear in advance while you want to quit highway. Quit highway properly considering vehicles behind you in order not to hamper other vehicles.

Driving on Snowy or Icy Roads



CAUTION

- Never speed up suddenly, apply strong brake, slow down fast or take sharp curve with steering wheel on slippery roads.
- There is danger of road handling decrease and brake distance increase between tyres and road surface. Danger of icy road surfaces is much more especially on the bridges, dark places and the places having ponds. Keep your speed low on snowy or frozen road surfaces and do not forget using tyre chains and winter tyres.

Before Driving In Cold Areas

Getting In and Getting Off the Vehicle

Basement may be frozen in cold areas. Be careful while getting in and off the vehicle in order not to slip.

Before Sitting Down the Driver Seat

Clean snow and ice while getting in the vehicle. If you continue to drive with your shoes having snow under, your shoes will slip on pedals and you will not press pedal properly; that's why your driving will be out of balance. Additionally, interior air may be more humidity and this may cause windshield to steam up.

Starting the Engine

Be sure that accelerator pedal runs properly while starting the engine.

Check Fuel Level

Fuel consumption is more while tyre chains are being used. Think of fuel amount that you need to reach the place you would like to go and add fuel tank in advance.

Driving on Snowy or Icy Roads

**Pay Attention to Turning Mode and
Coupling Sense of Steering Wheel**

**CAUTION**

- In snowy roads, water and snow splashed by tyres may be frozen and can make turning of steering wheel hard by collecting on splash guards. Rarely get off the vehicle and clean the collecting snow. Do not use a sharp device to remove the snow. Sharp devices may damage rubber parts.

Check Brakes Rarely**CAUTION**

- When the vehicle is driven or parked on snowy road, ice can happen on brakes that decrease the efficiency. While driving, press brake pedal slowly and check brake efficiency. While checking brakes in another way, pay attention to the vehicles beyond and behind you.
- After being parked, immediately check brake efficiency while starting up the vehicles. If the brakes do not operate well in such cases, drive slowly and depress the pedal a few times until the brakes dry out and work properly.

Cleaning of Snow out of the Window and Under the Body

Use a plastic scraper to clean snow and ice out of the windows in order to protect adequate field of vision. You can clean snow and ice using plastic scraper. Check whether windshield wiper blades are frozen over the window.

Additionally, look under the vehicle and clean ice particles sticking under the body. Be careful not to damage the vehicle.

**RECOMMENDATION**

- Do not use a sharp device to remove the snow and ice. Sharp devices may damage rubber parts.

Driving on Rough Road Surfaces (Sandy or Muddy)

If the vehicle stuck in the muddle, over pressing accelerator pedal will push the vehicle to the deeper point of the muddle and removing the vehicle out of muddle will be much harder. Put stones, tree branches, mantling under the tyres to gain traction power or drive car forward and backward again and again to use vehicle power in removing the vehicle.

In cases where you have to drive through deep muddy roads, using the tyre chain is an effective way for preventing getting stuck.

**RECOMMENDATION**

- While driving on sandy or muddy road, avoid strong braking, sudden speeding and turning steering wheel suddenly. These kinds of movements cause the vehicle to get stuck in muddle and it becomes impossible to remove it.
- After driving on deep muddle, mud sticking to vehicle can damage steering wheel, brakes and power train. Wash the vehicle and remove all the mud and other covering.

The Points to Take Into Consideration While Parking

Parking in the Cold Areas

Do not use hand brake in cold areas. If you leave hand brake engaged, cables and brake shoes may freeze and this situation makes disengaging the hand brake impossible. Be sure that you parked the vehicle while gear is engaged.

Bring gear lever to "1" or "r" position to park while gear is engaged and stop the vehicle on a smooth place. Be sure that gear lever shows "1" or "R" position before stopping the engine in the vehicle having leveller and stop the vehicle on a smooth place.

Do not forget putting chock towards the tyres. If it is possible, park the vehicle in a garage to make it easier to prevent components to be frozen and to start-up engine.



CAUTION

- If you park the vehicle to a place getting too much snow, snow collecting around the vehicle can limit the ventilation. Starting up the engine under these circumstances may cause exhaust gases to enter interior and this situation may end up with poisoning of carbon monoxide. For instance, apply preventive operations by cleaning the snow around the vehicle.



NOTE

- Fulfil the requirements to prevent engine's cooling in vain while parking in open air. For example; place the vehicle in a way that front part of the vehicle will be towards the wind.
- Do not park the vehicle under the trees or building drips. If doing so, ice particles may fall onto the vehicle.

The Points to Take Into Consideration While Driving in Hot Regions

Engine will be prone to over heating in the places having high ambient temperature. Pay attention to the following points in order to prevent engine to over heat.

**CAUTION**

- Do not add well water, river water or any other kinds of strong water into engine cooling system. This water will quicken rust and tartar forming.



Cooling system's performance will decrease if foreign material (insect, mud and etc.) sticks to radiator air funnels. Check air funnels against choked up and clean foreign materials using low pressure water.

**RECOMMENDATION**

- When ambient temperature is high, evaporation of battery fluid will be faster. Frequently check battery liquid level and add liquid if necessary.

The Points to Take Into Consideration While Driving in Cold Regions

Apply following warnings in the regions under snow and mountain regions, ski centres and other regions being excessively cold and or getting excessive snowfall. Use these warnings in other regions in winter. Have Isuzu Service to do winter preparation that is explained below for your vehicle. Apply these preparations before going to a cold region.

**CAUTION**

- Do not cover front of radiator with newspaper, paperboard or other flammable material to increase the temperature of coolant.
- Have nearest Isuzu Service check the thermostat if you don't increase coolant temperature providing engine to heat.
- If you park the vehicle to a place getting too much snow, snow collecting around the vehicle can limit the ventilation. Starting up the engine under these circumstances may cause exhaust gases to enter interior and this situation may end up with poisoning of carbon monoxide. For instance, apply preventive operations by cleaning the snow around the vehicle.

Coolant

Use a mixture of tap water and engine coolant subject to lowest temperature that your vehicle can run with in order to prevent coolant to freeze and damage to engine.

Replacement of Engine Oil

SAE10W-40							
-30	-20	-10	0	10	20	30	40 (°C)
-22	-4	14	32	50	68	86	104(°F)
AMBIENT TEMPERATURE							

Use recommended engine oil for all seasons.

Recommended engine oil viscosity degrees

SAE 10W-40

ACEA E6
(Low Ash)

Fuel**CAUTION**

- Please only use low-sulphur diesel fuel (50 ppm or lower sulphuric content) or super low-sulphur diesel fuel (10 ppm or lower sulphuric content) always for the engine of the model with diesel particulate diffuser (DPD). Use of low quality diesel fuel, addition of a substance such as cleaner into the fuel in the tank or filling the fuel tank with a fuel or diesel fuel based on gasoline, kerosene or alcohol will damage the fuel filter and lead to lubrication problems in the injector components that are lubricated with fuel. In addition, this practice may damage the operation of the engine and DPD, and the exhaust emission cleaning system, and this may lead to the malfunction of the systems related to the engine. In an inappropriate fuel is filled into the tank accidentally, please empty the fuel from the system. If this measure is not performed, a fire or permanent damages may occur when the engine is started.
- If any other fuel apart from low-sulphur diesel fuel or super low-sulphur diesel fuel is used in the vehicle with DPD, the resulting malfunctions will not be covered by the warranty.
- Open the fuel tank filler cap slowly. If you open it quickly, the fuel may splash.

If you go to a cold region while using diesel fuel that freezes at higher temperature than others, is used in hot region in winter, fuel may freeze. As ambient temperature will decrease, fuel in fuel tank and pipes may freeze making it difficult for engine to start-up.

**NOTE**

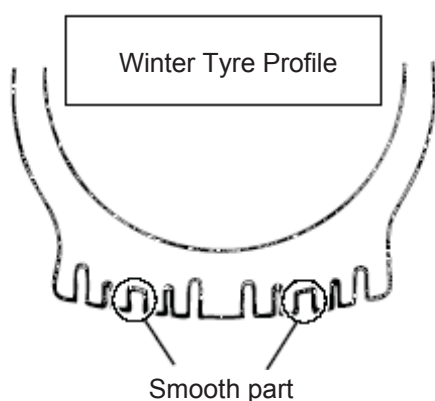
- Diesel fuel specifications change as per the season and the region.
- Put enough fuel into the fuel tank to reach the place to go while going to a cold region. When you arrive at the cold place, fill the fuel tank with fuel having low freezing temperature.
- While bringing the vehicle to a cold region over a car ferry, go in the ferry with a little fuel in the tank and then after reaching the region, fill in the fuel tank with a fuel having low freezing temperature.

When Ice Prevents You From Putting the Key into the Door or Opening the Door

If you try forcing the key to put in the door, you may bend the key. If you try to open the door pulling with power more than enough, rubber joint around the door may loosen or be damaged. Use warm water to melt the ice and then wipe the water quickly and open the door.

If wipers and electric door mirrors or electric windows freeze, use warm water to melt the ice and then run the system. After that, wipe the water. If the key of frozen system is opened, this will damage the system or empty the battery.

Winter Tyres



Use winter tyres having the same dimensions with standard tyres. In addition, use tyres having the same dimensions with the standard tyres. A winter tyre reaches its wear limit when tyre sidewall curves reach to half of new tyre depth. During wearing, smooth parts which states that tyre will not be able to perform enough on snow will be visible on curves. Renew tyre.



CAUTION

- Do not turn the steering wheel suddenly and do not brake abruptly. Use engine brake to decrease the speed. When applying the brakes on snowy or frozen road, depress the brakes a few times smoothly instead of depressing it hard one time. Depressing the pedal hard one time may be dangerous because it may cause vehicle to slip or spin.
- If you use exhaust brake while the vehicle is not filled with load, speed decrease upon exhaust brake may cause vehicle rear part to drift from side to side. Pay attention to the warning.
- Avoid driving with high speed on dry road if your vehicle has winter tyres.
- Obey lawful requirements while using winter tyres.

Cleaning of the Vehicle after Driving On Snowy Roads**CAUTION**

- Clean sticking snow onto the splash guards and brake hoses. Otherwise, it can damage the components. After driving on salted road, wash underside of the vehicle immediately in order to prevent rust occurring. Water blowing under high pressure is an effective way.
- After washing the car, dry the door apertures by wiping them.

**RECOMMENDATION**

- Vehicle speed sensors are put in the tyres in the model having anti-lock braking system. While cleaning snow, ice and other covering, pay attention to not damaging components.
- Do not use a sharp device to remove the snow. Sharp devices may damage rubber parts.

Usage of Tyre Chains

Before winter arrives, make preparations by putting tyre chains, adjusting their length and checking their damages.



CAUTION

- The exhaust pipe and muffler will be very hot right after use of the vehicle. Be careful about not to touch these components. In addition, do not renew a tyre while diesel particles diffuser renewal operation is continuing because exhaust temperature is extremely high by this way.
- Be careful not to be damaged while dealing with tyre chains around the vehicle.

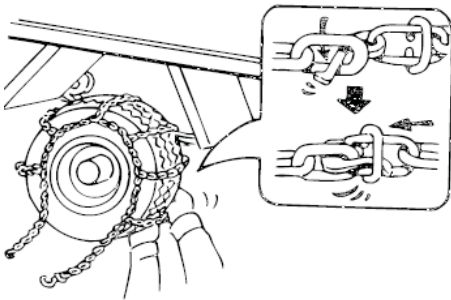
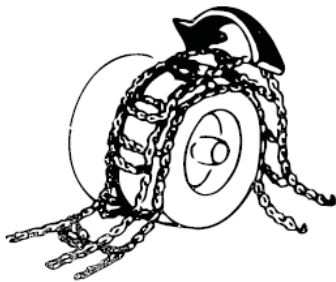
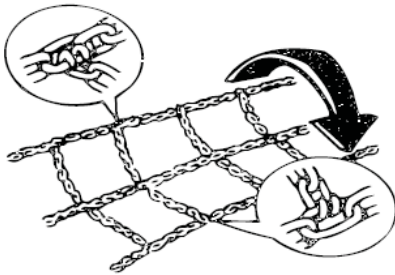
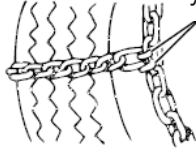


RECOMMENDATION

- Tyre chains are not put on front tyres. Put chains suitable to tyre dimension to rear tyres. Contact to Isuzu Seller for more detailed information.
- When tyre chains are put to the vehicle, drive under 30km/h and avoid driving on the roads apart from snowy or icy ones.

Putting Tyre Chains

Tyre chain



1. Make sure that tyre chain is not hedged and place tyre chain in a way that volute parts will be toward outside



NOTE

- Fold tyre chains in two and place it over outside tyre that is closer to you. And then open up other half of tyre chain and place it to inside tyre.

2. Pull each side of the tyre chains as much as possible. Knit up inside hooks at first and then outside hooks.



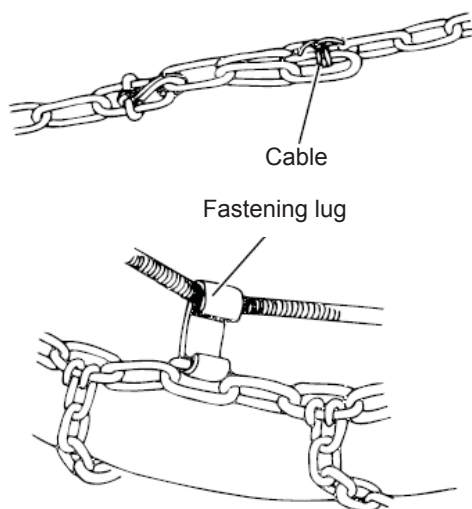
RECOMMENDATION

- When you buy tyre chains, try putting it on the tyres and cut them in order to make them suitable to tyres if they are too long.



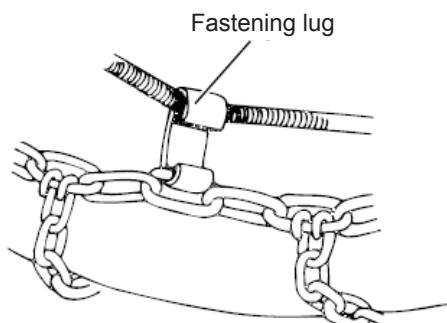
NOTE

- For double tyres, knit up the middle, inside and outside hooks by means of this processing.



3. Latch excess part of the chain with cable in order to prevent it from hitting vehicle body or brake pipes.
4. Hook fastening lugs over chain band in a way that fastening lugs will be equal around the band. (Fastening lugs towards outside)
5. After putting the tyre chains and driving for a while, check whether chains are loosened or opened.

Removing a Tyre Chain



1. Remove chain band and all the cables, open outside hooks and finally open inside hooks.
2. Drive the vehicle and remove tyre chain.



NOTE

- For double tyres, knit up the middle, inside and outside hooks by means of this processing.



RECOMMENDATION

- If a tyre chain is broken or opened partly while vehicle is moving, it will damage vehicle body. Immediately fix it.
- If there are double tyres on the vehicle, be sure that you use tyre chains designed for double tyres.
- Do not put tyre chains designed for single tyres on outside tyres if the vehicle has double tyres.
- Tyre chains may damage to sidewalls of radial tyres. Be sure that you use tyre chains designed for radial tyres or use winter tyres.



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Before Use



CAUTION

Do not create a
risk of electric shock



CAUTION: DO NOT OPEN THE DEVICE'S COVER (OR ITS REAR SIDE) IN ORDER TO REDUCE THE RISK OF ELECTRIC SHOCK; THERE ARE NO PARTS IN IT WHICH CAN BE MAINTAINED BY THE USER. CALL ONLY AUTHORIZED SERVICE PERSONNEL FOR SERVICING.



The arrow-head lightning symbol in the equilateral triangle stands for a warning against non-insulated "dangerous voltage" which may be enough to create electric shock in the device cab.



The exclamation point in the equilateral triangle stands for a warning related to the availability of significant use and maintenance (repairing) instructions in the text provided with the product.



Always drive the vehicle safely. Do not allow the device to distract you during driving and always be on alert against all kinds of driving conditions. Do not change its settings or any one of the functions. Before making such procedures, pull off the road safely and in accordance with the rules.



Do not drive for a long period of time under extremely low or high temperatures. (5 - +50oC)



Do not open the device's cover or its rear side in order to reduce the risk of electric shock. There are no parts in the device which can be repaired by the user.
Call only an authorized service personnel for servicing.



Do not open the device's cover or its rear side in order to reduce the risk of fire or electric shock. There are no parts in the device which can be repaired by the user. Call only an authorized service personnel for servicing.



The temperature of the device can be very high outside of the device; please use the device after installing it into your vehicle correctly.



This device cannot play 8 cm discs (use only the 12 cm discs).

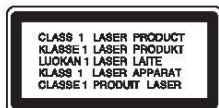
Before use

CAUTION: This product uses a Laser System.

Please read this manual fully in order to ensure the correct usage of the device and preserve the manual for future use.

Contact to an authorized service centre if the device requires maintenance. Conduct of the procedures – whose checks and settings are stated herein – may lead to exposure to dangerous radiation.

Do not try to open the cover in order to prevent direct exposure to the laser beam. When it is uncovered, there will be a visible laser diffusion. **DO NOT LOOK DIRECTLY AT THE BEAM.**



Disposal of old devices



1. The sign of waste basket with wheels which has a cross on it – put on the product – means that the product is within the scope of European Directive 2002/96/EC.
2. All electrical and electronic products are disposed via the collection facilities assigned by the government or local authorities apart from the house wastes.
3. Wrapping the old device in a correct way will aid preventing the potential negative effects on the environment and human health.
4. For more detailed information about the disposal of the old device, please contact with your local office, house waste disposal unit or the store from which you purchased the product.

**CAUTION**

The device will show the following when it is connected incorrectly.

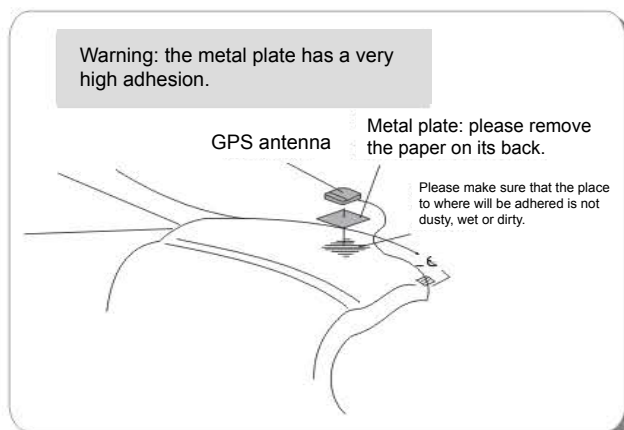
- Antenna on port short circuit check. **“ANTENNA ON PORT SHORT CIRCUIT CHECK”**

After connecting it once again, restart the device.

Before use

☐ **GPS antenna installation**

The GPS antenna must be mounted in the vehicle near the window.

**NOTE:**

the windows of some vehicle models do not allow the passage of GPS satellite signals. In such cases, the GPS antenna must be installed at the exterior of the vehicle.

Before Use

☐ DVD Disc

The DVD player can play the DVD discs signed with the format given below

DVD/VCD/CD/MP3/MPEG/CD-R/WMA/JPEG



The DVD player does not play the DVD discs whose area code is not suitable. (the DVD player is not in compliance with the whole area codes.)

Maintenance of the DVD player

Please use the conventional circular discs; do not use irregular and non-circular discs, otherwise, these discs may get stuck in the DVD player or DVD player may not play them correctly.

Before playing the disc, please check for cracks, scratches or deformation.

Such discs may not be played and may cause the product to be broken down. Do not use such discs.

Do not touch on the recording surface (unprinted side) when using the disc.

Please put the disc into its cover when it is not used.

Do not place the disc under direct sunlight or in a place which has a high temperature.

Do not remove the tag, do not write on the disc surface or do not paint it and do not use chemicals on the disc.

Please wipe the disc from the centre to the edge with a smooth and dry cloth. If the vehicle has central heating, the internal components of the DVD player may get dampened. The moisture may cause the DVD player not to operate properly. Thus, in such an error, please wait for 1 hour so that your device dries out. Wipe the moisture on the disc with a smooth cloth.

If the vehicle is driven on a bumpy road, DVD may get interrupted.

Before Use

DVD disc

Certain special feature may not be used on certain discs. Some of them may not be played at all.

DVD digital versatile disc (also known as "Digital Video Disc") is a popular optical disc storage medium format. Generally, it is used for video and data storage.

Most DVDs are have the same size with CDs; however, they can store six times more data.

DVD Menu

DVD may not display the title menu where there is double title. In addition, the DVD title menu shows some items, sub-menus which come during playing, Dolby Digital and PCM audio, subtitle and the language which changes as per writing.

The device only plays the video format (in the video mode) when playing the DVD-R/DVD-RW discs; it does not play PC files.

Recorded DVD-R/DVD-RW discs may not be played depending on the disc features, its scratches or the condensation of the device's lens.

Discs – which are recoded via personal computers - may not be played; this depends on the installation and the application format; thus, please use a suitable recording format.

CD-R/CD-RW Disc

The DVD player can only play the closed CD-R/CD-RW Disc.

CD discs – which are recoded via personal computers - may not be played depending on the disc features, its scratches or the condensation of the device's lens. Discs – which are recoded via personal computers - may not be played properly; this depends on the installation and the application format; thus, please use a suitable recording format.

When CD-R/CD-RW is exposed to direct sunlight or high temperatures in the vehicle, it may not operate properly. DVD player cannot operate properly with the title and data of the recorded CD-R/CD-RW Disc. (Under the audio transmitter) You will wait more for CD-RW than the traditional CD or CD-R.

Before using CD-R/CD-RW, please check the warning first.

The files are compatible with Id3 label version 1.0 and version 1.1 formats in order to display the special information (disc title), Song (song title) and artist (singers).

Before Use

The enhancement function is only effective only when 32,44.1 and 48 KHZ frequency MP3 files are played. (16, 22.05,24,32,44.1, 48 KHZ can be played) The acoustics of the MP3 files can generally be increased after the increase at the speed of byte. This player can play the recorded audio at the byte speed between 8 KBPS and 320 KBPS. We recommend you to use recorded discs that have a byte speed of 128 KBPS or higher so that you can enjoy a reasonable audio quality.

MP3 Files (CD-ROM)

MP3 is a kind of audio compression method which should be brought to the Audio Level 3 in the MPEG standard. Audio compression method is already being used as a standard mode in personal computers. MP3 can compress the original audio data up to 10 percent of its original size and keep the audio quality at a high level. This means that a CD-R or CD-RW disc can store approximately 10 Audio CDs.

In this case, it will not be necessary to change CDs constantly for long-term music listening. This player allows to play the contents of any disc compatible with ROMEO and JULIET file system along with ISO9660 Levels 1 and 2, as well as the MP3 files in the CD-R and CD-RW discs.

It can play the discs which are recorded as compatible with multi-session. MP3 files are not suitable for the transmission of data which are written as groups. The maximum number of characters to display the file names is 32.

If a file is recorded via the ROMEO and JULIET file system, it can only display 32 characters. A disc including MP3 files and audio data (CD-DA); for example, when it is CD-EXTRA and MIXED-MODE CD, transition between these two different formats (MPE and CD-DA) can be made in order to play both of them. The selection of playing order or the other folders to be operated will be the writing order used by the writing software. For this reason, the playing order awaited may not be the same with the actual playing order. However, some software allow the adjustment of the playing order.

Basic Procedures

☐ **Practical manual for the buttons on the main unit****[Volume Button, Right and Left]**

We are increasing the volume by turning it to right on dial devices. We are decreasing the volume by turning it to left. We can turn off the device by keeping it pushed.

[DVD Disc Insert and Eject Button]

When you insert a disc, the device goes into the DVD mode automatically and when you push on thÿs button when the device is on, it ejects the disc automatically.

[Band Radio Button]

If the BAND button is pushed when the device is off, the device will be turned on go into radio mode directly. If it is pushed when the device is on, it allows going into the radio mode or enables transition between FM1, FM2, FM3 and AM bands.

[MUTE Button]

Regardless of the audio level, it is used for instant audio off and on.

[SRC Function Button]

It allows turning the device off-on and transition to the main menu. In order to turn on the device when it is off, you should push on the SRC button shortly for one time. In order to turn off the device when it is on, you should push on the SRC button for a long time.

[IR Receiver Port]

This does not operate properly with the remote control if the window is covered.

[System Setup Button]

The SETUP button – which allows you to go to the settings – is displayed ob the top - left side of the screen when you go to the main menu by pushing on the SRC button when the device is on.


Basic Procedures

[DVD Button]

When this button is pushed when the device is off, the device will be turned on and it will go into the DVD mode directly. If it is pushed when the device is on, it allows access to the DVD menu.

[ Receiver Button]

It is used in order to answer an incoming call.

[ Hang Up Button]

It is used in order to end a call.

[System Reset Button]

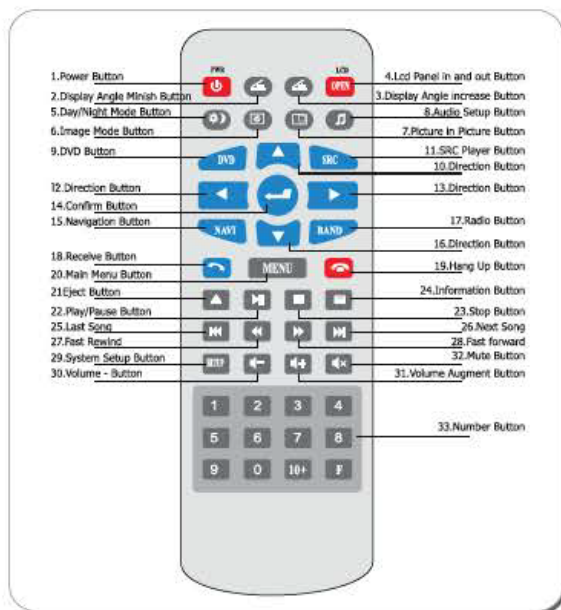
It resets without deleting the saved settings if a freezing or locking happens on the device for any reason.

[Power Button]

When it is pushed shortly, it turns on the device and when it pushed for a long time, it turns off the device.

