NOVOULTRA

USER'S MANUAL

ANADOLU ISUZU

Revision No: 02

FOREWORD

This user's manual is prepared to give general information about the efficient and most economical use of **E6 Novoultra** vehicle. We strongly recommend you to read the information carefully and to abide by all warnings. We would liketo inform you that our company will not be responsible for any financial, spiritual problems and losses that you may suffer unless you follow the instructions.

You may apply to authorized dealers and authorized services when you need more detailed information about your vehicle.

Keep the user's manual in the vehicle continuously.

There may be modifications in the shape, equipment and technical specifications as a result of our continuous efforts to improve our vehicles. The information, pictures and technical specifications here are based on the last product information available at the publication of the user's manual and Anadolu Isuzu A.Ş. reserves the right to change without any prior notification.

Thank you for choosing this product.

We wish you a nice drive.

Anadolu Isuzu Automotive Industry and Trade Inc.

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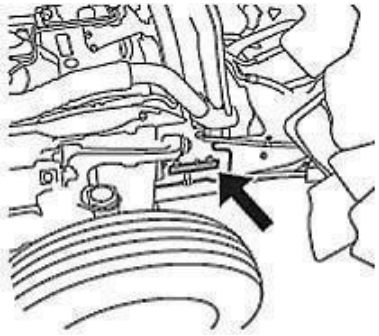
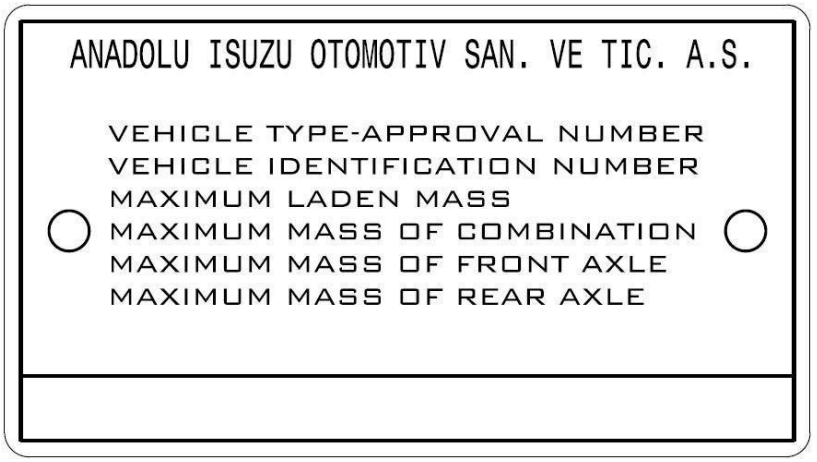
1. INTRODUCTION

CHASSIS NUMBER



The chassis number is stamped on the right-side front part of the frame.

IDENTIFICATION PLATE



Identification plate is at the front door entry, at the step level on the left. There are type approval number, VIN number, maximum axle load sum, maximum front axle load and maximum rear axle load on the identification plate.

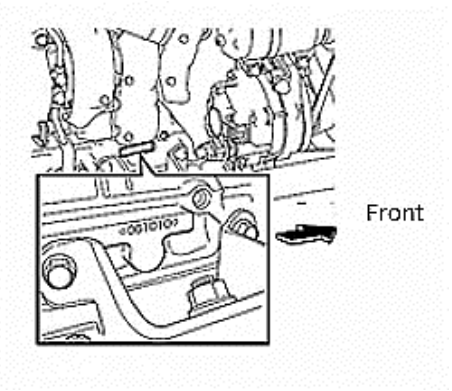
VIN number includes the datum of vehicle model, maximum loaded weight, type of engine, drive system, wheelbase, production location codes and the chassis number of the vehicle.

BUS VIN SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
N	**N**	**A**	**M**	**0**	**A**	**8**	**L**	**N**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**
(SAMA..E)																

1 - 3	INTERNATIONAL WMI NO:	NNA:	(AIOS) ANADOLU ISUZU OTOMOTIV SANAYI VE TICARET ANONIM SIRKETI
4	MODEL LINE	M:	BUS GROUP
5	GVW OR CAPACITY RATING	0	INDEPENDENT FROM SEAT NUMBER
6	MODEL EXTENSION	A:	DELUXE TYPE WITH AIR SUSPENSION
		L:	DELUXE TYPE WITH MECHANICAL SPRINGS
		B:	PUBLIC TRANSPORT TYPE
7	ENGINE MODEL	8:	ISUZU - 4HK1E6 EUR06-C
8	DRIVING SYSTEM	L:	LEFT HAND DRIVE
		R:	RIGHT HAND DRIVE
9	WHEEL BASE	N:	3385mm
10-11	MANUFACTURING PLANT	01:	AIOS KARTAL PLANT
		02:	AIOS GEBZE PLANT
12-17	PRODUCTION SEQUENCE NO		

ENGINE NUMBER



The engine number is stamped on the left-side rear part of the engine block.

VEHICLE WARRANTY

Warranty terms and conditions are specified in the “Warranty Certificate” given with the vehicle. You can find the detailed information about warranty procedure in “Warranty Certificate”.

OPTIONS

Apart from the standard features of the vehicle, the following options may be applied to the vehicle when requested.

- Central locking system
- Cruise control
- Tropical climate A/C
- Retarder
- Fire extinguisher
- LDWS (Lane Departure Warning System)
- Engine room fire sensor
- Disabled lift
- Ski box fitting bracket and socket
- Trailer towing system
- Armrests (window side) for passenger seats
- Foot rest
- 3 points safety belts for all seats
- Refrigerator (front or rear)
- Tea coffee machine
- Monitor / LCD

RECOMMENDATIONS / WARNINGS

- Do not load your vehicle over its passenger capacity and do not change the places of the seats.
- Our factory is not responsible for the problems arising as a result of a change in the load balance of the vehicle.
- Only use the fuel (DIN EN 590 compatible Sulphur rate max 10 ppm) with the stated characteristics for your vehicle.
- Examine exhaust pipe from time to time. If you see a damage (for example, a damaged connecting member caused by abrasion or a hole or a crack, corrosion and leaks in pipes ports), take it to the nearest authorized service for control and maintenance.
- Control the wheel pressures frequently and be sure that they are always at the right value.
- Control the main and dipped beam settings, do not drive with defective headlights.
- Control brake, parking and plate lamps frequently, do not drive with defective or mud covered brake, parking and plate lamps.
- Take care of the maintenance of your vehicle to be done in authorized services in time and regularly in order to provide maximum performance in your vehicle.
- When the fluids such as waste oil, brake fluid and antifreeze you use in your vehicle and scrap batteries are thrown away indiscriminately, this gives great damage to the environment. Take care of eliminating such hazardous wastes in accordance with environmental regulations.
- Empty cans, bottles or other articles rolling on the floor, are extremely dangerous, be sure that especially the floor around the driver's seat is clean and tidy.
- Be sure that there are no combustible materials under or around the vehicle before starting it. The existence of such materials may cause fire.
- Be sure that you had trimmed the seat, steering wheel and the mirrors suitable for your correct driving position before the drive.
- Always wear your seat belt.
- Take care of front and side windows to be clean, keep the blinds not hindering your visibility and driving.
- Do not raise the speed of the engine before it was heated enough.
- Drive your vehicle carefully by complying with traffic rules and the road condition.
- If you realize an abnormality in a wheel during the drive, stop immediately in a safe place.
- If you go on your way with a deflated tire, this may cause the breaking of the bolts and the remove of the wheel by applying too much force to the wheel studs.
- Drive at a constant speed to the utmost. It is the waste of fuel to heat the engine overmuch and to make the engine high-speed.
- Do not go on driving when a warning light turns on. Do not forget that you have to get the corrective action by applying the instructions of counters, warning lights and indicator lights.

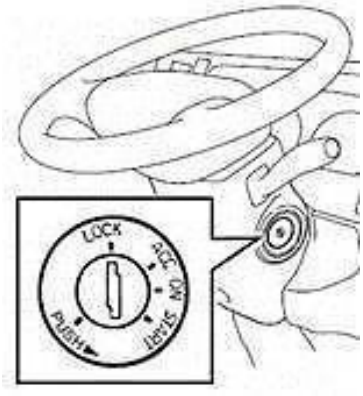
- When the vehicle malfunctions during the drive, turn on the hazard warning flashers and take the vehicle to a safe place not to block traffic. In order to inform the other vehicles that you were there, insert the triangle reflectors. Provide other passengers to get off the vehicle and wait in a safe place. Notify the nearest authorized service.
- Under bad weather conditions, visual angle reduces and slippery road surfaces increase the stopping distances. Drive slower than in good weather conditions. Additionally do not rotate the steering wheel suddenly and do not apply the brakes. Use tire chains and winter tires in snow-covered or icy roads.

2. GENERAL INFORMATION

ENGINE START

Make sure that the handbrake lever is pulled safely. Before operating the engine, gear lever must be in "N" position. Keep the clutch pedal fully depressed.

Ignition Key



LOCK : In this position the key can be inserted and removed. Remove the key and turn the steering wheel until it is locked.

ACC : In this position audio system and other accessories can be used when the engine is closed.

ON : The engine is automatically pre-warmed.After the engine starts, the key stays in this position.

START : The engine is started in this position. The key returns to “ON” position when released.

ENGINE STOP

Pull handbrake lever, turn the ignition key to “ACC” or “LOCK” position.

If the vehicle will be parked for a long time (more than 1 days), turn the main switch off.

OPENING AND CLOSING THE DOORS

There are door opening/closing switches on front control panel to open/close the doors from the inside.

Opening Doors in Emergencies

There are air cocks on the upper side of doors for emergencies. Turn the tap clockwise to discharge the air and push the door towards outside to open.

There are also air cocks on sides of the doors to open the doors from outside when necessary. Turn the tap clockwise and pull the door towards outside to open the door.

There is a red lock opening/closing control on the door to open the door if there is any passenger in the vehicle when it is locked from the outside with the key. Control is turned in the arrow's direction when necessary and air is discharged by turning the air cock on the upper side of the door, door is pushed towardsoutside to open.

EMERGENCY EXITS

Emergency exit is enabled by breaking the windows on the right and left side of the vehicle and window on the trapdoor using the emergency hammer.

3. CONTROLS AND INDICATORS

FRONT CONTROL PANEL

Flasher Switch: Flasher is opened when pressed the lower edge of the switch. Flasher is closed when pressed the upper edge of the switch. When flasher is open, signal warning lamps on the instrument panel and function lamp on the switch flash and give audio warning along with all signal lamps of the vehicle.

Roof Light Switch: Roof lights are turned on when pressed the lower edge of the switch. Roof lights are turned off when pressed the upper edge of the switch.

Reading Lamp Switch: Switch works as two levels. It opens on the first level when pressed the lower edge and if reading lamp switch on the service set is turned on by the passenger, the lamp is on. It goes off if turned off. Reading lamps are turned on the second level when pressed the lower edge for the second time, it may not be controlled by the passenger.

AEBS Switch: This switch is used to deactivate the AEBS system. When the switch is pressed, AEBS light appears in the warning lens panel. Pressing the switch again activates the AEBS system. The AEBS light also appears when there is a failure in the system.

Front Door Control Switch: Front door is opened/closed when pressed the lower edge of the switch.

Rear Door Control Switch: Rear door is opened/closed when pressed the lower edge of the switch.

Trunk Lid Switch: Lights in the trunk are turned on when pressed the lower edge of the switch. Lights go off when pressed the upper edge of the switch.

Front Fog Lamp Switch: When keyswitch and park lamps are turned on and pressed the lower edge of the switch, front fog lamps are activated. They are deactivated when pressed once more. When keyswitch is turned off, fog lamps are deactivated.

Outside Mirror Resistance Switch: Outside mirror heater is activated when pressed the lower edge of the switch. It is deactivated when pressed for the second time. If the heater is not turned off by the driver, it is automatically deactivated after 20 minutes.

Driver Side Window Resistance Switch: Driver side window is activated when pressed the lower edge of the switch. It is deactivated when pressed for the second time. If heater is not turned off by the driver, it is automatically deactivated after 20 minutes.

LDWS Switch (Optional) : You can disable the system for a period of 10 minutes on roads with no clear lane markings to avoid false alarms. Press this switch to disable the system.

The system is active and the green LED on the switch is lit:

- the vehicle is moving on roads with clear lane markings
- the vehicle is moving above a configured speed (default parameterised speed from 60 km/h or 37 miles/h).

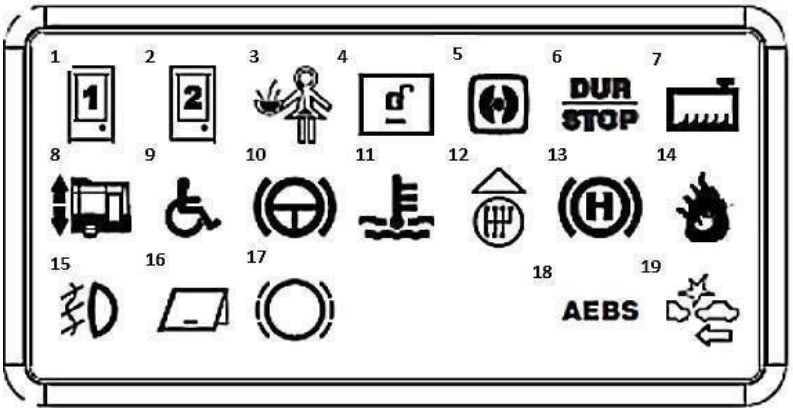
The system is not active and the green LED on the switch is off:

- the vehicle is moving on roads with no clear lane markings (e.g. frequently changing or missing lane markings)
- the vehicle is moving below the configured speed

The function of the system can be hindered or disabled by the following conditions:

- Dirty or damaged windscreen
- Poor light conditions, such as insufficient illumination of the lane or strong glare
- Poor weather conditions, such as snow, ice, heavy fog / rain
- Missing, worn, faded, damaged or covered lane markings
- Speed below the parameterised speed.
- Ignition off

Warning Lens Panel: It indicates the status in which functions or malfunctions are active.



1	Front door is open	11	Engine overheat
2	Rear door is open	12	Up-Shift indicator
3	Passenger calls the hostess	13	Bus stop activated **(optional)**
4	Trunk lid unlocked **(optional)**	14	Fire warning **(optional)**
5	Door emergency exit tap is open	15	Front fog lamp is on
6	Passenger presses the stop button	16	Trunk lid is open **(optional)**
7	Cooling water level is low	17	Pads ended warning
8	Rear suspension is not at the normal level	18	AEBS **(optional)**
9	Disabled passenger wants to get on	19	Collision warning
1	Retarder activated		

Retarder Control Lever (Optional)

Retarder control lever is used for mountainous applications where retarder activation on long downgrades independent of the brake pedal is desired. To activate the retarder, simply move the hand lever to one of the four powered positions:

Position 0 : Retarder Power OFF
Position 1 : 25% Retarder Power
Position 2 : 50% Retarder Power
Position 3 : 75% Retarder Power
Position 4 : 100% Retarder Power

The retarder control does not automatically turn off at low speeds. Do not forget to reset the lever to Position “0” when the vehicle is stationary or when the retarder is no longer required.

Lighter

Lighter is pushed towards the heat element inside and it goes out automatically when heated.

Idling Control Knob

This knob is used to warm up the engine.
You can increase the engine speed by turning the knob clockwise without the need to use the accelerator pedal.

Turn the knob back fully counterclockwise after you have used it for engine warm-up and keep it in this position**.**

AIR CONDITIONER CONTROL PANEL

It shows internal temperature value as two digits. Temperature can be adjusted up - down.

When pressed (the air conditioner is on), set temperature increases 1°C. Temperature may increase up to maximum 30 °C.

When pressed (the air conditioner is on), set temperature decreases 1°C. Temperature may decrease to at least 18°C.

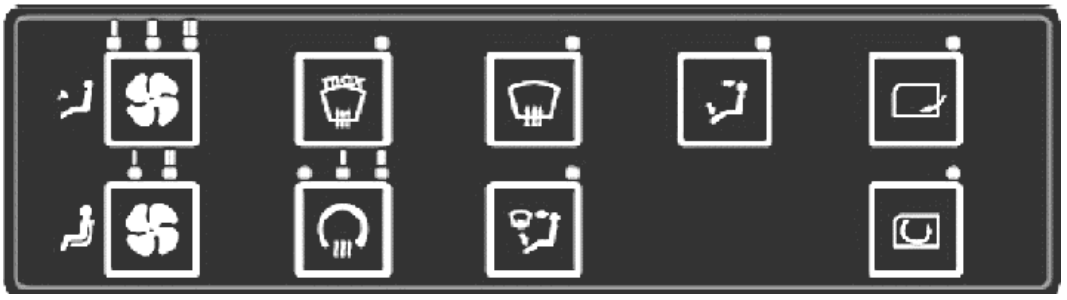
Each pressing the fan button, speed level increases.

The last set value is automatically activated when pressed and led lights. If internal temperature value is greater than the set value, air conditioner cooling function is activated.

RADIO & MP3 PLAYER

There is a radio & MP3 player with USB and AUX input in the vehicle. You can store 30 radio channels in the memory.

HEATER



This button provides speed control of the blower unit which is in front heater. While the lights are off, blower does not work.
When pressed the button, green led position I lights. Blower works in low flow.
When pressed the button once more, green led position II lights with position I. Blower works in midrange.
Pressing the button again, green led position III lights with position I and II. Blower works in the highest speed.
The lights turn off when pressed once more and blower fan stops.
While in summer position, the blower is activated for air conditioning. When the air conditioner is open, if pressed position I, a signal goes to air conditioner.

This button starts and stops rear heaters. When the vehicle is started, the rear heaters are off and the leds are in dimmed position. Green led of the heater I lights and 1st stage of the heater works, when pressed this button.
When pressed once more, green led showing that the position II lights with position I, in this case heater works in 2nd stage. When pressed again, green led goes off, heater stops. Operation of both heating, stage settings and stopping are done with this button. When the vehicle is stopped, the lights will go out.

When pressed the button, fresh air is taken from outside and blower works at highest speed by increasing gradually.
When pressed again, the control panel returns to its previous position.

While in max. position, if any key is pressed, max. is deactivated and returns to its previous position.

Hot-Cold valve control button; When pressed the button, if blue led is on, it is in summer position. Hot water does not go to heater.

Pressing the button, red led position I lights and the valve opens in position by 1/2. In this situation warm air is obtained.

When pressed once more, red led position II lights with position I. Valve is fully open in position II. Heater operates at full capacity and it is in winter position. When pressed again, red led goes out, blue led is on, it returns to the summer position.

When pressed the button, green led lights. It is used for defrosting windshield.

When pressed the button, green led lights. Some air is directed to the windshield and nozzles.

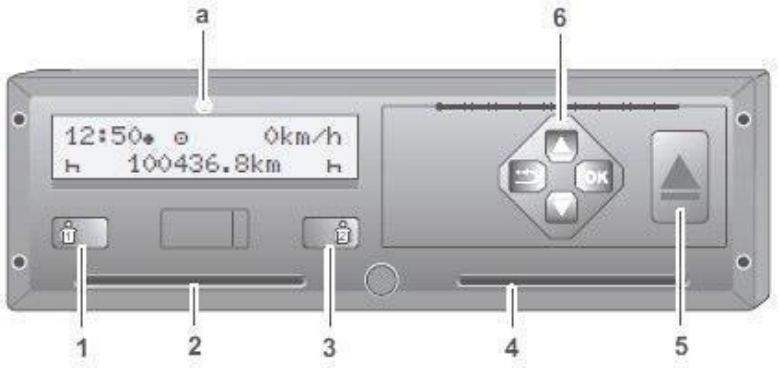
When pressed the button, green led lights. All of the air is directed to the nozzles.

When pressed the button, green led lights. In this position, fresh air needed by front heater is taken from outside.

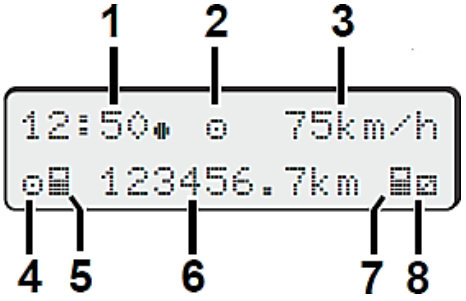
When pressed the button, green led lights. In this position, air needed by front heater is taken through the vehicle.

TACHOGRAPH

The tachograph records vehicle speeds, time, distance travelled and other information. It can be useful in achieving economic driving and optimum management of operations.



1 Driver 1	Activity button and ejection button
2 Card slot 1	
3 Driver 2	Activity button and ejection button
4 Card slot 2	
5 Unlock button	
6 Menu buttons	▲/▼ Select desired function OK Acknowledge function or confirm actions Leave menu



1	Time
2	Operating mode
3	Speed
4	Driver 1 active
5	Driver 1 card symbol
6	Total kilometer
7	Driver 2 card symbol
8	Driver 2 active

AMPLIFIER

Sound levels of radio, video and microphone can be adjustable.

SIDE CONTROL PANEL

Handbrake : Handbrake system is air-driven and spring wound. Handbrake lever is on the left side control panel. When the vehicle is stopped, handbrake is pulled backwards and lever must be locked at the lower position. Lock latch on the lower part of the lever is slightly pulled upwards and lever is released frontwards to disengage the brake. There is a warning light on the instrument panel to indicate whether handbrake system is enabled. For driving (vehicle activated), if brake air is insufficient when handbrake is disengaged (below 6 bars), warning light turns red.Wait for this light to go off before moving.

Emergency Switch: Red security cap is opened by moving upwards to use the emergency switch. Electricity in the system is cut off, engine stops, all inner lighting and flasher are turned on and door switches become activated when it is pushed forward. System becomes normal when it is pulled back.

Mirror Control Switch: This switch is used for the driver to adjust the directions of rear view mirror according to himself. Mirror is turned towards the desired direction by turning the arrow mark on the switch towards the mirror to be adjusted and directing the switch (right, left, upwards, downwards).

Spot Light Switch: Spot light on the front door is turned on when pressed the lower edge of the switch. The light is turned off when pressed the upper edge of the switch.

DPD Switch: The DPD switch is used to manually regenerate the DPD.

Warm–up Switch: This switch is used to allow engine coolant to warm up faster at low temperatures to increase the efficiency of the heater or to increase the efficiency of the heater while the vehicle is parked. Start the engine and press the lower edge of the switch. After the engine has warmed up, press the upper edge of the switch to turnit off.

Roof Light Switch: Roof lights are turned on when pressed the lower edge of the switch. Roof lights are turned off when pressed the upper edge of the switch.

Suspension Control Switch: This switch is used for a higher drivinglevel than the normal one. When pressed the lower edge of the switch,the vehicle gets a higher level and when pressed the higher edge of the switch, the vehicle gets the normal driving level. When the switch is turned on, intermittent warning sound is activated.

Electrically Operated Window Switch: The window moves down when pressed on the lower end of the switch, stops when pressed again, and moves up when pressed on the upper end.

LCD Screen Switch (Optional): LCD screen is turned on when pressed the lower edge of the switch. LCD screen is turned off when pressed the upper edge of the switch.

PREHEATER (OPTIONAL)

Heating

Heating immediately with longpress

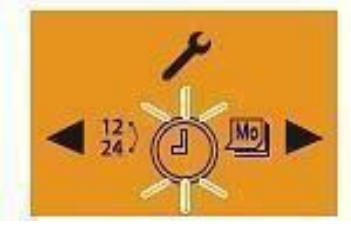
Press the Longpress button for longer than 2 seconds. Heater On.
Display On, the Heating menu item is displayed. Press the Longpress button for longer than 2 seconds. Heater Off.

Heating with shortpress

Press the Shortpress button for less than 2 seconds.
Use the or button to set the temperature setpoint. Press the button to confirm the temperature setpoint.
Press the Shortpress button for less than 2 seconds. Heater Off.

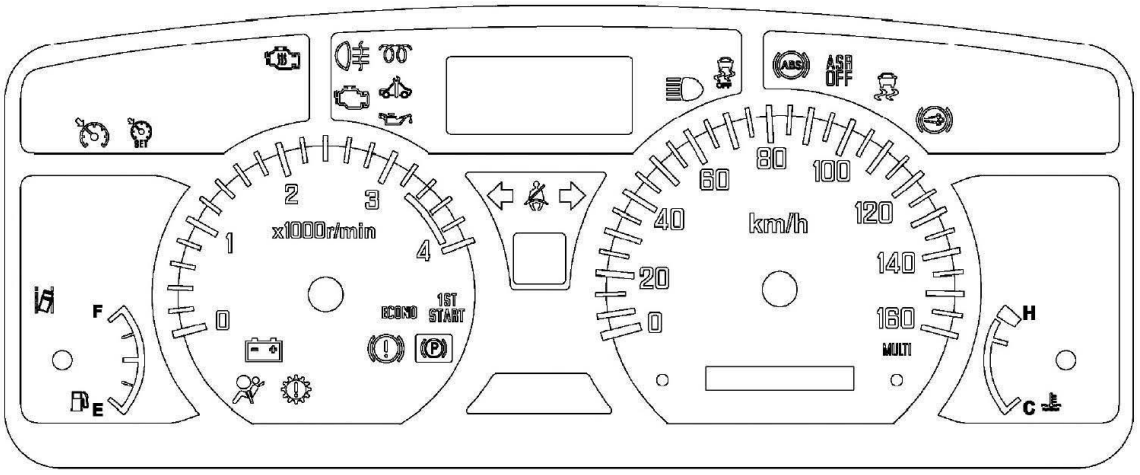
Settings

Use the or button to select the symbol in the Menu bar.
Confirm the Settings menu item by pressing the button.



Use the or button for choosing the symbols to set the time format, time and weekday. Then confirm it by pressing the button.

INSTRUMENT and WARNING LIGHTS PANEL



	Check engine warning light
	Rear fog light indicator light
	Glow plug indicator light
	SVS indicator light
	Engine oil pressure warning light
	High beam indicator light
ABS	ABS warning light (yellow)
	Exhaust brake indicator light
	Cruise control MAIN indicator light
	ESC warning light
ASR OFF	ASR OFF indicator light
OFF	ESC OFF indicator light

	Cruise control SET indicator light
	LDWS warning light
	Warm-up system indicator light
	SRS airbag warning light
	Generator warning light
	Smoother warning light
	Hydraulic warning light
	Parking brake warning light
ECONO	ECONO mode indicator light
1ST START	1st start mode indicator light
	Turn signal and hazard warning flasher indicator light – left
	Turn signal and hazard warning flasher indicator light – right
	Seat belt warning light

Multi – Information Display Warning Lights

	Normal voltage
	Abnormal voltage low
	Abnormal voltage high
	Speed limit
	Engine torque reduction
	Incorrect AdBlue
	Critical emission fail
	Overheat
	Can system error
	AdBlue refill
	AdBlue level low

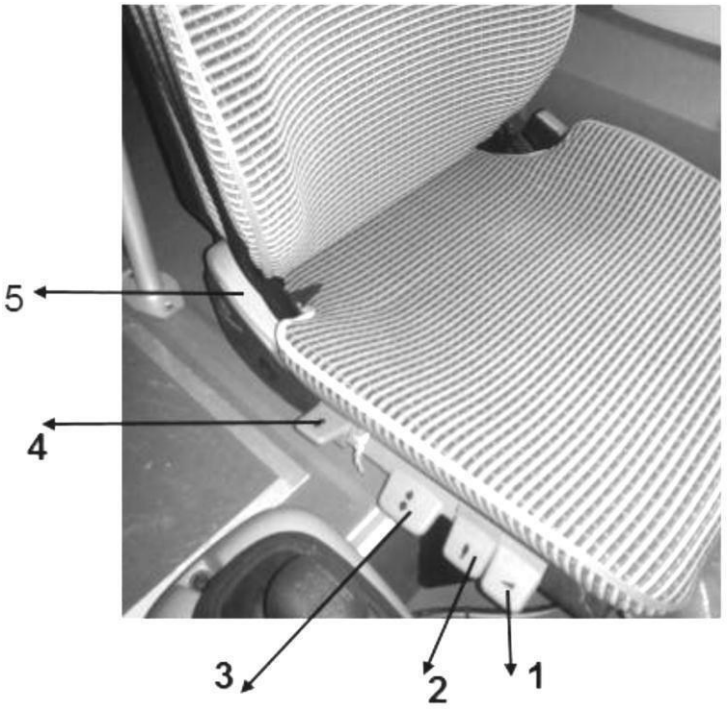
	Check engine oil level
	AdBlue injection system
	AdBlue DOS malfunction
	PM level being checked for selectable DPD regeneration
	Manual regeneration of DPD in progress
	Air cleaner
	Push DPD switch
	Automatic regeneration of DPD
	DPD PM accumulation level
	Low fuel
	Total fuel economy
	Per trip fuel economy
	Instantaneous fuel economy

	Progress of DPD regeneration
	Engine oil and filter
	Transmission oil
	Clutch oil
	Fuel filter
	Power steering fluid
	Tire rotation
	Hour meter
	Speed warning
	Nighttime dimmer
	ASR is active
	Over speed
	Water separator (fuel filter)

	ASR failure
	Error

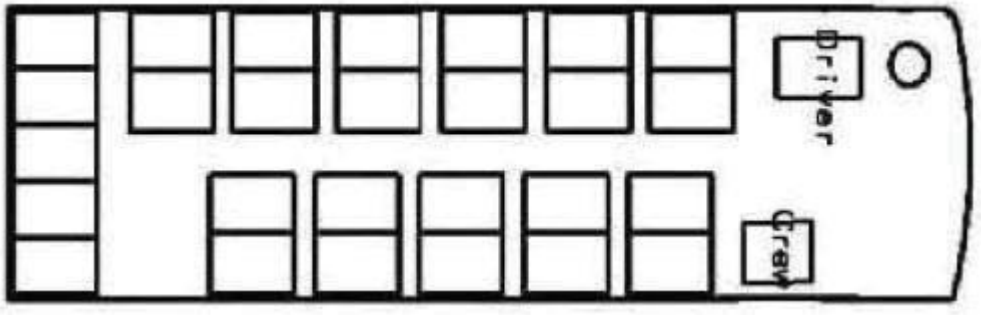
4. VEHICLE EQUIPMENT

DRIVER SEAT



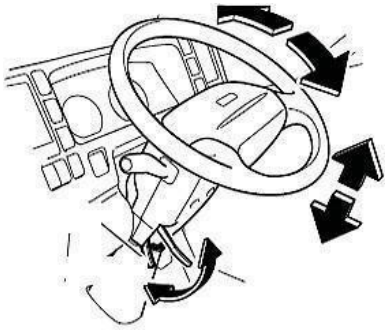
1. Seat Inclination Adjustment
2. Shock Absorber Adjustment
3. Height Adjustment
4. Quick Lift Down Adjustment
5. Backrest Inclination Adjustment

PASSENGER SEATS



Passenger seats are covered in cloth. Leather upholstery is offered as an option. There is a crew seat at the front door entrance. Passenger seats may be laid backwards, seats by the aisle may spread to the side. The front right and left double seats and middle seat of the back five seats have 3 points seat belt while the other passenger seats have 2 points seat belt. Right and left double seats have armrests by the aisle.

STEERING WHEEL ADJUSTMENT

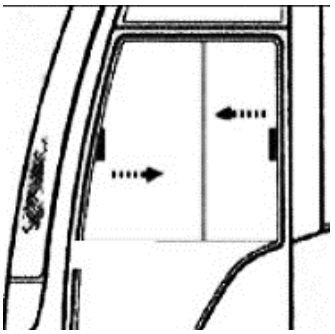


Steering wheel is tilt and telescopic. The lever located below the steering wheel on the left side is pulled upwards for this adjustment. Lever is pushed back when the desired position is reached.

HORN

Horn sounds when pressed the center of steering wheel.

DRIVER SIDE WINDOW



Press the latch for opening the window and move the window in the direction of arrows.

ROLLER BLIND

There is a roller blind which is opened/closed manually on the front window. There are 2 adjusting ropes on the left side of the roller blind. When you draw one of these ropes, roller blind goes down, when you draw the other rope roller blind goes up.

DIGITAL CLOCK

Hour Minute

There is a digital clock at the the front side of the vehicle. Hour adjustment can be done with button on the left and minute adjustment can be done with button on the right.

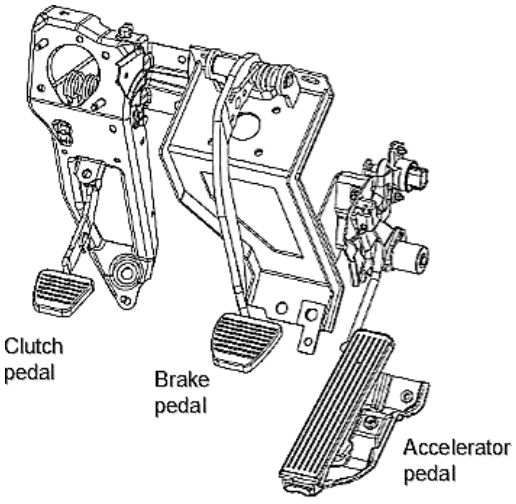
There are two stop buttons in Class II Novoultra vehicles. The passengers who want to get off the vehicle, informs the driver by pressing on these buttons.

on the warning lens panel lights and the “STOP” expression is seen on the digital clock. Additionally audible warning activates. When door is opened, “STOP” article and the warning light turns off.

This button is near the double seat which is located across the rear door.

This button is on the rear door handrail.

PEDALS



Brake Pedal

Brake pedal is a part of electronic braking system (EBS). Electrical signal is sent to the central control unit and air is distributed to brake elements once the brake pedal is stepped on.

Retarder activates automatically when the brake pedal is applied. It is integrated into the vehicle braking system and will function as the brake pedal is depressed. Slight pressure on the brake pedal gradually applies the retarder. Retarder activates before the service brakes are applied.

Accelerator Pedal

Pedal on the right is the accelerator pedal. Electronic signal sent by the position sensor tied to accelerator pedal is assessed by ECU (Electronic Control Unit) and the amount of fuel going to the engine is adjusted.
Off-throttle control allows the retarder to be automatically engaged when the driver lets off the accelerator pedal. Retarder control lever can be used to select the number of retarder stages that will activate when the accelerator pedal is released.

MIRRORS

There are one rear door step mirror, one inside mirror and two outside mirrors in the vehicle.

Rear Door Step Mirror

Inside Mirror

Right Outside Mirror

Left Outside Mirror

LANE DEPARTURE WARNING SYSTEM (LDWS) (OPTIONAL)

LDWS is a lane departure warning system which warns the driver in the event of any inadvertent lane-change. There is a camera in the windscreen, it watches the lane markings. The system monitors indicator signalling, the brake light switch and the driving speed. The system is thus able to detect intended lane-changes and as a resultdoes not warn you.

- LDWS is active when the vehicle is moving above 60 km/h or 37 miles/h.
- When the system is active, the green LED on the switch is lit.
- When the system is not active, the green LED on the switch is off.

- The function of the system can be hindered or disabled by the following conditions:
  - Dirty or damaged windscreen
  - Poor light conditions, such as insufficient illumination of the lane or strong glare
  - Poor weather conditions, such as snow, ice, heavy fog / rain
  - Missing, worn, faded, damaged or covered lane markings
  - Speed below the parameterised speed
  - Ignition off
- The system can be disabled for a period of 10 minutes on roads with no clear lane markings to avoid false alarms. The yellow LED is lit until the automatic reset occurs.

TRAPDOOR

There is a trapdoor for emergency exit and ventilation which is opened/closed manually.

SERVICE SET

There are service sets on the overhead of seats. There are two air discharge nozzles, one hostess button and two buttons to activate reading lamps on service sets. Nozzles are opened by pressing the wings on air discharge nozzles to enable air discharge. Wings may be moved backwards and forwards to adjust the amount of air. The direction may be changed by turning.

DISABLED LIFT (OPTIONAL)

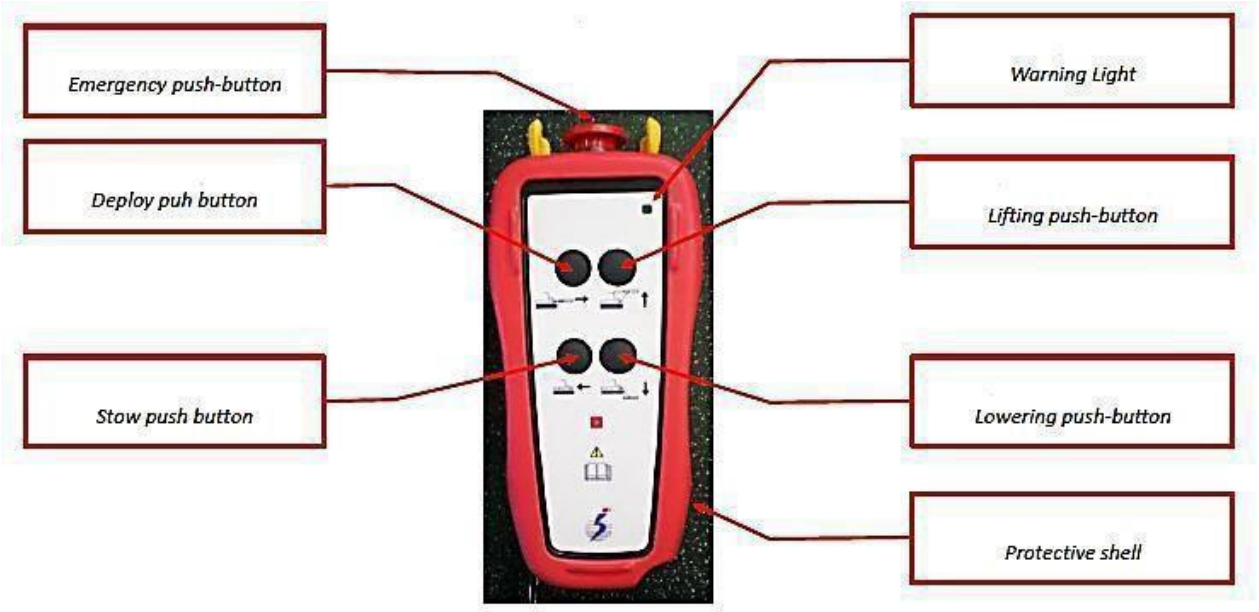
Disabled lift is under the middle door on the right side of the bus.

To get on the bus;

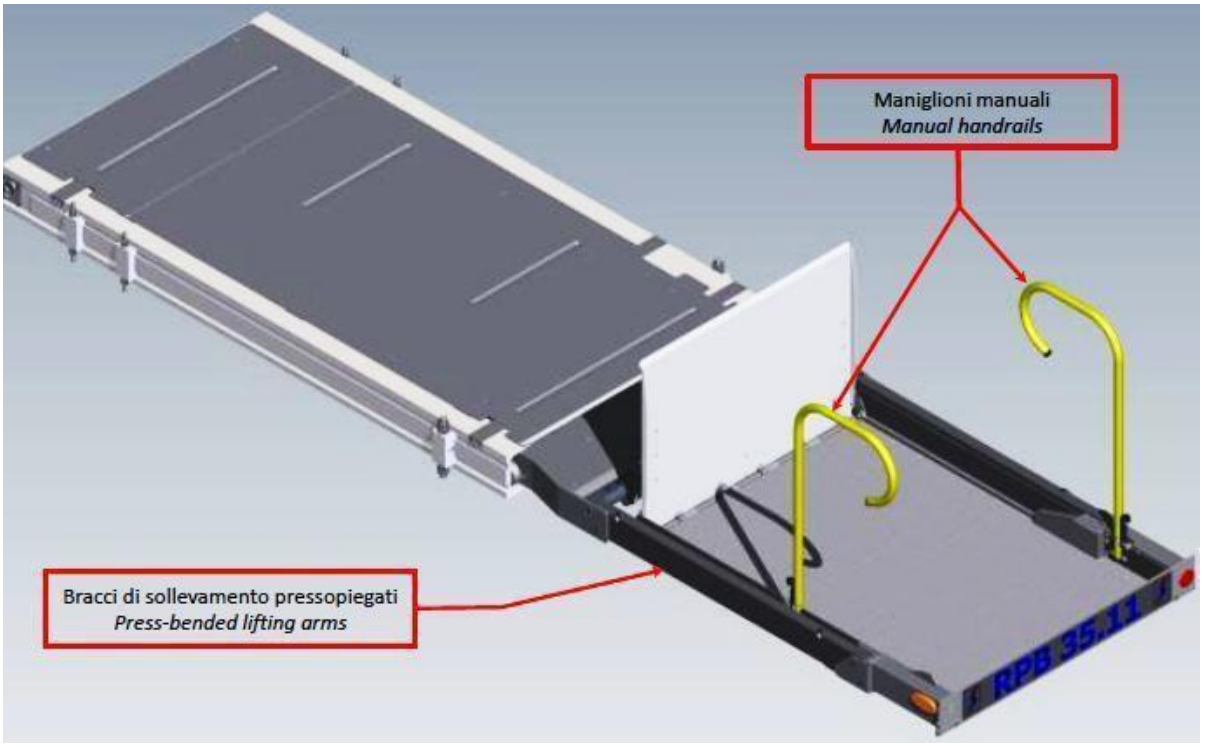
Disabled passengers press the button  and  lights on the warning lens panel, also audible warning activates.