Basic Procedures

Remote Control Buttons



1. [Power Button] If it is pushed on when the device is off, it turns on the device, when it is pushed on when the device is on, it turns off the device.
2. [Viewing Angle Decrease Button] [This button has no function on the model with a fixed panel.]
3. [Viewing Angle Increase Button] [This button has no function on the model with a fixed panel.]
4. [LED Panel Interior-Exterior Button] (This button only operates on the single model.)
5. [Daytime/Night Mode Button] It allows transition between the daytime and night modes.
6. [Picture Mode Button] It allows transition between different picture mode settings, brightness and colour tone (between 0-40).
7. [PIP (Picture In Picture) Button] It operates the picture in picture function interface.
8. [Audio settings button] It allows access to the menu where special audio settings can be made.
9. [DVD Button] It allows access to the DVD player function.
10. [Direction Button] Up
11. [SRC Device Button] This button is pushed on in order to gain access to the main menu.
12. [Direction Button] left
13. [Direction Button] right
14. [Ok Button]

Basic Procedures

15. [Button] It allows access to the GPS interface and if it is pushed for a long time, it allows exiting from the GPS.
16. [Direction Button] down
17. [Radio Button] It allows access to the radio function and if it pushed for a short time consecutively, it allows transition between FM1, FM2, FM3 and AM.
18. [Call Answering Button] After making the Bluetooth match-up, this button is pushed on in order to answer the call on the Bluetooth interface.
19. [Hang Up Button] After making the Bluetooth match-up, this button is pushed on in order to end the call on the Bluetooth interface.
20. [Main Menu Button] By being pushed one by one, it allows transition to the main menu and to the settings such as volume level adjustment and video settings in an order.
21. [Disc Ejection Button] If this button is pushed on, the disc will be ejected from the device.
22. [Play/Pause Button] If this button is pushed when the disc is inserted, the disc begins to play and if it is pushed on once again, it is paused.
23. [Stop Button] This button is pushed on in order to stop the playing procedure.
24. [Information Button] When it is pushed, information such as title and track/section order number relevant to the playing programme are displayed.
25. [Previous Track] It rewinds the song when it is pushed for 1 time when listening to Track CD. When it is pushed repeatedly, it allows transition to the previous songs. When listening or watching MP3 or DVD, it allows access to the precious track or section each time you push on it.
26. [Next Tract] It is pushed on for a short time in order to play the next track.
27. [Fast Forward] It is pushed for a short time in order to fast forward the disc.
28. [Fast Backward] It is pushed for a short time in order to fast backward the disc.
29. [System Settings Button] it is pushed on for a short time in order to enter into the system settings.
30. [Volume Button] It is pushed on for a short time in order to decrease the volume.
31. [Volume Augment Button] It is pushed on for a short time in order to increase the volume.
32. [Mute Button] It is pushed on for a short time in order to turn on/off the mute function.
33. [Number Button] It is for numbers between 0 and 10.

Basic Procedures

☐ **Turning on/off the device**

When the device is turned off, the SRC button over the device's front panel or on the remote control is pushed. When the device is turned on, it is required to push on one of separate SRC buttons for a long time in order to turn off the device.

☐ **Main menu**

When the device is turned on, if the SRC button over the device's front panel or on the remote control is pushed for a short time, it allows access to the menu which will be displayed as given below.



The main menu has 17 function buttons as given below.

(DVD) Due to the fact that 800x480x pixel high resolution high definition coloured digital panel is used, it has a very good performance in terms of colour saturation, colour and colour reversal response feature and its colours are able to provide a higher sensitivity during video and GPS operations. The device can play DVD/VCD/CD/MP3MPEG/CD-R/WMA/JPEG format discs.

(V-CDC) The device provides access to a music memory that provides 7.5 hours of playing capacity which is equal to the playing duration of approximately six normal discs.

Basic Procedures

[USB] After connecting an USB device, WMV/AVI/MPEG/PM3/MP4/JPEG formatted files can be played by touching on the USB icon.

[Card] After inserting the SD Card, WMV/AVI/MPEG/PM3/MP4/JPEG formatted files can be played by touching on the SD icon.

[TV] If TV signal is available, this icon should be touched on in order to access to the TV function. The device can support CMMB, DVB-T, DMB-TH signals.

[Radio] Radio function can be accessed by touching on this icon; more powerful and determined signals can be obtained with a higher-sensitive frequency, and the device can store 32 AM/FM station in its memory.

[Bluetooth] The DVD device supports your mobile phone for making a call in the hands-free mode if your mobile phone has the Bluetooth function; it can connect your mobile phone to the DVD in the hands-free mode.

[iPod] When the iPod device is connected, iPod function can be accessed by touching on the iPod icon.

[AUX] It functions if there is an external video signal input.

[GPS] GPS icon should be touched on in order to access to the GPS function.

SETUP Setup Button: It allows entering the settings of Video (motion video), Audio, Time, etc.

EXIT EXIT Button: It allows exiting from the main menu. **OFF** Off Button.

AUDIO Button Audio Level Button: This button is pushed in order to increase/decrease the Button Audio Level.

COLOR Button Colour Button: This button is pushed in order to change or fully switch off the button colour.

DAY/NIGHT Daytime-Night Mode Button: This button is pushed in order to adjust the display brightness; the display is brighter in the Daytime Mode. If the button is pushed once again, the mode becomes the Night Mode and the brightness of the display is reduced or fully closed.

KEY It allows access to the Key (spectrum) function.

Basic Procedures

☐ DVD Basic Operation Information

When a disc is inserted, the interface directly goes into the DVD mode; if it has another interface, the DVD function can be accessed by pushing on the DVD button on the front panel or the icon on the main menu; the top and bottom menus will appear when you touch the empty space on the screen as shown below.



The descriptions of the buttons are as follows:

MENU Touch on this button in order to go to the main menu;

PIP Touch once in order to open the PIP function and touch one more time in order to close it.

















2-ZONE Touch on this button in order to setup the rear area monitor output.

EXIT Touch on this button in order to exit from the DVD settings interface.






AUDIO Audio level adjustment and pause

MENU This menu is the secondary menu; it is pushed on in order to pause and access the section selection interface while the device is on. It enables the listing of all the content in the disc and allows you to select the section you desire.

Basic Procedures

-  This button is pushed on in order to start the previous track or DVD scene.
-  This button is pushed on in order to start the next track or DVD scene.
-  It is pushed on in order to stop the DVD playing operation.
-  If there is a Disc in the device, it plays when this button is pushed, and when it is pushed again, it pauses or stops the operation; if it is pushed on during its paused or stopped, it enables the playing operation to continue.
-  This button is pushed on in order to access the DVD settings menu.
-  This button is pushed on in order to return to the DVD settings menu.
-  Disc ejection button: this button is pushed on in order to eject the disc in the device.
-  This button is pushed on in order to display the playing title and the program serial number.
-  This button is pushed on in order to fast backward the disc.
-  This button is pushed on in order to fast forward the disc.
-  Transition between word titles can be made by pushing this button when the device is reading a multi-language disc.
-  This button is pushed on in order to see the playing title and the program serial number.
-  Transition between tracks can be made by pushing this button when the device is reading a multi-track disc.
-  This button is pushed on in order to access the repetition mode.
-  This button is pushed on in order to make the picture the menu logo when the device is reading a picture.
-  It means playback control and it has two functions which are interactive features and motionless picture at high sensitivity. It enables cleaning the motionless or motion pictures from the menu screen and finding a more user-friendly picture with the help of the menu screen which emerges during the human-computer dialogue; DVD system settings button allows access to the DVD settings menu.

Basic Procedures

-  The button is pushed on in order to display/close the highlighted cursor key.
-  It is possible to move in the directions of up, down, left and right by pushing on these buttons  by pushing the button the selection is confirmed and the section begins to play.
-  This button is pushed on in order to display/close the digital panel keyboard.
-  It enables fast access to the desired track in the DVD/USB/SD CARD Mode.

☐ DVD system settings

Push the SETUP button below the DVD settings menu in order to access the DVD settings; there are 4 types of DVD setting: as detailed below, normal setting, speaker setting, default setting and password setting:



TV Display Mode Setting



Angle Symbol Setting



Language Setting



Subtitle

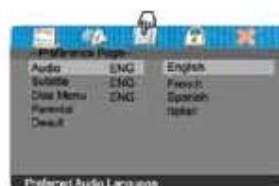
Basic Procedures



Logo Setting



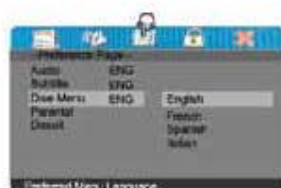
Downmark Mode Setting



Preferred Audio Language



Preferred Subtitle Language



Preferred Menu Language



Preferred Parental Control



Load Factory Setting



Change Password

(Default setting will operate without any disc; there may be some differences in the DVD settings from one device to another; for this reason, implement the procedures as per your own device)

Basic Procedures

☐ Virtual CD driver settings (V-CDC)

Virtual CD driver, which is shown in the picture below, is accessed by pushing on this button under the main menu. Please check the function of the button as given below:



On the CD recording menu screen, you can see the (note symbol, the album listening function within the vehicle) on the left bottom, (function to listen the albums which are stored in the memory with numeric intervals from 1 to 5) on it right, (bin symbol; function to delete the stored albums) on the upper section and icons for (1) recording and (2) fast recording when listening.

DVD cannot record mp3. Album recording will begin upon clicking on the album sequence number, which is at the bottom, after clicking on the upper (1) and (2) icons as per the selection. If desired, the deletion procedure is conducted via the bin symbol with the same order. (It does not record films and mp3.)

Basic Procedures

Settings:

1. When a Track CD is inserted in the device, it automatically goes to the virtual CD menu.
2. When copying the CD to the virtual CD driver, please use normal compaction (recording during listening) or fast compaction (recording in the silent mode).
3. When the virtual CD is playing, it can be played or deleted with the file control button.

USB settings

When you insert the USB device into the USB slot appropriately in order to play a file via USB, the device goes to the USB menu given below. Touch on the USB empty menu so that the button can be displayed.



This menu, too, has the same function and settings with the DVD menu. The device supports USB device connection when working.

Capturing an image in order to make a DVD start-up logo

This functions operates only when the USB and SD connection is established or during mp4 reading. Image format is JPG and the resolution value may change between 720x500 and 1M.



1. When you are displaying your favourite picture or mp4, the image will freeze if you push on the stop button.

Basic Procedures




2. Go to the 2nd settings menu as shown below by pushing on the next page button.

3. **SETUP** Go to the DVD menu interface by pushing on the SETUP button; the following image will appear;

Click on the "Captured" by pushing on the "Logo Type" option in the menu. Choosing the option which emerges on the "Captured" which we selected in the same menu will be sufficient in order to delete the image on this menu. Push on the X symbol in order to exit from this menu.

Click on the "Captured" by pushing on the "Logo Type" option in the menu. Choosing the option which emerges on the "Captured" which we selected in the same menu will be sufficient in order to delete the image on this menu.

Push on the  symbol in order to exit from this menu.

4. If you desire to put any image on the display after making these settings, pausing the image and pushing on the "Capture" button will be sufficient.

Basic Procedures



When the statement of "wait capture logo..." disappears, the desired image will be successfully captured.

☐ SD settings

In order to play a file via SD, we should insert an appropriate SD card to the slot and select the SD card from the menu. We can use and access the SD card content and settings just like DVD and USB. The device supports insertion of an SD card when it is on.

☐ TV settings

If the TV icon on the main menu is touched, we will go to the TV mode whose menu resembles the image given below:



Basic Procedures

When clicked on the display, the following functions will be seen: SETUP function on the left bottom, SEARCH function and PIP on the right upper part, 2 div. exit function.

When clicked on the setup, TV display and volume adjustment image will emerge. The TV display must remain the TV acs BG position.

Automatic recording will begin when SEARCH is opted.

Frequency and channels are not being used since they are passive.

The search must be conducted once again when the vehicle's position is changed.

Button functions and settings are as follow:



Volume level adjustment and mute switch



Setup button; setup menu can be accessed by pushing on this button.



The device is fixed as PAL-BG default setting in accordance with the Turkish analogue TV imaging system.

Basic Procedures



Button enables you to go to the previous channel.



Button enables you to go to the next channel.



You can initiate the TV channel search by pushing on the search button.



The device will save the searched channels in its memory up to 100 channels. If the panel is touched on, the device stops and shows the channel numbered 1 when it is ready. The device can store 100 channels at the most; if the receiving quality is not good, please check whether the TV antenna connection is good or not. If the signal is weak or the vehicle is fast, it normal for the TV receiving quality to be low and this does not mean that there is a failure.

Basic Procedures

☐ Use of the radio function

Radio mode can be accessed by touching on the radio icon on the main menu and you can switch among AM/FM1/FM2/FM3 bands with BAND button.



Functions and use of the key:



Band selection key: the radio band can be changed as AM/FM1/FM2/FM3 by pushing on this key.



Search key: It is used in order to search for the channels automatically and to store them in the memory during search.

PTY key, which is a program type key, enables perception of the codes that belong to the program type information sent with each program and that shows one of the 31 program types, and enables the Receiver to record by going to the similar programs in accordance with this code.



Limited adjustable key is used for making a semi-automatic search in the high and low frequency.



It is used for upwards and downwards channel search.



When the channel in the middle of this circle is used, the digital channel menu appears as shown in the picture.

Basic Procedures



Spectrum key is used in order to access the spectrum menu.



Mute key is used in order to pause volume or to resume it.



Volume bar; you can touch on the left side of the bar in order to decrease the volume and on the right side of the bar in order to increase it, or you can realize this operations via a remote control or on the main menu.



RDS function; RDS can only be used in European countries. AF key; instead of frequency table, it sends each receiver information - belonging to the same program with the AF table - to the same area or a nearby place; the receiver stores the table information in its memory and reduces the search time. This feature is very useful in terms of receipt of the signal.

TA key, which is the traffic notification detection key, is for seeing whether a traffic notification is sent or not, and the receiver automatically prioritises the traffic notification over the TV program and when the airing of the traffic notification is finished, it goes back to its original state.

Basic Procedures



Exit key is used in order to exit from the digital channel menu interface.



Delete key is used in order to delete the entered digital channel value.



Confirmation key; after entering the digital channel value, the information is confirmed by pushing on this key; digital keys are between 0 and 9.

Caution: If any key is pushed on when the device is in the automatic channel search, the search process stops. The device can store total of 32 channels (24 FM + 8 AM) in its memory.




Use of the Bluetooth function

This system has the Bluetooth communication function. If your mobile phone has Bluetooth function, you can connect it to the DVD device and you can answer your calls via Bluetooth. In order to do this, go to the Bluetooth interface seen in the following picture by touching on the Bluetooth icon in the main menu. The way of operation and function of each key is as follows:

Basic Procedures

Basic Procedures

First of all, confirm that your Bluetooth function is operational.

Touch on the  icon on the Bluetooth main menu. The Bluetooth setup interface will appear as shown below:



Push on this key in order to make connection with the mobile phone signal,

Push on this key in order to exit from the matching process,

The system connects to the mobile phone automatically when this key is pushed on.

The system initiates the process of connecting to the mobile phone when this key is pushed on.



The system disconnects the phone when this key is pushed on.

If this key is pushed when a call is received, the system answers automatically.

Basic Procedures





Making a phone call


After establishing connection between the system and the mobile phone, you can dial the numbers via your mobile phone or the number keyboard which you can access by pushing on the  key on the Bluetooth main menu again, then push on the  key. After your telephone is connected successfully, the system transmits the audio of the mobile phone to the DVD audio system and you can hear the person – with whom you are talking – via your vehicle's speakers.

Answering a phone call

When a call is received, the mod will go back to the Bluetooth mode automatically regardless of the device's current mode. The audio, too, will turn into a call ring. In the meantime, the calling phone's number is displayed in the information area.

By pushing on the  or  key, you can answer the call or you can hang up the phone. By touching on the ... (M) key on the numerical keyboard, you can make the calling person's voice come out from the mobile phone instead of the vehicle DVD's speakers.

Ending the call (hang-up)

Push on the  key in order to end the call, to exit from the Bluetooth interface and to go back to the previous status.



By pushing on this key, you can switch between the mute and non-mute functions,



and you can decrease the volume by pushing on the left side of the volume bar and you can increase it by pushing on the right side.

Basic Procedures



Playing via Bluetooth



By pushing on this key, go to the Bluetooth audio playback interface. If your mobile phone has the function of A2DP, this feature operates and the following interface appears:



Previous track button

Next track button

Play/pause button

Stop button

Bluetooth system volume + key

Bluetooth system volume – key



Basic Procedures

**iPod function**

Connect the iPod from the iPod connection point on the device; touch on the iPod icon and the system will go to the 1st iPod menu; select the tracks as shown below and go to the 2nd iPod menu:



The functions of the keys are as follows:



By pushing on this key one or two times, you can play those tracks or part again; you can play the last track or the part by pushing on this key for the 2nd time and keeping it depressed.



By pushing on this key, you can play the next tract or part.



By pushing on this key, you can initiate playing and you can pause it by pushing on it one more time when it is in playing mode.



You can return to the playlist menu.



Shuffle



Repetition

Basic Procedures

☐ AUX IN

If you wish to connect an external audio/video signal source to the device, go to the external video interface by clicking on the AUX IN icon.



AUX function enables displaying and monitoring the external audio/video signal, but it cannot control the external signal. If there is no video signal input, the signal connection information will be displayed on the screen when the AUX IN icon is clicked on.

☐ Use of the GPS function (Optional)

When you touch on the NAVI icon or NAVI key of the main menu interface, the system will go to the GPS mode.

Points to be taken into consideration before using the navigation system:

First of all, make sure that the satellite antenna is connected correctly. When you go to the navigation after turning on the device, it receives the satellite signal, updates the messages and begins operating normally after a few minutes.

Make sure that the vehicle is not completely under a bridge, in a tunnel or near a tall building; otherwise, signal receipt may be affected.



Basic Procedures

MAP

Due to fast development of urban and extra-urban roads, the information related to the streets and the traffic infrastructure in cities are changing very frequently. GPS Software Company will update the e-maps constantly; for this reason, check for updates issued by the GPS Software Company from time to time. Due to the changes in the traffic rules or temporary traffic inspections, the route guides may be different from the real-life traffic inspection conditions. Please use your vehicle in accordance with the factual road conditions, traffic inspections and rules.

Due to the fact that actual road traffic conditions may change from time to time, the system can only provide a guidance service which can be a reference for the driver. For example: if the driver knows the territory, it will be more appropriate for him/her to choose the route which he/she know better instead of following the route recommended by the system.



TEMPERATURE

Normal operation temperature range is between -50°C and +50°C, and the radio may not operate normally outside of this range. In such a case, you should try to get the temperature to the normal operation temperature again.



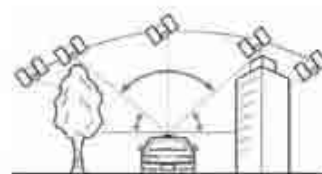
Basic Procedures

IMPACT PREVENTION SYSTEM

This product is designed to be resistant against impact and the radio is not affected from vehicle vibration under normal conditions. Do not turn on the radio in places where the road conditions are poor in order that the product can provide service for a long time normally.

**RECEIPT OF SATELLITE SIGNAL**

This system can always receive at least 8 satellites' signal. Most of the time, if it is receiving only 3 or 4 satellites' signal, the system can calculate vehicle's location precisely. However, sometimes, the signal receipt quality may be affected under adverse weather conditions or when the vehicle is parked near a tall building.

**ERROR INFORMATION**

When the system is receiving the satellite signal normally, standard satellite direction detection system's coverage area is 11 km (7 miles). When the vehicle is travelling on parallel roads, the vehicle may appear as it is on the parallel road rather than the actual road, even if the system has automatic error correction function.

***Main Functions**

A. GPS function: It is enabled by the SD Card users in which GPS software is available.

Basic Procedures

B. Music Media player: It supports mp3/wma/wav file formats.

C. Video player: It supports more than 19 file formats such as mp4/mpeg/mpg/asf/wmv/mov/avi/3gp/3g2/k3g/m4v/mqv/wm/divx/mkv/ogm/wmx/mlv/mpv. It supports functions such as adding and deleting file, adjusting the feed rate, time indication, pause, full screen image.

D. Digital book: It has a text reading function for TXT format. The user can select the desired page by entering the page number.

E. Picture explorer: It supports file formats such as bmp, jpg, gif and png for displaying pictures. It has functions of zoom in, zoom out and transparent (slide) displaying.

F. Setup: It contains GPS setup, GPS monitoring setup, shared use setup, touchscreen correction and system setup. Basic setup features are language, time, skin, transition effect, volume and key sounds.

2. Touchscreen

A. Single touch: Click on the screen for one time.

B. Double touch: Click on the screen for two times.

C. Dragging: Clicking and dragging.

Note: Sharp and coarse objects may scratch the touchscreen.

3. SD Card Memory

An SD Card memory slot is available, and you can use the GPS software and multimedia files only with the SD card.

A. Make sure that you are holding the SD card in the correct direction. If you hear a clicking sound when pushing the card, this means that the card is seated on its slot.

B. When you wish to remove the SD card, the card will be ejected automatically if you put a little pressure on the card.

C. Please remember to cut the power of the device before inserting – removing the SD card.

D. Please do not remove the SD card from the device when the SD card is being used; otherwise, the data in the card may get corrupted.

Basic Procedures



[GPS Monitor]

Press on the GPS monitor symbol in order to enter into the interface.



[General Setup]

Go to the interface by pressing on the general setup symbol. In this interface, you can adjust the languages and the effects of the transition between the interfaces (see. adjacent image).

[Touchscreen]

In order to enter into the touchscreen calibration interface, press on the touchscreen symbol and follow the procedures on the screen. Press longer on the cursor location in the centre. If the correct location is pressed on, the cursor goes to the left top, leftbottom, right bottom and right top positions respectively. If the correction procedure is not successful, the procedure restarts. When the calibration is successful, the "OK" message is displayed. Touch on any position on the touchscreen in order to save the correct calibration and exit. When the touchscreen calibration is complete, the system will remember the correct result. When the device is turned off, the settings will not be lost and it will not be necessary to renew the settings for each use. The correction procedure is conducted in the factory before the device was sent.

Basic Procedures

[Display]

Touch on the display symbol in order to go to the display setup interface. The display colour, brightness and position can be adjusted from here; see. adjacent image:



[Volume]

Press on the volume symbol in order to go to the volume settings interface; the system volume and key sound volume can be adjusted from here; see. adjacent image.



[Time Zone]

Go to the system setup by pressing on the TIME symbol. You can adjust the TIME ZONE, date and time in this interface.



Basic Procedures

[System]

You can check the system version information by pushing on the system symbol. In this interface, you can make the start-up setup and you can fix files.



3. There is an "entertainment" symbol at the bottom of the console page. This symbol leads to the system entertainment page. Here, you can listen to the music, watch movies, read e-books or view images. See. adjacent image;



[Music]

Press on the music symbol in order to go to the music player interface which is shown in the adjacent image.

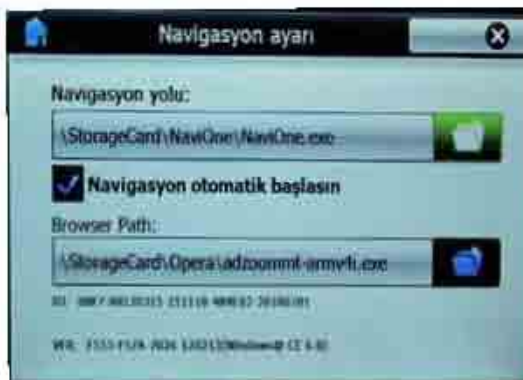


Press here in order to return to the navigation keys main interface. Press on this key to enter into the SD card catalogue in order to select a track. Touch on this key in order to close the music player. Press on this key in order to delete the tracks. Press on this key in order to select the previous page. Press on this key in order to select the next page. Press on this key in order to switch the playback mode between "random" and "constant". Touch on this key in order to go to the previous track. Pause key. Next track.

Basic Procedures

Definition of the navigation address route:

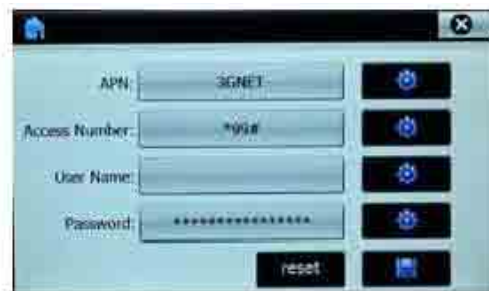
Touch on the SETUP icon of device when you are in the GPS menu and select the Navigation setup in the new window. Then, click on the green coloured folder icon on the display. Here, select the NaviOne.exe in the GPS card. Your navigation will operate when you exit from the menu displayed below and click on the Navigation icon in the main menu.



Basic Procedures

Internet APN Configuration

Connect your mobile modem of the operator to the internet cable connection found in the glove box you are using for APN configuration. Then go to GPS menu of the device and touch 3G settings icon show in G letter in the picture below.



Write internet for all operators in the APN field in the page shown on the right.

Note: If your line is a data line, write VPN.

Enter the operator name you are using in Username field.

Click the disk (save) button in the bottom right.



Basic Procedures



The screen will close in 3 seconds and go back to the main page. Wait till 3G is displayed on the screen. Then click the internet button and start using the internet.

Basic Procedures



System Settings

SETUP

Enter System Settings interface by clicking SETUP button or using MENU button on the remote control, in this interface you can customize 10 settings including audio, video, normal usage settings, calibration, info, start screen, sensitivity settings, specifications, system settings, steering wheel. Interface is as seen below.




Audio Settings



AUDIO

Getting the best sound performance from the device depends on the volume and hybrid bass feature. By adjusting each treble and bass sound to different sound frequency combinations in all kinds of instrumental and vocal music programs, you can acquire more realistic sounds. Using left and right and front and rear stereo channels before and after each volume level is also significant in obtaining an optimum volume balance. With the audio settings button shown in X icon, you can enter audio settings interface.



Basic Procedures



User  can adjust treble, mid and bass values with buttons. By adjusting the system to pop, rock, classic and standard, you can choose the favorite mode in order to adjust upper and lower limits for customized settings.

 By pressing buttons separately, you can adjust front, rear, left and right speaker balance. Every time the user presses these buttons, yellow globe will move to the identified direction one unit. Pressing the "NEXT PAGE"  button at the beginning of the interface will take you to the second page of Audio settings. You can adjust volume levels of DVD, TV, radio, etc.



Video Settings

VIDEO

 Enter video settings page by clicking button. System offers three modes as SOFT, STAND and BRIGHT. You can adjust Brightness, Contrast and color with  buttons. Video settings interface is as follows:



Basic Procedures

Normal Usage Settings

NORMAL

NORMAL

enter normal usage settings by clicking button.



You can make normal usage adjustments using buttons. This is how detailed interface looks:



Spectrum: Visual eco view

GPS Sound: Closing Navigation speech sound.

TOUCHSCREEN

TOUCH

TOUCH

Enter touchscreen interface by clicking button. According to the description that will appear on the screen, long press cursor center till the cursor moves upper left corner. Then bring the cursor to bottom left, bottom right, upper right respectively. If calibration fails, system will automatically return to the interface. You will see OK in the screen if it is successful and in this case click somewhere on the screen to save and exit the calibration interface. System will keep the calibration in the memory even if the power is shut down.

Basic Procedures

Calibration Settings is not lost even if the power is shut down. User does not need to repeat the operation and the device is delivered from the factory with best calibration settings.



Information

INFO

INFO

Enter to visual information interface by clicking INFO button. Voltage and help options will appear in this interface as shown below.

Press button to move from 1st page to the 2nd



and X from 2nd to 1st page of system settings.



Start Screen

LOGO

Enter start screen settings shown below by pressing X button in the 2nd page of system settings. Device will offer you lots of car models that you can choose from. Following the choice based on standard vehicle pictures, the picture you chose is shown when device next started. In some devices, this field is inactive. In this case, turn off the device and press 0000 (four zeros) in the remote. Change the logo using the option at the bottom of the screen that appears.



Basic Procedures

Sensitivity Settings

DETECT

DETECT

Enter sensitivity settings using DETECT button.

You can carry out normal sensitivity settings using buttons.

This is the interface:

**Automatic camera input (turning to camera mode when device is turned off, first setting)**

Rear detection (Camera active/inactive setting)

Light detection (screen light setting)

Brake detection (driving safety setting when handbrake is not connected)

Function Setting

FUNC

FUNC

Enter function setting interface using FUNC button.

You can set volume, camera reference cable, still picture display, speaker and other main functions using buttons.

This is the interface

Button tone (Turning on/off device button tone):



Basic Procedures

System Settings

SYSTEM

SYSTEM

Enter system settings interface using SYSTEM Button.

You can set radio field, language, clock and reset settings using buttons. This is the interface:

Language (Language setting, the setting that must be done when the device first turned on)**Time Adjust** (Time setting)**Reset** (Restore)

Steering Wheel Setting

SWC

SWC

Enter steering wheel interface using STEER button. In this interface, you can assign steering wheel buttons to the options on the screen.



Picture in Picture (PIP) Function

With PIP function, you can play the audio or video you are playing in radio, Bluetooth, DVD, SD, etc. interface in another window. Here is the radio function used with PIP function. SRC when in radio interface.

SRC

Basic Procedures

System Settings

SYSTEM

SYSTEM Enter system settings interface using SYSTEM Button.

You can set radio field, language, clock and reset settings using XX buttons.

This is the interface:

Language (Language setting, the setting that must be done when the device first turned on)

Time Adjust (Time setting)

Reset (Restore)



Steering Wheel Setting

SWC

SWC Enter steering wheel interface using STEER button. In this interface, you can assign steering wheel buttons to the options on the screen.



Picture in Picture (PIP) Function

With PIP function, you can play the audio or video you are playing in radio, Bluetooth, DVD, SD, etc. interface in another window. Here is the radio function used with PIP function. SRC when in radio interface.

SRC

Basic Procedures

2- ZONE Settings

When pressed 2-ZONE button in each function interface, you enter rear view screen control interface shown as below:



You can control the rear view transfer screen that you will connect to the device here. You can connect DVD, USB, TV, radio, camera, etc. to rear view (can be accessed with audio). Content of rear view unit may differ from the content of main view unit. You can choose the source of signals to be shown in rear view with AUX, RADIO, CAM, BT, TV buttons.

2-ZONE

2-ZONE Switch: this button controls rear view unit.

VIDEO

VIDEO : Video control buttons

Previous

Previous track/channel button

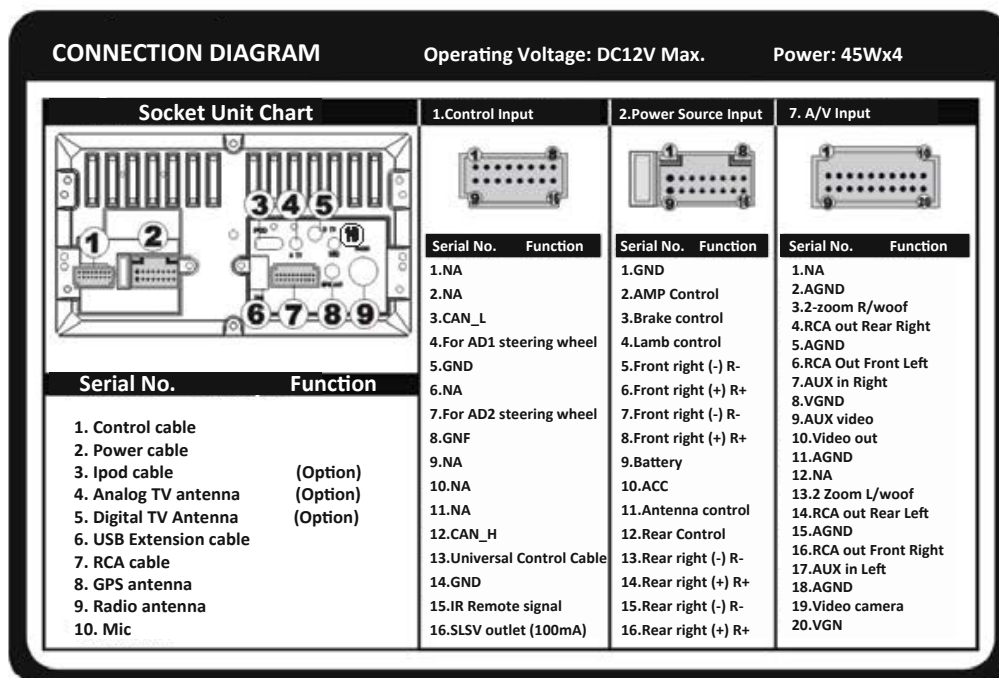
Play

Play/pause button

Next

Next track/channel button

Basic Procedures



TROUBLESHOOTING

Trouble	Cause	Fix (just for reference)
No power	Wrong connection between cables and connectors	Check all connections for accuracy.
	Burned fuse	Find the cause of burn and replace with another with the same value
	Internal micro-processor does not operate normally due to noise and other factors	Press RESET to return to factory settings
Remote control failure	Low battery	Change with new batteries
	Some functions are forbidden in certain modes	Go to the right mode
Disc cannot be played	Disc is locked or not compatible with this player	Clean disk or check the disk type. Connect a compatible disk.
No audio	Cable is not connected correctly.	Correct cable connections.
Volume is not turned up	This player is played in slow motion or frame-by-frame.	Slow motion or frame play is normal
Special speaker failure	Wrong volume setting	Configure the speakers normally.
Failed disk	Disk cannot be played	Change the disk with a good one.
Parental Lock Function is active	Parental Lock Info is shown and prohibits a certain operation	Deactivate Parental Lock Function
There is no extra language option of current DVD	Language cannot be changed (including subtitles)	If DVD is recorded in one language, there cannot be other options.

TROUBLESHOOTING

Symptoms	Reason	Fix (just for reference)
There is no extra language option of current DVD	Only options shown in disk menus can be selected	Use disk menu to select
Subtitle is not shown	There is no subtitle recorded in the DVD. Only options shown in disk menus can be selected	If there is no subtitle recorded in the DVD, subtitle cannot be shown. Use disk menu to select
Audio and Subtitle selected in DVD setup menu is not compatible. Other viewing angles cannot be selected.	No audio or subtitle language in DVD and DVD Setup Menu. There is no multiple viewing angles in the current DVD.	There is no option in this case.
Scenes are unusually corrupt or dark.	You are trying to select another viewing angle but there is no such option. Disk is copy protected (Some disks may have this option).	Only when they are saved in the disk, multiple viewing options can be selected. As the player is compatible with analog copy protection system, there may be some issues of horizontal lines on the screen or other issues when a disk with copy protection is attempted to be played. This does not indicate an issue in the player.
No display: PIC OFF is shown. When IG Key is ON or ACC, player is automatically on.	No connection could be made with manual braking cables or manual brake cannot be operated.	Connect manual brake and operate. This is normal.

FREQUENTLY ASKED QUESTIONS (FAQs)

HOW IS LANGUAGE SETTING MADE?

Click SRC, click SETUP on upper left corner, NEXT on the bottom right, choose TÜRKÇE in languages, EXIT from upper right.

HOW IS STEERING CODING MADE?

Enter main menu pressing SRC in the device, Click SETUP on the upper left, NEXT on the bottom right, enter STEERING on the bottom right, you will see functions in the menu that will open:

MODE (Bottom right)

STORE (upper right)

DELETE (upper left)

START (upper left)

Functions on the screen: VOL-, VOL+, CH-, CH +, MENU, MUTE, ANSWER

Functions on the wheel: VOL-, VOL+, SEEK, PWR, MUTE, MODE

Coding Sequence

1.Click VOL+

2.Click START

3.Hold Wheel VOL+ for 5 seconds.

The code, e.g 45, will adhere to the VOL+ function on the screen. Use this procedure for other functions. Each function is assigned a separate code. After all coding is done, activate STORE function and EXIT from upper right corner.

NAVIGATION IS NOT TURNED ON?

Navigation is not turned on as it is not installed.

For installation, click SETUP on the upper right of navigation main menu, enter NAVIGATION SETUP on the upper left

corner, click the folder, enter STORAGE CARD in the folder, click NAVIGATION symbol in the folder, click

NAVIGATION.EXE in the folders, it will take you to the folder directory, return to main menu using X on the upper

right corner, installation will be completed when NAVIGATION icon is clicked.

NO SIGNAL IN THE NAVIGATION, X IS SHOWN ON SIGNAL?

There may be a short cut in GPS antenna, a new antenna must be tried, if the issue persists, the device must be serviced.

FREQUENTLY ASKED QUESTIONS

HOW TO LISTEN TO MUSIC WHEN NAVIGATION IS ACTIVE?

When you touch the screen when navigation is active, you will see a lock icon on the upper left corner. Click on it and touch GPS DIS in the bottom left in them menu to open, it will turn blue, you just need to touch options that you want to hear sound.

“DRIVING SAFETY” IS SHOWN ON THE SCREEN?

Cable named BRAKE in the main socket must be grounded or connected to hand brake, if both is not done, go to SETTINGS in the device and turn off BRAKE DETECTION in the FIND function.

NO DISPLAY FROM REVERSE GEAR CAMERA WHEN THE DEVICE IS TURNED OFF?

REAR DETECTION must be turned on in FIND Function in SETTINGS.

IS THERE SPECIAL SPEECH OPTION IN BLUETOOTH?

When you click the blue icon in the center area surrounding the menu in Bluetooth main menu, you can see TRANSFER SOUND TO GSM and TRANSFER SOUND TO KIT options.

HOW IS TELEPHONE SYNCHRONISATION MADE?

Enter synchronization menu on round blue area in BLUETOOTH menu, touch SYNCH ON on the right, at the same time set your telephone Bluetooth to find other devices and find the device as CAR KIT, when you synchronize, it will ask for a password, enter four zeros (0000) and the synchronization will be made. When you allow automatic connection, you will not be required to run the synchronization again. (Device is not a mobile phone. It will synchronize with the mobile).

TV HAS NO SIGNAL?

Make sure antenna is connected and the antenna lamb is lit.

NO SOUND ON TV DESPITE THE DISPLAY?

It is required to SEARCH again in TV display PAL, TV, Audio BG in TV Settings.

FREQUENTLY ASKED QUESTIONS

NO DISPLAY ON HEADREST MONITORS?

Touch the screen on DVD screen, you will see up and down options, click 2 ZONE in upper right, you will see new options, you will see 2 ZONE in bottom left this time, when touched It turns blue or yellow, when it is yellow, the same screen will be shown on other monitors, when it is blue selection can be made in rear monitors while a function is being used in the front monitor, e.g. 2 zone is blue, click the functions that you want to choose on the right, your selection will be shown on rear monitors as video-audio or only audio depending on your choice.

PASSIVE CANNOT BE ACCESSED IN 2 ZONE SCREEN?

Enter setup settings in the main menu, a new menu will open when NEXT is selected, 2 ZONE will be active when RESTORE is opened and closed in system settings on right corner.

HOW IS CD RECORDING MADE?

NOTE: Only TRACK CD recording can be made in CD Recording.

When a CD is installed in the device, 2 icons will be shown (1 and 2), 1 is for recording when album is listened and 2 is for direct recording. You can start recording by touching CD memory icons from 1 to 5 after touching 1 icon. To delete the recording, touch the BIN icon on the upper center and album number you want to delete.

RADIO CHANGES CHANNELS AUTOMATICALLY WHILE DRIVING?

NOTE: The same procedure will be followed if the sound is turned off for 30 seconds and returns while listening to CD.

AF TA PTY Functions on the bottom right in radio menu are for traffic control. If one of them is active, when there is weak signal, it seeks for a stronger signal, all functions must be off for manual operation.

HOW CAN I CHANGE BUTTON ILLUMINATION COLOR?

You can change the color in the icon on the bottom right in main menu (four dots in a circle).

PRODUCT SPECIFICATIONS

Technical Specifications

Power:	12 DC (permitted range: 10.8 – 14.5V)
Grounding system:	Negative terminal type

Main Chassis

Maximum current consumption:	15A
Dimensions (W x H x D) mm:	190 x 190 x 100 mm
Weight:	3.5 kg

Display

Size/horizontal-vertical ratio:	6.2 inch – 7 inch – 8 inch 16:9
Pixels:	336.960 (1440*234)
Type:	TFT active matrix
Color system:	Full system
Operation temperature range:	-5C - +50C
Storage temperature range:	-30C - +80 C
Angle correction:	0C-50C

Audio

Max. out power:	45W*4
Load impedance:	4 Ohm (permitted range: 4-80hm)
Front out level/impedance:	4.0V/200Ohm
Coder:	Linear PCM*Dolby Digital/Dolby Professional edit II/DTS

DVD PLAYER

System:	DVD Audio, DVD Video, VCD, CD, DTS CD and MP3 System
Compatible disks:	DVD Audio, DVD Video, VCD, CD, DTS CD
Track no:	2 (Stereo), digital 6 songs)
MP3 format:	MPEG-1 and 2 and Audio level 3
FM Frequency modulator frequency range:	531 – 1 629 KHZ (9KHZ)
Active sensitivity:	30 DB (S/N: 20DB)
AM Frequency modulator frequency range:	531 – 1 629 KHZ (9KHZ)
Active sensitivity:	30 DB (S/N: 20DB)

Packing List

No	Name	Qty	Note
1	Main Body	1	
2	Remote control	1	1 – Inc. battery
3	Power cable, etc	1	1 set
4	User's manual	1	
5	Touch pen	1	

Product technical specifications are subject to change without notice.

SERVICE AND MAINTENANCE

7

SERVICE AND PRE MAINTENANCE

7-2

DAILY CONTROLS

7-8

SERVICE AND MAINTENANCE ABOUT ENGINE

7-12

SERVICE AND MAINTENANCE ABOUT CHASSIS

7-46

OTHER SERVICE AND MAINTENANCE

7-84

MAINTENANCE DATA

7-98

SERVICE AND PRE MAINTENANCE

Precautions needed to be taken for Control and Adjustments**WARNING**

- Be sure that you close the engine and remove key from starter switch before applying any control.
- Engage hand brake and shift the gear to neutral.
 - If your vehicle has manual transmission, be sure that gear lever is on "N" position.
 - If your car has leveller system, bring gear lever to "N" position and be sure that gear level indicator shows "N" position.
- Choose strong and smooth place to apply control and adjustment operation. Be sure that you put chock behind the tyres. If the vehicle starts moving, it will be very dangerous.
- Be sure that the vehicle is supported with tyre jack after raising the car and before sitting under the vehicle to fulfil the operation.
- Be sure that cable is removed from the negative terminal in the accumulator while operating on electric system.
- Engine, exhaust pipe and radiator will be heated right after the vehicle is driven. Be careful that you will be burnt around these parts. Apply all of the controls while engine is cold.
- Do not operate near bare flame or other heat source.
- While operating on fuel pipe line or fuel filter, remove fuel tank filler cap. Fuel system is under pressure in a way that a probable burning or fire can occur until pressure is decreased and fuel will overflow.
- Do not start-up the engine in airless garages or huts. This may lead to carbon monoxide poisoning.

**CAUTION**

- Thrown parts, oil, grease oil and liquid may have bad effect on environment. These are difficult to get rid of; for this reason have Isuzu Service to make all of the controls and changes.



RECOMMENDATION

- Only use proper devices.
- Oil, brake hydraulic and engine coolant have lubrication, cooling and rust protection. If this liquid's value decreases due to lost or pollution, this will cause components' performance to have problems such as decrease, seizing or malfunction. Refill or renew this liquid while its control (daily and proper controls) is being applied as required by related regulation or suitable to Maintenance Program. (specified driving distance or time period whichever lasts earlier)
- Be sure that all the systems and components is normal after operation.
- Do not leave removed components or devices in engine part. If these stick to belts or other movable components, they damage equipment.
- Dirty water, smear or other foreign materials decrease the efficiency of oil, Grease oil or liquid seriously and damage to components. Pay attention to the required warnings in order to prevent dust and waste while contacting with removed components or material during changing or refilling operation. I

Removed Components, Oils and Other Liquids

- While changing oils, engine coolants or other liquids, do not forget to have a cap with you to throw them.
- Use methods suitable to lawful requirements in order to throw and get rid of the components, oils, filters or coolants during changing or renewal operation.

Oils and Grease Oil

It is important to change oil and grease oil and refill them in order to protect your vehicle performance and prevent malfunctions. For your vehicle's maintenance and service, we recommend you to use oil and hydraulics that Isuzu advises.

Malfunctions to occur as a result of the usage of oil and hydraulics that are not recommended by Isuzu is considered as out of warranty



CAUTION

- Flames or other heat sources near thrown oil may lead to fire. Be sure that you clean all the thrown oils.

Maintenance Caps V

Engine Bulkhead Cap V



Opening

Holding the handling that places at the centre of engine bulkhead and raise it.

Closing

Place engine bulkhead cap to its position by raising its handling. Be sure that locks are empty.



CAUTION

- While opening and closing engine bulkhead cap, be careful of preventing fingers, hand or any part of the body to squeeze. In addition, be sure that engine bulkhead cap is placed properly.

DAILY CONTROLS

Daily Controls (Before Driving)

Check your vehicle for the following elements to provide safe and proper usage before start-up. In addition, note down the mileage that your vehicle takes and your vehicle's usage conditions in order to determine optimum control range special to you and according to the results of the control have it maintained adequately.

If an abnormality happens as a result of controls or if there are a components showing abnormality during previous usage, we recommend you to have your vehicle's maintenance to a nearest Isuzu Authorized Service.

Daily Control Elements (Before Driving)

[1. Controlling of the components showing abnormalities during previous usage]

Control element
Controlling of the components showing abnormalities during previous usage

[2. Controls applied while engine bulkhead cap is open or interior is overset]

Control element
Fan belt tension and damage
Engine Oil Level
Engine coolant level
Power Steering Fluid Level

[3. Checks conducted on the driver seat]

Control element
Brake fluid level and clutch fluid level MT (manual transmission)
Brake pedal free travel
Clutch pedal free travel MT (Manual Transmission)
Operation of the counters, indicators and warning/indicator lamps
Engine activation, unusual sounds and colours of the exhaust gas
Hand Brake Lever stroke
Windshield washer liquid status and windshield wiper operation
Windshield Washer Liquid
Steering wheel free travel and erection state
Operation of horn and turn signal lamps
Balance fuel amount
Operation of door locks

[4. Checks to be conducted when walking around the vehicle]

Control element
Lighting, blinking, dirt and damage of the lamps
Battery liquid level
Leaf spring damage
Oil, coolant, fuel, brake fluid, hydraulic steering wheel oil and HBB oil leak
Water accumulation in the fuel filter (lower)

[5. Checking of wheels and tyres]

Control element
Tyre air pressure
Cracks and other damages
Abnormal wear
Tread depth
Rim mounting status

[6. Checks conducted while driving]

Control element
Brake operation
Driving status at low speed and increasing speed

Controlling of The Components Shown Abnormalities During Previous Usage

Check the components shown abnormalities during previous usage provide any abnormalities to be repaired by Isuzu Seller before driving the vehicle.



**SERVICE AND MAINTENANCE
RELATED TO THE ENGINE**

Engine Status

Checking the Engine for Starting Up and Abnormal Sounds

1. Make sure that hand brake is engaged properly. Keep the brake pedal fully depressed.
2. Make sure that transmission is not empty.



CAUTION

- If your vehicle has Leveller system, engine will not work unless gear is shifted to neutral.
- Keep the brake pedal fully depressed as a result of safety before running the engine.

3. Open starter key to run the engine. Be sure that engine is run without an abnormal sound.



Checking Engine Status at Low Speeds and Increasing Speeds



1. Make sure that gear is shifted to neutral and hand brake is engaged safely.
2. Open starter key to run the engine and start it in order to heat.
3. Make sure that engine is running between Standard idle speed range.



NOTE

- During the renewal of diesel particulate diffuser, engine idle speed may increase.

4. Drive the vehicle being sure that accelerator pedal is not seizing, engine speed increases properly and engine is not pinking while speeding up gradually.

Engine Oil

Engine oil is an important element determining engine performance. Only use specified oil and oil filters. Engine oil level must be checked according to Maintenance Program and oil must be renewed regularly.



NOTE

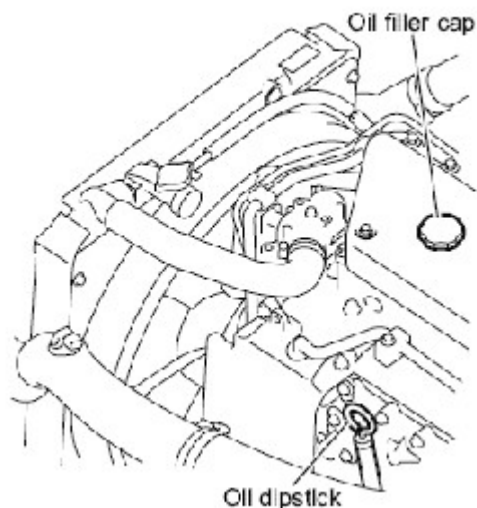
- If your vehicle has a diesel particulate diffuser, filter is automatically renewed via burning when particulate substance collects on DPD filter. A little fuel is added to engine burning room in order to this renewal (burning) operation be done. This operation provides fuel to mix with engine oil gradually and engine oil level may increase higher than the original one. This does not mean that engine is broken down.

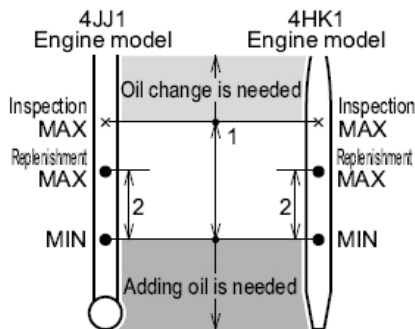
Checking the Engine Oil Level

Park the vehicle to a smooth place. Close the engine, check engine oil level after waiting 30 minutes. Remove oil level gauge bar in order to check oil level, wiper its tip with a clean cloth. Put it inside again and slowly eject it.

If oil level is between 'Control MAX and MIN' signs, oil level is proper. In addition, check it whether there is a oil leak or not.

4HK1 engine model





Checking Engine Oil Level

1. Remove oil level gauge bar (oil level bar) and wipe the oil on it.
2. Put oil level bar in completely again and then slowly remove. If oil level is between 'Control MAX and MIN' (range 1) signs, oil level is proper.
3. If oil level is too low, add oil until 'Refill MAX' sign (range 2). If oil level is above 'CONTROL MAX' level, you can change oil.
4. After checking oil level put oil level bar again.



RECOMMENDATION

- Any oil level above 'CONTROL MAX' sign may cause engine malfunction. Whenever oil level is above 'CONTROL MAX' level, change oil.
- Fuel will gradually mix with engine oil by diluting engine oil. Do not forget changing oil at specified intervals.

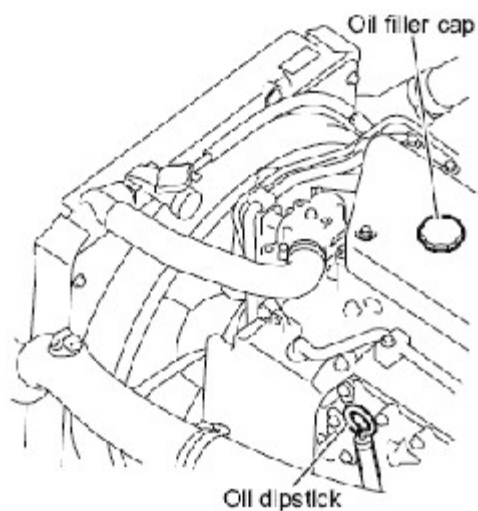


NOTE

- Apply all oil level checks on smooth place before running the engine.
- Oil level is not checked properly while engine is running.
- Fuel will mix with engine oil gradually and engine oil level will increase higher than the original one. This does not mean an engine malfunction.
- While oil level is being measured after engine is run, wait at least 30 minutes after engine is closed.

Engine Oil Adding

When engine oil level is close to `MIN` sign in oil level gauge bar, remove oil filling cap and add oil. By the way, Remove oil level bar. Only use specified engine oil.

4HK1 engine model

**WARNING**

- Be careful not to drop while adding oil and have a cloth with you in case dropping happens. If oil drops over the engine, wipe carefully and clean. If this precaution is not taken, dropping oil can fire and spread.
- Do not leave flammable material such as cloth or glove on engine bulkhead. These materials may cause fire.
- Engine oil is hot after driving, for this reason, be careful not to get burnt while changing the oil after driving.

**RECOMMENDATION**

- Engine oil lubricates and cools components inside of the engine. Due to evaporation, drop and burning occurring during engine start-up, oil quality spoils and oil amount is decreased. Continuous usage of the same oil without checking its level or refilling and changing may cause engine to seize or get damaged. Add oil or change it when oil quality spoils even before the interval time specified in Maintenance Programme which will differ according to terms of use is invalid.
- Prevent dirt going inside filling hole while adding oil. If foreign substances mix with oil this may damage engine.
- Adding oil over `Control Max` sign on oil level bar may cause engine to run with malfunction. Do not forget checking oil with oil level bar.
- For a model having DPD, not using an oil suitable to DPD may cause engine or DPD to break down or low fuel performance. Be sure that you use engine oil suitable to DPD.

Changing Engine Oil and Oil Filter

Engine oil and oil filter are important factors for engine performance and life. Only use specified oil and oil filters. Engine oil level must be checked according to Maintenance Program and oil must be renewed regularly.



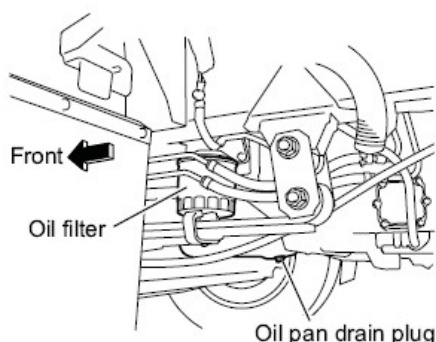
RECOMMENDATION

- Use the following oil amount only as a guide while engine oil is being changed. Be sure that oil is on the required level after oil is changed.
- For a model having DPD, not using an oil suitable to DPD may cause engine or DPD to break down or low fuel performance. Be sure that you use engine oil suitable to DPD.

Engine oil amount

Engine Model	Oil amount (Reference Value)	
	Only while changing the oil	While changing oil and filter
4HK1	10,5 liter	13 liter

4HK1 engine model



Oil Changing

4HK1 engine model

1. Clean oil filling cap in case a foreign material would not go in. Remove oil filling cap.
2. Place a cap under the oil tank and oil filter to take the oil.
3. Remove oil tank drain plug to drain oil inside the cap.

**RECOMMENDATION**

- Drained oil must be stored in a way that would not damage the environment and must be get rid of.

4. Use special oil filter switch to remove oil filter.
5. Slowly cover joint of new oil filter with clean engine oil.
6. Put new oil filter. After filter joint is placed to the position where it is supposed to be, compress it with 1 and 1/4 turning using special oil filter switch.

**RECOMMENDATION**

- While putting oil filter, be sure that joint does not fasten to thread. This may lead to oil leaking.

7. Be sure that oil tank drain plug is clamped properly.

Oil tank drain plug clamping torque	
4HK1 engine model	83 N•m (8,5 kgf•m)

**RECOMMENDATION**

- Clean the dirt over the plug before putting it again.

8. Remove oil level bar and fill specified oil by means of oil filling cap carefully.
9. Put oil level bar and oil filling cap. Start-up the engine and leave it idle, 5 minutes after refilled with the new oil. Check whether oil leak occurs near the oil filter or drain plug while engine is running on idle.

**RECOMMENDATION**

- Do not increase the speed as it can damage the engine.