In this case,

- Stop the bus
- Get off the bus and open the middle door
- Demount 4 seats which are close to the middle door
- Open the cap where the lift is located in
- Take the remote control



Remote control is equipped with four push-buttons, one for each lift movement (deploy, stow, lifting, lowering), clearly identified by icons.
Emergency push-button, built in the remote control, allows the operator to intervene earlier.
Remote control protective shell, as well as protect it from accidental drops, prevents unwanted lift movements when, for example, remote control is reversed on the ground and trampled.



Press-bended lifting arms (shaped in order to contain lower levers) and platform sides covers protect passenger from lift moving parts.
Platform is equipped with two manual handrails with locking device which can be driven by only one hand.

- Close the cap and middle door, after disabled passenger gets on the bus.

When the cap is closed, light ♿ on the warning lens panel goes off.

CAUTİON

✓ ✓ ✘

- The trunk lid on the right side of the vehicle should not be opened when the door reserved for disabled passengers is open.
- Suitable and unsuitable situations are shown in the images above.

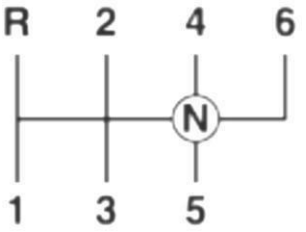
Stop Button for Disabled Passengers:

Disabled passengers who want to get off the bus, inform the driver by pressing on this button.

Then,  lights on the warning lens panel and also audible warning activates. Help the disabled passengers to get off by using the lift in the same way.

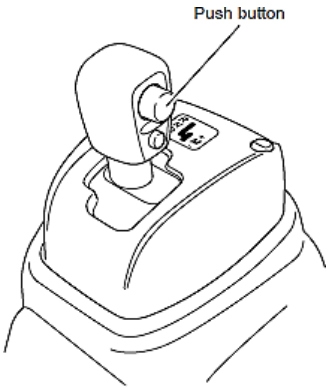
TRANSMISSION

1) Manual Transmission Model

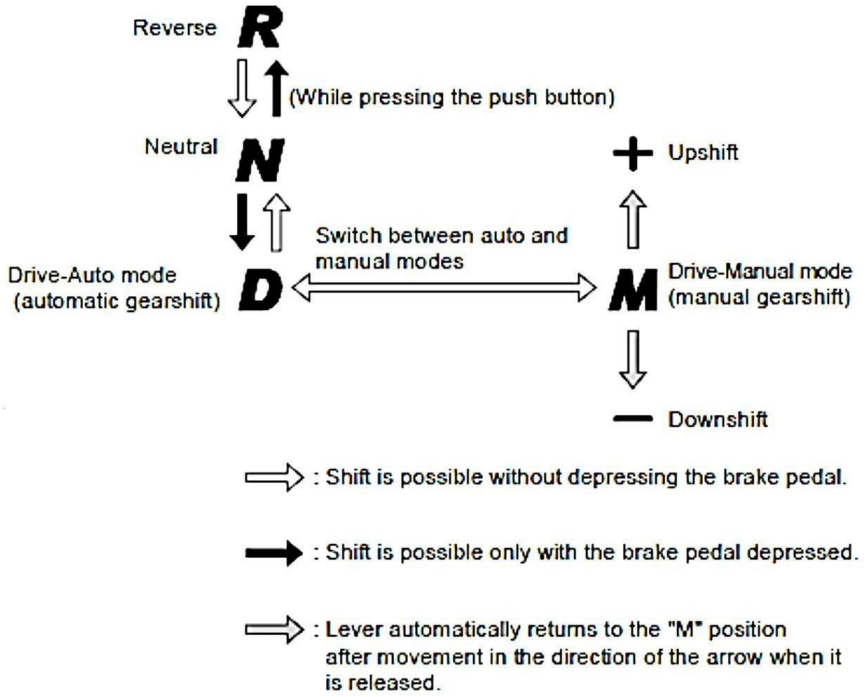


A manual transmission model requires fully depressing the clutch pedal when making a gearshift.
When the gearshift lever is placed into "R (Reverse)", the backup lamps come on.

2) Model With Smoother



Smoother is a transmission system that allows the driver to move the vehicle from a standstill, drive the vehicle with gears automatically changing and bring the vehicle to a stop by only using the gearshift lever, accelerator pedal and brake pedal, without needing to use the clutch pedal.
Move the gearshift lever to make it shift into each gear.



Gearshift lever position	Shift indicator display in instrument panel	Gear position
R	R	Reverse: Used when backing up the vehicle.
N	N	Neutral: Used when starting the engine.
D	D 1 - D 5, D 6 [6-speed transmission model]	Drive-Auto mode (automatic gearshift): The system automatically selects an optimum gear according to the vehicle speed.
M	+ 1, 2, 3, 4, 5, 6 [6-speed transmission model] - 5, 6 [6-speed transmission model]	Drive-Manual mode (manual gearshift): Manually selecting the "+" (upshift) or the "- " (downshift) position allows the driver to select the desired gear.

- Before starting the engine, place the gearshift lever into "N", make sure the shift indicator indicates "N", pull up the parking brake lever and fully depress the brake pedal.
- When moving the gearshift lever from "N" into "D" or "R", be sure to depress the brake pedal.

- Never leave the driver seat with the gearshift lever placed in "D", "M" or "R" while the engine is running. The vehicle may start moving. When leaving the driver seat, be sure to place the gearshift lever into "N" and securely set the parking brake.

To Start The Vehicle

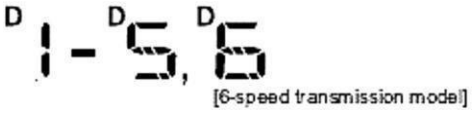
1. Fully depress the brake pedal. After making sure the gearshift lever is placed in "N" and the parking brake lever is fully pulled up, place the starter switch into the "ON" position.
2. Start the engine while fully pressing the brake pedal with your right foot. Place the gearshift lever into "D" for forward movement or into "R" for backward movement. The clutch disengages automatically upon operation of the gearshift lever, the gear is changed, and then the clutch is re-engaged automatically. The gear is then controlled in the auto mode (automatic gearshift).
3. Make sure that the shift indicator indicates "D" or "R" at the left upper portion, release the parking brake, release the brake pedal, and then slowly press the accelerator pedal. The vehicle starts moving as you depress the accelerator pedal further.

To Stop the Vehicle

1. Press the brake pedal with your right foot to slow down and stop the vehicle. No special gear shifting is required. After the vehicle has stopped, the gear is automatically shifted into the starting gear in both the manual mode and auto mode.
2. While the vehicle is stopped, place the gearshift lever into the "N" position. When the vehicle must be stationary for several minutes, set the parking brake.

When leaving the driver's seat, be sure to place the gearshift lever into the "N" position, make sure that the shift indicator displays "N" and firmly set the parking brake.

To Change Gears - Auto Mode



[6-speed transmission model]

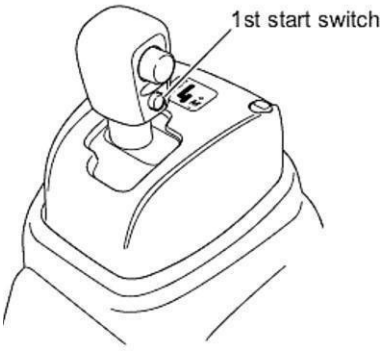
When you change the gearshift lever from "N" into "D", shifting takes place in the automatic mode. Check that "D" is displayed on the upper left of the shift indicator.

To Shift Gears - Manual Mode

[6-speed transmission model]

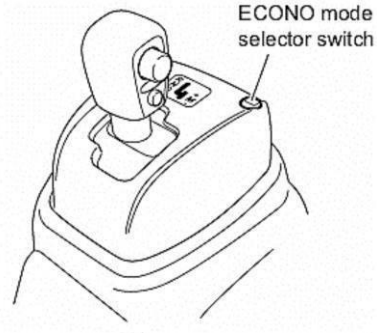
- When changing the gear in the manual mode, place the gearshift lever into the "M" position and move the lever towards the "+ (upshift)" or " – (downshift)" direction as necessary to select the desired gear. Check that the desired gear is displayed on the shift indicator.
- The clutch is automatically disengaged upon operation of the gearshift lever. When the shift has completed, the clutch is automatically re-engaged. You can make both upshifts and downshifts in a similar manner.
- Gears are not automatically shifted in the manual mode. To return to the auto mode, place the gearshift lever into the "D" position. Make sure that "D" is displayed on the upper left of the shift indicator.

1st Start Mode



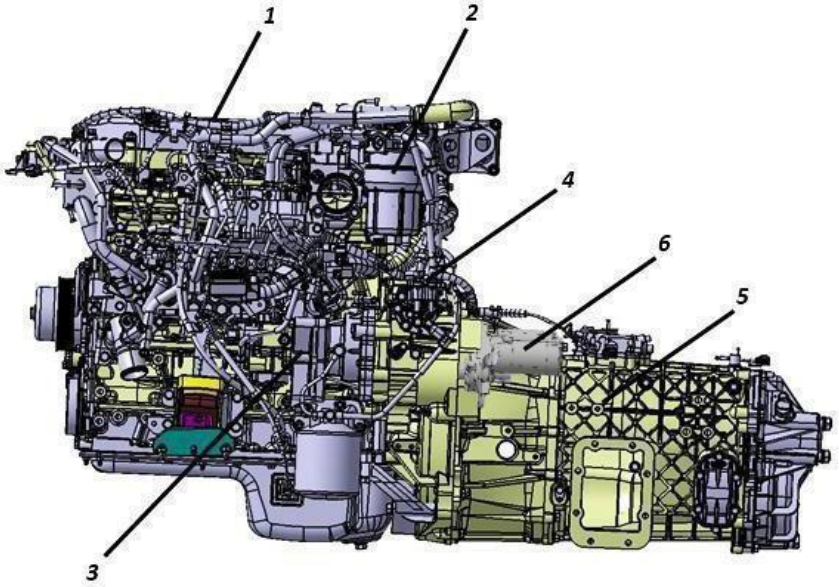
The vehicle normally moves off from a standstill in 2nd gear. Use the 1st start mode when you need powerful torque to start the vehicle, for example, when it is heavily loaded.
When you press the 1st start switch in auto mode (i.e., when the vehicle is stopped and either the foot brake or parking brake is applied), the 1st start mode indicator light comes on, indicating that the transmission has switched to 1st start mode. Return the transmission to the normal start mode (2nd start mode) by pressing the 1st start switch again.

ECONO Mode

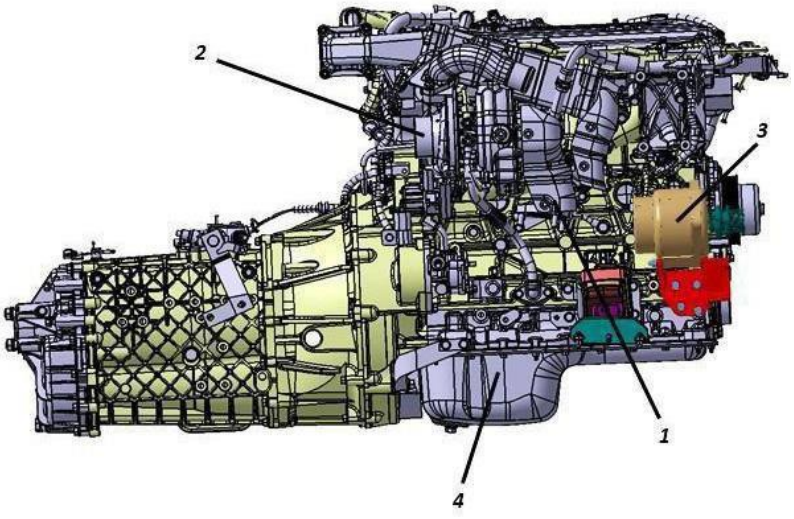


You can improve fuel economy if you select the ECONO mode when the vehicle is driven with the transmission in the auto mode (automatic gearshift mode). When you press the ECONO mode selector switch, the ECONO mode is selected and the ECONO mode indicator light comes on.

ENGINE



1. Engine Oil Filling Plug
2. Fuel Filter
3. Vacuum pump
4. Fuel Pump
5. Transmission
6. Starter



1. Exhaust Manifold
2. Turbo Air Inlet
3. Generator
4. Engine Oil Sump

RETARDER (OPTIONAL)

Your vehicle is equipped with a retarder. It provides you with essential safety, cost effectiveness, accurate and reliable braking.

In town

Even at the lowest speeds, the retarder is very effective for common braking situations (junctions, bends, turns,etc.) and for stops, virtually without using the service brakes. Its highly flexible operation provides smooth braking and improves passenger comfort.

On the highway

Your retarder will provide the necessary braking, whether at high road speeds or in dense traffic. Its efficient usage will reduce fuel consumption and permit higher average speeds in safety, whilst increasing brake and tyre service life.

In hilly terrain

Use the retarder in conjunction with the engine braking for an optimum use of the gear ratios. This will allow you to achieve the speed best suited to changes in gradient and to the road conditions as quickly as possible.

For very long downhill gradients

After the vehicle stabilises at the required speed, we recommend that you use the retarder in position 2 to obtain maximum endurance efficiency.
Intermittently it may be useful to combine the use of the service brakes with the operation of the retarder to adapt the vehicle's speed to the road conditions (particularlyentering bends).

Snow, ice, mud

When tyre adhesion is poor, the retarder is particularly valuable : it allows you not only to brake progressively, but may also be used for smooth startups on slippery ground. Try position 1 and position 2 successively, checking the vehicle's stability and tyre adhesion.

ABS Interface

The retarder system is equipped with an electronic interface designed to work with your vehicle's Anti-Lock Braking System(ABS). During an ABS event (an ABS event is defined as any wheel lock-up) the retarder will automatically turn off, allowing the ABS to control the brakes without interference from retarder. After the ABS event, the retarder will reactivate progressively to assure proper braking.

NOTE:

If the vehicle's ABS warning light remains on, the retarder will not operate. When the ABS warning light is on, there is a problem with the ABS. The ABS must be serviced before the retarder will operate.

Important Points to Remember

- The retarder operates by normally applying the brake pedal. You will notice that less pedal travel is needed to obtain sufficient braking.

- It will automatically shut off at low speeds (below approximately 3 km/h).
- Make sure dashboard indicator light on when the brake pedal is fully engaged. If the light does not turn on, it is possible that the retarder may not be working properly.
- When the vehicle's ABS warning light stays on, the retarder will not operate.
- The retarder should be pressure washed periodically. Please make sure that it is clean and free of debris before operation of the vehicle.
- It will function effectively in reverse (above approximately 3 km/h).
- It will not magnetically attract metal objects.
- The retarder is integrated into the vehicle's braking system. To avoid vehicle malfunction do not tamper with or disable it.

Maintenance of the retarder system

The power to the retarder system must be disconnected before any maintenance on the system. Before reconnecting the power to the retarder system, make sure that all controls of the retarder are set to the OFF position.

Maintenance Interval (x 1000 km)	20	40	60	80	100	120
Retarder	I	I	I	I	I	I
Carry out a full function check of the control system	I	I	I	I	I	I
Retarder air-gaps and adjust if necessary	I	I	I	I	I	I
Fastener torques are within specification	I	I	I	I	I	I
Oil leakage from the gearbox or axle flange seals	I	I	I	I	I	I
Retarder electrical cables	I	I	I	I	I	I
Cable terminations, tightening torques	I	I	I	I	I	I

Pressure washing

Maintain a distance of at least 1 meter between the nozzle of the jet washer and the retarder.
Do not exceed a pressure of 25 bar or a water temperature of 50 °C, and do not use chemicals or detergents.
The power to the retarder, along with any retarder electronic control modules, must be disconnected before charging the batteries.

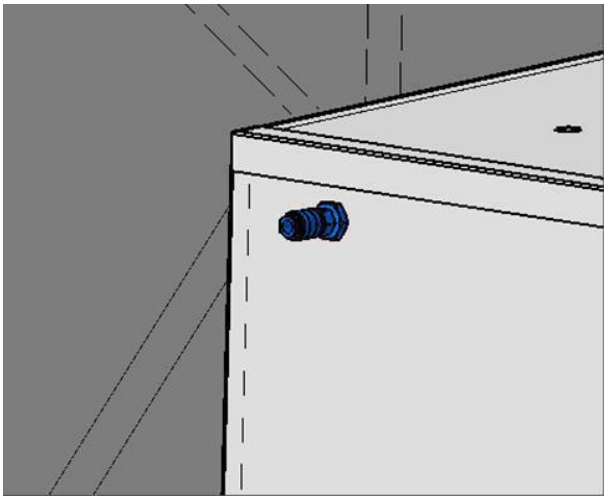
FUEL TANK

Opening and Closing the Fuel Tank

1. Turn the cap counterclockwise to open.
2. Fill the tank.
3. Turn the cap clockwise to close.
4. Be sure that the fuel tank cap is tightly closed.

If the fuel tank cap is not tightly closed, leaking fuel could start a fire while driving.

TYRE INFLATION SET



If the air pressure in vehicle tyres are low, tyre inflation set among the tools are used to adjust tyre pressures. In order to do that :

- Park the vehicle in a way not to block the traffic.
- Pull the parking brake and shift the gear to neutral and start the engine.
- Take the tyre inflation set.
- Attach one end of the hose to the tyre valve to be inflated and the other end to the air discharge end which is in rear trunk on the left.
- Complete tyre inflation by accelerating the engine.

ELECTRONIC BRAKE SYSTEM (EBS)

Electronic braking system has an infrastructure both electronic and pneumatic. Brake system is controlled electronically in normal conditions. Brake request from the driveris treated by the control unit and the most suitable braking is created in that condition.
This system has a higher performance than conventional
systems. In the case of electronic fault, the system does not shut down itself, it keeps running pneumatically. EBS system includes the functions below:

1) **Anti Blockage Brake System (ABS) :** It prevents the vehicle from slipping by preventing the wheels from locking when braking. It ensures steering wheelstability in sudden braking.

2) **Anti Skating System (ASR):** ASR becomes activated and increases driving safety by minimizing skating when drive wheels skate on ramps, slippery grounds and when accelerating.

3) **Drift Torque Control (DTC):** Wheels may get locked due to inertia of transmission organs on slippery grounds, this system gets activated and increase engine torque and tries to ensure road handling.)

4) **Electronic Brake Equalising (EBD):** It distributes the brake forcenecessary according to the load status and lining wear to the wheels.

5) Lining wear is controllable, lining thickness is continuously followed on the instrument panel.

6) **Hillholder :** When the vehicle stopped on a ramp starts to move, it preventsthe vehicle from slipping backwards by keeping it stable for 3 seconds. It is controlled with a switch on the driver control panel. When you turn on the switch and step on thebrake on the ramp, brakes get activated to keep the vehicle waiting on the ramp, the system gives time until you step on the accelerator pedal from the brake pedal.Brakes get deactivated when accelerator pedal is stepped on or time is exceeded.

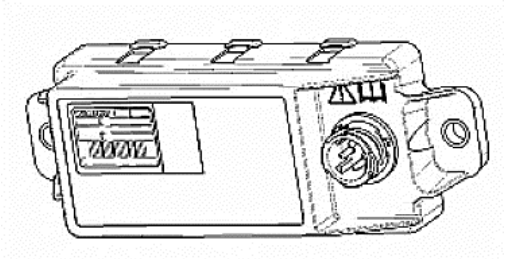
7) **Retarder Integration:** System is in a continuous interaction with retarder. Retarder gets activated in slight brakes to prevent the linings from wearing. It also reinforces the braking system under normal conditions. Retarder system is deactivated when ABS function operates.

Safety functions do not operate, brake performance decreases in the case of an electronic fault. The driver must contact the closest Isuzu service carefully in such case. Safety functions such as ABS, ASR and DTC are effective to decrease accidentrisk; however the actual important issue is to drive the vehicle in a way suitable for traffic and road conditions.

ESC (Electronic Stability Control)

It is possible to intervene in the wheel brakes independently in sudden maneuverings in vehicles which carry load and passengers with electronic control. The purpose is to prevent possible accidents such as vehicle skidding or rolling over.So more determined driving dynamic is guaranteed.

Angular Acceleration Sensor



Acceleration sensor is positioned on the floor casing in the trunk space close to the center of gravity of vehicle.

Axial deviation in the vehicle is perceived as instant angular acceleration and conveyed to braking system control unit as electronic signal. It is controlled how much the vehicle has deviated from the route in a critical state. It gives information about how stability control functions must be activated.

Steering Wheel Angle Sensor

Angle sensor passes through steering wheel column and positioned below the signal group. It conveys the maneuvering request of the driver to the braking system control unit according to the rotation amount of steering wheel. Conveyed information is sent as electronic signal. Calibration is performed when the system is first installed to match the signals from sensor and direction angle of the vehicle.

ESC system will be faulty in the event that steering wheel is dismounted and mounted, changed or renewed in front alignmentadjustment. In such cases, installation must be made in Isuzu services.

ADVANCED EMERGENCY BRAKING SYSTEM (AEBS)

Advanced Emergency Braking System is a system that automatically detect the emergency situation and activates the braking system to slow down the vehicle in order to avoid the collision or to reduce the impact of collision. AEBS is a requirement of General Safety Regulations and it is the user's responsibility to disable the system.

The operating speed range of the AEBS is 15 – 125 km/h. It will switch off at speeds above and below this range and switch to "Temporarily Out of Service" mode.

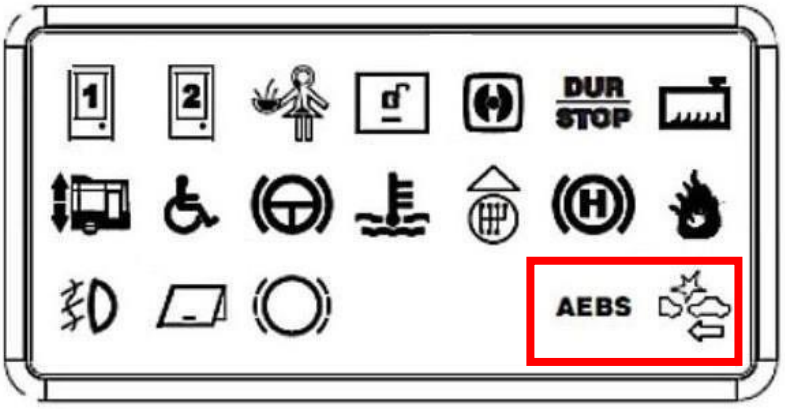
For AEBS system performance;
- Do not change radar position and radar cover positon.
- Do not paint the sensor cover.
- Do not change the radar cover.
- Do not place any objects (plates, labels, etc.) on or in front of the radar cover.

If the AEBS is not deactivated in the following situations, the vehicle may self-brake and create a hazardous situation:
- If the vehicle towed with the ignition switch on
- When the vehicle is in a stable position, it moves to a mechanism where wheels rotate
- If the wheels are turned by lifting the vehicle from front or rear axle to the air

AEB function contains the sub-functions described in the following sections.

1. FCW Function - Front Collision Warning

- Visual and audible (FCW) warnings are given on the warning lens panel display.



- Along with the visual and audible warning signal, the wheel brakes are briefly given a tactile feedback (HCW) to reinforce the collision warning given to the driver.

2. AEB Function

The AEB function detects moving and stationary objects in the event of a potential collision from the rear and applies the wheel brakes. It does not react to oncoming traffic. Up to 70 km/h for moving objects and up to 20 km/h for stationary objects the vehicle is slowed down in order to reduce the impact of accident. However, depending on various factors, such as road friction, the prevention of the accident cannot be guaranteed even in case of moving objects.

3. Warning and Brake Levels

The standard sequence of a complete AEBS reaction is as follows:

- Start of visual and audible warning (FCW)
- Application of tactile feedback (HCW)
- Short braking and activation of FCW
- Automatic start of emergency braking

4. Response to Objects That Intercept the Main Vehicle

If the criteria for starting the FCW cannot be fulfilled early enough, the AEB ranking may change. For example; if an object cuts off the main vehicle at a short distance.

The situation is extremely critical after the collision warning is given and the AEB braking starts shortly after the FCW. In this case, it is not possible to avoid collision due to the limited AEB slowdown at the beginning of the event.

5. AEBS Limitations

The following limitations shows the different AEBS restrictions that can lead to an unexpected response and impaired system performance.

- Sudden changes that correct a critical situation and that have already been recognized by the driver cause warnings that are perceived as unnecessary by the driver.

- The response may be delayed if the system detects that an upcoming collision can be avoided by a maneuver of the driver.
- The system uses an avoidance path at low speeds for stationary objects.
- The system may not be able to prevent the collision if the ideal braking conditions due to weather conditions or road surface are not met.
- The tolerances the radar sensor uses for measurements may cause an accident without any system response.
- If the system cannot detect the center of the object in the road, there will be no braking.
- For narrow road bends, the sensor must be in the middle of the main vehicle path since the sensor has limited detection performance.
- If the brake lights do not flash for the minimum time required before emergency braking, the desired braking is restricted.
- The system is approved up to 90 km/h. At speeds above this, the braking level of the system is reduced.
- If the vehicle passes through a narrow road bend, the desired deceleration is restricted by the system to prevent the loss of cornering force.
- In high lateral acceleration road bends, system braking requirements are restricted in order to keep the deceleration below the critical level.
- If the system detects driving in tunnel, it limits the maximum deceleration as the radar sensor is affected by reflections on the tunnel wall and can create greater false detection risks.
- If any of the vehicle stability control functions are actively interfering, AEBS brake requests are restricted.
- The system will be in the restricted sensitivity operating mode after engine start, for at least 10 km, and in which the rolling rate probability control will use more protective parameters than its normal operation if it has not yet delivered a successful result.
- If the AEBS is in "Temporarily Out of Service" mode, no warnings and emergency braking will occur.

6. AEB Event Counter

The AEB event counter counts unrestricted emergency brake events initiated by AEBS. If the 3 event threshold is exceeded, the system enters a fault state. The event counter will reset if the maximum event threshold has not exceeded and the predefined minimum distance has been covered without increasing the counter.

7. Driver Disabling Conditions

After the AEBS has been deactivated by the driver, it is deactivated until it is manually reactivated or the ignition is reset. The hazard light switch and AEBS switch are used to deactivate the AEBS. AEBS must be deactivated if the vehicle is to be towed and the wheels must be rotated in a stable position. When the system is disabled, depending on the information display application, collision warning is not displayed to the driver.

EBA (Extended Brake Assistance)

The extended braking aid reinforces the driver's manual brake request to avoid an oncoming collision at times of collision. In the event of an active collision warning, the EBA will send a request for the required deceleration to the brake system, depending on the current brake pedal position, to avoid an accident if the driver has started to depress the brake pedal slightly. The EBA is not activated if the driver does not have an active collision warning when the brake pedal is depressed. If the object disappears during an active EBA event, the last deceleration request is maintained as long as the EBA is active.

DIESEL EXHAUST EMISSION FLUID HEATING SYSTEM

The diesel exhaust emission fluid used in the vehicle begins to freeze at -11 °C. The engine begins to spray ureas to the exhaust system when its heat has increased. If the fluid in the tank remained frozen when the engine heated, the engine cuts power since there would be no urea spraying operation. Therefore, under cold acclimatization (at temperatures of -7 °C or lower), the engine heats the diesel exhaust emission fluid tank and the diesel exhaust emission fluid line going from tank to the injector with hot water.

DIESEL PARTICULATE DEFUSER (DPD)

DPD reduces particulate matter (PM) in the exhaust emissions. The DPD filter captures PM. When a certain amount of PM has accumulated in the DPD filter, the filter is automatically regenerated.(The PM is burned away.)

To prevent a DPD failure, be sure to observe the following points
:

1. The DPD, urea selective catalytic reduction (SCR) system, and exhaust pipe are extremely hot while the engine is running, during DPD filter regeneration (PM combustion) and immediately after vehicle operation. Be careful not to inadvertently touch them. Otherwise, you could be burned.
2. Any grass, waste paper or other flammable material near the vehicle could catch fire.
3. Before doing maintenance work on the vehicle, shut down the engine and allow it to cool down. Otherwise, you could be burned.

- The exhaust pipe is extremely hot immediately after vehicle operation. Before parking, make sure the area is free of flammable material (for example, grass, waste paper, oil or old tires). Take particular care when parking in a garage.
- Use caution concerning exhaust gases while the engine is idling. Be particularly careful when the diesel particulate defuser (DPD) is regenerating while the engine is idling.

DPD Switch

The DPD switch is used to manually burn PM (regenerate the filter).
You should take the steps for manually regenerating the DPD when the "PUSH DPD SWITCH" indication flashes.
Perform the manual regeneration of the DPD while parking the vehicle after the day's operation, for example, following the instructions under "DPD Manual Regeneration Procedure".

DPD Manual Regeneration Procedure

1. Stop the vehicle at a safe place free of flammable materials such as grass and waste paper.
2. In a manual transmission model, place the gearshift lever into "N" and firmly engage the parking brake.
   In a Smoother model, place the gearshift lever into "N", confirm that the "N" indication appears, and firmly engage the parking brake.
3. Run the engine at idle. Return the idling control knob to the fully counterclockwise position to decrease the engine speed when the engine speed has been increased using the idling control knob.
4. Press the DPD switch.
5. The "PUSH DPD SWITCH" message will stop flashing and change to a steady "MANUAL REGEN." message, while the engine speed is automatically increased to start regeneration.
6. Do not leave the vehicle during regeneration. Regeneration normally is completed in 15 to 20 minutes.
7. When the "MANUAL REGEN." message goes out, regeneration is completed. Normal driving is then possible.

Interruption of Manual Regeneration

If you must interrupt regeneration for an unavoidable reason, press the DPD switch again.
The "MANUAL REGEN." message changes to a flashing "PUSH DPD SWITCH" message. Then, you can drive the vehicle. If you interrupt regeneration, you need to perform the regeneration again. Perform manual regeneration beginning with step 1 as soon as possible.

Automatic Regeneration of DPD

The engine speed may increase and the exhaust brake may activate while the vehicle is stopped with the engine idling. When this occurs, the DPD is automatically regenerated. This does not indicate a failure. The automatic regeneration causes the "AUTO REGEN." message to be displayed.

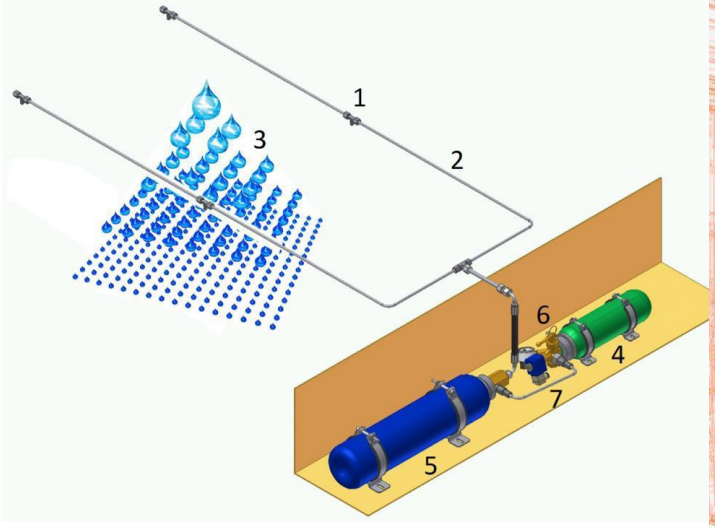
NOTE :

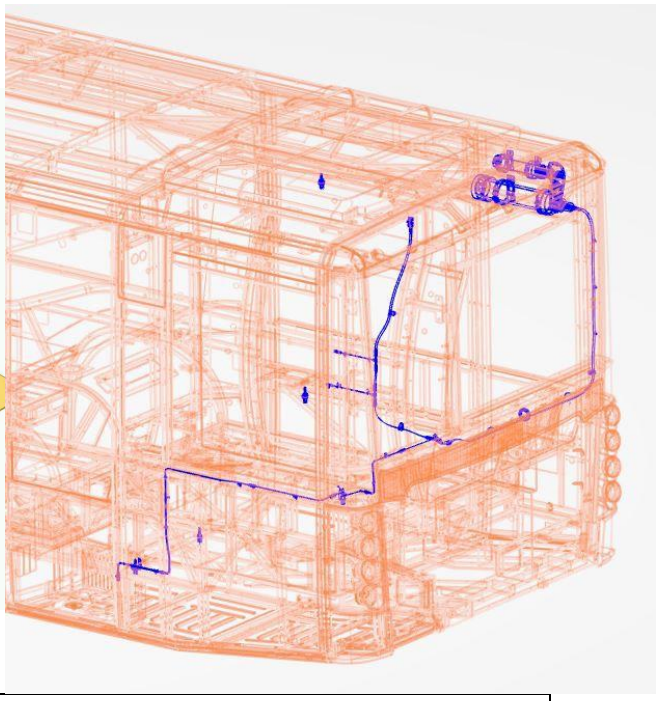
- If the vehicle is stationary with the engine idling during DPD regeneration, the exhaust brake or exhaust throttle operates. Operating sounds will be heard when the exhaust brake or exhaust throttle is activated or deactivated. The sounds do not indicate a fault.
- Combustion of PM during DPD regeneration can cause white smoke to be briefly emitted from the exhaust pipe. The white smoke does not indicate a fault. Do not perform manual regeneration in any poorly ventilated indoor place.
- When a new vehicle has been driven a certain distance, it can emit white smoke during DPD regeneration. The white smoke does not indicate a fault. The vehicle may not emit white smoke during its initial operation when new.
- Owing to the exhaust emission reduction function, the exhaust gases emitted by the exhaust pipe smell different from those emitted by the exhaust pipes of earlier diesel vehicles.
- The exhaust brake may automatically be activated in order to prevent emission of white smoke if the engine idles continuously over an extended period of time.
- A long continuous idling can cause white smoke to be briefly emitted from the exhaust pipe. The white smoke does not indicate a fault.

ADVICE :

- Use Isuzu genuine engine oil compatible with the DPD. Using oil other than Isuzu genuine engine oil compatible with the DPD would shorten the time between DPD filter cleaning and could increase fuel consumption.
- For models conforming to Euro V or Euro VI emission standards, be sure to use extra-low-sulfur diesel fuel (containing sulfur of 10 ppm or lower).
- If you fill the vehicle with poor-quality fuel, water-removing additive or other additive, gasoline, kerosene or alcohol-based fuel, it could harm the fuel filter, prevent proper movement of fuel-lubricated parts in the injectors and adversely affect engine components, possibly resulting in a breakdown.
- Do not modify the DPD, urea SCR, or exhaust pipe. Changing the alignment, length or diameter of the exhaust pipe would adversely affect the exhaust system's exhaust emission reduction function. If any modification is necessary to install a component to the rear of the vehicle, consult your Isuzu service.
- Although the DPD filter automatically undergoes regeneration (burning of the accumulated PM) when a certain amount of PM has accumulated, driving conditions can prevent completion of regeneration. In a model without multiinformation display (MID), the DPD manual regeneration indicator light will flash at this time. In a model with MID, the "PUSH DPD SWITCH" indicator will flash. Perform manual regeneration in accordance with the proper procedure. This is to restore DPD function and is normal.

ENGINE COMPARTMENT FIRE DETECTION AND AUTOMATIC FIRE SUPPRESSION SYSTEM (FIREDECT- OPTIONAL-1)





No	Name
1	High pressure (20MPascal/200bar) water mist nozzle
2	High-pressure stainless-steel pipe system
3	Extinguishing Agent (Temper S-30) as 50 µ droplets
4	Nitrogen pressure bottle
5	Temper S-30 Water + agent bottle
6	Mechanical pressure valve for manual actuation (optional / not all models)
7	Electric pressure valve (coil and solenoid valve), pressure gauge (optional)

This is a system which consists of a pressure fire detection hose and fire spout nozzles which pass from the areas where a fire may occur in the engine room.There are 2 tanks in the system, one is the nitrogen tank which provides the detection of fire, and the other one is the fighting tank in which there was fireextinguishing fluid. Illuminated and audible lights alert during the fire detection.

Fire suppression system uses water as the extinguishing agent. The water is atomized at a high pressure of at least 160 bars at the nozzles. The pressure energy is used to split the water into small droplets of 50µ with an extremely large surface area for cooling and provides these droplets with sufficient kinetic energy to bring them rapidly to the protected area. During fire extinguishing, the fire extinguisher is sprayed from nozzles which reduce the temperature, cut contact with air and convert them to columnar smoke clouds. The fire extinguisher is mainly antifreeze water based. Extinguishing time is between 3 - 5 seconds at normal but the effective time is50 - 75 seconds.

WARNING

In case of fire;

- Stop the engine.
- Empty the vehicle.
- Turn off the current.
- Keep the bonnet closed at least 5 minutes.
- Use a portable fire extinguisher if needed.
- Connect with the authorized Isuzu Dealer.

WARNING

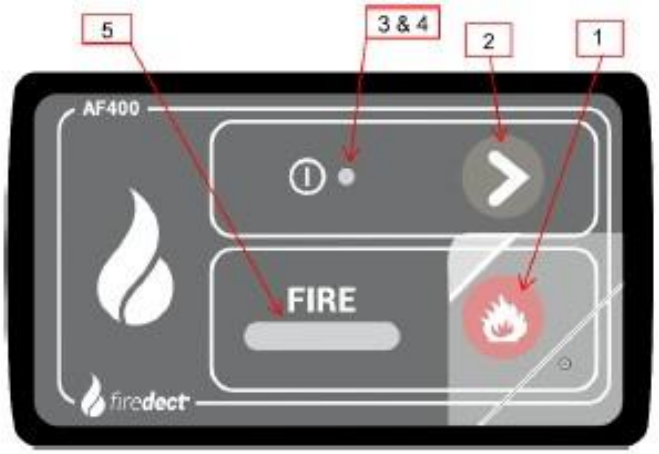
The following operations should be performed when the fire extinguishing system activated because of a reason other than fire and the tanks emptied:

- Wash all component surfaces with water in order for the parts in the engine room effected by the system not to corrode.
- Wash inside of the pipes and nozzles by giving water to the fire extinguishing piping system, but if it was too late for this, remove the nozzles and clean nozzles and pipeswith water. Replace the nozzles if required.
- Insert protection covers to nozzles again.
- Activate the system again by mounting filled tanks.

FIRE DETECTION THE CONTROL UNIT

It integrates the control unit and the display / HMI in one single device only.

No.	Name
1	Fire Button
2	Action Button
3	Green Led
4	Yellow Led
5	Red Zone Led



Fire Button

WARNING

- Press only in emergency.

Press the fire button to activate immediately the suppression system manually.

CAUTION

- The fire button is protected by a plastic cab which has to be replaced every time the firebutton is actuated.

Action Button

Normal operational mode:

- Short press has no functionality.
- Long press will start the LED & Alarm self-test.

Warning/diagnosis mode:

- Short press
  First press will silence/mute the warning signal.
  Every further press will show you the “Fault Display” (blink codes). If there is at lea stone error.
- Long press will reset the warnings. (The resets will only be reset if you are inthe “Fault Display”).

Alarm mode:

- Short press will delay the activation by 15 seconds.
- Long press will silence/mute the alarm

Green Led

Blinking:

- The control unit is booting.

Blinking slowly:

- The control unit is in the emergency current mode.

Constantly:

- The control unit is on normal operational mode.

Yellow Led

Warning/Diagnosis mode:

- Blinking
  There was a warning, but it has not yet been queried.
- Constantly
  There is currently a warning.

Red Zone Led

Fire in zone X detected. The suppression system is automatically activated.

- Blinking

Alarm countdown for activation.

- Constantly

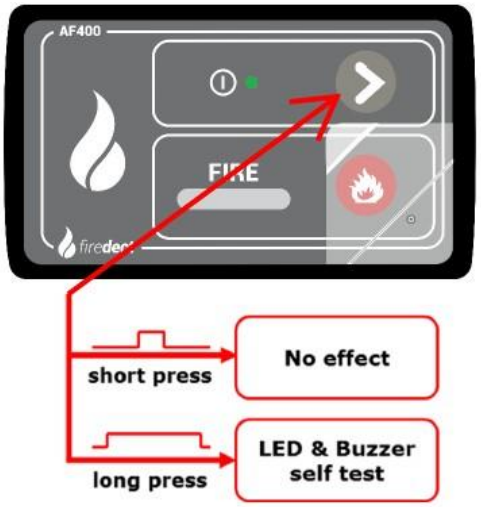
Alarm activated.