10. Close engine And then, after waiting for at least 30 minutes, Check oil level with oil level bar.

**WARNING**

- Approaching with flame or other heat sources to poured engine oil may lead to fire. Be sure that you clean all the poured oils.
- Do not leave flammable material such as cloth or glove on engine bulkhead under the interior. These materials may cause fire. In addition, do not leave devices.

**RECOMMENDATION**

- Do not increase the speed as it can damage the engine.
- Do not fill engine with oil over `Control Max` sign on oil level bar. Overfilling may damage the engine.



Engine Coolant

Engine coolant must be changed according to Maintenance Programme.



WARNING

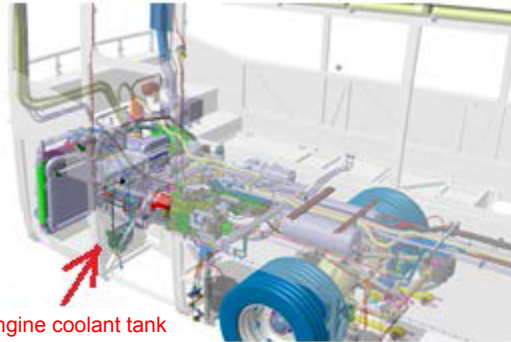
- Check engine coolant only after engine is cooled adequately, refill or change it.
- Do not open radiator cap unless coolant get cools. Hot vapour may rise and you may be scalded. Coolant in expansion tank will be heated in a way that would cause burning. Apply all the checks, refilling operations and changes when coolant temperature decrease.
- While removing radiator or expansion tank cap, use a thick cloth to cover the cap and turn the cap slowly.
- Engine coolant is poisonous and must not be touched to mouth. Immediately sluice your eyes in case coolant goes in your eyes.
- Engine coolant is flammable and for this reason it must be kept away from flame or other heat sources. In addition engine coolant may fire if touches hot surface such as exhaust manifold. Pay attention to the warning in case this would not happen.



NOTE

- Use proper intensity mixture of tap water and coolant.

Checking Engine Coolant Level



Engine coolant tank

Expansion tank takes place under the engine maintenance cap. Be sure that expansion tank liquid level is not under 'MIN' line when engine is cooled.

In addition, check to be sure whether there is a leak through radiator or radiator hose.

Check whether there is any liquid or dirt showing leaks in the place of parking. When you find leaks, contact to Isuzu Authorized Service.



CAUTION

- Driving with leaking may end up with seizing to occur in engine.

Engine Coolant Adding



Open tank cap while engine coolant level in expansion tank is under 'MIN' line and fill the tank with the mixture of tap water and engine coolant until the near of 'MAX' line. Compress the cap properly after coolant refilled.



WARNING

- Check engine coolant only after engine is cooled adequately, refill or change it.



RECOMMENDATION

- Check expansion tank in order to determine engine coolant level. However, open radiator cap and check the level of radiator if level in expansion tank decreases or increases.
- Be careful of preventing engine coolant from touching exhaust manifold while engine is still hot. This may lead exhaust manifold to get damaged.
- If engine coolant level changes quickly have your car to be examined by Isuzu Service.

Engine Coolant Changing



RECOMMENDATION

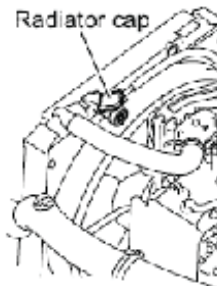
- Thrown coolant must be get rid of suitable to the requirements of your country.

Engine Coolant Level

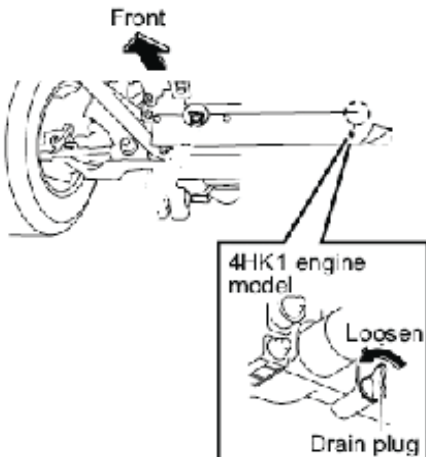
Engine model	Oil amount (Reference Value)
4HK1	30,0 litre

4HK1 engine model

Radiator cap



Front



4HK1 engine model

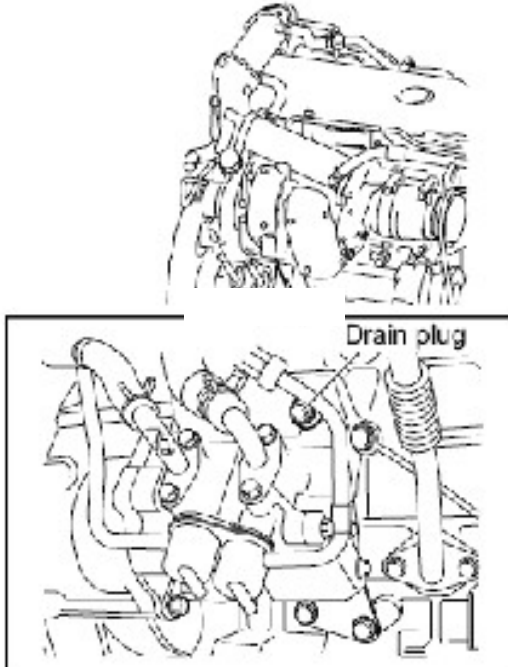
Loosen

Drain plug

Coolant System Draining

Clean radiator cap, radiator and coolant channels while coolant is being changed.

1. Be sure that engine is completely cold before starting the operation.
2. Remove the radiator cap.
3. Open coolant drain plug in radiator and engine in order to remove coolant.
4. Close coolant drain plugs in radiator

4HK1 engine model

5. Be sure that oil tank drain plug is compressed properly. For 4HK1-TC engine, put the joint into the drain plug before putting it.

Engine drain plug clamping torque**21,6 N•m (2,2 kgf•m)****CAUTION**

- Do not run the engine if there is no coolant in radiator after draining operation. This may lead engine to seize.

**RECOMMENDATION**

- Compress radiator drain plug manually. Compressing the plug with pliers or other device may damage it.

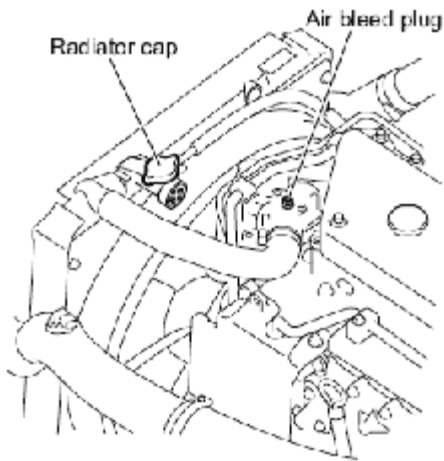
Radiator Core Cleaning

Coolant efficiency becomes difficult if there is a dirt or dust choking the air funnels in radiator core. This may lead radiator core to wear. Wash radiator core periodically.

**RECOMMENDATION**

- Do not damage radiator cores while cleaning it.
- Wash it from behind to the front.

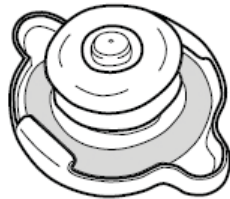
4HK1 engine model

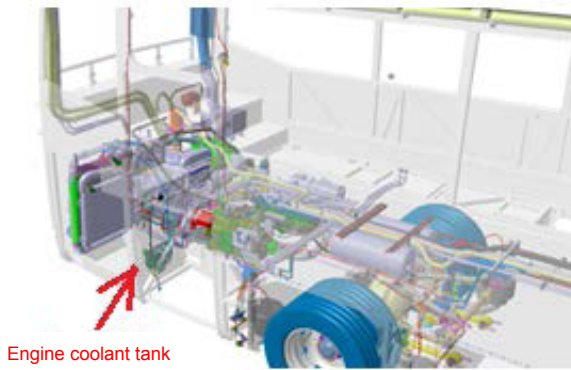
**Coolant Funnels Cleaning**

1. Remove radiator cap and fill it with tap water to the top of the gap. Remove bleeder plug out of water outlet pipe before filling coolant. Compress bleeder plug completely after filling water.

Bleeder plug clamping torque**14 - 24 N•m (1.4 - 2.4 kgf•m)**

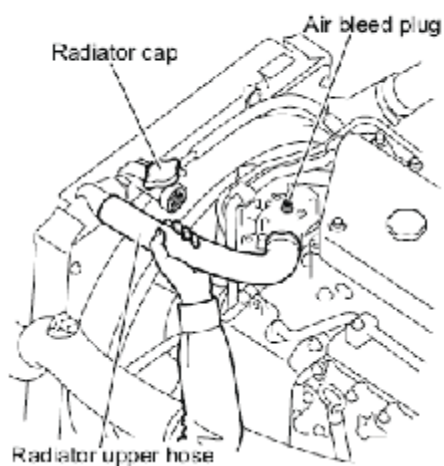
2. Check radiator cap and clean. If the cap is worn, change it.
3. Put radiator cap and stabilize it safely.





4. Fill expansion tank with tap water to 'MAX' line.
5. Close expansion tank cap.
6. Run the engine and leave it on idle for 20 minutes. Stop the engine, wait until it is cooled and then drain the water.

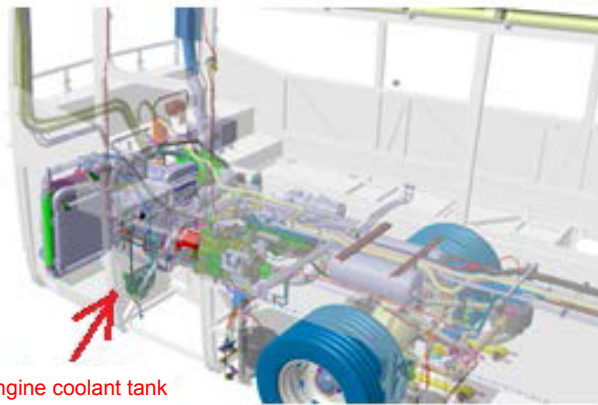
4HK1 engine model

**Coolant System Filling**

1. Be sure that engine is completely cold before starting the operation.
2. Remove radiator cap and fill it with tap water to the top of the filling hole. Remove bleeder plug out of water outlet pipe before filling coolant. Renew bleeder plug joint. Compress bleeder plug completely after filling coolant.

Engine	Bleeder plug clamping torque
4HK1	14 - 24 N•m (1.4 - 2.4 kgf•m)

3. Compress radiator up hose two or three times. If this ends up with air draining out of hose and engine coolant level decreases, add coolant to the top of radiator filling hole.
4. Put radiator cap and stabilize it safely.



Engine coolant tank

5. Fill expansion tank with coolant to 'MAX' line. Close expansion tank cap.
6. Close bleeder plug of water outlet pipe.
7. Start the engine, leave it on idle for 2 or 3 minutes and then stop the engine.
8. After being sure that coolant is not hot anymore, open radiator cap. If coolant level decreased, fill water from radiator hole again. If coolant level is abnormally low, check whether there are leaks in radiator, engine coolant cycle or expansion tank hose.
9. After closing the radiator cap, start the engine with 2000 cycle/minutes in order to heat the engine.
10. Leave engine on idle for 5 minutes and stop it when engine coolant temperature indicator reaches to medium point.
11. After being sure that coolant is not hot anymore, open radiator cap, check coolant level and if it is necessary, fill coolant from radiator hole again. If coolant level is abnormally low, check whether there are coolant leaks.
12. Close radiator cap properly.
13. Refill coolant in expansion tank to 'MAX' line and close expansion tank.



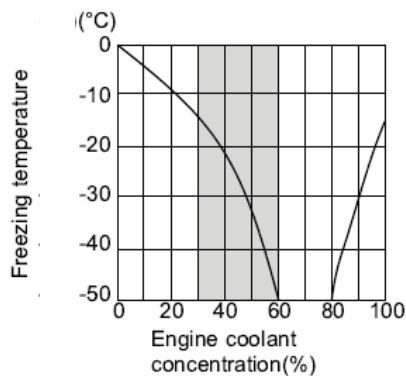
RECOMMENDATION

- Because the usage of another engine coolant other than what is recommended cannot protect coolant system from wearing, it may shorten the engine life.

Coolant Preparation

Use a mixture of engine coolant and tap water in order to prevent engine to get damaged due to freezing and to protect it from wearing. Only use the mixture of proper intensity anti freeze that is recommended by Isuzu and tap water.

Engine coolant intensity and freezing temperature



While Isuzu is using original engine coolant, engine coolant rate in the coolant must be between 30% and 60%. When it is below 30 %, coolant rust prevention performance will be inadequate and if it is above 60% over heat may occur. Use 30% of coolant and 70% of water mixture for moderate outside temperature.

Choose mixture rate for freezing temperature which is 10°C lower than estimated outside ambient temperature.

Use following mixture rates while using different engine coolant other than Isuzu original engine coolant.

When outside ambient temperature is higher than -40°C 50% of coolant and 50% of tap water

When outside ambient temperature is lower than -40°C 60% of coolant and 40% of tap water

Engine Coolant Amount

Coolant amount is specified below in order to use it as a guide while changing coolant. Check whether coolant is at specified level after changing coolant.

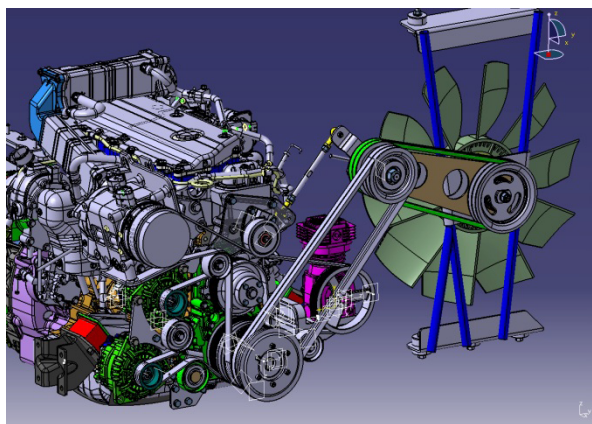
Engine Model	Oil amount (Reference Value)
4HK1	30,0 liter

**RECOMMENDATION**

- Use only engine coolant recommended by Isuzu.
- While preparing coolant for refilling or changing, do not use well or river water, use tap water.
- If coolant is decreased quickly, immediately go to Isuzu Seller for controlling or maintenance.
- Compress radiator drain plug manually. Compressing the plug with pliers or other device may damage it.
- Aluminium components and other components of coolant system in heat unit rust away and coolant leads to leaks if specified amount of coolant is not used.

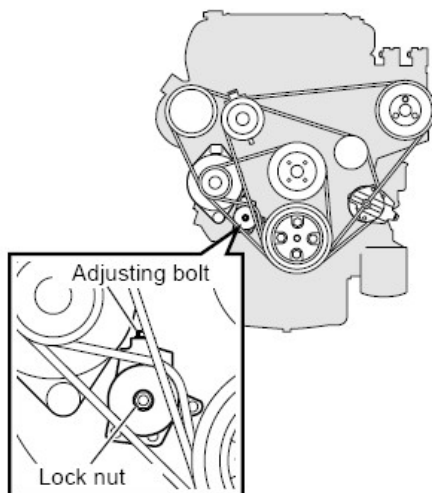
Fan Belt**CAUTION**

- V grooved fan belt tense in your engine must be adjusted more properly than ordinary V belts. Improper tense may cause sound coming from belt or belt broken. A proper electric production can not happen when fan belt is damaged or this becomes the reason for the engine to over heat. You need to check belt tense carefully.
- Use Isuzu original components while changing fan belt.
[Follow up this processing to adjust belt tense]
- Initial tensing operation takes place after putting it for a new belt. Do the following adjustments to put the belt onto pulley funnels after putting a new or used belt. Use Isuzu original components while changing fan belt. Follow up this processing to adjust belt tense.
 - Bring belt and pulley funnels into the same line and adjust belt tense using specified method.
 - Start the engine and leave it on idle for 5 minutes in order to place belt onto the pulley funnels.
 - Close the engine and adjust belt tense to specified value again.

2 80A generator Engine**4HK1 engine model**

Press the distance centre between belt pulleys with 98N (10,0kgf) power and check flexion amount. Flexion amount must be between the following specified value range. In addition check the belt in case of cracks. Change the belt if cracks occur.

Generator	Standard value [Amount of stretch]		Standard value [Vibration frequency]
80A	Used belt	6 -8 mm.	161 -173 Hz
	New belt	5 -7 mm.	187 -209 Hz

**80A generator 4HK1
engine model****80A Generator 4HK1 Engine Model Adjustment****Adjustment**

1. Loosen locknut of belt tense mechanism.
2. Adjust belt tense with adjusting screw.
3. Compress belt tense mechanism locknut properly when tense is adjusted.

Belt Changing

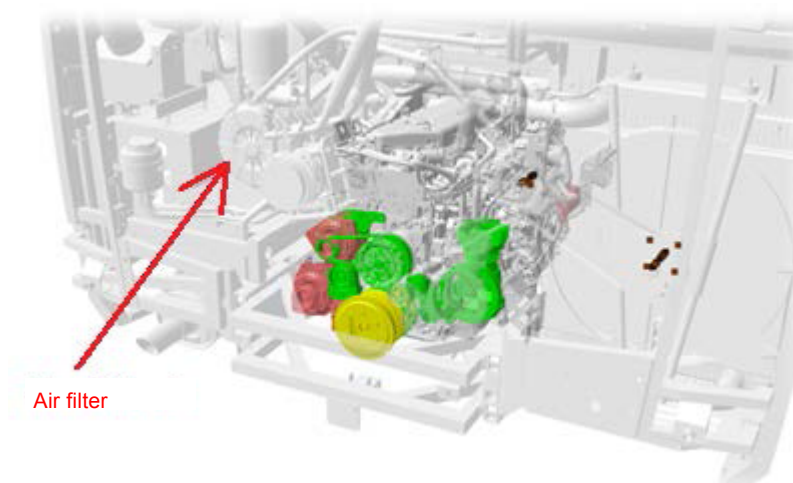
1. Loosen locknut of belt tense mechanism.
2. Loosen adjusting screw and remove the belt out of pulleys.
3. Remove the belt out of the gap in the fan.
4. Put new belt passing it from the gap in the fan and put the belt bringing the funnels and funnels in the pulleys to the same line.
5. Turn adjusting screw until belt tense is in standard value range.
6. Compress belt tense mechanism locknut properly when tense is adjusted.

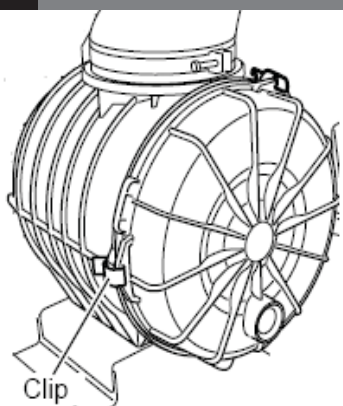
Air Filter

Change air filter component after cleaned for 6 times or suitable to Maintenance Program.

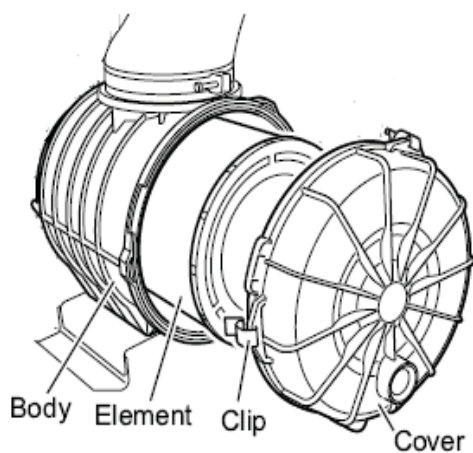
Air Filter Cleaning

Remove air filter component and check whether it is covered with dirt. If there is over pollution, change air filter component without considering its maintenance time.

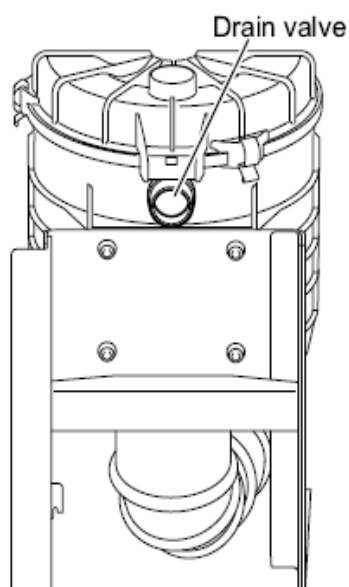




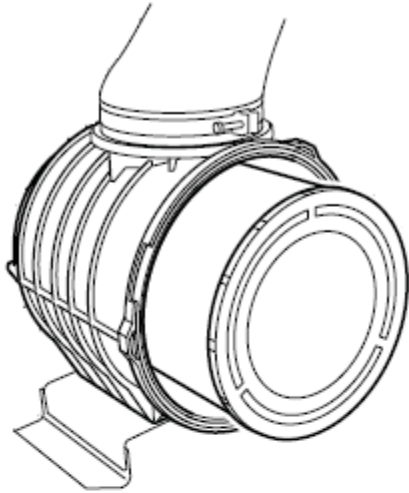
1. Open 3 fastening lugs and remove air filter cap.



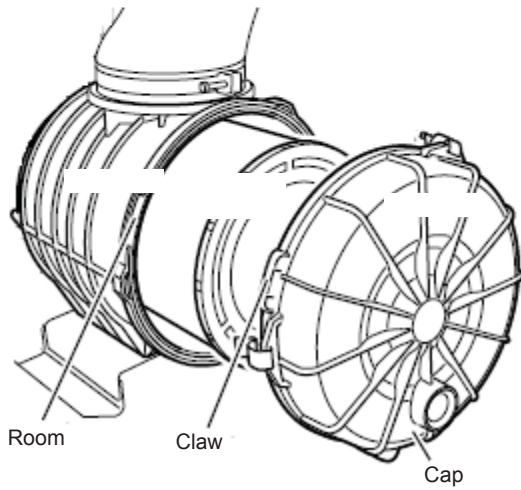
2. Remove air filter component pulling it towards yourself.



3. Clean dirt collecting on the air filter cap and air filter body.
4. Clean drain valve under air filter.



5. Push filter component back to its position on air filter.



6. Bring the room on the left side of the body and the claw in the cap to the same line.



Air Filter Component Cleaning



Choose one of the following cleaning methods according to the filter component pollution type.

1. When dry dust sticks to filter component
 - a. Blow pressure air towards the inside of filter component until maximum 690kPa ($7,0\text{kgd/cm}^2/100\text{ps'}$) in order to remove dust.
 - b. Check the component whether it is damaged or not.
2. When filter component is darkens due to oily fume or flue
 - a. Leave the component in a water and neutral detergent mixture approximately 30 minutes.
 - b. Remove filter component out of detergent solution and dry it with tap water.
 - c. After cleaning operation, leave filter component in well ventilating place to dry,



RECOMMENDATION

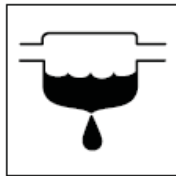
- Do not hit filter component as it can be damaged.
- Drying operation with air lasts for 2 or 3 days. We recommend you to use a spare filter component.

Fuel Filter

Change fuel filter suitable to Maintenance Program.

Drain water when fuel filter warning lamp lights.

Water Sedimeter (Fuel Filter) Warning Lamp



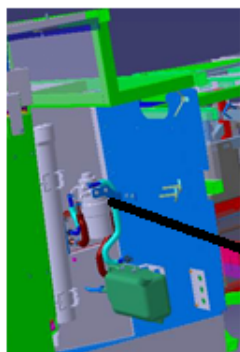
When a definite amount of water collects at water sedimenter (fuel filter) warning lamp light.

In this condition, drain the water and be sure that warning lamp goes off.

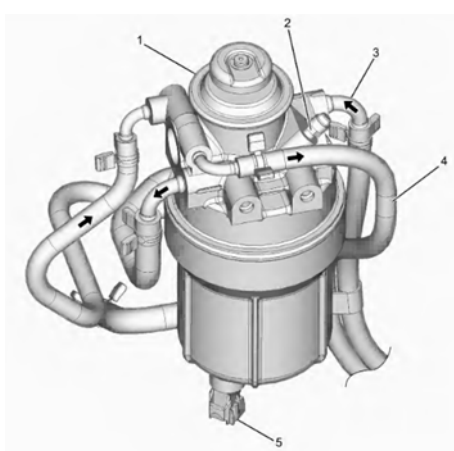


CAUTION

- Balance water that is not drained out of water sedimenter may freeze and damage to the vehicle.
- If warning lamp lights while engine is running, immediately drain water out of water sedimenter. Keeping on driving while lamp is lighting may damage fuel blow pump. If this happens, have your vehicle to be controlled and maintained by nearest Isuzu Service



Fuel filter



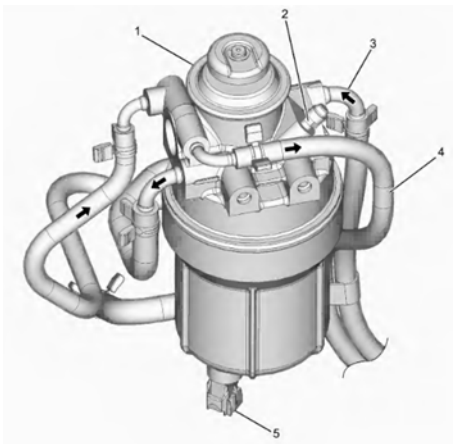
1	Fuel filter
2	Bleeder Plug
3	Fuel inlet (from fuel tank)
4	Fuel return
5	Sedimenter water warning sensor

1. Filter component takes places at the rear right baggage part of the vehicle and towards the expansion cap.
2. Loosen drain plug under filter component. Remove rubber cap of bleeder plug and then loosen the plug. This will provide the oil in filter component cap to be drained out of bleeder plug. Compress bleeder plug.
2. Cut the connection of water sedimenter switch connector.
3. Use a device (29mm , 1,14inch, like a socket wrench) to turn the hexagonal part under the filter component counter clockwise and remove filter component cap.

**RECOMMENDATION**

- Be sure that float valve at the down side of filter component cap interior part moves properly.
- Fasten water sedimenter switch connector, reverse filter component cap and be sure that water sedimenter warning lamp lights.

Clean foreign substances and dirt at the bottom of filter cap interior.



1	Fuel filter
2	Bleeder Plug
3	Fuel inlet (from fuel tank)
4	Fuel return
5	Sedimenter water warning sensor

4. Pull the filter component down and remove O-Ring. Use a clean cloth to remove impurities accumulated in filter body.



RECOMMENDATION

- Do not use compressed air to remove impurities. Use a clean cloth instead. Air application may direct impurities in fuel channel and cause engine breakdown.

5. Install the new o-ring to the filter body making sure that screw threads are not damaged.
6. After covering iner and outer seals of new filter component with diesel fuel, insert the component till it contacts with filter body.



RECOMMENDATION

- Do not let impurities interfere from 4 holes next to iner seal.

7. After covering filter component container inner surface and O-ring with diesel fuel, turn the component clockwise until it touches the filter body. If bottom part of filter component container do not touch filter body, filter component is not completely inserted. Insert the component while turning.

**WARNING**

- While fitting filter component container, make sure that o-rings are not squeezed in screw threads. This may lead to fuel leakage and fire.