Starting The Control Unit

When the control unit is connected to the power source, the green led will flash for20 seconds, showing that the control unit is in boot loader. After leaving the boot loader, all leds will flash for 2 seconds and the buzzer will also become audible. The control unit will then go into operational mode recognizable by the glowing green led. If any of the monitored zones is not operational when the control unit is booted, the yellow alert led and zone led will flash and the buzzer will sound. In this event, the suppression system will not be activated. The zone can be checked, and if operational, the alerts will reset to normal state.

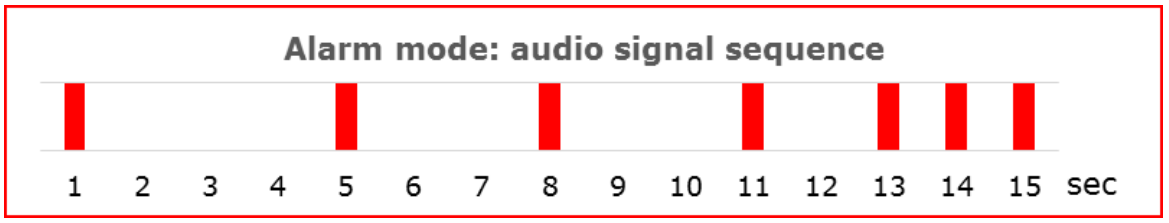
Normal Operational Mode

In normal operational mode, the control unit will monitor all three (3) zones for fire. A long press of the action button while the control unit is in normal operational mode will cause the buzzer to sound and all leds will light up.

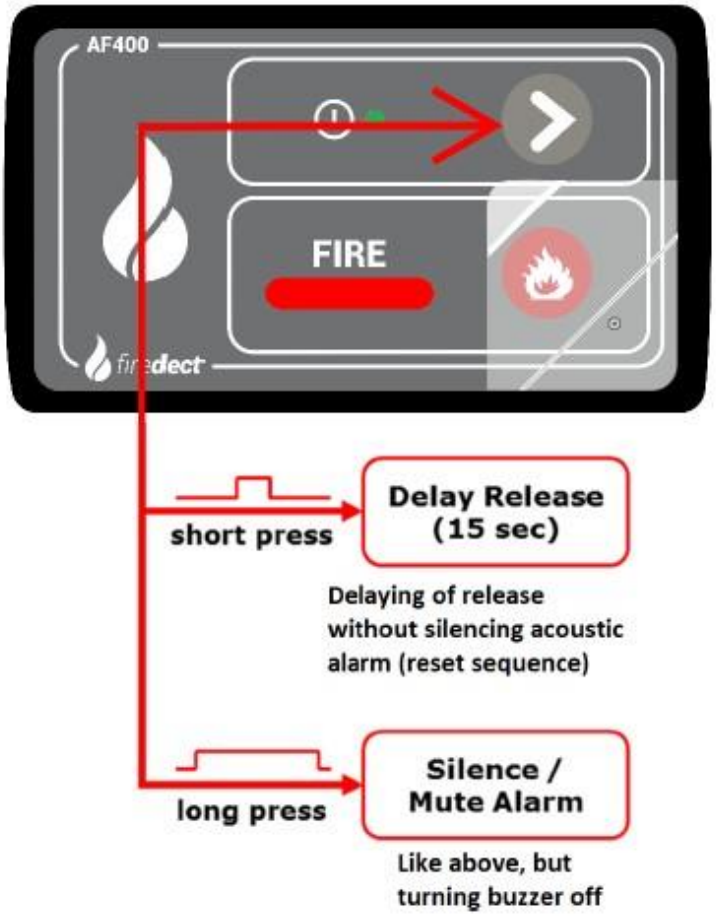


Alarm Mode

If a fire is detected in any of the zones, the zone led will start to flash and the buzzer will sound. The flashing and beeping will continue to get faster until the suppression system is activated.

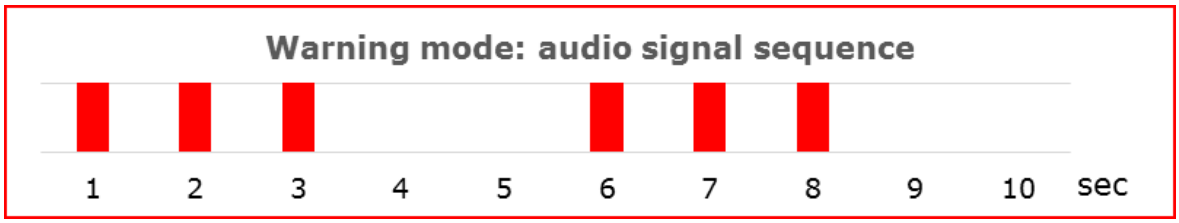


If the suppression system is active the led will flash constantly as well as the buzzer beeps constantly. There is a 15 second delay on activation, and the system is activated for 3 seconds. The alarm can be muted by pressing the action button for 0.8 seconds. Pressing the action button for less than 0.8 seconds will reset the delay in activation to 15 seconds. If a fire is detected in another zone, the timer will not be reset to 15 seconds. After the initial delay, the suppression system in Zone 1 willbe activated for 3 seconds, followed by Zone 2 for 3 seconds. If the fire button is pressed, the suppression system for the zones will be activated for 3 seconds one after another.



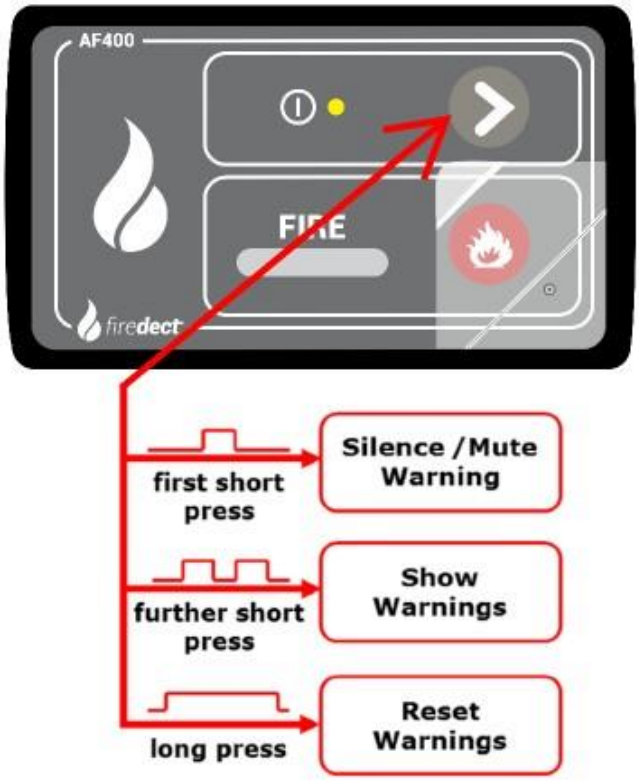
Warning / Diagnosis Mode

If any warning occurs, the yellow led will flash and the alarm will beep 3 timesevery 5 seconds (in the emergency current mode: 3 times every 10 seconds).



A short press on the action button will silence/mute the acoustic warning signal. Every further press of the action button for less than 0.8 seconds will cause the control interface to show an error codes this will not work in alarm mode. A long press on the action button while showing the error codes will reset all error codes.

#	Error - operational	Z1	Z2	Z3
1	Fire-Sensor/Terminating - Resistor -> bad value	0	1	0
2	Low-Pressure	0	2	0
3	Defect in Valve-Connection	0	3	0
4	Low Battery-Voltage	0	4	0
#	**Error – boot**	**Z1**	**Z2**	**Z3**
1	Fire-Sensor/Terminating - Resistor -> bad value/not connected	On	Off	Off
2	Low-Pressure/not connected	Off	On	Off
3	Defect in Valve-Connection	Off	Off	On
4	Fire Alarm	On	On	On
5	Wrong Battery	Off	Off	Off



ENGINE ROOM FIRE DETECTION SYSTEM AND CONTROL UNIT (FOGMAKER-OPTIONAL-2)

Control Module

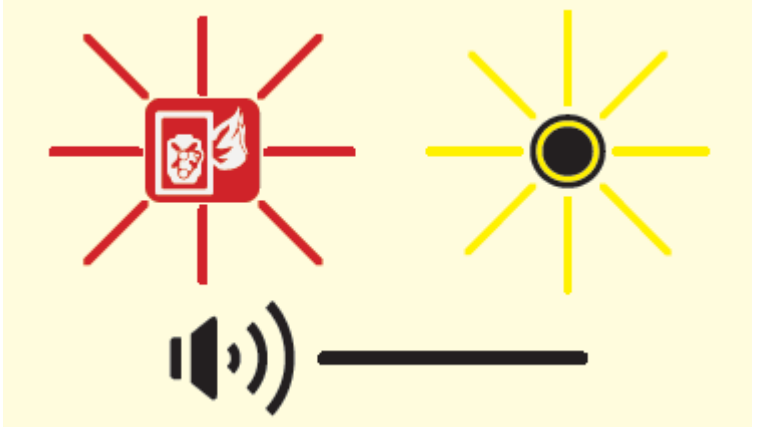
In Case Of Alarm - Fire

Red motor fire symbol/red lamp flashes red.
Alarm siren gives repeating acoustic signal.
Fire alarm signal – bus manufacturer's system:
See bus manufacturer's manual.
Do not start the vehicle until the cause of the fire has been established and rectified!

Clean up the engine compartment as soon as possible to prevent corrosion on metal parts and unwanted flash-overs in the electrical system. Hose down with water, preferably at high-pressure. Alkaline washing agents can be used. See also the manufacturer's recommendations for washing the engine compartment.

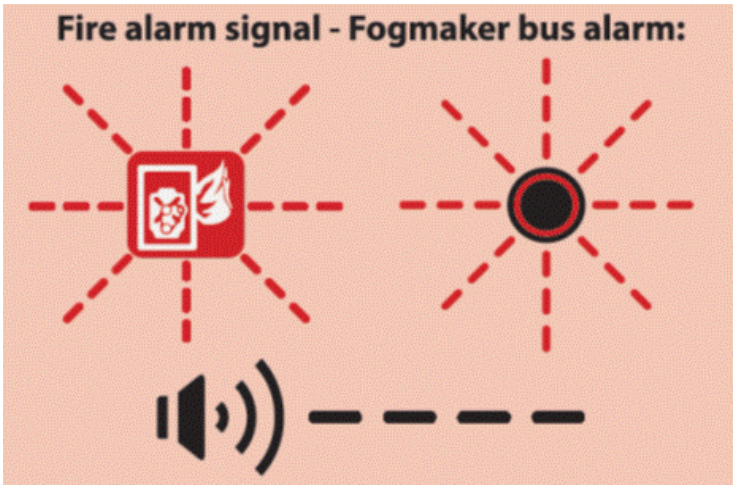
Engine wash after fire

Low pressure signal with fogmaker bus alarm:



- Red engine fire symbol/yellow lamp lights constantly
- Alarm siren sounds constantly.
- Low pressure signal- bus manufacturer's sysyem:
- See bus manufacturer's manual.
- Contact the nearest authorized service.

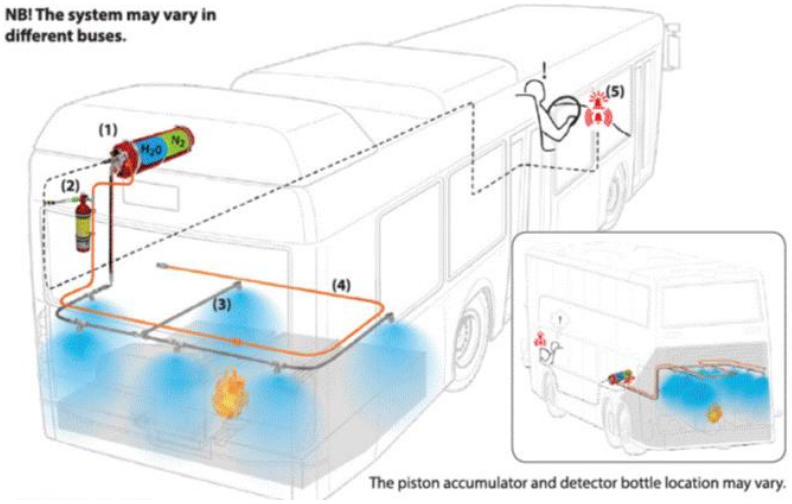
In Case Of Alarm – Fire



Overview, Fogmaker's Fire Protection System

This bus fitted with a fully automatic fire protection system for the engine compartment The system comprises:

- Piston accumulator (1)
- Detector bottle (2)
- Pipe system with nozzles (3)
- Detector tube (4)
- Fogmaker bus alarm with acoustic and light signals or alternatively manufacturer-specific alarm panel (5)



Routine Maintenance

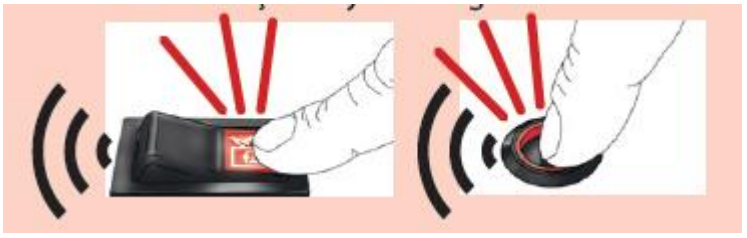
Pressure switch installed: Check that lamps indicating low pressure are not alight on the bus alarm button.

Pressure switch not installed: Make sure the pressure in the piston accumulator is within the green zone on the pressure gauge.

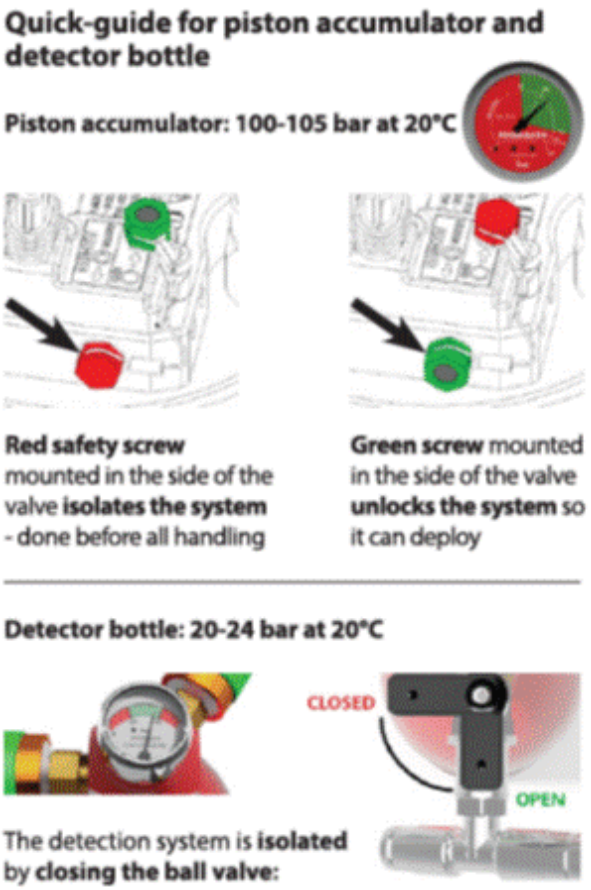
Test the alarm before starting the day's work..

Alarm test with the Fogmaker bus alarm:

- Press down the button- two variants,see below:
- Check that there are both a sound and light signal.



Alarm test – bus manufacturer's system:
See bus manufacturer's manual.



1. SERVICE AND MAINTENANCE

CLEANING VEHICLE

External Cleaning

- Do not clean your vehicle with detergent and chemical materials, do not wipe with gas.
- Use pressurized water for vehicle cleaning (except for engine area), do not leave the extra water on the vehicle after cleaning, remove the extra water with a cloth or washleather.
- Do not wash your vehicle under hot sunlight.
- Keep the inside of mudguards clean during winter.
- Use only soap and water to clean the air bellows on the vehicle.

Internal Cleaning

- Clean the instrument panel with wet cloth, do not use substances such as alcohol and thinner.
- Clean the seats with wet cloth or foamy vinylex cleaners.
- Wipe the passenger floor with wet mop and then dry the floor.

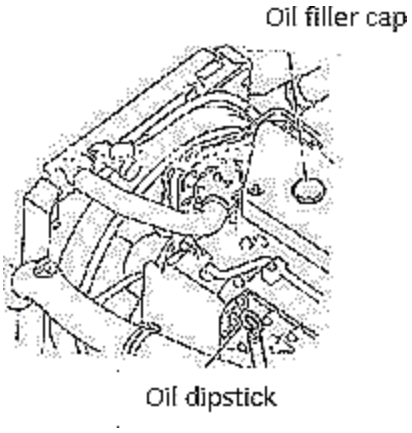
TOWING VEHICLE

- Open the tow hook cap which is on the bumper.
- Take the tow hook by opening cap front left.
- Screw the tow hook to the hole on the casing and make sure that it fits.

ENGINE OIL

Engine oil is an important factor determining engine performance and longevity. Be sure to use only the specified oil and oil filters. The engine oil level must be checked and the oil should be changed regularly according to the Maintenance Schedule.

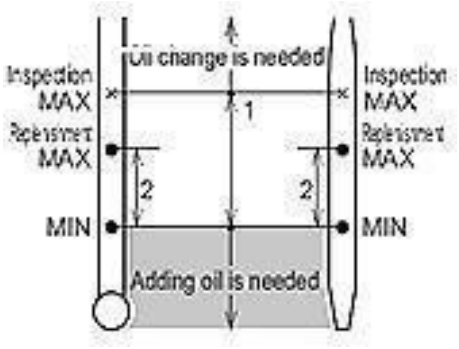
Checking the Engine Oil Level



Park the vehicle on a flat surface and check the engine oil level before starting 30 minutes after turning off the engine.

To check the oil level;

1. Remove the oil level gauge rod (oil dipstick) and wipe off any oil on the oil dipstick with a clean cloth.
2. Reinsert the oil dipstick fully and then gently remove it.



3. If the oil level is between the "Inspection MAX" and "MIN" marks, the oil is at the correct level.
4. If the oil level is too low, add oil to the “Replenishment MAX” mark. If the oil level is beyond the "Inspection MAX" level, then change the oil.
5. Reinstall the oil dipstick into position after checking the oil level.

Adding the Engine Oil

When the engine oil level is near the "MIN" mark on the oil level gauge rod (oil dipstick), remove the oil filler cap and add the oil. Remove the oil dipstick at this time. Use only the specified engine oil.

Changing the Engine Oil and Oil Filter

Engine oil and oil filter are important factors in engine performance and life time. Be sure to use only the specified oil and oil filters. The engine oil level must be checked and the oil should be changed regularly according to the Maintenance Schedule.

Changing the Oil

1. Clean around the oil filler cap so that foreign matter does not enter. Remove the oil filler cap.
2. Place a container for receiving the oil beneath the oil pan and the oil filter.
3. Remove the oil pan drain plug to discharge the oil into the container.
4. Use the special oil filter wrench to remove the oil filter.
5. Lightly coat the gasket of the new oil filter with clean engine oil.
6. Install the new oil filter. After the filter gasket comes in contact with the surface to which it will be attached, use the special oil filter wrench and tighten it by 1 1/4 (one and a quarter) turns.
7. Make sure that the oil pan drain plug is securely tightened (83 Nm torque).
8. Remove the oil dipstick and carefully fill the specified oil into the oil filler.
9. Install the oil dipstick and the oil filler cap. Start the engine 5 minutes after refilling it with the new oil and let it idle. While the engine is idling, check to see if any oil leaks around the oil filter or drain plug.
10. Shut off the engine. Then, after waiting at least 30 minutes, check the oil level using the oil dipstick.

ENGINE COOLANT

To prevent the engine damage due to freezing of the engine coolant, mix the coolant and water at the ratio of 50/50.
The engine oil tends to thicken with lowering temperatures. Use engine oil with a viscosity suited to ambient temperature.
The engine coolant must be changed according to the Maintenance Schedule.

- Check, replenish or change the engine coolant only after the engine has sufficiently cooled down.
- Do not loosen or remove the radiator cap, sub-tank cap or reserve tank cap when the engine coolant is still hot. Hot vapor or boiling water may burst out and cause a burn. Cover the cap with a cloth, etc. and remove it gradually after the engine is fully cooled down and the temperature of the engine coolant becomes low.
- When removing the radiator cap and reserve tank cap, use a thick cloth to cover the cap and turn it slowly.
- Engine coolant is toxic and must not be ingested. If the engine coolant is mistakenly ingested, immediately vomit it and seek prompt medical attention.