**RECOMMENDATION**

- Make sure you use Isuzu original fuel filter.
- Replace the seals while changing the filter.
- Store and dispose the replaced filter in environment-friendly ways.

8. Install filter component container.

Filter component container tightening torque

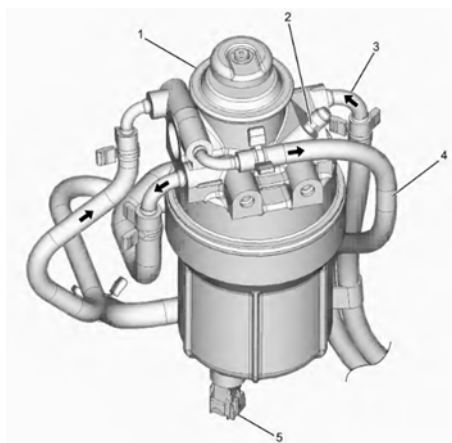
30 -36 N•m (3,1 -3,7 kgf•m)

9. Tighten drain plug and connect water separator switch connector.

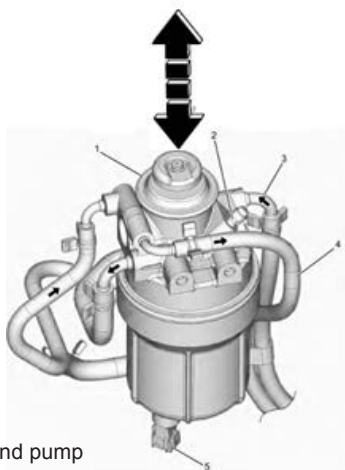
10. Deflate the fuel system.

**WARNING**

- After replacing fuel filter, start the engine to check if there is leakage around the filter. Fuel leakages may cause fire.

Draining Fuel Filter

1. Connect a plastic hose to drain plug under engine side fuel filter and place the other side of the hose in a container placed under the filter. Connect a plastic hose to drain plug under engine side fuel filter and place the other side of the hose in a container placed under the filter.



Hand pump

2. Loosen drain plug and move hand pump up and down manually 10-20 times.
3. Tighten drain plug completely and move hand pump a couple of times.
4. Start the engine to check and check if there is fuel leakage from drain plugs of chassis and engine side fuel filters. Also, make sure that water separator (fuel filter) warning light is not lit.

**CAUTION**

- Clean the fuel accumulated on vehicle body.
- It takes a little longer to start the engine just after draining water from fuel filter. In case it does not start in 10 seconds, try again after some time.
- Fuel will be observed in drained water. This water must be get rid of suitable to the requirements of your country.

DPD Diesel Particulate Diffuser (DPD)**Checking and Cleaning the DPD**

Have your exhaust pressure check in your Isuzu dealer in accordance with Maintenance Schedule. Filter might need cleaning according to check results. If exhaust pressure control is not conducted, clean the filter according to Maintenance Schedule.

**RECOMMENDATION**

- Conducting maintenance and cleaning on DPD may lead to DPD breakdown and engine failure or low fuel efficiency.
- Consult your Isuzu dealer about maintenance and cleaning of DPD.

**NOTE**

[Setting Pressure Difference Sensor 0 point]

- Conduct a 0 point setting for pressure difference sensor detecting clogging in DPD every year.
- Conduct 0 point calibration for pressure difference sensor after it reaches environmental temperature. After DPD replacement, wait at least for 2 hours before 0 point calibration.
- Besides, after each DPD check or cleaning, conduct a differential pressure sensor setting according to the procedure below.

1. Turn IG Key "ON" and wait for some time. DO NOT START the engine
2. Make sure that DPD automatic and manual regeneration indicator lamps are lit one after another.
3. Make sure that DPD automatic and manual regeneration indicator lamps go off in 30 seconds.
4. Turn IG key "OFF" and wait for 15 seconds or more in this state.

**SERVICE AND MAINTENANCE
ABOUT CHASSIS**

Disc Brakes

v

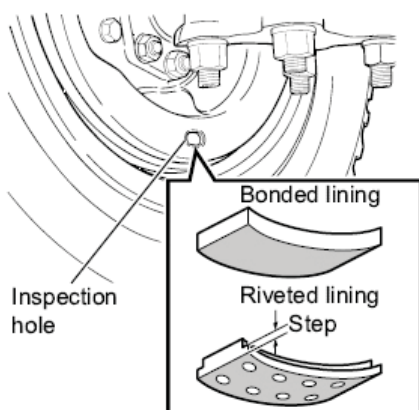
In case brake shoe plates are worn over the limit, brake performance decreases and components may fail.



WARNING

- Do not drive with brake shoe plates worn excessively. Excessively worn brake shoe plates may lead to brake component failures and decreased braking performance. This situation is extremely dangerous.

Brake Shoe Plates



Checking Brake Shoe Plates for Wear

1. Remove rubber plug from support plate maintenance hole.
2. Check if sufficient thickness of brake shoe plate is present. Also, check if there are other damages on the sides of the plate.
3. Wear limit of plate adhered to brake shoe; 1 mm thickness. and wear limit of riveted plates is when pillar is worn. If the plate is worn over the limit or cracks are found on the sides, it must be replaced. Visit an Isuzu Service for the replacement.



Drum-Plate Clearance Adjustment (Automatic Adjustment Model)

1. Press the brake pedal completely.
2. Repeating Step 1 until there is no change in brake stroke will adjust the drum-plate clearance to a certain length automatically. After that, repeated braking during driving will automatically adjust the clearance.

Tyres and Wheels

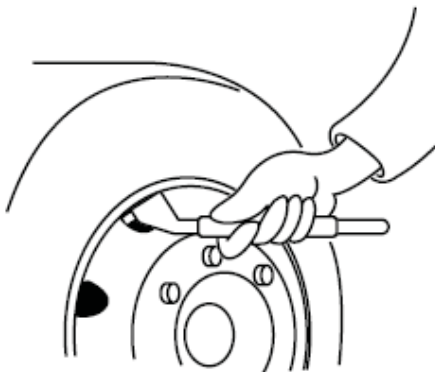
Wheels have a great effect on safe and comfortable ride. Any Wheel breaking and flying will cause the vehicle to stop and block the traffic and may lead to serious accidents. We strongly recommend you to check wheels and tyres daily and store in a relatively good condition.



WARNING

- If you detect an unusual situation when checking nuts, Wheel nuts or wheels, do not drive the vehicle and contact an Isuzu Dealer as soon as possible.
- If you find an abnormality on left wheels, check the wheels on the right for similar issues. A problem in a Wheel may indicate problems in other wheels.

Checking The Tyres



Air Pressure

Too low or high tyre pressure may lead to abnormal temperature rise, early wear, puncture or even blowout in the tyre as well as its impact on driving or load.

- While measuring air pressure in a tyre, use an appropriate manometer. Tyre air pressure must be checked when tyre is cold or the vehicle is not used. (After driving, tyre air pressure increases by %10.)
- As tyre air pressure varies according to vehicle type and tyre size, check air pressure label on driver's door frame or tables in the following pages.
- Also, check spare tyre air pressure according to Maintenance Schedule using a manometer.

Tyre Air Pressure

Vehicle model	Tyre size		Tyre air pressure kPa (kgf/cm ² /psi)	
	Front	Rear	Front	Rear
VISIGO	265/70 R19,5	265/70 R19,5	600 (6.00/87)	600 (6.00/87)

**WARNING**

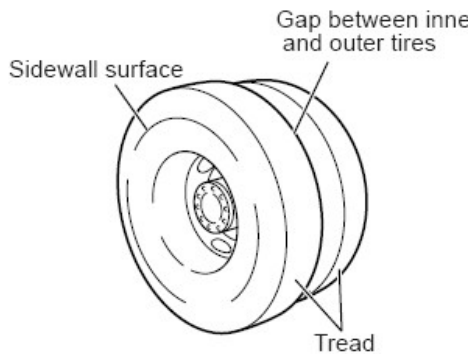
- Insufficiently pumped or worn tyres are extremely dangerous as they can easily slip or blow-out. If tyres blow, they can burn and cause fire in the vehicle.
- If you drive the vehicle with deflated tyres, nuts will be subject to excessive pressure. Under these conditions, nuts can be broken and wheels may fly and cause accidents.

**CAUTION**

- Excessively inflated wheels cause shaky ride and may damage the load. Deflated tyres increase the heat and may cause the tyre blow. Keep your tyres adjusted in standard air pressures all the time.
- In double tyre rear wheel models produced for European market, nut cover cannot be used as step. Do not step on this.

**RECOMMENDATION**

- There should not be air pressure difference between inner and outer tyres in double tyre wheels.
- It is not easy to visually determine double Wheel tyre with insufficient pressure or low tyre cross-section height-width rate (%70 or %75 cross-section height-width ratio). In order to check air pressure of any tyre, always use a manometer.
- If you have aluminium wheels, use an extension connected to inner tyre valve or a special pressure gauge as well as a standard manometer when checking air pressure of the inner tyre of double wheels. This simplifies the control.



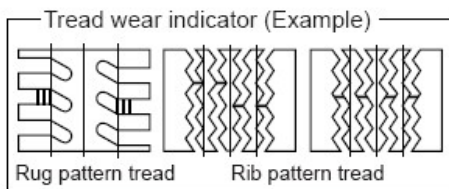
Cracks and Other Damages

Check if there are cracks or other damages on the threads and side surfaces of each tyre. Especially, check if there are nails or other metal pieces in the grooves of the threads and stones in the clearance between double tyre wheel.



RECOMMENDATION

- When checking the tyres, observe the following points. low air pressure; gravel or nails in thread grooves; cracks or other damages on tyre surfaces; unbalanced wear; and gravel in the clearance between double wheels.



Tyre Thread Depth and Abnormal Wear

It is dangerous to use worn tyres as these tend more to puncture or blow out during driving. Check if there are indicators of thread wear on tyre threads and check tyre thread depth with a gauge to make sure the grooves are deeper than the specified depth. Tyres showing thread wear must be replaced. Also, check tyres for unbalanced wear or other damages.



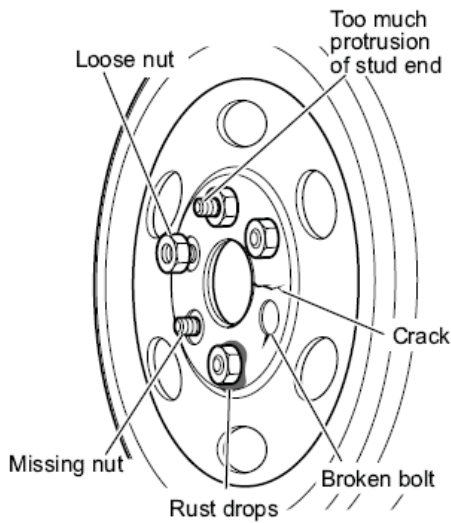
CAUTION

- Skidding and high speed aquaplaning potential is higher in tyres with shallow thread depth.



NOTE

- Aquaplaning occurs when vehicle is travelling on wet road in high speed; water layer between tyres and road causes tyre slipping. Aquaplaning prevents the driver from using the wheel and decelerating the vehicle using brakes.



Visual Check of Tyre Installation State

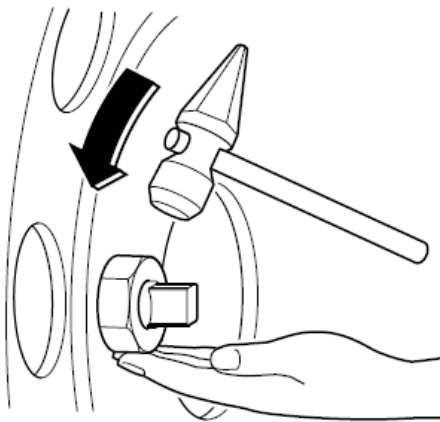
Check wheel placement visually.

1. Make sure there are no missing wheel bolts and nuts.
2. Check each wheel if there is rust and leakage in bolts and nuts. Also, check the Wheel for cracks and other damages.
3. Check each wheel stud end to see if protrusion from wheel nut length is suitable. Protrusion must be same between all studs in the wheel and wheels.



CAUTION

- Abnormality experienced in wheel placement may result in loose or missing nuts and/or broken wheel studs.



Situation Found After One Check Hammer

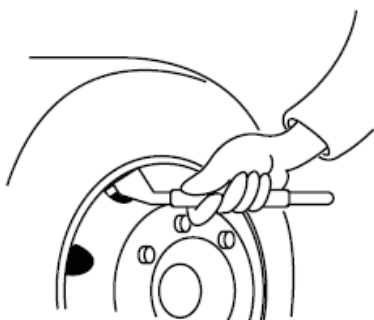
Situation Found After One Check Hammer
Place your fingers under each wheel nut and hammer the nut flat end in the tightening direction.

In case the vibration felt by hands is different from other nuts or the sound is not clear, there may be problems in the nut or stud.



CAUTION

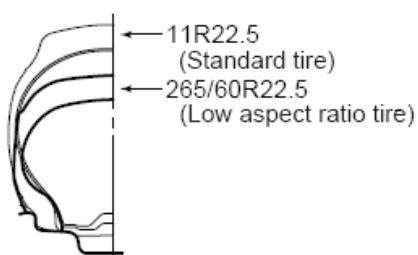
- In case you find an abnormality in wheel nut or stud condition during this investigation, nut may be loose or stud may be broken.



Spare Tyre Air Pressure

Keep spare tyre pressure a little higher than standard pressure. Adjust the pressure accurately while using.

Tyres are heated when used and pressure gets higher. If you need to wait until after driving to adjust the pressure, determine required target pressure for adjustment by adding about 20 kPa to Standard pressure.



Use of Tyres with Low Cross Section Height-Width Ratio

Tyres with low ratio for truck applications (about %70-75) have %20-30 lower air volume than Standard tyres. When air starts leaking, tyres with low ratio have a quicker negative impact on driving. Air pressure of tyres with low ratio must be checked more frequently than standard tyres using a manometer.

Tyres Used Long Term

Tyres are made of rubber that changes features and ages in time (even installed to the wheel as spare tyre). If they have to be used continuously, an aging check should be done after 5-7 years of use.

**CAUTION**

- Everytime the wheel is removed, make sure that you check wheel studs, nuts and wheel for abnormalities.
- In case you find an abnormality, do not keep on using the wheel. Contact Isuzu Service as soon as possible.

Tyres in different places wear in different ways. For similar tyre wear and longer tyre life, change the places of tyres regularly.

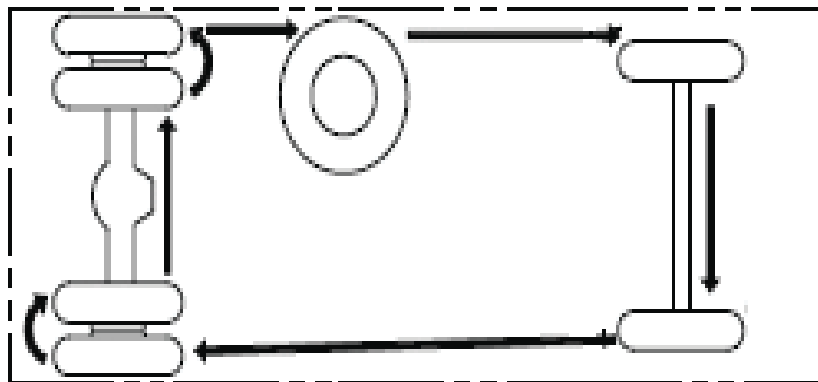
Make sure you use the same type tyres on the same shaft. If you use different tyre types on the same shaft, vehicle may diverge left or right when braking.

New tyres increase the heat more than old ones and wear faster, that's why new tyres must be placed in the front shaft that has lower load.

If there is diameter difference between iner and outer tyres of double wheel, install the smaller diameter one inside.

Diameter difference in double wheel tyres must be in the range specified in the table below. If the limit is exceeded, tyres wear more than they should be.

[Model with spare tyre on the side]

**CAUTION**

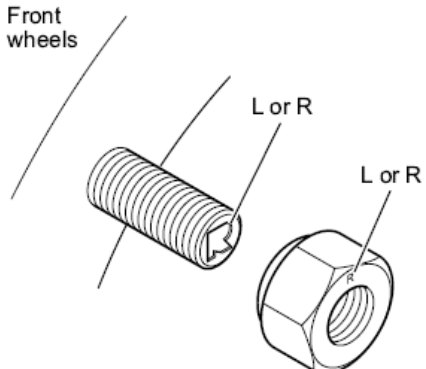
- If different diameter tyres are used between front and rear shafts, do not replace rear and front tyres; otherwise, tyres are loaded over the limits. This is very dangerous as tyres and wheels may deteriorate under excessive load.

**RECOMMENDATION**

- Tightening torque of wheel nuts may decrease after changing a tyre. Tighten the nuts again to torque values specified according to instructions in “Re-Tightening of Wheel Nuts” in this chapter after 50-100 km drive following a tyre change.

Replacing the Tyres

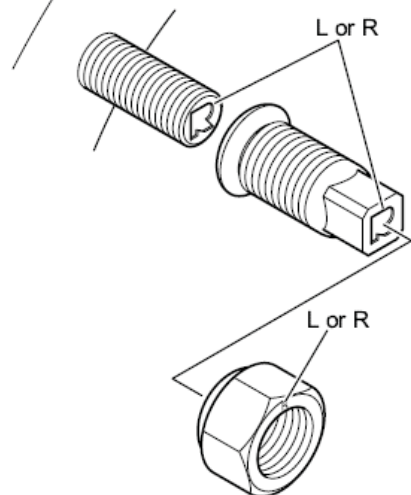
Front
wheels



After checking the safety around, place the tyre on a flat and hard surface.

Each stud or nut on the right is marked "R" or "L" or "R" on the left.

Rear
wheels



Preparation

While parking your car to replace the tyres, make sure that;

- Your vehicle does not block the traffic
- Surface must be balanced, flat and hard; and
- It should be safe to replace tyres.

In order to notify other vehicles while changing tyres use hazard switch and warning triangle.

Pull the handbrake fully. Place a wedge behind the tyre diagonally on the other side of the vehicle (or Stone, wood, etc.) (EXAMPLE) Place a wedge to the left wheel while changing rear right wheel. Allow the passengers to get out of the car.



CAUTION

- If you have ABS in your vehicle, use the same size and thread pattern tyre.

Removing a Wheel



WARNING

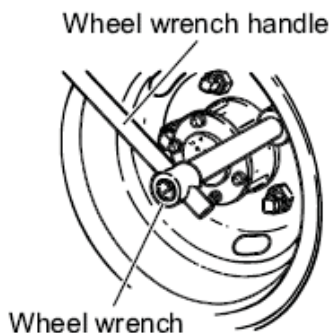
- Before lifting the vehicle pull the handbrake fully and place wedges to the wheels. In order to prevent vehicle from moving, it is not enough to pull the handbrake. When a rear wheel is lifted using the jack, vehicle stopped with just handbrake will move and cause serious dangers.
- Do not open doors or start the engine while lifting the vehicle. Do not attempt to look or get under the vehicle. This situation is extremely dangerous.
- In order to prevent a potential danger in the case of jack slip, place the spare tyre under the vehicle close to the jack.



CAUTION

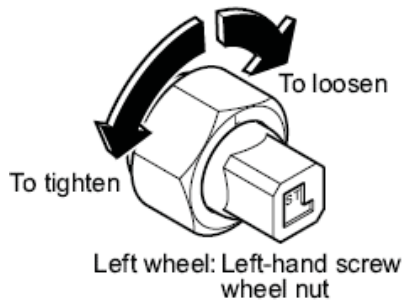
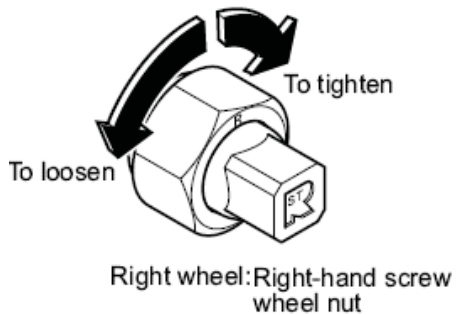
- Wheel is heavy. Handle the wheels carefully when installing and removing to prevent injuries.
- Just after stopping the car, do not touch the exhaust pipe as it is extremely hot. In addition, do not renew a tyre while diesel particles diffuser renewal operation is continuing because exhaust temperature is extremely high by this way.

1. Pull the handbrake fully. Place a wedge to the rear wheel across while changing a front tyre. Place a wedge to the front wheel across while changing a rear tyre.
2. Place the upper part of the jack to jack point carefully.
3. Lift the vehicle so that the tyre is not fully lifted.
4. Using the wrench, loosen the nuts so that the tyre is still in its place. Do not remove the nuts.



CAUTION

- Do not loosen the nuts too much. Wheel studs may be damaged.



5. Lift the vehicle completely so that the tyre leaves the ground.
6. Remove all nuts and wheel. Remove the tyre making sure that you do not damage wheel stud threads.
7. While removing one of double rear wheels, remove the nuts of the outer wheel and remove this first. After that, lower the vehicle and loosen inner wheel nuts.
8. Lift the vehicle again and remove the inner wheel.
9. Check the parts below: Check wheel for deformation or cracks; wheel hub for excessive wear of wheel installation surface; and wheel studs and wheel nuts for thread damages. If abnormalities are found in the parts above, check other parts and replace the broken ones with the new ones.

Installing a Wheel



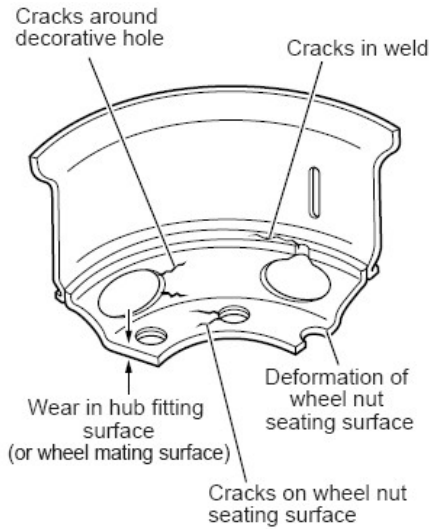
WARNING

- Wheel, studs or nuts that are abnormal may break in the future, this causes the wheel to fly while driving.
- Do not paint contact surfaces, nut contact surfaces (conic surfaces) and wheel hub installation surface. Thick paint layers will loosen or break the studs.



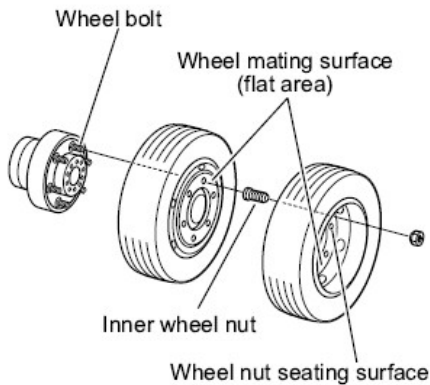
CAUTION

- Replace the wheels only when wheel is above the ground. Otherwise, wheel will be installed wrong and driving will be negatively affected.
- Clean mud or rust on contact surfaces between tyres or on wheel hub installation surface. Otherwise, wheel may loosen while driving.



1. Check the wheel against:

- Cracks or other damages around stud or decorative holes.
- Cracks, other damages or deformations on nut installation surfaces (conic surfaces)
- Cracks or other damages in welds.
- Wear or other damages on wheel hub installation surfaces or contact surfaces between wheels.



2. Check wheel studs or nuts against:

- Cracks and other damages
- Stud lengthening or excessive rust
- Crushed, thinned or stuck threads.



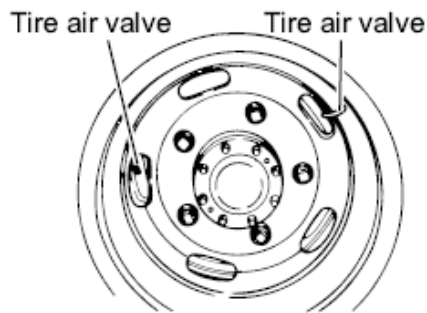
CAUTION

- Clean rust and dust on wheel stud and nuts; lubricate threads using engine oil, gear oil or power train oil and tighten the nut on the stud. If the nut is not turned easily, threads are broken.
- If threads are broken, change stud and nut as a set.
- If one of the studs is broken, change all studs and nuts of each wheels.

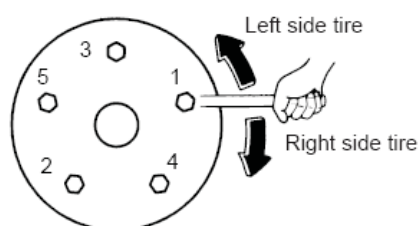
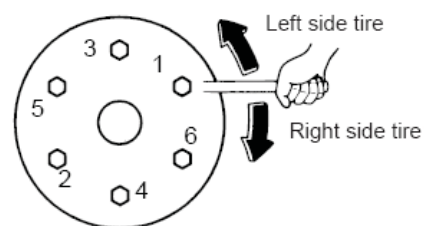
3. Clean rust, dust or mud on surfaces of wheel installation, wheel hub installation or between wheels and nut contact surfaces (conic surfaces) and on threads of wheel studs and nuts.

**CAUTION**

- Clean the wheel to clean dust and rust on surfaces of installation, wheel hub installation or between wheels. Also clean conic part of each nut. If you fix wheel nuts without cleaning, nuts will loosen in the future and cause the wheel fly while driving. This situation is extremely dangerous.



4. Install the tyre aligning wheel stud holes with stud holes. While installing rear wheels, place the tyre air valve aligned 180 degrees out of the tyre to utilize the inflation of inner and outer tyres.
5. Manually tighten each nut till they contact nut installation surface on the wheel and tighten all wheel nuts till wheel is fixed without any loose parts. Turn wheel nut cone ends inside.
6. Turn jack air screw counter-clockwise to lower the vehicle slowly.

Wheel nut tightening sequence**Wheel with 5 nuts****Wheel with 6 nuts**

7. Tighten the nuts in transverse order or with 2-3 cycles. While installing one of the rear wheels, first tighten the nuts of inner wheels and then the outer.

**CAUTION**

- Some hammer wrenches found in the market generate higher torque than maximum torque specified for wheel nut tightening. If hammer wrenches are used, studs may break. Before using hammer wrenches check if their torque value meets the specifications.
 - While using hammer wrench, adjust air pressure regulator carefully and choose compression time. Eventually, tighten to the specified torque using a torque wrench.
8. Finally, tighten all nuts to the specified torque using a torque wrench. While changing only the outer rear wheel, tighten inner wheel nuts before tightening outer wheel nuts.

Model or specifications	Front wheel nuts		Rear wheel nuts	
	Torque values	Amount	Torque values	Amount
VISIGO	441 - 539 N·m (45 - 55 kgf·m/ 325 - 398 lb·ft)	6	441 - 539 N·m (45 - 55 kgf·m/ 325 - 398 lb·ft)	6

**RECOMMENDATION**

- After changing a tyre, turn the steering wheel to make sure that components around the wheel do not block the parts. If you find any abnormalities, contact an Isuzu Dealer. iri
- Tightening torque of wheel nuts may decrease after changing a tyre. Tighten the nuts again to torque values specified according to instructions in "Re-Tightening of Wheel Nuts" in this chapter after 50-100 km drive following a tyre change. .

Re-tightening Wheel Nuts

In order to make sure that nuts are tightened to correct torque, check these using a torque wrench.

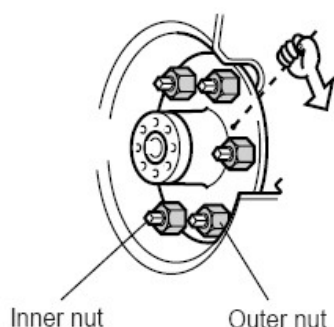
Use the methods below to check loose wheel nuts. Tightening torque of wheel nuts may decrease after changing or rotating a tyre. Make sure you re-tighten the nuts to correct torque after 50-100 km drive.

Model or specifications	Front wheel nuts		Rear wheel nuts	
	Torque values	Amount	Torque values	Amount
VISIGO	441 - 539 N·m (45 - 55 kgf·m)	6	441 - 539 N·m (45 - 55 kgf·m)	6

Single Wheel

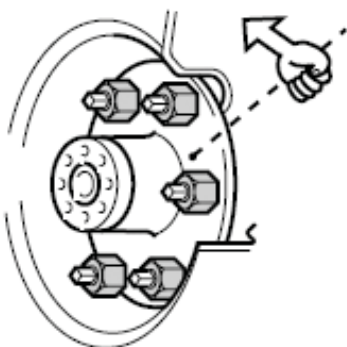
Turn wheel nuts to torque value in the tightening direction.

Retightening of nuts on left rear dual-tire wheel



Double Wheel

1. Loosen outer wheel nuts of wheel stud nuts.
2. Tighten the inner wheel nuts of the same wheel to the specified torque value.



3. Then tighten the outer wheel nuts to the specified torque value.

**WARNING**

- In case you find an abnormality such as frequent loosening of re-tightened screw in wheel nuts, have your vehicle checked in an Isuzu Dealer or have it maintained as soon as possible.

**CAUTION**

- In order to tighten the nut to torque value, completely grip the wrench on the nut. However, do not use a pipe as an extension or your feet as extra load. This causes over-tightening and damage components.
- Over or insufficient tightening of nuts both may lead to broken wheel studs or cracked wheels and result in flying wheel. Stick to the specified tightening torques.
- When changing a tyre with the new one, use the same tyre type or size, otherwise, safe driving may be influenced. Avoid using mixed tyre type and sizes at all times.

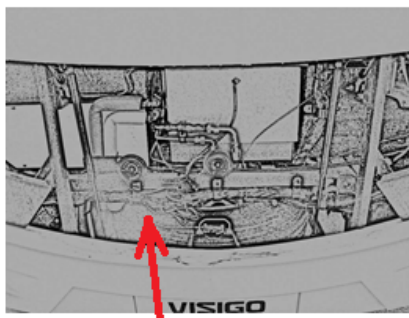
Spare Wheel ^v

Removal

Spare tyre is found in rear left trunk of the vehicle. Following procedure must be followed to remove the spare tyre.

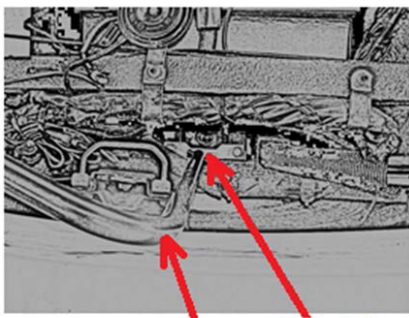


1. Spare tyre is found behind the front bumper.



Spare Wheel

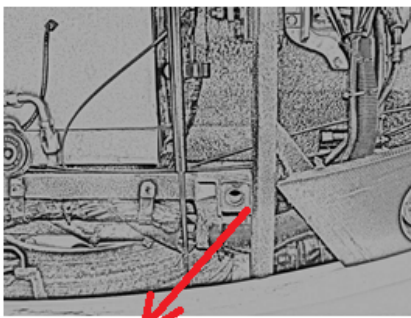
2. Remove spare tyre removal mechanism and place it in mechanism hole.



Spare wheel lowering lever

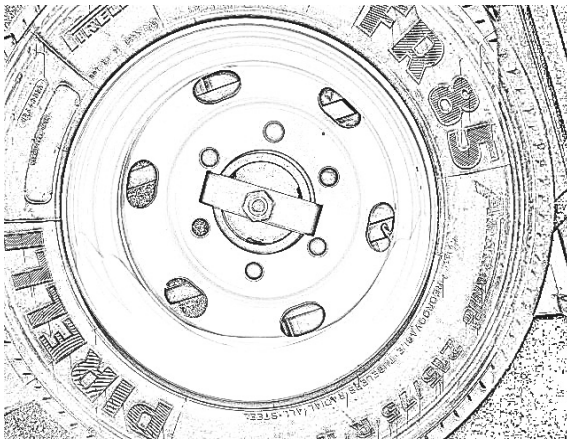
Spare wheel lowering mechanism

3. Remove the tyre by turning the lever clockwise.



Drawbar connection point

Vehicle drawbar is located on the left side of the spare tyre.

Spare Wheel ▾**Removal**

4. Loosen the nut fixing spare wheel to the rail and remove the tyre.

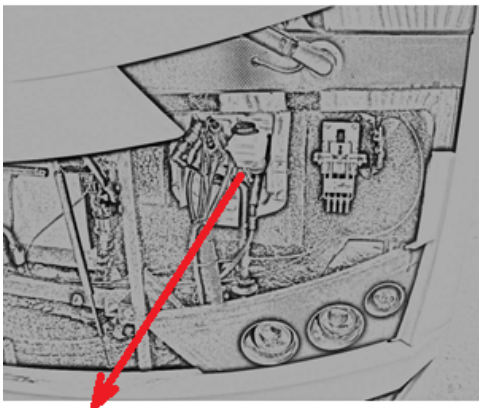
Air Pressure

Also, check spare tyre air pressure according to Maintenance Schedule using a manometer.

A spare tyre inflated to a normal pressure may deflate due to leakages. Thus, inflate the spare wheel more than the pressure that it may lose in time.

Clutch M/T**Clutch Fluid****CAUTION**

- When filling the tank with clutch fluid, make sure dust and water do not enter the tank. Dust or water may deteriorate the fluid.
- Make sure the fluid does not contact a painted surface or your skin. In case it is spilled on a painted surface or your skin, immediately wash and clean the surface.
- Only use the specified fluid and change it according to Maintenance Schedule.
- Fluid catches moisture easily. Tighten the cover tightly while storing this.
- Do not use fluid mixed with any other brand.
- If the fluid decreases very quickly, there may be a problem in clutch system or clutch may be worn excessively. Please immediately get Isuzu Service to control your vehicle.

Checking Clutch Fluid Level:

Clutch Fluid container

1. Open vehicle front maintenance cover.
2. Clutch fluid container is located on the left as shown in the figure below.
3. Fluid level must be between min and max marks on the container.

Adding Clutch Fluid

If fluid level falls below MIN mark, open container cover and add fluid. Add fluid till MAX line.

**CAUTION**

- Before refilling the tank, clean the area around and fill the fluid from a clean container. Impurities in the tank will cause clutch system failure.
- Clutch fluid melts painted surfaces and plastic, vinyl and rubber components. Also it is highly abrasive for metals. If it is spilled, clean or wash the surface immediately.
- Do not mix fluids of unspecified brands with clutch fluid. Due to chemical reactions mixture of different brands will cause clutch system failure.

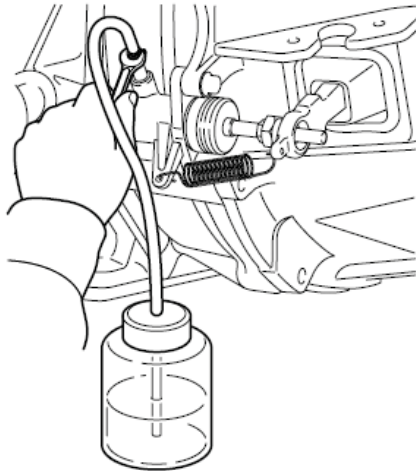
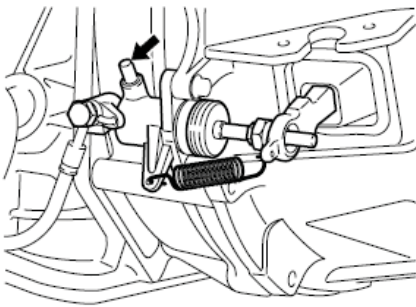
Changing Clutch Fluid

Change the fluid using the specified fluid in Maintenance Schedule. As changing the fluid requires the removal of related components, contact an Isuzu Service.

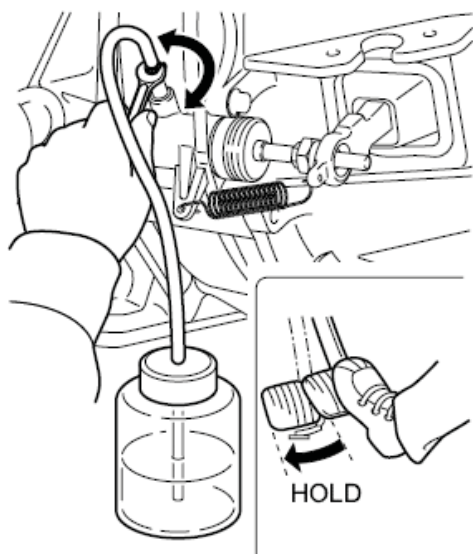


Draining Clutch Fluid System

If air is present in the system, clutch is released insufficiently. If clutch is used with excessively low amount of fluid or clutch pipeline is removed in maintenance, drain the air from the system. Do not drain the system by yourself, ask for help from another person.



1. Put wedge to the wheels and pull the hand-brake fully.
2. Check fluid level in fluid tank and add required fluid.
3. Remove rubber cover from air drain screw on clutch cylinder. Clean bleeding screw.
4. Place one end of the hose to bleed screw and the other end to a container. Fill 1/3 of the container with clutch fluid.



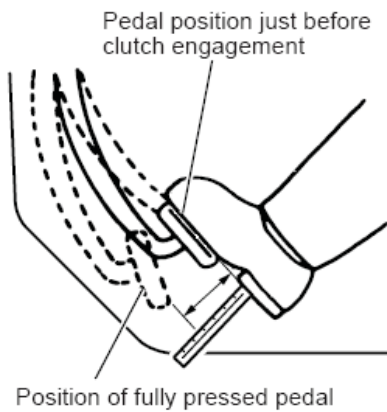
5. Press the clutch pedal a couple of times and hold it.
6. In order to allow the bubbles in the fluid flow in the container, loosen bleed screw and tighten immediately.
7. Release the clutch pedal slowly. Repeat Steps 5 and 6 until there are no bubbles left in the pipe. Replace the rubber cover after bleeding.

**CAUTION**

- During bleeding, make sure fluid level in the tank is not below MIN mark.

Clutch Pedal

Clutch disc wears as the clutch is used and this causes clutch pedal clearance to decrease. If you keep on using pedal with less clearance, clutch slips easily. On the other hand, if clutch clearance is too much, clutch is not released sufficiently and shifting becomes difficult.



Checking Clutch Pedal

1. Press the pedal with your hand until you feel a slight resistance. Pedal movement distance up to this point is pedal play.

Clutch pedal play

15 - 25 mm (0.59 - 0.98 in)

2. Make sure handbrake is fully pulled. Start the engine and allow it to idle and fully press the clutch pedal
3. Shift the lever to 1. gear and release the pedal slowly. If the distance between fully pressed position and the coupling position is 20 mm clutch pedal is normal.

Also, make sure the clutch operates normally without slipping when the vehicle is moving.



RECOMMENDATION

- In order to prevent the vehicle to start very fast, release the pedal slowly.

Transmission Oil

Change transmission oil according to Maintenance Schedule.

If you have leveller in your vehicle, you have to follow special procedures to check and change leveller clutch oil level.



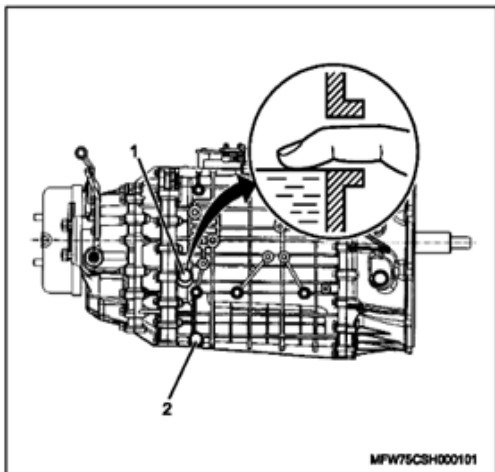
RECOMMENDATION

- Use the following oil amount only as a guide while engine oil is being changed. Be sure that oil is on the required level after oil is changed.
- Emptied oil must be stored and disposed in environment friendly methods.

Transmission oil amount to be changed

Transmission model		Oil amount
MZW 6P	6 vites	5,3lt
Oil type: API GL5 Gear oil 80W90		

Checking Oil Level



1. Filling plug
2. Drain plug

1. Remove oil filling cap
2. Make sure oil level reaches the bottom edge of oil level tap. Correct oil level is 0 and 10 mm below level tap hole. . If oil level is too low, add oil from oil leve tap hole.
3. Fix the tap to specified torque.

In addition, check it whether there is a oil leak or not.

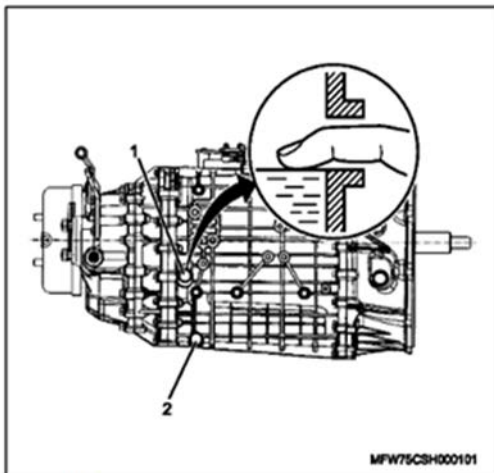
Oil level tap tightening torque

39 N·m (4.0 kgf·m)

**RECOMMENDATION**

- You have to clean the dirt on the tap before fixing.

Oil Changing



1. Filling plug
2. Drain plug

1. Place a container under drain plug(s) to empty the oil.
2. Remove oil level and drain plugs together to empty the oil in the container.
3. After tightening drain plug(s) to the specified torque, fill the transmission with new oil through oil level plug hole.

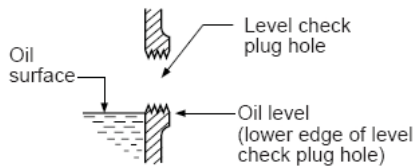
Drain plug tightening torque

39 N·m (4.0 kgf·m)



RECOMMENDATION

- You have to clean the dirt on the tap before fixing.



4. After the refill, make sure oil level reaches the bottom edge of oil level tap.
5. Fix the tap to specified torque.

Oil level tap tightening torque

39 N·m (4.0 kgf·m)



RECOMMENDATION

- You have to clean the dirt on the tap before fixing.



RECOMMENDATION

- As MYY and MZZ transmission bodies are made of aluminium, pay required attention not to tighten oil level and drain plugs excessively. Otherwise, the threads can be damaged.



NOTE

- Transmission type is shown on description plate in the cabin.

Rear Shaft Differential Gear Oil

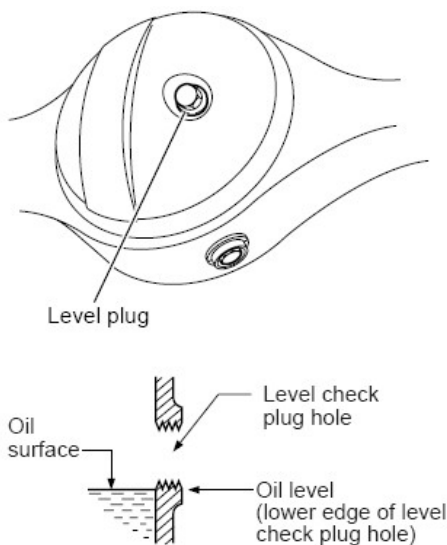
Rear Shaft Differential Gear Oil level must be checked and changed according to Maintenance Schedule.



RECOMMENDATION

- While changin the oil, use the oil levels stated in the following pages just for guidance.
- Be sure that oil is on the required level after oil is changed.
- Emptied oil must be stored and disposed in environment friendly methods.

Checking Oil Level



1. Remove oil filling cap.

2. Make sure oil level reaches the bottom edge of oil level tap.

- If oil level is too low, add oil from oil leve tap hole.

3. Fix the tap to specified torque.

Plug tightening torque

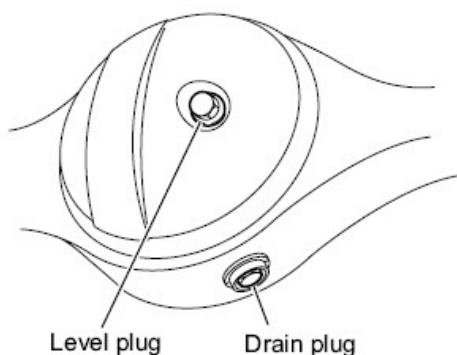
84 N•m (8,6 kgf•m)



RECOMMENDATION

- You have to clean the dirt on the tap before fixing.

Oil Changing



1. Place a container under drain plug(s) to empty the oil.
2. Remove the plugs illustrated in the figure to empty the oil in the container.
3. After tightening drain plug(s) to the specified torque, fill the rear differential with new oil through oil level plug hole.

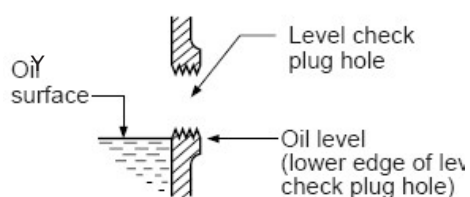
Plug tightening torque

84 N•m (8,6 kgf•m)



RECOMMENDATION

- You have to clean the dirt on the tap before fixing.



4. After the refill, make sure oil level reaches the bottom edge of oil level tap.
5. Fix the tap to specified torque.

Plug tightening torque

84 N•m (8,6 kgf•m)

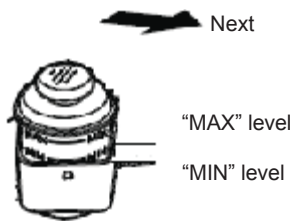
Rear shaft gear oil level to be changed

Technical Specifications	Oil amount (Reference Value)
320 mm. differential	11 liter

Power Steering Fluid

Power Steering Oil level must be checked and changed according to Maintenance Schedule.

Checking Power Steering Oil Level



If oil level is between "MAX" and "MIN" Marks on the container, it is correct. If the level is below "MIN" mark, refill up to "MAX" mark.

Fluid oil container is found behind right engine compartment. After checking the oil level, securely fit the cover and head.



CAUTION

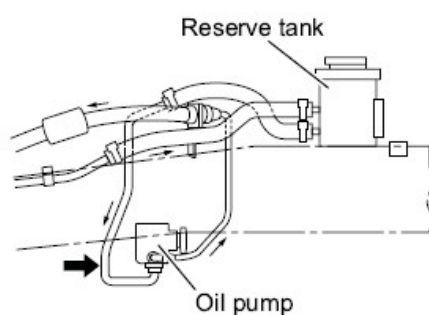
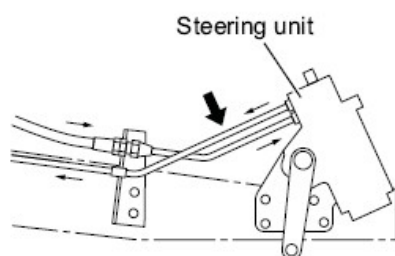
- Before filling oil, clean the area around the head and pour oil from a clean water container or cone. Impurities entering the tank may cause power steering system failure.
- Do not mix recommended steering oil with other brands. Due to chemical reactions mixture of different brands will cause system failure.

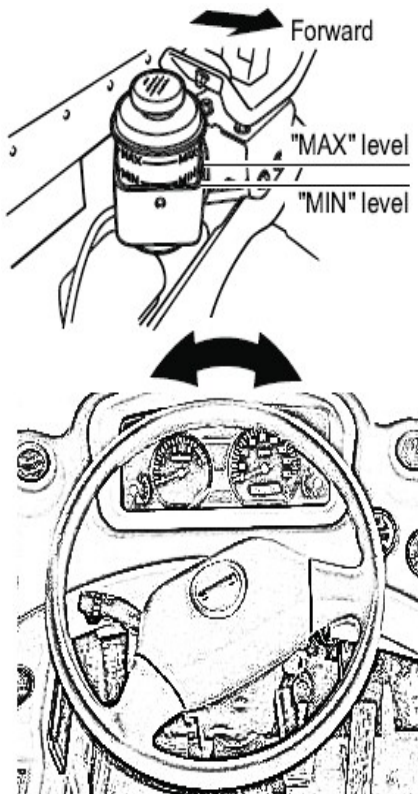
Changing Power Steering Oil

Drainage

1. Pull the handbreak fully and place wedge to rear wheels.
2. Place the upper part of the jack to jack point carefully.
3. Lift the vehicle until front wheels are completely off the ground.
4. Remove oil hose between oil pump and fluid oil tank and oil pipe between steering unit and fluid oil tank and drain power steering oil.
5. When steering fluid is completely drained, turn the steering wheel to left and right a couple of times to drain the remaining fluid in the line.

Recirculating balls



**Refill**

1. Secure oil pump and oil hose and refill fluid container with specified steering fluid oil.
2. After filling the container to the specified level with oil, wait for 2 – 3 minutes to allow oil level to lower.
3. Turn the steering wheel to both sides a couple of times before starting the engine.
4. Lower the vehicle and start the engine. While the engine is idling, fully turn steering wheel to both sides a couple of times. If you do not hear abnormal sound, system is successfully air drained.

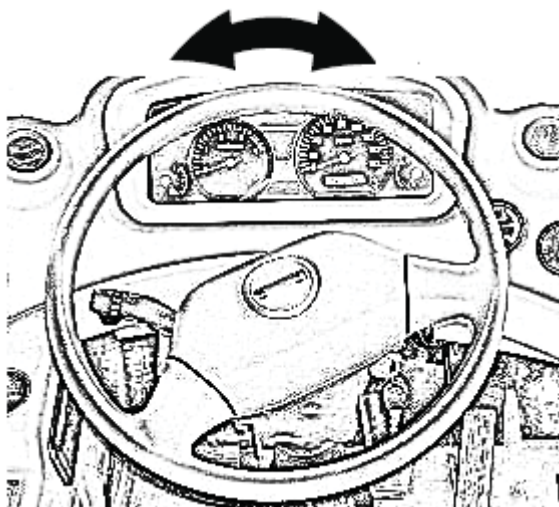
**CAUTION**

- When refilling the system, make sure fluid container is full with oil by making necessary additions in order to avoid air entrance to fluid system.

Bleed

If you hear abnormal sounds when turning the steering, there is air left in the system. Follow the steps below to bleed the system.

1. Pull the handbrake fully and place wedge to rear wheels.
2. Place the upper part of the jack to jack point carefully.
3. Lift the vehicle until front wheels are completely off the ground.



4. Start the engine. Turn the steering wheel to both sides a couple of times before starting the engine.
5. Lower the vehicle. Turn the steering wheel to both sides a couple of times when the engine is working. If you do not hear abnormal sound, system is successfully air drained. If you still hear abnormal sound, this indicates air in the system. In order to bleed remaining air by increasing air temperature, fully turn steering wheel to both sides a couple of times. When oil temperature rises to 60-80C, stop the engine and wait about 5 minutes (in order for air to separate from high temperature oil).
6. Check oil level in fluid container and attachments against oil leakages.
7. Check if steering wheel turns easily and no abnormal sound is present while turning and test the vehicle by driving.

Hub Bearing Grease

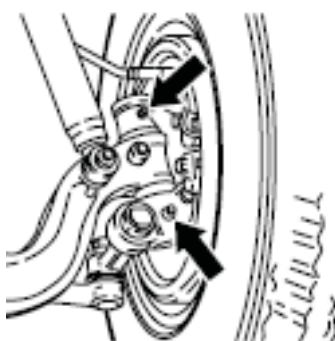


In order to change front and rear bearing grease, as demount and mounting is required, contact an Isuzu dealer.

Lubricating Chassis Components With Grease

Grease type specified for chassis components is not the same as grease type specified for other components. Make sure you use the specified grease for each component and carry out lubrication according to Maintenance Schedule.

Shaft pins (left-right)



Each has 2 ends
Rigid shaft suspension

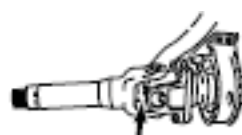
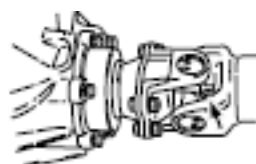
Drive shaft centre bearing



Drive shaft splines



Drive shaft universal joint



Single part drive shaft: 2 ends; Two part drive shaft: 3 ends



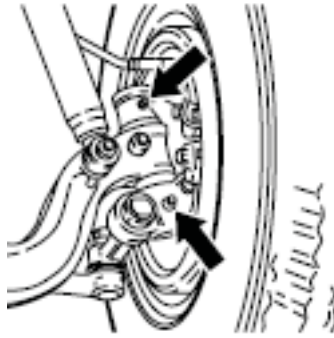
RECOMMENDATION

- Each drive shaft universal joint must be excessively lubricated with grease till 4 needle bearings leak on oil pads. After lubrication, clean remaining grease.

Lubricating Chassis Components With Grease

Bir şasi bileşeninde kullanılması için belirtilen gres yağının tipi (özellikleri) başka bir bileşende kullanılması için belirtilen gres yağının tipinden farklıdır. Her bir bileşen için yalnızca belirtilen gres yağını kullandığınızdan emin olunuz ve yağlama işlemini Bakım Programına göre gerçekleştiriniz.

Shaft pins (left-right)



Each has 2 ends
Rigid shaft suspension

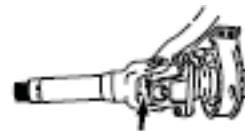
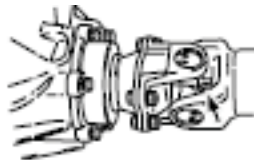
Drive shaft centre bearing



Drive shaft splines



Drive shaft universal joint



Single part drive shaft: 2 ends; Two part drive shaft: 3 ends



RECOMMENDATION

- Each drive shaft universal joint must be excessively lubricated with grease till 4 needle bearings leak on oil pads. After lubrication, clean remaining grease.