- If the engine coolant gets in your eyes, rinse it off immediately with a large amount of water for 15 minutes or longer. Also, if still abnormality such as irritation is felt, seek medical attention.
- If the engine coolant gets on your skin, rinse it off using a soap with a large amount of water. Also, if abnormality is seen, seek medical attention.
- Engine coolant is flammable, and therefore, it must be kept away from flames and other heat sources. Engine coolant also could ignite if it comes in contact with a hot surface, such as the exhaust manifold. Exercise caution to prevent this from happening.

Preparing Engine Coolant

To prevent the engine damage due to freezing of the engine coolant and to protect the cooling system from corrosion, mix the Isuzu recommended coolant and water to be at 50% concentration.
For other than Isuzu genuine coolant (Caltex/Texaco/Chevron,etc.), it is recommended to use directly "50/50 Pre-diluted" product which is already diluted to 50% concentration.

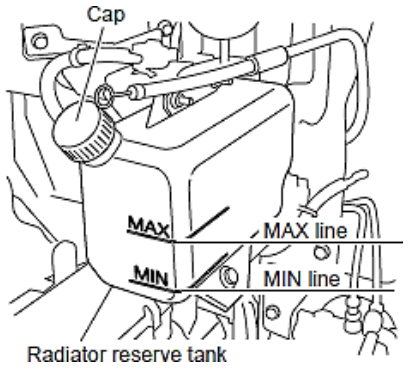
Engine Coolant Quantity

The quantity of engine coolant is indicated below for your use as a guideline when changing the engine coolant. After changing the engine coolant, check that the engine coolant is up to the specified level.

Engine coolant quantitiy (Reference value)
19 liters

- Coolant is toxic and must not be ingested.If the coolant is mistakenly ingested,immediately vomit it and seek prompt medical attention.
- If the coolant gets in your eyes, rinse it off immediately with a large amount of water for 15 minutes or longer. Also, if still abnormality such as irritation is felt, seek medical attention.
- If the coolant gets on your skin, rinse it off using a soap with a large amount of water. Also, if abnormality is seen, seek medical attention.
- For storage, close the cap securely and keep it in a place inaccessible to children.
- Coolant is flammable, and therefore, it must be kept away from flames and other heat sources. Coolant also could ignite if it comes in contact with a hot surface, such as the exhaust manifold. Exercise caution to prevent this from happening.

Checking the Engine Coolant Level



Check that the engine has cooled sufficiently, and inspect the coolant level of the radiator sub-tank or the reserve tank. The level is correct if it is between the "MIN" and "MAX" lines. If the engine coolant level is lower than the "MIN" line, replenish it by filling up to the "MAX" line.
Also, check to make sure there are no leaks from the radiator or radiator hose.

Check for stains or fluid on the ground where the vehicle is parked that would indicate there is a leak. Contact your Isuzu Service when you discover leaks.

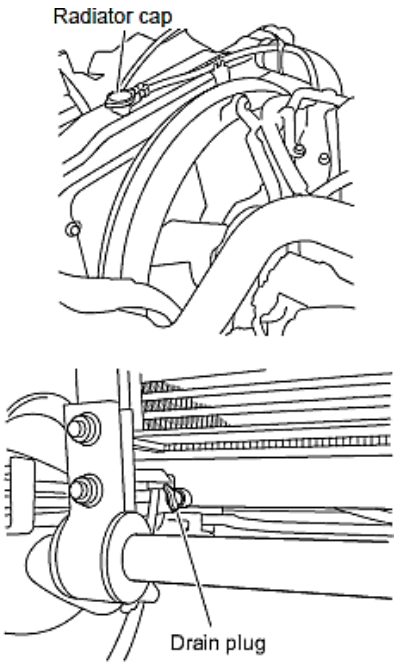
Adding Engine Coolant

When the engine coolant level is too low, open the cap on the radiator sub-tank or the reserve tank and fill the tank almost to the "MAX" line with a solution of water and engine coolant at an appropriate concentration. Tighten the cap securely after the engine coolant has been replenished.

Changing the Engine Coolant

Change the engine coolant according to the Maintenance Schedule.
When changing the engine coolant, also clean the radiator cap, radiator, intercooler and engine coolant passages.

Draining the Cooling System

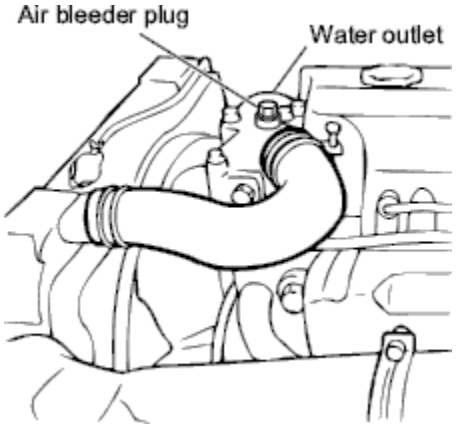


1. Check that the engine has cooled sufficiently.
2. Remove the radiator cap.
3. Open the drain plugs on the radiator and the engine to let the engine coolant run out. Drain the engine coolant from the reserve tank as well.
4. Close the drain plugs on the radiator and the engine.

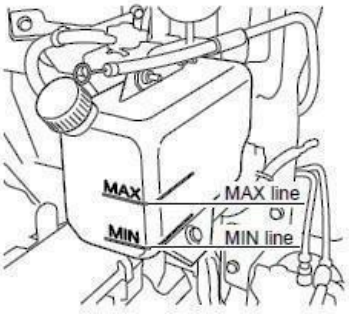
Cleaning the Radiator Core and Intercooler Core

Cooling efficiency is compromised when there is dirt or dust plugging air passages in the radiator core and intercooler core.It also could cause corrosion of the core. Periodically wash the core with water.

Cleaning the Engine Coolant Passages



1. Disconnect the air bleeder plug of the water outlet (if equipped). Refill the radiator with tap water up to the top of the opening. After refilling, tighten (23.5 Nm torque) the air bleeder plug.



2. Check and clean the radiator cap. Replace the cap if there is anything abnormal with it.
3. Securely fasten the radiator cap.
4. Engine coolant may leak from even minor cracks. Replace damaged rubber hoses.
5. Refill the reserve tank with tap water to the "MAX" line.
6. Close the cap of the reserve tank.
7. Start the engine and let it idle for 20 minutes. Stop the engine, wait until it cools down, and then drain out the water.

Filling the Cooling System

1. Confirm that the engine has fully cooled down before starting work.
2. Tighten the radiator drain plug. Tighten (22 Nm) the engine drain plug. Replace the gasket of the engine drain plug with a new one (if equipped).
3. Remove the air bleeder plug from the water outlet (if equipped) and pour engine coolant in the specified concentration. After filling with engine coolant, replace the gasket of air bleeder plug with a new one and tighten (23.5 Nm) the air bleeder plug.
4. Squeeze the radiator upper hose two or three times. If this action results in air being discharged from the hose and the level of engine coolant goes down, add engine coolant up to the top of the radiator filler opening from the radiator cap section. Repeat until the level of the engine coolant no longer decreases.
5. If the vehicle is not equipped with an air bleeder plug and exhaust gas recirculation (EGR) cooler, close the radiator cap. If the vehicle is equipped with an EGR cooler without air bleeder plugs, in the case that there is an air bleeder plug on the water outlet, replace the gasket with a new one and tighten the air bleeder plug. Disconnect the hose from the intake manifold side of the EGR cooler above the cylinder head to bleed the air. After the bleeding of air is complete, reconnect the hose. If the engine coolant level has decreased, refill with engine coolant up to the radiator inlet from the radiator cap section, and then close the radiator cap. If an EGR cooler with air bleeder plugs is equipped, close the radiator cap before performing the following operation. In the case that there is an air bleederplug on the water outlet, replace the gasket with a new one and tighten the air bleeder plug. Remove both air bleeder plugs (A and B) from the EGR cooler above the cylinder head and refill with engine coolant from the air bleeder plug hole. Air bleeder plug (B) is used for bleeding air. After filling with engine coolant, replace the gasket of air bleeder plug with a new one and tighten (23.5 Nm) the air bleeder plug.
6. Fill the reserve tank with engine coolant to the "MAX" line. Close the cap of the reserve tank.

7. Start the engine, let it idle for 5 minutes or more and then stop the engine.
8. After checking that the engine has sufficiently cooled down, remove the radiator cap. If the engine coolant level has decreased, replenish with engine coolant up to the radiator filler opening. If the engine coolant level has abnormally decreased, check for leaks from the radiator, the engine coolant passages, or the reserve tank hose.
9. After firmly closing the radiator cap, idle the engine until the needle of the coolant temperature gauge reaches the center and the thermostat opens. In order to save time, if the vehicle is equipped with a warm-up switch, turn the switch on to warm up the engine. If the vehicle is not equipped with a warm-up switch, maintain the engine speed approximately 2,000 r/min to warm up the engine. After the needle of the coolant temperature gauge reaches the center, increase the engine speed to approximately 2,000 r/min, and maintain this speed for 5 minutes. If the vehicle is equipped with an air conditioner, turn the A/C switch offto facilitate warming. If the vehicle is equipped with a heater, turn off the fan to facilitate warming. Check if the thermostat is open or not by checking whether the upper hose and lower hose are hot. If the vehicle is equipped with a heater, turnthe temperature control to the maximum setting and make sure that hot air comes out.
10. Let the engine idle for 5 minutes and then stop the engine.
11. After checking that the engine has sufficiently cooled down, remove the radiator cap and check the engine coolant level. If the engine coolant level has decreased, replenish with engine coolant up to the radiator filler opening from the radiator cap section. If the engine coolant level has abnormally decreased, check for engine coolant leaks.
12. Repeat steps 9 through 11 until the engine coolant level in the radiator filler opening stops declining.
13. Firmly close the radiator cap.
14. Replenish the engine coolant in the reserve tank up to the "MAX" line, and then close the reserve tank cap.
15. Check the engine coolant level of the reserve tank the next morning. If the engine coolant level has decreased, refill with engine coolant to the "MAX" line.

Cleaning the Radiator Core and Intercooler Core

Cooling performance is compromised if the radiator core and intercooler core become dusty or dirty. This can also cause corrosion of these cores. Periodically wash the radiator core with tap water.

Be sure to stop the engine before cleaning cores. If the engine is running, you can get entangled in the rotating components, resulting in an injury. Do not clean cores until the engine,radiator, intercooler, and other parts have cooled. Otherwise, you could get burned.

TRANSMISSION OIL

Change the transmission oil according to the Maintenance Schedule.

Checking the Oil Level

1. Remove the oil level plug.
2. Check whether the oil level is up to the lower edge of the oil level plug hole. The correct oil level range is between 0 and 10 mm (0 and 0.39 in) below the bottom of the level plug hole. If the oil level is too low, add oil through the oil level plug hole.
3. Fasten the oil level plug to the specified torque (39 Nm). Also check to see if there are any transmission oil leaks

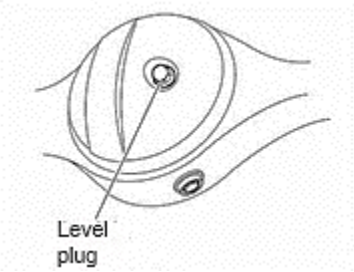
Changing the Oil

1. Place a container under the drain plug(s) to receive oil.
2. Remove both oil level plug and drain plug(s) to discharge the oil into the container.
3. After installing the drain plug(s) by tightening it to the specified torque (39 Nm), refill the transmission with new oil through the oil level plug hole up to the lower edge of the hole.
4. After refilling, confirm that the oil level is up to the lower edge of the oil level plug hole.
5. Install the oil level plug by tightening it to the specified torque (39 Nm)

REAR AXLE DIFFERENTIAL GEAR OIL

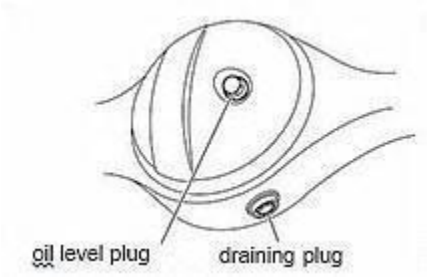
The rear axle differential gear oil level must be checked for its level and it must be changed according to the Maintenance Schedule.

Checking the Oil Level



1. Remove the oil level plug.
2. Check that the oil level is up to the lower edge of the oil level plug hole.If the oil level is too low, add oil through the oil level plug hole.
3. Fasten the oil level plug to the specified torque (84 Nm).

Changing the Oil



1. Place a container under the drain plug to receive oil.
2. Remove the plugs indicated in the figure to discharge the oil into the container.
3. After installing the drain plug by tightening it to the specified torque (84 Nm), refill the rear axle differential with new oil through the oil level plug hole up to the lower edge of the hole.
4. After refilling, confirm that the oil level is up to the lower edge of the oil level plug hole.
5. Install the oil level plug by tightening it to the specified torque (84 Nm).

POWER STEERING FLUID

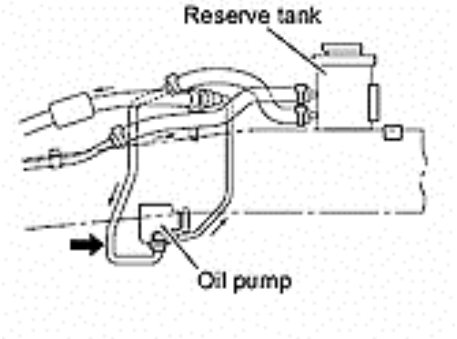
The power steering wheel fluid level must be checked and it must be changed according to the Maintenance Schedule.

Checking the Power Steering Fluid Level

The fluid level is correct if it is between the "MAX" and "MIN" lines on the reserve tank. If the level is lower than the "MIN" line, add fluid up to the "MAX" line. The reserve tank is located at the engine compartment left of the engine. When you have finished checking the fluid level, securely install the cap and cover.

Changing the Power Steering Fluid

Draining



1. Apply the parking brake firmly and chock the rear wheels.
2. Firmly apply the head of the jack to the jacking point.
3. Raise the vehicle until the front wheels are completely clear of the ground.

4. Disconnect the oil pipe between the steering unit and reserve tank as well as the oil hose between the oil pump and reserve tank, and discharge the power steering fluid.
5. When the power steering fluid has been completely discharged, turn the steering wheel fully to the left and right several times to remove fluid left in the piping.

Refilling

1. Securely connect the oil pipe and oil hose, and then refill the reserve tank with the specified power steering fluid.
2. When the reservoir tank is filled with the fluid up to the specified level, wait for 2 to 3 minutes to allow the fluid level to lower.
3. Without running the engine, fully turn the steering wheel in both directions a fewtimes.
4. Lower the vehicle and start the engine. While running the engine at idle, fully turn the steering wheel in both directions a few times. If you do not hear any abnormal sounds, the system has been properly bled.

Bleeding

If you hear any abnormal sounds when you turn the steering wheel, air has gotten trapped in the hydraulic system. Follow the steps below to bleed the system.

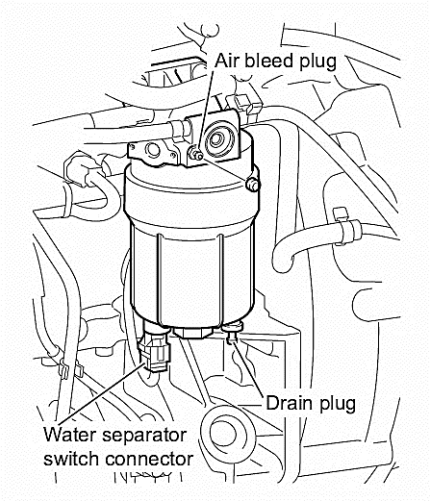
1. Apply the parking brake firmly and chock the rear wheels.
2. Apply the head of the jack to the jacking point firmly.
3. Raise the vehicle until the front wheels are completely clear of the ground.
4. Start the engine. Turn the steering wheel fully in both directions a few times.
5. Lower the vehicle. With the engine still running, fully turn the steering wheel in both directions a few times. If you do not hear any abnormal sounds, the system has been properly bled. If you still hear any abnormal sounds, this means there is air remaining in the power steering system. To remove the remaining air from the system, fully turn the steering wheel in both directions a few times to increase the fluid temperature. When the fluid temperature has risen to between 60 to 80°C (140 to 176°F), stop the engine and wait for about 5 minutes (allowing air to be collected from high temperature fluid).
6. Check the level of the fluid in the reservoir and also check the joints for fluid leaks.
7. Test drive the vehicle on a road while checking that the steering wheel turns smoothly and the system produces no abnormal sounds when you turn the steering wheel.

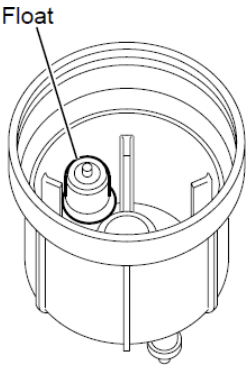
FUEL FILTER

Change the fuel filter in accordance with the Maintenance Schedule.
Drain the water when the water separator (fuel filter) warning light comes on.

Changing the Fuel Filter

Engine-side Fuel Filter

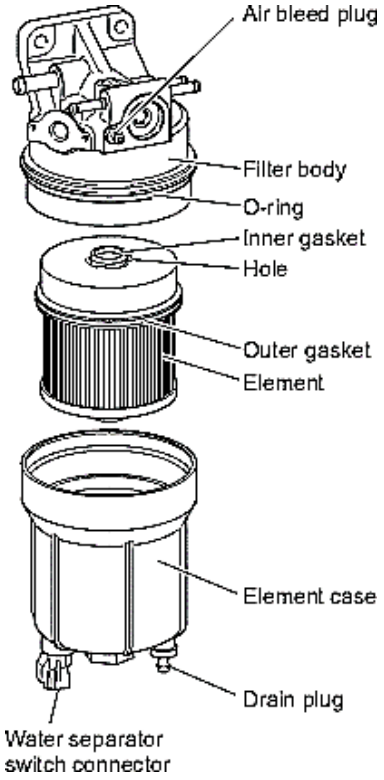




1. Loosen the drain plug at the bottom of the filter element case. Remove the rubber cap of the air bleed plug and then loosen the plug. This will allow the fuel in the filter element case to drain through the drain plug. Tighten the air bleed plug.
2. Disconnect the water separator switch connector.
3. Use a tool (like a 29 mm (1.14 in) socket wrench) to turn the hexagonal part at the bottom of the element case counterclockwise and remove the element case.

ADVICE :

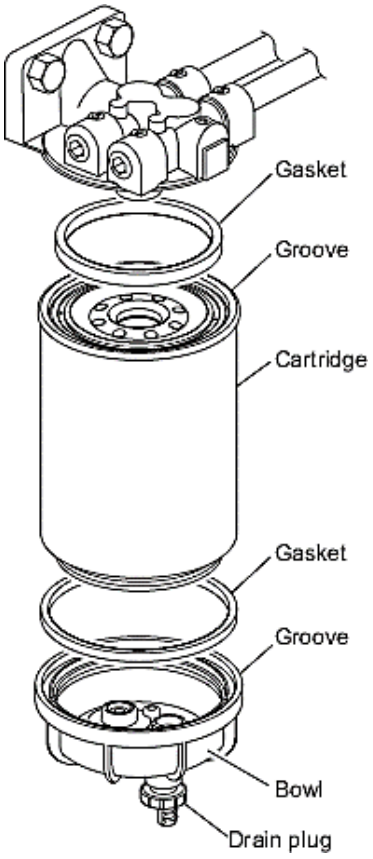
- Check the float at the bottom of the interior of the filter element case for free and smooth movement.
- Connect the water separator switch connector, turn the filter element case upside down, and confirm that the water separator (fuel filter) warning light comes on.
- Clean any foreign matter or dirt at the bottom inside the filter element case.



4. Pull out the filter element downward and remove the O-ring. Use a clean cloth to wipe off any foreign matter that has accumulated on the inside surface of the filter body.
5. Attach the new O-ring to the filter body, making sure that it is not damaged by the screw threads.
6. After lightly coating the inner and outer gaskets of the new filter element with diesel fuel, insert the element until it touches the filter body.
7. After lightly coating the inner surface of the element case or the O-ring with diesel fuel, turn the element case clockwise until it touches the filter body. If the element case end fails to touch the filter body, the filter element has not been inserted fully. Reinsert the element while turning it.
8. Install the element case.
9. Tighten the drain plug and connect the water separator switch connector.
10. Bleed air from the fuel system.