OTHER SERVICE AND MAINTENANCE

**WARNING**

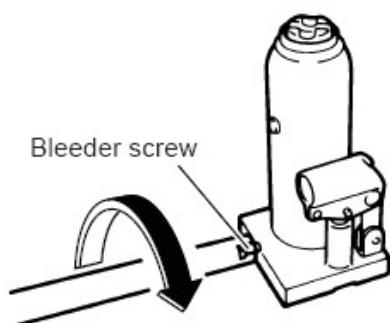
- Lifting the vehicle with jack on a soft or sloping surfaces may lead to serious accidents. Make sure you always do this on flat and hard surfaces.
- Before lifting the vehicle pull the handbrake fully and place wedges to the wheels. In order to prevent vehicle from moving, it is not enough to pull the handbrake. When a rear wheel is lifted using the jack, vehicle stopped with just handbrake will move and cause serious dangers.
- Before lifting the vehicle, make sure nobody is present in and around the vehicle.
- For safety, doors must not be opened and engine must not be started during lifting. Also, do not place or let anyone place a part of body under the vehicle. Failure to do this may lead to an accident in the case of a jack slip.
- After lifting, if something is needed to be done under the vehicle, use jack legs to support the vehicle
- Jack must only be used in one of specified jack points. Also, you have to make sure that the jack has full contact with the specified point.
- In the case of a jack slip, for extra safety, take a spare tyre and place it under the vehicle near the jack.
- Before starting lifting with jack, make sure jack and jack points are free from dirt, oil and grease. Failure to do so may cause dust or oil to slip the jack and accidents.
- If your vehicle is equipped with differential locking system or limited slip differential, when one of the wheels in the shaft is lifted off the ground, vehicle may start moving as engine power is transferred to rear shaft.
- Do not start the engine if one of rear wheels contact the ground.
- Jack provided with your vehicle must only be used for tyre change or chain removal. For extra safety, one wheel must be lifted at a time.
- If you are using double stage, extension type jack and see stopping sign (yellow), stop lifting the car. Failure to do this may lead jack breakage.
- Do not use multiple jacks at a time.
- Jack provided with your vehicle is designed for that vehicle. Do not use the jack for other vehicle and never use another vehicle's jack.
- Slightly turn the bleed screw. Rapid turn may lead to vehicle fall and jack breakage.

Use of Jack

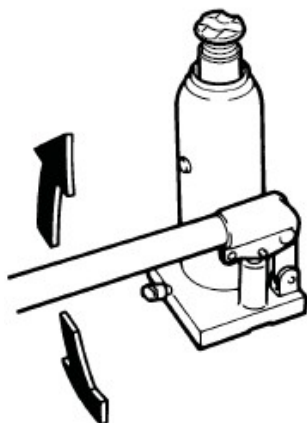
Lifting the Vehicle



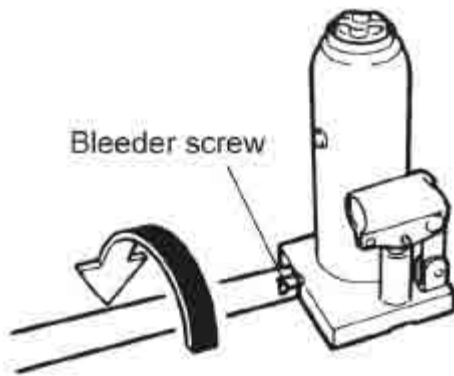
1. Place the jack directly under the jack point and make sure it is vertical. Jack must be placed on a flat and hard surface.



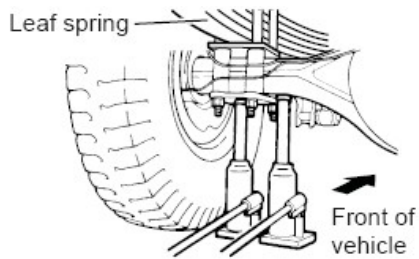
2. In order to extend the jack to the jack point, turn the upper part of the jack. Turn counter-clockwise to extend.
3. Place jack arm to the insert. Before lifting, use notched end of the jack to turn bleed screw clockwise.



4. Move the lever up and down slowly to extend slightly.
5. Make sure jack contacts the jack point completely and then go on lifting the vehicle.

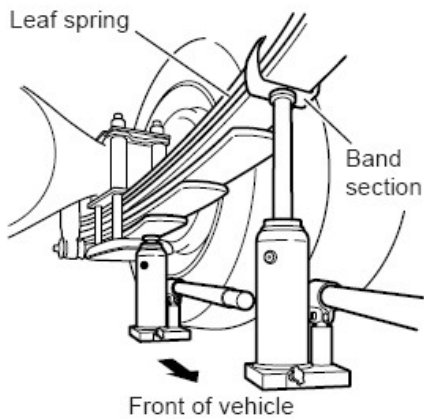
**Lowering the Vehicle**

1. Align jack lever end notch with bleed screw.
2. Turn jack air screw counter-clockwise to lower the vehicle slowly.
3. When vehicle is completely lowered, turn bleed screw completely clockwise.
4. Completely turn jack lever clockwise.

Rear Wheel Jack Points**Overhead Leaf Spring Suspension Model**

(single, double rubber model and flat bearing model)

Apply the jack under the shaft or shaft body.

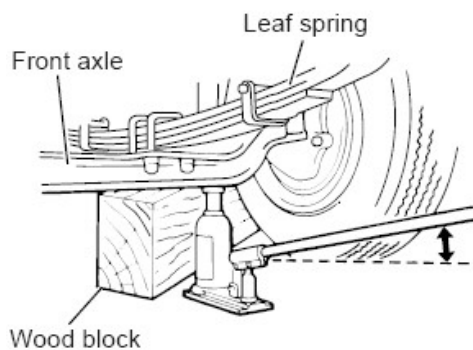
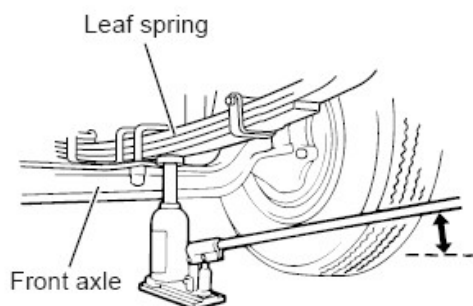
**Bottom Leaf Spring Suspension Model**

(some double wheel models, standard flat bearing model)

Apply the jack under leaf spring or striped rivet in front of the vehicle.

Lifting With Jack When a Front Wheel is Deflated**WARNING**

- Place the jack near the front shaft as much as possible.
- In order to increase balance, log must be as thick as possible.
- As bottom part of leaf spring is tilted, extra care must be taken while lifting. Slipping the jack may cause serious dangers.



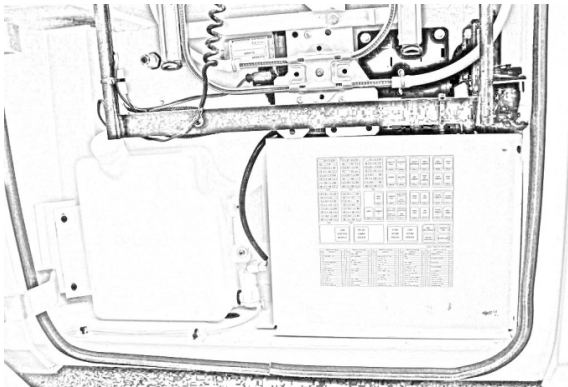
In the case of a deflated front wheel, lifting can not be done using normal jack points. You should follow the steps below using a log or similar:

1. Place wedges front and back of the rear wheels.
2. Apply the jack under the leaf spring in front of the front shaft and lift the vehicle.
3. Place the log under the front shaft.
4. Lower the jack slightly to make sure that front shaft contacts the log securely. If this is the case, go on lowering the jack.
5. Then, take the jack to specified jack point and lift the vehicle to the required height to remove the wheel.

Windscreen Washing Water

Windscreen Wiper / Washer

Windscreen washer tank is found in front of the fuses in the left front trunk. Check water level in windscreen washer tank. In order to check if there are areas not wiped thoroughly, use the washers and wipers. Also check the spraying condition.



Refilling Windscreen Washing Water

1. Washer tank is found in front of the fuse box.
2. Open the cover and fill the tank completely with windscreen washing fluid.




RECOMMENDATION

- Only tap water is found in the tanks in factory deliveries. Adjust water intensity according to your own preference.
- Apply the instructions provided with the fluid according to tap water mixture ratio.
- Products with low quality, engine coolant and sudsy water must not be used. Failure to do so may lead to clogging and damage on painted surfaces.
- Washer must not be used when the tank is empty. Otherwise, washer motor may fail.

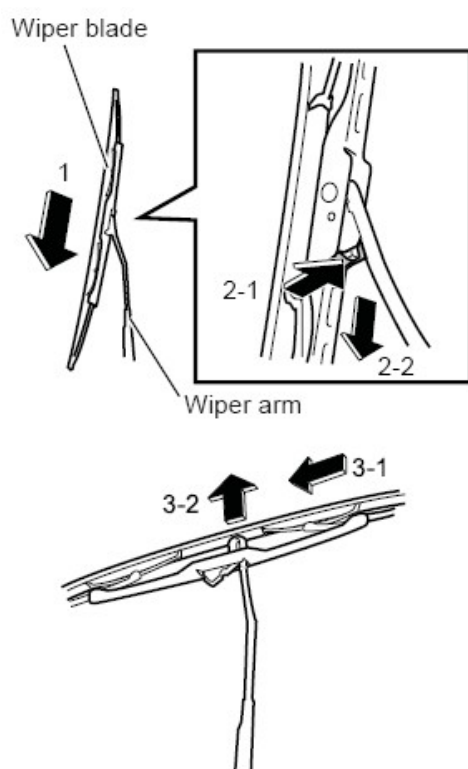
Windscreen Wiper Blades

Daily Checks

In order to check if there are areas not wiped thoroughly, use the washers and wipers.

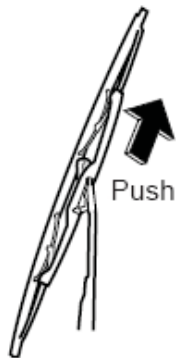
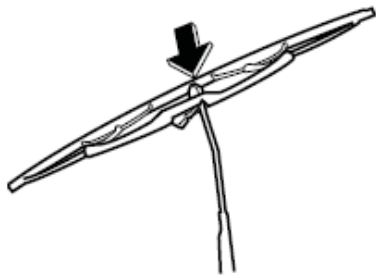
Also, make sure that “ intermittent”, “LO” and “HI” functions work properly.

Changing Windscreen Wiper Blades



Removal

1. Pull the wiper lever up vertically.
2. When pressing the lever on wiper blade hook; pull the blade down (to the bottom of the lever).
3. Remove the blade from the lever when they are vertical.



Push up the blade.

Mounting

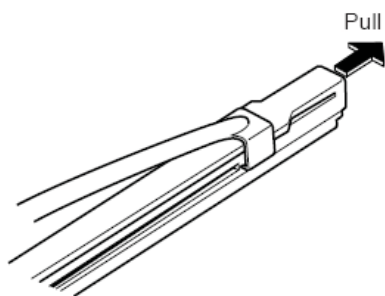
1. Insert the blade to the lever in almost vertical position.
2. Then, when the blade and lever is tilted to the same direction, press the blade till it sits in the lever.



RECOMMENDATION

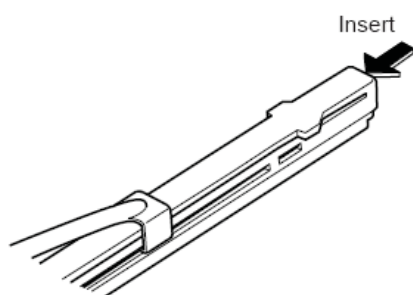
- Do not lower wiper lever without blade, it may scratch the windscreen.
- Make sure a wiper is fixed each time they are mounted. Otherwise, blade may slip when wipers are operated.

Changing Wiper Blade Bearing



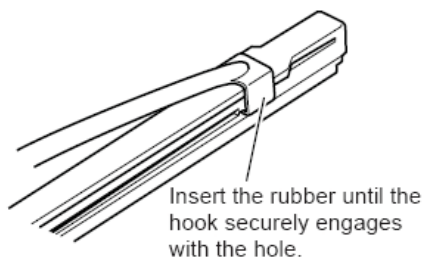
Removal

1. Remove the blade from the lever.
2. Pull wiper blade bearing to the direction indicated by an arrow and remove it from the blade.



Mounting

1. Insert a new wiper blade bearing to wiper blade.
2. Push the blade till hook is secured in the hole and make sure that blade bearing is secured completely.
3. Insert the blade to the lever.



Using the Battery



WARNING

- Using or charging the battery when battery fluid is below “LOW LEVEL” mark makes deterioration faster and may cause heat generation and even explosion.
- If battery fluid contacts the eyes, wash with abundant water for 5 minutes. You need to ask for medical help.
- When using tools or metal objects where battery is found, make sure they do not contact positive terminal. As the vehicle will conduct electricity, this contact may cause a short circuit and electric shock.
- A vehicle battery generates combustible hydrogen. That’s why, sparking or open fire operations should never be done near the battery. If hydrogen catches fire, this may cause an explosion. A damp cloth must be used to wipe battery fluid.



WARNING

- Stop the vehicle everytime you want to check the battery.
- Diluted sulphuric acid is used as battery fluid. This liquid must not contact skin, clothes or metal surfaces.
- When removing cables from terminals, start with negative. When inserting these, negative must be last.

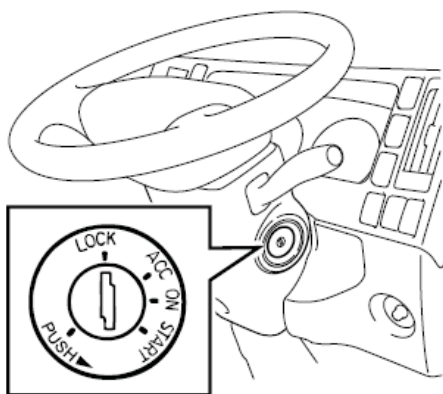


RECOMMENDATION

- Battery fluid must never be filled over the mark “UPPER LEVEL”. Failure to do so may cause battery fluid spill and corrosion in terminals and other components. Spilled fluid must immediately be cleaned with water.
- After battery fluid is added, battery must be re-charged (by driving). If you do not re-charge in winter, fluid may freeze and damage battery box.
- If battery fluid level decreases fast which is rare, contact an Isuzu Dealer for maintenance.

Precautions to be Taken for Battery Use

Keep the battery clean. If battery is left dirty; impurities may contaminate fluid, battery plates may be damaged, short circuits may occur on the battery and service life may shorten.



During Checks and Maintenance

Before starting checking and maintenance of battery and other components of the electricity system, turn the ignition key "LOCK" and other switches "OFF" and remove negative cables off the battery.

If checking or maintenance is carried out when battery is connected, electrical components may be damaged.

Removing the Battery

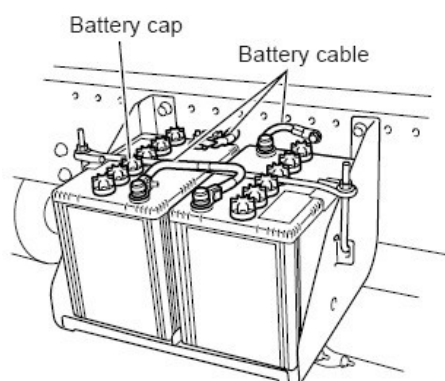
When removing the battery, remove the negative cable first. If negative cable is connected, a contact between positive terminal and the body may lead to short circuit and serious electric shocks. Also electricity system may be damaged.





Charging the Battery

1. Before charging the battery, take the battery off the vehicle to a well ventilated area and remove the terminals. On the other hand, if the battery is charged on the vehicle, remove the cables first.
2. When installing or removing a charger from the battery, make sure it is turned off.
3. In case of a fast charging, cables must always be removed. Failure to do this may lead generator burn.



WARNING

- Do not use open fire around the battery when charging. Battery generates hydrogen when charging; so, failure to do so may cause fire or explosion.

Mounting the Battery

1. When mounting the battery, make sure it is aligned correctly and secured without loose parts. If the battery is not installed correctly, battery box and plates may be damaged as a result of impact during driving.
2. When connecting battery cables, start with the positive and connect the negative terminal last.



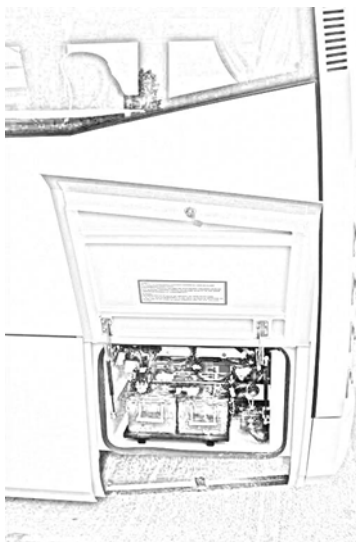
CAUTION

- When connecting battery cables, make sure you do not confuse the positive and negative terminals. Wrong terminal connections may cause burns in the generator or vehicle cables as it will cause excessive voltage.

Using the Battery As Direct Power Source

Battery must not be used as 12 volt power source. If it is necessary to do so, contact Isuzu Service.

Checking Battery Fluid Level



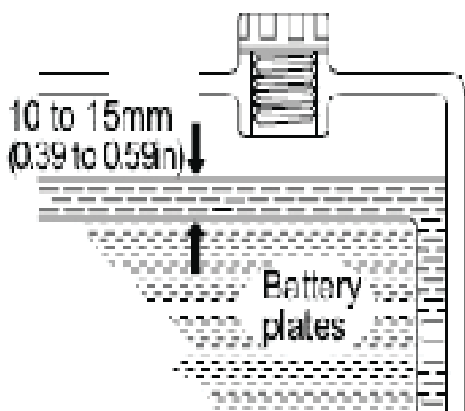
Battery positions

Batteries are located in rear left trunk of the vehicle.

Daily Check

Remove battery cover and make sure the fluid level is between the specified range. Battery fluid surface level must be between “UPPER” and “LOWER” Marks. If you cannot clearly see the surface, tilt the vehicle a little.

If there is no level sign on the box, 10 and 15 mm over the plates is considered as sufficient.



Filling Battery Fluid

If battery fluid is not sufficient, remove the head and cover and add diluted fluid until “UPPER LEVEL” mark or 10 and 15 mm over the battery plates. After diluted fluid adding is over, replace the head and the cover.



- Battery fluid must never be filled over the mark “UPPER LEVEL”. Failure to do so may cause battery fluid spill and corrosion in terminals and other components. Spilled fluid must immediately be cleaned with water.
- After battery fluid is added, battery must be re-charged (by driving). If you do not re-charge in winter, fluid may freeze and damage battery box.
- If battery fluid level decreases fast which is rare, contact an Isuzu Dealer for maintenance.

MAINTENANCE DATA

Examination and Maintenance

We recommend that you have your vehicle maintained and checked according to the program in this section for safe and economical drive.

Maintenance Program

In order to drive your vehicle safely and economically, it is vital that you have your maintenance and check in an Isuzu Service in the way it is stated in maintenance program.

Contact Isuzu Services for operations requiring demounting and/or special equipment.

Ranges Used to Identify Maintenance Service Types

K: Checking, cleaning or repair or change if required

A: Adjustment

D: Change

T: Tightening to specified torque

Y: Lubrication



RECOMMENDATION

- When checking the points listed below, check regular check components.

* If your vehicle is used in difficult conditions, it needs frequent servicing.

Maintenance Program (No. 1):

K: Checking, cleaning or repair or change if required A: Adjustment

D: Change T: Tightening to specified torque Y: Lubrication

Service interval	x1,000 km	10	20	30	40	50	60	70	80	90	100	Km gauge 1 value or months 1 value, whichever comes first
* 4H Engine oil		K	D	K	D	K	D	K	D	K	D	or every 12 months
* 4H Engine oil filter		-	D	-	D	-	D	-	D	-	D	or every 12 months
4H Fuel Filter		-	-	-	D	-	-	-	D	-	-	or every 12 months
* Air filter element		K	K	K	D	K	K	K	D	K	K	or every 24 months
Idling speed and acceleration		-	K	-	K	-	K	-	K	-	K	or every 12 months
Valve clearance		-	-	-	A	-	-	-	A	-	-	or every 24 months
4H Play or damage in 4H fuel tank cover and fuel pipeline		-	-	-	K	-	-	-	K	-	-	or every 24 months
Drive belt tension and damage		K	K	K	K	K	K	K	K	K	K	or every 6 months
Engine Coolant		-	-	-	K	-	-	-	K	-	-	or every 24 months
4H * Damage or play in brake, exhaust and their joints		-	K	-	K	-	K	-	K	-	K	or every 12 months
4H Cooling system		-	K	-	K	-	K	-	K	-	K	or every 12 months
4H Engine use conditions		K	K	K	K	K	K	K	K	K	K	or every 6 months
Clutch fluid (4HK1 engine model)		K	K	K	D	K	K	K	D	K	K	or every 24 months
M/T 1 M/tJ clutch pedal stroke and play		K	K	K	K	K	K	K	K	K	K	or every 3 months
* Transmission oil (MY6S model)		K	K	K	D	K	K	K	D	K	K	or every 24 months
4H Gear control mechanism play		-	-	-	K	-	-	-	K	-	-	or every 24 months
Gear control cable		-	A	-	A	-	A	-	A	-	A	or every 12 months
* Drive shaft, universal joint and slip		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	or every 12 months
Sleeve Play drive shaft joints		K	K	K	K	K	K	K	K	K	K	or every 6 months
Drive shaft spline wear		-	K	-	K	-	K	-	K	-	-	or every 24 months
Play in drive shaft roller and joint components		-	K	-	K	-	K	-	K	-	K	or every 24 months
Drive shaft centre bearing		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	or every 12 months
DPD filter cleaning		-	-	-	-	-	-	-	-	-	-	or every 12 months
DPD pressure difference sensor hose control		-	-	-	D	-	-	-	D	-	-	or every 12 months

Maintenance Program (No. 2):

K: Checking, cleaning or repair or change if required

A: Adjustment

D: Change T: Tightening to specified torque

Y: Lubrication

Service interval	x1,000 km	10	20	30	40	50	60	70	80	90	100	Km gauge 1 value or months 1 value, whichever comes first
* 4H Shaft pin (Fixed front suspension model)		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	or every 12 months
* Differential gear oil		-	-	-	D	-	-	-	D	-	-	or every 12 months
Fluid leakage at power steering system		K	K	K	K	K	K	K	K	K	K	or every 12 months
Power Steering Fluid		-	-	-	D	-	-	-	D	-	-	or every 12 months
* Play and damage in power steering system joint		K	K	K	K	K	K	K	K	K	K	or every 12 months
Play in connection between ball joint and front shaft		K	K	K	K	K	K	K	K	K	K	or every 12 months
Play and damage in steering system joint		-	-	-	K	-	-	-	K	-	-	or every 12 months
Play in steering wheel		K	K	K	K	K	K	K	K	K	K	or every 12 months
Steering mechanism functionality		K	K	K	K	K	K	K	K	K	K	or every 12 months
Wheel layout		-	-	-	K	-	-	-	K	-	-	or every 12 months
Power steering hose		-	-	-	-	-	-	-	D	-	-	or every 12 months
Brake air system check		K	K	K	K	K	K	K	K	K	K	or every 12 months
Brake system air leakage		K	K	K	K	K	K	K	K	K	K	or every 24 months
Brake show plate and drum wear		-	K	-	K	-	K	-	K	-	K	or every 12 months
Brake pedal stroke and play		K	K	K	K	K	K	K	K	K	K	or every 24 months
Play and damage in brake pipe and hose connections		-	K	-	K	-	K	-	K	-	K	or every 24 months
Handbrake functionality		K	K	K	K	K	K	K	K	K	K	or every 6 months
Wear or damage in handbrake drum		-	-	-	K	-	-	-	K	-	-	or every 24 months
Damage in handbrake lock mechanism		-	-	-	K	-	-	-	K	-	-	or every 12 months
Leaf spring damage		K	K	K	K	K	K	K	K	K	K	or every 12 months
Play and damage in suspension connection		K	K	K	K	K	K	K	K	K	K	or every 6 months
Shock absorber oil leakage		K	K	K	K	K	K	K	K	K	K	or every 24 months
Shock absorber joint play		K	K	K	K	K	K	K	K	K	K	or every 3 months
Wheel nuts and bolts		-	T	-	T	-	T	-	T	-	T	or every 24 months
Wheel damage		-	K	-	K	-	K	-	K	-	K	or every 24 months
Wheel bearing grease		-	-	-	Y	-	-	-	Y	-	-	or every 12 months
Tyre air pressure and damage		K	K	K	K	K	K	K	K	K	K	or every 12 months
Specific Gravity of Battery Fluid		K	K	K	K	K	K	K	K	K	K	or every 6 months
Exhaust pressure control or filter		-	-	-	-	-	-	-	-	-	-	or every 24 months
Checking lambs, horn, windscreen, wiper and washer		K	K	K	K	K	K	K	K	K	K	or every 24 months
Checking Nuts and bolts on chassis and body		-	-	-	K	-	-	-	K	K	K	or every 12 months

Maintenance program for driving in difficult conditions.



Driving condition

A: Conditions with frequent starting and stopping

B: Unstable, mountainous or uphill drive

C: Drive in dusty conditions

D: Driving in snow

4H Engine oil	Replace it every 10.000 kilometres.			C		A+D
 Engine oil filter	Replace it every 10.000 kilometres.			C		A+D
Air filter element	Replace it every 20.000 kilometres.			C		
Damage or looseness on the exhaust pipe, exhaust brake, exhaust passage and on their connections	Inspect it every 10.000 kilometres.	A	B		D	
M/T Transmission fluid (MYY5T model)	Replace it every 20.000 kilometres.		B			
M/T Transmission fluid (MYY6S model)	Replace it every 20.000 kilometres.		B			
 Transmission fluid (MZZ6F model)	Replace it every 20.000 kilometres.		B			
M/T Transmission fluid (MZZ6U model)	Replace it every 20.000 kilometres.		B			
Drive shaft universal joint and sliding sleeves	Lubricate it with grease oil at every 10.000 kilometres.		B			
Differential gear oil	Replace it every 20.000 kilometres.		B			
Kingpin	Replace it every 5.000 kilometres (3.000 miles).		B	C	D	
Looseness or damage on the power steering connection	Inspect it every 5.000 kilometres (3.000 miles).			C	D	
Wear of brake shoe and brake drums	Inspect it every 10.000 kilometres (6.000 miles).	A	B	C		
Disc brake lining and disc wear	Inspect it every 5.000 kilometres (3.000 miles).	A	B	C		

Recommended Liquids, Lubricants and Diesel Fuels

Choosing the right lubricants and diesel fuels is vital for your Isuzu vehicle to provide the best performance in years. Use the lubricants in accordance with Maintenance Program specified for your vehicle. Use the recommendations listed below for lubrication specified in Maintenance Program Oil change intervals specified in Maintenance Program and new vehicle warranty accept the use of lubricants below.

LUBRICATION	DEGREE			LUBRICATION VISCOSITY DEGREE
	API	ACEA	JASO	
* Diesel engine pan with DPD.	SG CD/CE/CF/CI-4 SJ/CF CD/CE/CF CI-4 CI-4	E6 E6 E6 C3	DH-2 DH-2	10W-40 10W-30,40 10W-40 10W-40 10W-40 5W-40
Manual transmission		E3/E5 A3/B3	DH-1	5W-30 15W-40 15W-50 15W-40 15W-40 15W-40
Clutch fluid				DEXRON III
Differential	GL-5 GL-5 GL-5 GL-5 GL-5 GL-5 GL-5			80W-90 80W90,85W140 140 90 80W-90 80W-90 80W-90 80W-90

LUBRICATION	DEGREE			LUBRICATION VISCOSITY
	API	ACEA	JASO	
Differential (limited slip differential)	**GL-5 GL-5 GL-5 GL-5 GL-5			140 90 90 90 85W-90
Power steering Fluid Brake additive				DEXTRON III
Centre bearing Shaft pins (multi purpose grease)				NO.2 NO.3
Drive shaft slip fork Universal joint (Multipurpose grease including molybdenum disulphide)				NO.2

* If your vehicle is equipped with DPD, it is necessary to use engine oil with low cinder compatible with DPD.



RECOMENDATION

- For a model having DPD, not using an oil suitable to DPD may cause engine or DPD to break down or low fuel performance. Be sure that you use engine oil suitable to DPD.

Engine Coolant	BRAND	TYPE
Engine cooling system		

**RECOMMENDATION**

- Use proper intensity mixture of tap water and coolant.

FLUID	BRAND	TYPE	DEGREE*
Clutch and brake fluid container			DOT 3 DOT 3

* : FMVSS 116 or SAE J1703

DIESEL FUEL / APPLICABLE STANDARD	
Japanese Industrial Standards	Based on K2204 Diesel Fuel Standard
German Industrial Standards (DIN)	Depends on EN590 Standard: 1997
SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)	Depends on SAE J-313C Standard
Turkish Standard	Depends on EN590 Standard: 1197

DIESEL FUEL / APPLICABLE STANDARD (sulphide content under 50 ppm) H	
Japanese Industrial Standards	Based on K2204 Diesel Fuel Standard
German Industrial Standards (DIN)	Depends on EN590 Standard: 2004
American Society for Testing and Materials (ASTM)	D975-04c NO.1-D S15 OR NO.2-D S15 Standard based (below 15 ppm)
Turkish Standard	Depends on EN590 Standard: 2004

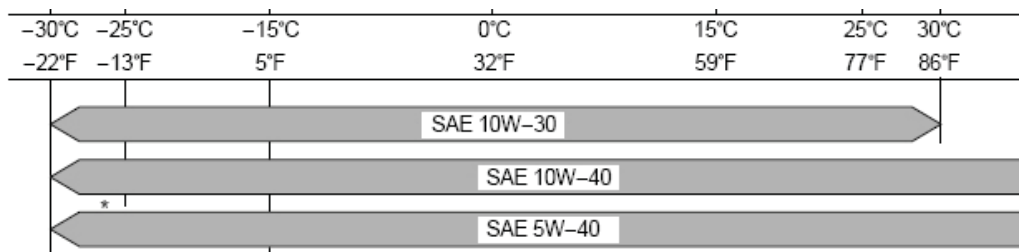
**RECOMMENDATION**

- Use quality diesel fuel with 50 ppm or less sulphur compatible with Euro4 standard. Otherwise, fuel system of your vehicle will be influenced negatively.

Engine Oil and Gear Oil Viscosity Schemes

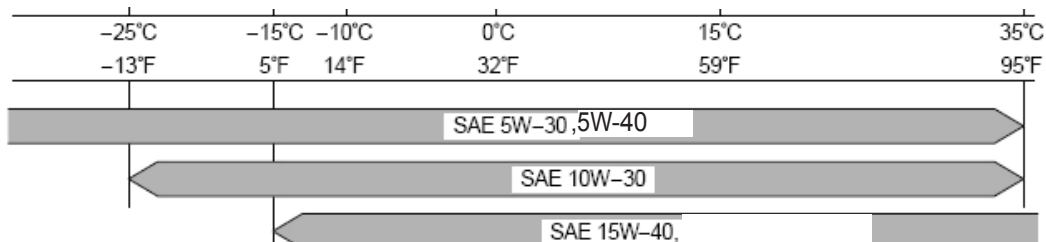
Choose engine and gear oils in accordance with the tables below. Also it is important to choose the viscosity that you start your vehicle with. Use the table below for educated selections.

ENGINE OIL VISCOSITY SCHEME ENGINE OIL VISCOSITY DEGREE – ENVIRONMENT TEMPERATURE

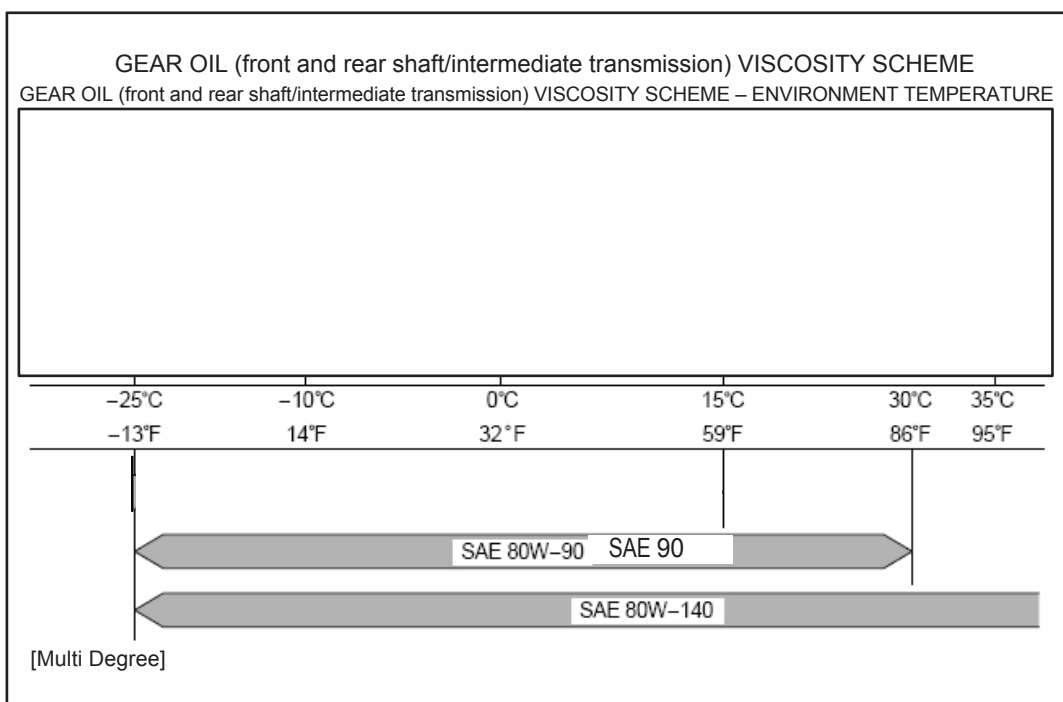


[Multi Degree]

TRANSMISSION OIL VISCOSITY SCHEME TRANSMISSION OIL VISCOSITY DEGREE – ENVIRONMENT TEMPERATURE

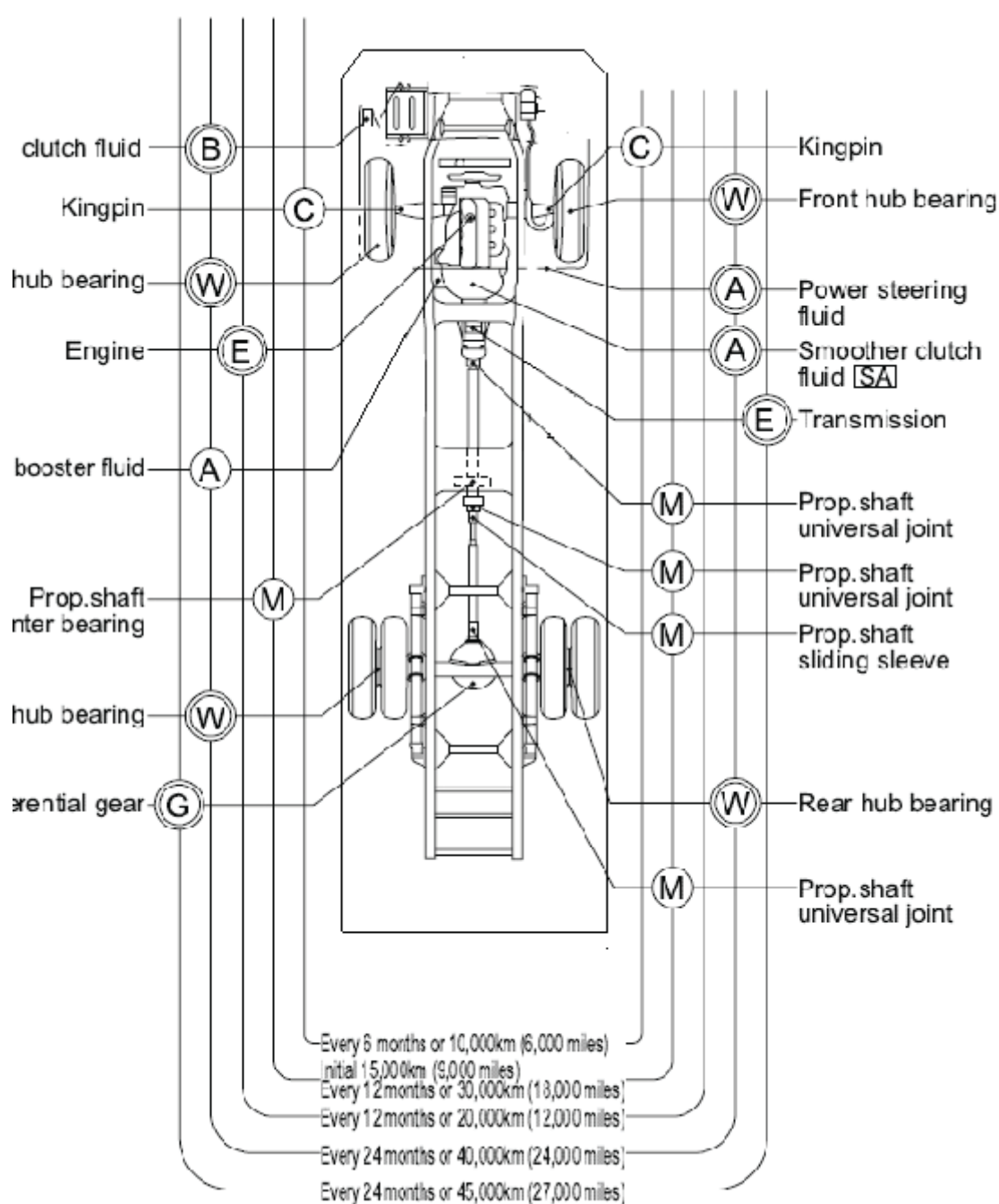


[Multi Degree]



Lubrication Scheme

- : Change
 ○ : Checking, Refilling or Lubricating
 E : Engine oil
 G : Gear oil
 W : Wheel bearing grease
 M : MoS2 content type grease
 B : Brake fluid
 A : Automatic transmission oil



EMERGENCY CASES

8

Troubleshooting

Making regular examinations and maintenance prevents damage. Make sure that the examinations and maintenance are made regularly. Besides, fix any malfunction immediately in order to prevent it from turning into a more serious problem (even if it is a small malfunction). If any of the symptoms given in the table below occurs, make the necessary examinations and conduct the corrective actions in accordance with the table. If you are not able to make the repair, if the corrective action given in the table does not remove the symptom or if you are not able to locate the malfunction, please refer to the nearest Isuzu Service.



RECOMMENDATION

- For any factor with O sign in "Corrective measure" column, repairs or adjustments are required. Refer to nearest Isuzu Service.

Symptom		Reason	Corrective action
	Starter does not rotate or weak	Empty batteries	Recharge or change
		Battery terminals are loosened, removed or rusty.	Secure the terminals tightly after cleaning the rust.
		Starter motor grounding cable terminal is removed, loosened or rusted.	Secure the terminals tightly after cleaning the rust.
		Engine oil viscosity is too high.	Change with correct viscosity oil.
		Starter motor or electricity system is faulty.	○
	Starter rotates	No fuel	Make sure there is no fuel leakage and refill
		Air is present in fuel system	Bleed the fuel system
		Fuel filter is clogged	Change the filter
		Fuel froze	Heat the fuel pipe using hot water or wait till it is heated.
		Fixed pressure injection system is faulty.	○
		Front heating system is faulty.	○
Engine starts but stops immediately.	Idling speed is too low.	Adjust idling speed.	
	Fuel filter is clogged.	Change the filter.	
	Air filter is clogged.	Clear the element or replace it.	
	Fixed pressure injection system is faulty.	○	
Unstable engine.	Fuel has water or system has air.	Bleed the system.	
	Fault is present in fuel system	○	

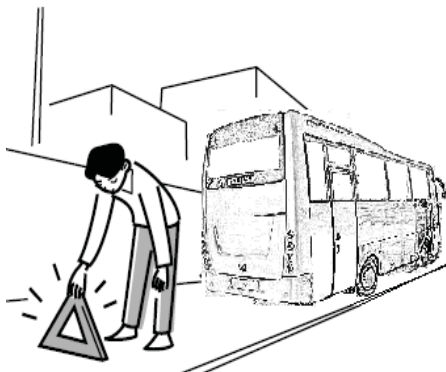
Symptom	Reason	Corrective action
White or black exhaust smoke	Engine is not heated properly.	Make the engine heated.
	Too much engine oil.	Correct the oil level
	Air filter is clogged.	Clear the element or replace it.
	Fuel system is faulty.	○
	DPD is faulty	○
Engine over heats	No coolant	Add coolant
	Raidator surface is clogged.	Clean with a soft brush
	Radiator cover is not tightened	Make sure it is tightened
	Fan belt is loose	Adjust the tension or change
	Coollant is contaminated	Clean the radiator inside or change coolant
	Fan clutch	○
	Radiator cover is dirty or broken	Clean or change
Oil pressure is low	Unsuitable engine oil viscosity	Change with correct viscosity oil.
	Engine oil level is too low	Add engine oil
	Engine components are faulty	○
	Gauge, indicator/warning lambs or switches are broken	○

Symptom	Reason	Corrective action
Weak engine power	Handbrake is not fully released.	Make sure it is fully released.
	Brake grids	○
	Clutch slips	Adjust clutch clearance (Manual transmission model)
		Add clutch fluid (Leveller model)
	Air filter is clogged.	Clear the element or replace it.
	Fuel filter is clogged.	Change the filter.
	Engine control system error	○
	Fixed pressure injection system is faulty.	○
	Engine is faulty.	○
	DPD is clogged	○
Brakes are weak	Drum-plate clearance is too far.	○
	Air is present in brake fluid.	○
	Brake system failure	○
Unstable braking	Unstable air pressure in tyres	Adjust suitable air pressure
	Unstable wear in tyre	Change tyre
	Drum-plate clearance problem in the wheels	○
	Bad wheel layout	○
Exhaust brake does not work	Electricity system is faulty	○
Steering wheel is hard	Too much load through the front	Adjust the load
	Power steering fluid level is too low	Add fluid
	Insufficient air in front tyres	Adjust suitable air pressure



Symptom		Reason	Corrective action
Too much play in steering wheel		Wheel studs and nuts are loose	Tightening to specified torque
		Unstable air pressure in tyres	Adjust suitable air pressure
		Unstable wheels	○
		Excessive steering wheel play	○
Steering is not turned completely		Steering mechanisms are not lubricated well	Lubricate the mechanism
		Bad wheel layout	○
Clutch is not released completely		Insufficient clutch fluid	Add fluid
		Excessive clutch pedal play	Adjust proper level
Noise or abnormal sound	Transmission	Insufficient transmission oil	Add oil
		Transmission internal components are broken	○
	Differential	Insufficient differential gear oil	Add oil
		Differential internal components are broken	○
	Suspension	Spring pins, shackles or stoppers are worn	○
	Drive shaft	Each component is not lubricated well	Lubricate these
		Sleeve channels or bearings are worn	○

When Vehicle Breaks Down During Driving



1. Operate hazard switch and pull the vehicle over to a safe place not blocking the traffic (side). Place hazard triangles to notify other drivers.
2. Make sure other passengers leave the vehicle and wait in a safe place.
3. Walk up to a safe place and take necessary precautions using the nearest telephone, etc.



WARNING

[In case of fuel leakage]

- Fuel leakage is dangerous due to a potential of fire or explosion. Stop the vehicle immediately.

Flat Tyre

When tyres are flat while driving, avoid standing on the brakes, hold the steering wheel tightly and stop the vehicle.

Tyre must be changed on a flat surface in order not to block other vehicles.



WARNING

- If you continue driving with a deflated tyre, this may lead to the breaking of the bolts and to the dislocation of the tyre due to excessive force on the wheel studs.

When Engine Stops While Driving



Braking efficiency will decrease as braking support does not work anymore. If the engine cannot be started, take your vehicle to the nearest Isuzu Dealer for examination and repair.

If engine stops due to running out of fuel, refilling the tank will not suffice to restart the engine. Bleed the fuel system after the refill.



CAUTION

- Driving will change, so stop the vehicle in a safe spot keeping the actions to be done in mind.
 - Power steering system will not work so it will be difficult to operate steering. More effort will be necessary.
 - Braking efficiency will significantly decrease as braking support does not work. Make sure you stand more on the pedal.

When Engine Breaks And Stops And Cannot be Restarted

- Shift the lever to “N” position in manual transmission models and pull the vehicle to a safe spot.



When Brakes Do Not Work

If brakes do not unexpectedly work, decelerate by shifting from gear 3 to 2 and 1. Gradually pull the handbrake while holding the steering wheel tightly. Pull the vehicle over.



CAUTION

- It is extremely dangerous to suddenly pull the handbrake while travelling at high speed. Decelerate by first down shifting and gradually pulling the handbrake.



NOTE

- In case of worst conditions such as a mountain road, try to stop the vehicle using the barriers or direct the wheels on one side to a trench on the sides of the road.



When Battery is Discharged

Use booster cables (sold separately) or other vehicle's battery to start the vehicle.

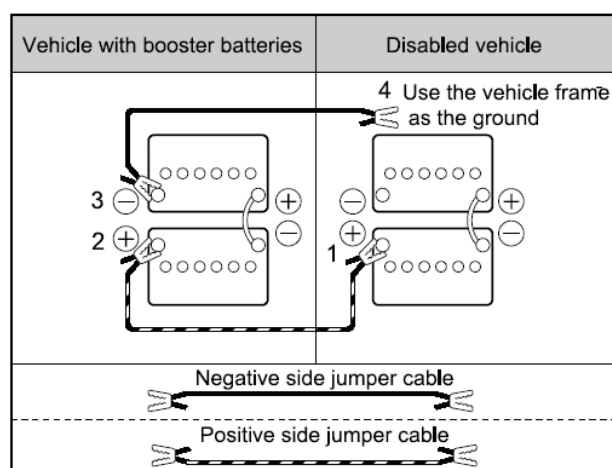
**CAUTION**

- Do not push start button for safety and protection of the vehicle.
- Make sure spare batteries allowing charging have the same voltage with the battery of the broken vehicle.
- Negative and positive terminals of the battery must never be contacted.
- While connecting the cables, do not let connection rings to contact each other.
- Contact nearest Isuzu Service to charge the battery.
- Do not remove a terminal while the engine is running. This may cause failure in electricity system.

1. Check battery water in the broken vehicle.
2. Use a vehicle battery with the same voltage.
3. Open battery case. Connect booster cables as explained in battery section.
4. After the cables are connected, start engine of the vehicle with reinforced battery.
5. Increase the engine speed of the vehicle with reinforced battery slowly and start the engine of the broken vehicle.
6. If the engine starts, remove the cables following the reverse procedure of connection.

**NOTE**

- When it is difficult to start the engine in a cold region, start the engine of the vehicle with reinforced battery first and after a couple of minutes, start the broken vehicle.

**WARNING**

- Check battery water before connecting jump cables. Using or charging the battery when battery fluid is below "LOW LEVEL" mark makes deterioration faster and may cause heat generation and even explosion. Work after adding battery water.
- Vehicle battery produces combustible gas. Pay attention to the following to avoid sparking.
 - Do not connect one end of the jump cable shown in the 4. step in the figure directly to negative terminal. Connect jump cable to a metal part of the engine far from the battery.
 - Do not let cable connected to positive terminal to connect negative terminal cable or body.
 - Keep fire away.
- Connect cables in a way that they do not contact any belts.

When You Run Out of Fuel



When you run out of fuel, air will enter the fuel system, so just refilling will not suffice to start the engine. Use the methods below to bleed the system.



WARNING

- Clean the fuel accumulated in the engine compartment under the cabin or body. Fuel here may cause fires.



CAUTION

- Before starting the engine, make sure that shift lever is in “N” position. Do not start the engine out of the driver’s seat. For example, do not reach from the window or the open door to start the engine. Keep in mind that vehicles with manual transmission are in other positions than “N” will start moving when started.

Bleeding the Fuel System**Before starting the engine**

1. Place a container under bleed plug to remove the fuel and loosen the plug completely.
2. Move hand pump up and down for at least 20 times until no air bubbles are left in the fuel flowing from the plug.
3. Secure the plug again and clean the fuel that may accumulate around or on the plug.
4. Move the hand pump up and down for at least 10 times to transfer the air in the system to air fuel feeding pump.
5. Open starter key to run the engine.

After running engine

1. Turn ignition key and start the engine without pressing accelerator pedal.
2. After the engine is started, let it idle for 5 seconds.
3. Press the accelerator pedal fully and bring engine rpm/m to maksimum. (repeat this a couple of times.)

**RECOMMENDATION**

- Insufficient bleeding may lead to faulty engine running. That's why, make sure you always follow the procedure explained in "After starting the engine."

When Warning Light Is Lit**Brake Booster Warning Lamp**

Buzzer will be heard and booster lamp will be lit when IG Key is "ON", brake pressure is low while driving and there is leakage in the system.

Brake System Warning Lamp

Brake system warning lamp lights while engine is running under the following conditions: (after the initial starting)

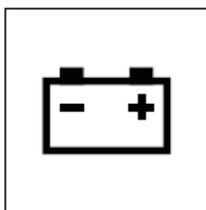
- Decrease in the level of brake fluid (occurring due to brake wear or brake fluid leak and etc.)
- Abnormality in the charging system (For example, generator breakdown or loosen, breakage of fan belt and etc.)
- ABS Abnormality in the model with ABS (ABS lamp will also be lit)

**CAUTION**

- If this warning lamp burns while engine is running, immediately bring the car to a safe place and contact to Isuzu Service in order to observe it.



Charge Warning Lamp



If this lamp is lit, charge system may be faulty. Stop the vehicle in a safe spot and carry out corrective actions after taking precautions.

Control and Corrective Action

1. Check if fan belt is torn or loose.
2. If it is loose, adjust the tightness.
3. If there is no abnormality in fan belt, contact the nearest Isuzu Service.



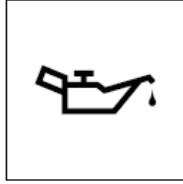
CAUTION

- Do not drive the vehicle with warning lamp is lit. Battery may fully discharge.



NOTE

- Contact the nearest Isuzu Service for fan belt change as demounting is needed.

Engine Oil Pressure Warning Lamp

Oil pressure is too low if this is lit. Stop the vehicle in a safe spot and carry out corrective actions after taking precautions.

Control and Corrective Action

1. Check engine oil level.
2. If engine oil level is too low, check if there is leakage and add oil.
3. If oil level is normal and no leakage, oil filter may be clogged. Change oil filter.
4. When oil level is normal and filter is not clogged, contact Isuzu Service only in the case of leakage.

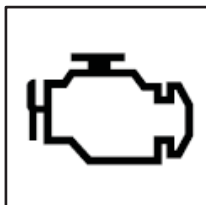
**CAUTION**

- Do not drive the vehicle with warning lamp is lit. This may damage the engine.

**NOTE**

- When engine oil temperature is low and viscosity is high, lamp may be lit for a while. Lamp will go off when engine is heated.



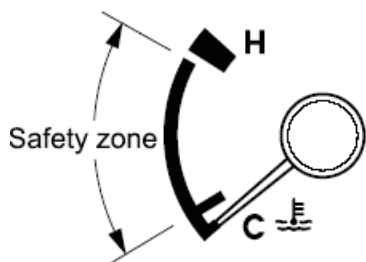
Engine Warning Lamp Control

If this lamp is lit when engine is running, this may indicate an issue in engine electronic control system. Contact the nearest Isuzu Service to check and repair the control system.

ABS Warning Lamp ▾**ASR Indicator Lamp ▾**

When The Engine Is Over-Heated

Motor is over-heated when engine power is decreased and engine coolant indicator needle goes over the safe line to “H” area. Engine over-heat warning lamp will be lit and buzzer will be heard. Carry out the following corrective measures immediately.



1. Operate hazard switch and pull the vehicle over to a safe place not blocking the traffic (side).
2. Lower engine temperature by allowing it to idle for some time.



RECOMMENDATION

- Do not stop the engine immediately. Otherwise engine may seize up.

3. When coolant indicator returns to the safe field, stop the engine.



WARNING

- Even when the engine is stopped, coolant in the radiator may have pressure. Opening the radiator cover immediately may cause the water flow out and burns. Coolant in expansion container might also be hot. Opening the cover immediately will cause the water spray and burn.
- While removing radiator or expansion tank cap, use a thick cloth to cover the cap and turn the cap slowly.

**RECOMMENDATION**

- If fan does not rotate for the radiator, stop the engine immediately.

4. After the engine is cooled enough, check coolant level in hydraulic container and radiator. If the level is not enough, add coolant. Also, check if fan belt is loose or damaged.

**RECOMMENDATION**

- Before adding coolant, make sure that engine coolant indicator needle is below C line. Adding coolant when engine is not cool enough may lead to an engine failure or problem.
- In the case of using tap water as coolant in emergency cases, adjust coolant viscosity as soon as possible.

Engine Coolant
Fan Belt

→ Refer to. page 7-34
→ Refer to. page 7-44



Main Data and Specification

Engine

4HK1 engine model

Technical Specifications		
Water cooled, overhead cam shaft, one air cooled, turbocharged direct injection engine		
Pressure rate	(1'e)	17.5
Volume	cc	5,193
Ignition sequence		1 - 3 - 4 - 2
Fuel injection timing	(statik) der	0°
Valve clearance	mm.	Both inlet and exhaust valve 0.4, cold engine
Idling speed	d/dk.	M/T 550 - 600,
Fan belt tension	mm. /Hz	80A generator New belt: 5 - 7 /187 – 209 Used belt: 6 - 8 /161 -173
Oil filter		Cartridge type
Engine oil capacity	liter	13.0
Coolant capacity	liter	30.0
Front heating system		Glow plugs
Turbocharged model		G25 (Honeywell)

Transmission

MZW6P Model

Technical Specifications		
6 speed transmission (excessive speed gear for 6. gear),		
Gear ratio (1'e)	1.	6,615
	2.	4,095
	3.	2,358
	4.	1,531
	5.	1.000
	6.	0.722
	Reverse	6.615
Transmission oil capacity literl		5,3

Service Technical Specifications

Weights	
Axle capacities : (kg)	Front : 4500 Rear : 8500

Engine	
Model	4HK1-TC
Engine oil capacity	Refer to page 9-2
Engine coolant capacity	

Transmission	
Model	MZW6P
Transmission oil capacity	5,3 liter

Rear shaft	
Differential gear oil capacity [Reference value] liter	11

Fuel	
Fuel tank capacity liter	250

Clutch	
Clutch pedal play mm mm.	12 - 22
Distance between fully pressed clutch pedal and the position just before coupling mm. mm.	22

Steering Wheel	
Play in steering wheel mm mm.	10 - 50
Steering wheel oil capacity [Reference value] liter	1.6

Wheel		
Wheel layout	: Toe-in mm.	0 - +2
	: Camber (degree)	0°15'
	: Caster (degree)	2°45'
	: Shaft pin (degree)	12°
Wheel bearing grease capacity [Reference value]	kg.	0.11 , 0.36

Servo brakes
Full Air Type servo brake

Hand brake
Coil Spring controlled, rear wheel connected handbrake

Electricity system		
Battery type	(Volt-Amp.h.) x unit no	12V / 80 Ah x 2
Starter	volt-kw	24 - 4.5
Alternator	volt/amp.	24/100