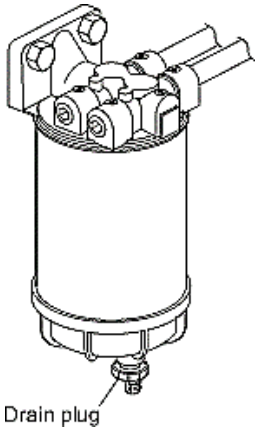
Chassis-side Fuel Filter (Model with Pre-fuel Filter Only)

1. Loosen the drain plug at the bottom of the bowl to drain the fuel inside the filter. (Self-bleeding type)
2. Turn the filter element cartridge counterclockwise to loosen and remove it from the filter head.
3. Turn the bowl counterclockwise to loosen and remove it from the cartridge.
4. Fit a new gasket into the groove of the bowl, lightly coat it with clean diesel fuel and tighten the bowl until the gasket is firmly seated in position.
5. Fill a new cartridge with diesel fuel to make air bleeding easier.
6. Fit a new gasket into the groove on the top of the cartridge, lightly coat it with clean diesel fuel and screw the cartridge into the filter head until the gasket is firmly seated in position. Be careful not to spill any diesel fuel from inside during this process.
7. Use a filter wrench and tighten the cartridge and bowl by 1/2 to 2/3 turns. (Reference tightening torque for both cartridge and bowl: 10 N·m (1.0 kgf·m/87 lb·in))
8. Tighten the drain plug and bleed air from the fuel system.



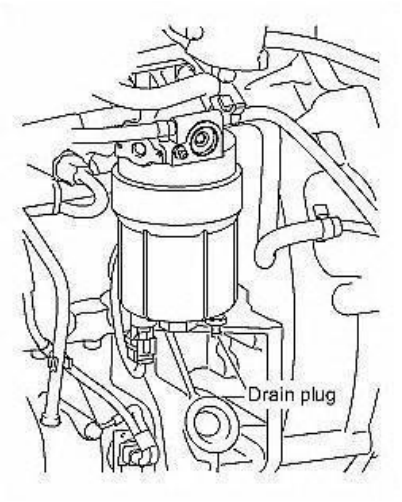
Draining Water from the Fuel Filter

Chassis-side Fuel Filter (Only Models with a Pre-fuel Filter)

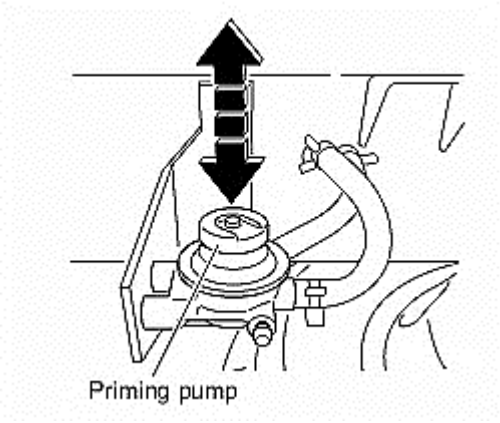


1. Connect one end of a plastic hose to the drain plug at the bottom of the chassis-side pre-fuel filter (primary filter) and place the other end of the hose inside a container to receive the drained fluid.
2. Loosen the drain plug; water will be discharged through the plug. Tighten the drain plug when water stops flowing out of it.
3. If the water separator (fuel filter) warning light comes on, drain water from the engine-side fuel filter as well.

Engine-side Fuel Filter (All Models)



1. Connect one end of a plastic hose to the drain plug at the bottom of the engine-side fuel filter and place the other end of the hose inside a container to receive the drained fluid.



2. Loosen the drain plug and move the priming pump up and down by hand between 10 and 20 times.
3. Fully tighten the drain plug and move the priming pump several times.
4. Test run the engine and check that there are no fuel leaks from the drain plugs of the chassis-side fuel filter and engine-side fuel filter. Also check that the water separator (fuel filter) warning light stays off.

- Clean off any fuel that has adhered to the vehicle body.
- Starting the engine immediately after draining the water from the fuel filter requires a little more time than usual. If the engine doesn'tstart in 10 seconds, wait for a while and try again.
- Fuel will be mixed in the drained water. Dispose of it in a method conforming to the regulatory requirements in your country.
- If the water separator (fuel filter) requires frequent draining, have the fuel tank drained at your Isuzu service. It would be better not touse the water separator (fuel filter), since it may possibly exert a bad effect on the fuel system.

UREA SELECTIVE CATALYTIC REDUCTION (SCR)

The urea SCR system reduces nitrogen oxides (NOx) in exhaust emissions. The system uses diesel exhaust emission fluid (DEF) as a reducing agent and hydrolyzes it into ammonia (NH_3) using the heat from exhaust emissions. The nitrogen oxides (NOx) are then reduced to nitrogen and water and purified by the generated ammonia. Diesel exhaust emission fluid is a clear, colorless and harmless aqueous solution. It is normal for diesel exhaust emission fluid to emit an odor in some circumstances.

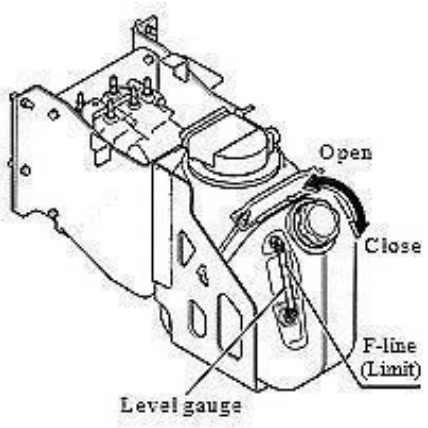
When storing ;

- Seal the diesel exhaust emission fluid container to prevent evaporation and store it indoors or in places that are well ventilated and not exposed to direct sunlight.
- When stored, the expiration date of diesel exhaust emission fluid varies depending on the temperature of the storage location. Contact your service for details.

When refilling ;

- Do not put anything other than diesel exhaust emission fluid in the diesel exhaust emission fluid tank.
- When refilling diesel exhaust emission fluid, doing any of the following may cause a fire or malfunction of the urea SCR system.
  - Diluting with water or other liquids
  - Adding gasoline or diesel fuel

How to add diesel exhaust emission fluid



1. Set the starter switch to the "LOCK" position and stop the engine.
2. Slightly loosen the cap of the DEF tank and wipe off any dust or dirt adhered to the cap or supply inlet.
3. Turn the tank cap slowly to open the tank.
4. Add DEF up to the "F" line while viewing the level gauge mounted in front of the DEF tank.
5. Turn the tank cap to securely install it to the DEF tank.

6. Confirm that the tank cap is securely installed.

DEF tank capacity : 16.5 liters

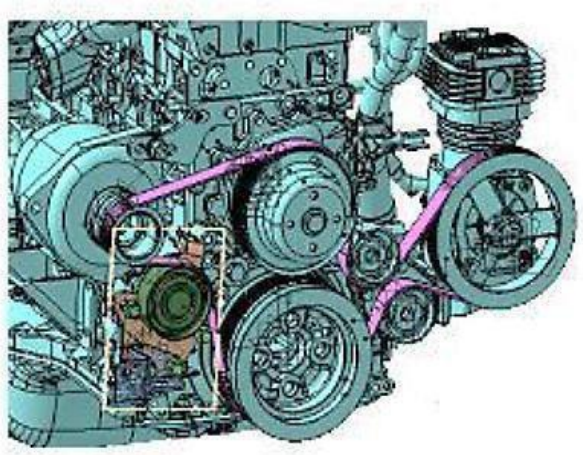
Because 3.6 liters of DEF will usually remain in the DEF tank, the effective capacity of the tank is 12.9 liters.

CONTROL OF BRAKE DISC and LININGS

Lining indicator must be regularly controlled. When lining indicator value is 10%, contact an Isuzu service to change it.

Left and right brake linings on the same axle must be changed together. Original brake part defined by the vehicle manufacturer must be used.
Brake discs must be controlled when changing linings and they must also be changed if necessary. Or else brake performance may be affected negatively.

FAN BELT



Press the center of the span between pulleys of the belt with a force of 98 N (10.0 kgf/22 lb) and check the amount of flection. The amount of flection must fall within the standard value range indicated below. Also check the fan belt for cracks. If there are cracks, replace the belt.

Generator	Standart value [Amount of flection]		Standart value [Vibration frequency]
100 A , 120 A	Newbelt	5 - 7 mm.	200 - 220 Hz
100 A , 120 A	Usedbelt	7 - 9 mm.	165 - 185 Hz

Adjustment

1. Loosen the tensioner's lock nut.
2. Adjust the belt tension with the adjusting bolt.
3. When the tension has been adjusted, securely fasten the tensioner's lock nut.

Changing the Belt

1. Loosen the tensioner's lock nut.
2. Loosen the adjusting bolt and remove the belt from the pulleys.
3. Take out the belt through the opening in the fan.
4. Insert the new belt through the opening in the fan, and install the belt while aligning its grooves with those in the pulleys.
5. Turn the adjusting bolt until the belt tension is within the standard value range.
6. When the tension has been adjusted, securely fasten the tensioner's lock nut.

- The V ribbed fan belt used in your engine requires the tension be adjusted more accurately than is required with conventional V belts. Inappropriate tension could cause the belt to make noise or break. When the fan belt is damaged, electricity is not properly generated or becomes a cause of engine overheating. You must check the tension of the fan belt carefully.
    - Use Isuzu genuine parts when changing the fan belt.

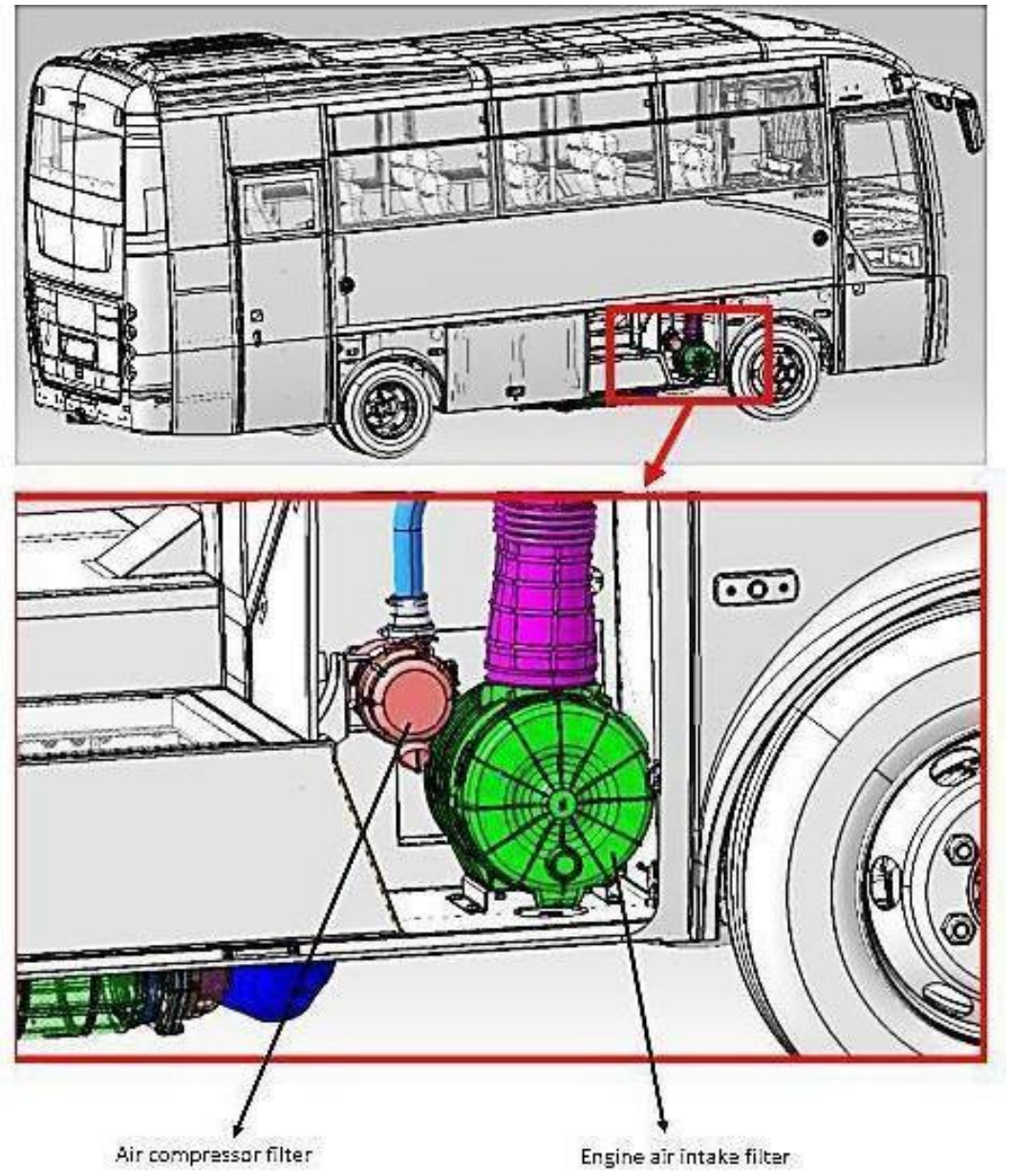
Follow this to properly adjust belt tension

Initial stretching takes place in any new belt after installation. For better seating of the belt in pulley grooves, make the following adjustments after installing either a new or used belt.

- Align the belt and pulley grooves and adjust the belt tension using the indicated method.
- Start the engine, and let it idle for at least 5 minutes to allow the belt to settle into the pulley grooves.
- Stop the engine, and once again adjust the belt tension to the specified value.

AIR CLEANER

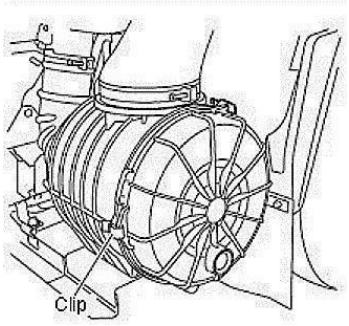
Air cleaners are located on the right side of the vehicle, in the area just behind of the front wheel. There are two filters on this area; while small one provides air to the compressor on the engine, bigger one is used on the layout of the engine intake.



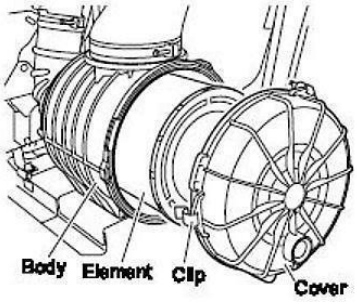
Checking the Air Cleaner

Remove the air cleaner element and check to see if it is blocked by dirt.

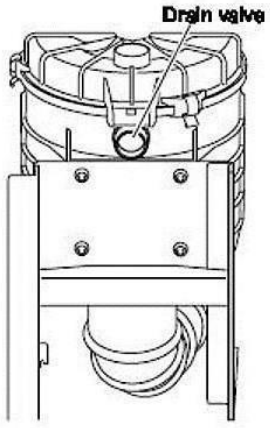
Changing the Air Cleaner Element (Engine Intake)



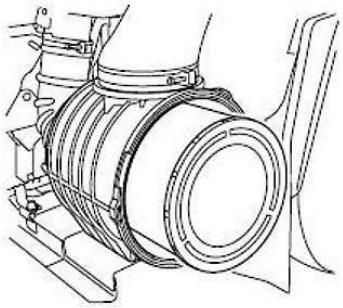
1. Unfasten the three clips and remove the air cleaner cover.



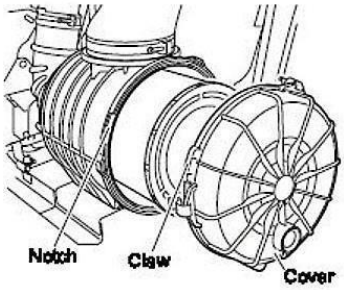
2. Remove the air cleaner element by pulling it out toward you.



3. Remove the dirt that has accumulated on the air cleaner cover and the air cleaner body.
4. Clean the drain valve at the bottom of the air cleaner.



5. Push the element back into position in the air cleaner body.



6. Install the air cleaner cover. Line up the notch on the left side of the body with the claw on the cover. Secure the cover in position by fastening the 3 clips.

Cleaning the Air Cleaner Element

Choose one of the following cleaning methods depending on how the element has become dirty.

1. When dry dust has adhered to the element ;
   a) Blow compressed air at a pressure of up to 690 kPa against the inside of the element while turning it to remove the dust.
   b) Check to see if the element has been damaged or become thin in places.

2. When the element has become blackened by oily smoke or soot ;
   a) Soak the element in a mixture of water and neutral detergent for about 30 minutes.
   b) Remove the element from the detergent solution and rinse well using tap water.
   c) After cleaning, allow the element to dry naturally in a well-ventilated place.

Changing the Air Cleaner Element (Compressor Intake)

1. Remove bulk dust with vacuum cleaner and remove used filter carefully.

2. Clean inside of housing thoroughly with clean damp cloth or vacuum cleaner.

3. Clean the gasket sealing surfaces of the housing removing any hard built up dust patterns.

4. Inspect the old element for uneven patterns of dirt. If on the clean side it's a sure sign of bypass.

5. Test the gasket for resilience on the new filter.

6. Make sure the gasket seats firmly.

7. Inspect all connection and ducts for a leakproof fit.

8. Don’t tap an element to clean it.

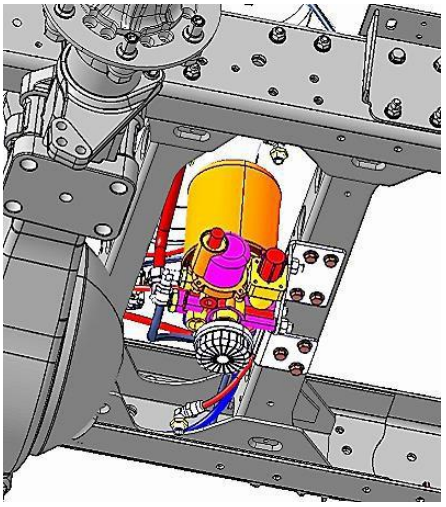
9. Don’t judge an elements life by appearance.

10. Don’t leave an air cleaner open any longer than necessary.

11. Don’t install a defective element.

12. Don’t use the wrong model or part number element.

AIR DRYER



Air dryer is behind the rear axle, at the back part of chassis. Function of air dryer is to adjust the air system pressure and decrease the moisture and air in the air pressed from the compressor. Dryer has a heater that prevents freezing in cold weather, which is activated in low temperatures in particular and deactivated in high temperatures. Air dryer fills air into the system until the circuit cutting discharge at 8.3 bar. When filling is completed, dryer dischargesthe water and oil accumulated from the mufflerin the bottom part with pressure, thus cleaning itself.

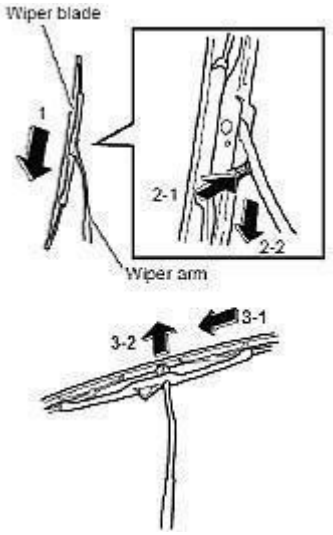
WINDSHIELD WIPERS CHANGE

Check the level of fluid in the windshield washer tank. In addition, spray windshield washer fluid and operate the windshield wipers to check for any areas not properly wiped. At this time, also check the windshield washer's spraying condition.

1. The windshield washer fluid tank is located under the instrument panel on the passenger side.
2. Open the cap and fill the tank with windshield washer fluid to the opening.

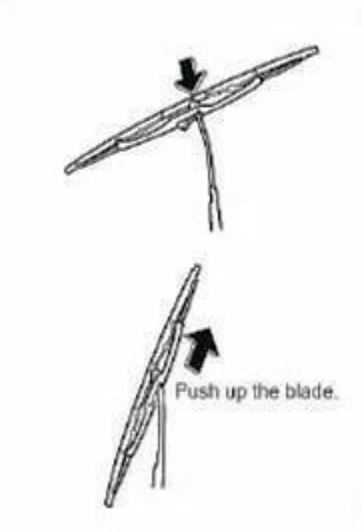
Windshield Wiper Blades

Removal



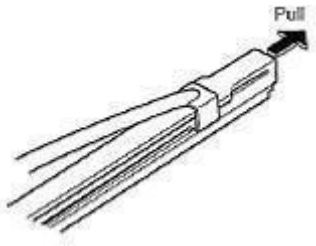
1. Pull the wiper arm up to the vertical position.
2. While pressing the wiper-blade hook towards the arm, slide the blade downwards (towards the base of the arm).
3. With the blade and arm almost perpendicular, remove the blade from the arm.

Installation



1. Insert the blade while holding it almost perpendicular to the arm.
2. Then, with the blade and arm oriented in the same direction, push up the blade until it locks into place on the arm.

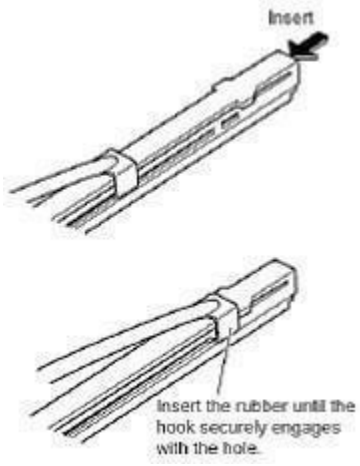
Replacement of Wiper Rubber Insert



Removal

1. Remove the wiper blade from the wiper arm.
2. Pull the wiper rubber insert in the direction indicated by the arrow and extract it from the wiper blade.

Installation



1. Insert a new wiper rubber insert into the wiper blade.
2. Continue pushing in the wiper rubber insert until the wiper blade's hook engages with the hole in it, and then confirm that the rubber insert is securely held in place.
3. Attach the wiper blade to the wiper arm.

WHEELS AND TYRES

The wheels have a major influence upon the safety and comfort of driving. If any wheel fall off the vehicle, it not only causes the vehicle to break down on the road andblock other traffic, but it may also lead to a serious accident. We strongly recommend that you check the wheels and tyres daily and maintain them in satisfactory condition.

Checking Tyres

Air Pressure

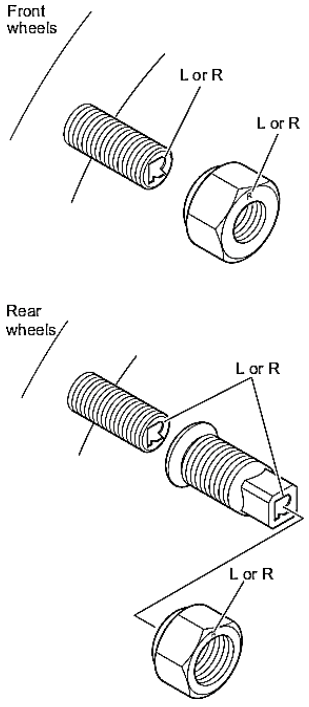
Too low or too high a tyre air pressure not only affects the ride or causes damage to the cargo but also causes abnormal heat buildup, premature wear, a tyre puncture, or may even cause the tyre to burst.
Use an appropriate tyre air pressure gauge when measuring the air pressure of a tyre.

Tyre air pressure should be measured when the tyre is cold, or before the vehicle is driven. (After driving, tyre air pressure increases by about 10%.)
As the tyre air pressure varies depending on the vehicle model and tyre size, refer to the air pressure label on the driver's door opening frame or the tyre air pressure tables on the following pages.
Also check the air pressure of the spare tyre using a tyre air pressure gauge at the intervals specified by the Maintenance Schedule.

Tyre size		Tyre air pressure (bar / psi)	
Front	Rear	Front	Rear
215/75R17,5	215/75R17,5	7 / 102	7 / 102

- If you drive on under-inflated or flat tyres, the wheel bolts will be placed under excessive stress. Under such conditions, the bolts may break and the wheel may detach from the vehicle, possibly causing an accident.
- Over-inflated tyres result in a harsh ride and are likely to cause damage to the cargo. Under-inflated tyres build up heat and could burst. Always keep the tyres of your vehicle adjusted at the standard air pressures.

Changing Tyres



Change a tyre on a level and solid surface after checking safety in the surrounding area.
Every stud or nut for right-hand wheels is marked "R" or "□", and each stud or nut for left-hand wheels is marked "L" or "□".

Preparation

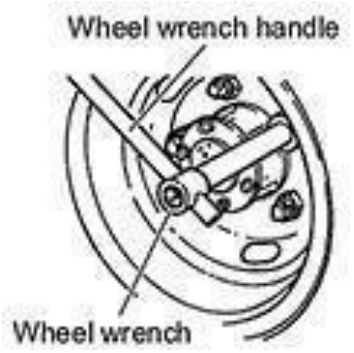
When you park the vehicle to change tyres, choose a place where ;

- Your vehicle does not hinder other traffic,
- The surface is level, flat and solid

When changing tyres on a road, use the hazard warning flasher and triangle reflectors to alert other traffic to the presence of your vehicle.

Fully pull the parking brake lever. Chock both the front and back sides of the wheel diagonally opposite to the one to be changed with chocks (or stones, wood blocks, etc.). (Example: When changing the right rear wheel, chock the left front wheel.) Have the passengers get out of the vehicle.

Removing a Wheel



1. Firmly apply the parking brake. When changing a front wheel, chock the rear wheel diagonally opposite to the front wheel. When changing a rear wheel, chock the front wheel diagonally opposite to the rear wheel.
2. Firmly apply the head of the jack to the jacking point.
3. Raise the vehicle enough so that the tyre not quite clear of the ground.
4. Using the wheel nut wrench, loosen the wheel nuts just enough so that the wheel remains stable in position. Do not remove the wheel nuts yet.
5. Jack up the vehicle so that the tyre is clear of the ground completely.
6. Remove all the wheel nuts that have been loosened, and then remove the wheel. Remove the wheel being careful to not damage the threads of the wheel studs.
7. When removing either of the dual rear wheels, first remove the wheel nuts from the outer wheel and remove that wheel. Then, lower the vehicle and loosen the inner wheel nuts.
8. Raise the vehicle again, and then remove the inner wheel.
9. Check the following parts: the disc wheel for deformation and damage such as cracks; the hub for excessive wear of the disc wheel fitting surface; and the wheel studs and nuts for damage to the threads. If anything abnormal is found in the above parts, check other parts as well, and replace any defective part with a new one.

Installing a Wheel

1. Check the disc wheel for the following:

- Cracks or other damage around the stud holes and decorative holes
- Cracks or other damage or deformation on the wheel nut seating surfaces (tapered surfaces)
- Cracks or other damage on welds
- Wear or other damage on the hub fitting surface or wheel-to-wheel mating surface

2. Check the wheel studs and wheel nuts for the following:

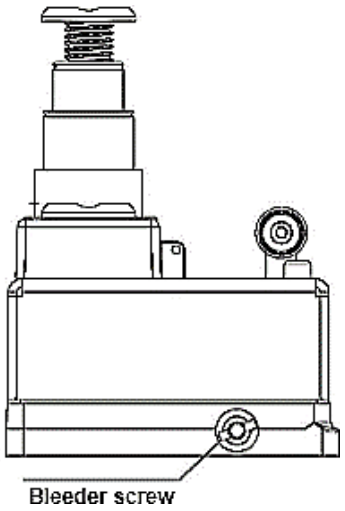
- Cracks or other damage
- Stud elongation or excessive rust
- Crushed, thinned or seized threads

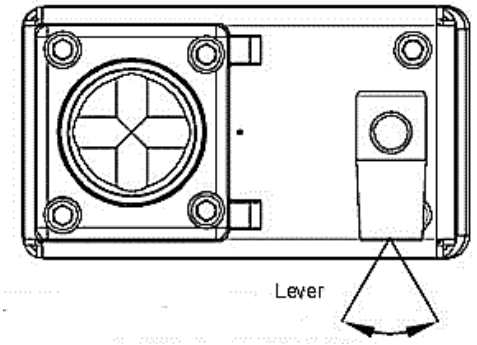
- Remove rust and dirt from a wheel stud and nut, lightly lubricate the threads with engine oil, gear oil or power steering fluid and turn the nut on the stud. If the nut does not turn smoothly, the threads are defective.
- If the threads are defective, replace both wheel stud and wheel nut as a set.
- If any wheel stud is broken, change all the wheel studs and wheel nuts on the wheel.

3. Remove rust, dust and mud from the fitting surface, hub fitting surface or wheel-to-wheel mating surfaces, and wheel nut seating surfaces (tapered surfaces) of the disc wheel, and from the threads of the wheel studs and nuts.
4. Install the wheel while aligning the stud holes in the disc wheel with the wheel studs. When installing the rear wheel, place the outer wheel so that its tyre air valve will be 180 degrees apart from that of the inner wheel to enable inflating both inner and outer tyres.
5. Screw in each wheel nut by hand until it touches the nut seating surface on the disc wheel, and then finger tighten all wheel nuts until the wheel is held in position without any looseness. Face the tapered end of wheel nuts inward.
6. Turn the bleeder screw of the jack counterclockwise to lower the vehicle slowly.
7. Tighten the wheel nuts in a diagonal sequence and in two or three passes. When installing a rear wheel, tighten the nuts of the inner wheel first and then the nuts of the outer wheel.
8. Finally, tighten all wheel nuts using a torque wrench to the specified torque. You must tighten the nuts of the rear inner wheel before tightening the nuts of the rear outer wheel even when you change only the rear outer wheel.

Front wheel nuts		Rear wheel nuts	
Tightening torque	Quantity	Tightening torque	Quantity
490 ± 49 Nm	6	490 ± 49 Nm	6

Operating the Jack





1. Before raising the vehicle, pull the handbrake and gear.
2. The jack must be placed on a flat, solid surface.
3. Place the jack below the vehicle in upright position.
4. Use jack handle to raise the jack.
5. Do not add any extra load while jack is operating.
6. To lower the jack, turn the bleeder screw two rounds left.

MAINTENANCE SCHEDULE

DAILY MAINTENANCE

- Check bus accident and original parts situation.
- Check corrosion chassis and parts of body

WEEKLY MAINTENANCE

- Check washing the entire bus weekly, making sure to remove all roadchemicals
- Check corrosion chassis and parts of body

CAUTION

- Should not use water jet cleaning machine inside of the bus
- Should not use corrosive material on the bus surface
- Should not use wash the vehicle with car wash brush
- Informing the authorized service in case of accident
- Regular maintenance in authorized service

To drive your vehicle safely and at minimum cost, it is essential to have your vehicle regularly inspected.

I: Inspect, clean, repair

A: Adjust

R: Replace

T: Tighten to the specified torque

L: Lubricate

Maintenance interval for the vehicle is prepared for 120.000 km. The maintenances after 120.000 km are the same with the maintenance intervals starting from 20.000 km and going on. In severe conditions (operations involving frequent starts and stops, driving in dusty areas, driving on rough roads, mountain roads), maintenance intervals have to be decreased in half.

Maintenance Interval (x 1000 km)	20	40	60	80	100	120	Month or Km whichever comes first
ENGINE							
Engine oil	R	R	R	R	R	R	or every 12 months
Engine oil filter	R	R	R	R	R	R	or every 12 months
Fuel filter	-	R	-	R	-	R	or every 12 months
Air cleaner element	I	R	I	R	I	R	or every 24 months
Air compressor filter	I	R	I	R	I	R	or every 12 months
Air dryer filter	I	R	I	R	I	R	or every 12 months
Idle speed and acceleration	I	I	I	I	I	I	or every 12 months
Valve clearance	-	A	-	A	-	A	or every 12 months
Functions of air compressor and air system	-	I	-	I	-	I	or every 15 months
Looseness in or damage to fuel tank cap and fuel line	-	I	-	I	-	I	or every 24 months
Drive belt tension and damage	I	I	I	I	I	I	or every 6 months
Engine coolant	I: Every 12 months ; R: Every 24 months						
Damage to or looseness in exhaust pipe, exhaust brake and their mounting	I	I	I	I	I	I	or every 12 months
Damage to air intake ducts	I	I	I	I	I	I	or every 12 months
CLUTCH							
Clutch fluid	I	R	I	R	I	R	or every 24 months
Smoother clutch oil	I	R	I	R	I	R	or every 24 months
Clutch, gas and brake pedal stroke and free play	I	I	I	I	I	I	or every 3 months
TRANSMISSION							
Transmission oil	I	R	I	R	I	R	or every 24 months
Gear control mechanism	-	I	-	I	-	I	or every 24 months
Gear control cable	A	A	A	A	A	A	or every 12 months
SHAFT							
Propeller shaft, universal joints	L	L	L	L	L	L	or every 6 months
Propeller shaft, sliding sleeves	L	L	L	L	L	L	or every 6 months
Propeller shaft center bearing	L	L	L	L	L	L	or every 6 months
REAR AXLE							
Differential gear oil	I	R	I	R	I	R	or every 24 months
FRONT AXLE							
King pin (model with rigid front suspension)	L	L	L	L	L	L	or every 6 months
STEERING							
Oil leaks from power steering system	I	I	I	I	I	I	or every 6 months
Power steering fluid	-	R	-	R	-	R	or every 24 months

Maintenance Interval (x 1000 km)	20	40	60	80	100	120	Month or Km whichever comes first
Power steering hose	-	R	-	R	-	R	or every 48 months
Looseness in rod end connection	I	I	I	I	I	I	or every 6 months
Looseness in or damage to steering mechanism	-	I	-	I	-	I	or every 24 months
Wheel alignment	-	I	-	I	-	I	or every 24 months
BRAKES							
Leaks from brake system air tanks, air valves, hoses, pipes	I	I	I	I	I	I	or every 12 months
Air tanks	I	I	I	I	I	I	or every 6 months
Disc brake pad and disc wear	I	I	I	I	I	I	or every 6 months
Looseness in or damage to brake hose connections	I	I	I	I	I	I	or every 6 months
Air leak of parking brake	I	I	I	I	I	I	or every 6 months
Function of brake chamber	I: Every 50.000 km						or every 12 months
SUSPENSION							
Leaf spring damage	I	I	I	I	I	I	or every 6 months
Looseness in or damage to suspension mounting	I	I	I	I	I	I	or every 6 months
Shock absorber oil leaks	I	I	I	I	I	I	or every 6 months
Shock absorber mounting looseness	I	I	I	I	I	I	or every 6 months
WHEELS							
Wheel nuts and wheel bolts	T	T	T	T	T	T	or every 12 months
Disc wheel damage	I	I	I	I	I	I	or every 12 months
Wheel hub bearing grease (rear axle only)	-	R	-	R	-	R	or every 24 months
Tire air pressure and damage	I	I	I	I	I	I	or every 6 months
ELECTRICITY							
Battery fluid specific gravity	I	I	I	I	I	I	or every 6 months
Inspection of lights, horn, windshield wiper and	I	I	I	I	I	I	or every 6 months
Battery and starter connections	I	I	I	I	I	I	or every 6 months
General control of fuse panel, electric cables and sockets	I	I	I	I	I	I	or every 6 months
OTHER							
Inspection of DPD filter pressure difference or DPD filter cleaning	-	-	-	-	I	-	or every 12 months
Sensor hoses of DPD pressure difference	-	R	-	R	-	R	or every 12 months
DEF filter	R: Every 200.000 km						or every 120 months
Underbody wax checking and repairing	I: weekly						
Washing the entire bus, making sure to remove all road chemicals	I: weekly						
Check bus accident and original parts situation.	I: daily						
Inspection of nuts and bolts on chassis and body	-	I	-	I	-	I	or every 6 months
Visual inspection of fire extinguishing system parts	I	I	I	I	I	I	or every 6 months

Firecom fire extinguishing system Aerosol replacement	**R: or every 15 year**

6. TECHNICAL INFORMATION

Dimensions (mm)	
Maximum length	7305
Maximum width	2282
Maximum height	3350
Wheelbase	3385
Front overhang	1650
Rear overhang	2270
Front track width	1914
Rear track width	1650
Inner height	1930
Masses (kg)	
Gross vehicle mass	max. 9800
Empty mass	6000 - 6740
Front axle capacity	3400
Rear axle capacity	6400
Engine	
Model	ISUZU 4HK1E6 (Euro VI)
Type	Commonrail Turbo dizel intercooler
Number of cylinders	4
Engine volume	5193
Maximum power (PS/rpm)	190 / 2600
Maximum torque (Nm/rpm (Kgm/rpm)	(510 /1600-2600) (52 /1600-2600)
Exhaust gas emission class	Euro VI
Clutch	Hydraulic actuated diaphram spring and single dry plate

Gearbox

Model	MZZ-6/ ISUZU NEES
Number of gears, type	6 forward, 1 reverse , Manual+Nees AMT (opt.), overdrive
Final gear ratio	4,777
Steering system	Hydraulic
Tyres	215/75 R17,5
Minimum turning radius	6450
Gradeability % (at GVW)	37,4 %
Suspensions	
Front	Parabolic steel alloy leaf springs
Rear	Air springs
Brake system	
Front / Rear	Disc / Disc
System	Full air brake system with EBS and ABS dual circuit; automatic adjuster
Parking brake	Air actuated; acted on rear axle
Auxiliary brake	Vacuum assisted exhaust brake(S), optional retarder
Fuel tank (lt)	150
Diesel Exhaust Fluid Tank (lt)	16
Generator	24V - 100A
Nominal voltage	24V
Battery	24V (2X12V) - 105 Ah
Starter engine	24V - 4,5kW

PRESSURE VALUES		
Four Circuit Protection Valve	Static Closing Pressure	≥ 5.5 bar
Air Dryer	Minimum Cut in Pressure	7.1 bar
Air Dryer	Maximum Cut out Pressure	9.1 bar
Tyres	Cold Inflation Pressure	7.03 bar / 102 psi

FLUID SPECIFICATIONS

DEFINITION	CAPACITY	VISCOSITY	OIL GRADE (API)	OIL GRADE (ACEA)
Engine oil	12,6 lt (with oil filter) 10,6 lt (without oil filter)	10W-30, 10W-40	CJ4	E9
Transmission oil	4,4 lt	5W-30, 5W-40	CH4, CI4	E4, E7
Differential oil	4,8 lt	80W-90	API GL5	
Suspension and greasing	0,3 kg		NLGI-2	
Shaft spiders	Molybdenum grease			
Clutch and brake fluid	DOT 4			
Power steering fluid	1,5 lt	ATF III		
Antifreeze (%50) + Water (%50)	37 lt	LLC		
DEF	16,5 lt	AdBlue®		
A/C Gas	4,5 kg	R134		

7. LIST OF FOREIGN DISTRIBUTORS

COUNTRY	STORE NAME	STORE ADDRESS	CONTACT NUMBER
ALGERIA	Spa Elsecom	Rue Baha H'med, BP 200 Bab Ezzouar - Alger	+213 (0)23 85 30 86
AZERBAIJAN	AZ Auto LLC	2207 Nobel avenue AZ1006 - Bakü	+(994) 124964598
BOSNIA	Sejari d.o.o. Sarajevo	Blažuj 78, 71215 Blažuj - Sarajevo	+387 33 770 306
BULGARIA	Isubus Ltd.	Botevgradsko Shose Blvd. 1839 Sofia	+(359) 28182929
CROATIA	STP Krapina Presečki Grupa d.o.o.	Frana Galovića 15 49 000 Krapina	+385 (049)328-045
CZECH REPUBLIC	Turancar CZ. s.r.o.	Bavorská 856/14 155 00 Praha 5	+420 776 111 113
FRANCE	Fast Concept Car	Z.I La Ribotiere 85170 Le Poire Sur Vie	+33 25 13 41 034
GERMANY	Omnicar Fahrzeughandel GmbH	Weinbrennerstrasse 10 77815 BÜHL	+49 (0)7223 8061930
GREECE	Petros Petropoulos S.A.	96-104 Iera Odos 122 10 Athens	+(30) 210349 92 00
HUNGARY	Anadolu Rom Hungary	1135 Budapest Robert Karoly Ket. 96-98	+36 703730637
ISRAEL	Universal Trucks Israel Ltd.	Industrial Area Segula, P.O. Box 4599 Petach-Tikva 49145	+972-3-9120010
ITALY	Midi Europe SRL	Via Crosaron, s.n. 37053 Cerea VR	+39 0442 328 212
LITHUANIA	UAB Saločiai Ir Partneriai	Mokyklos str. 1B, Bukiskės LT-14182 Vilniaus raj.	+370 5 2793000
MOROCCO	Maroc SDAMA	Route principale de Rabat 1, km 6,3 Ain Sebaa - Casablanca	+212 (0) 529 029 300
POLAND	Busimport PL Sp. z.o.o.	Gierłatowo 10A 62-330 Nekla Wielkopolskie	+48 61 43 86 905
ROMANIA	Anadolu Automobil Rom. Srl	Soseaua Bucuresti- Ploiesti Nr. 110 Comuna CiolPani	+4021-266 8300
SERBIA	Sejari Ltd. Belgrade	Auto-put za Zagreb 15 11199 Novi Beograd	+381 112608 700
SLOVAKIA	Turancar	Bratislavská 29 94901 Nitra	+421 37 6555 777

SEPTEMBER
2023