NOVOCITI LIFE

USER'S MANUAL

ANADOLU ISUZU

Revision No: 03

FOREWORD

This user's manual is prepared to give general information about the efficient and most economical use of E6 Novociti LİFE vehicle. We strongly recommend you to read the information carefully and to abide by all warnings. We would like to 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 Otomotiv Sanayi ve Ticaret A.Ş.

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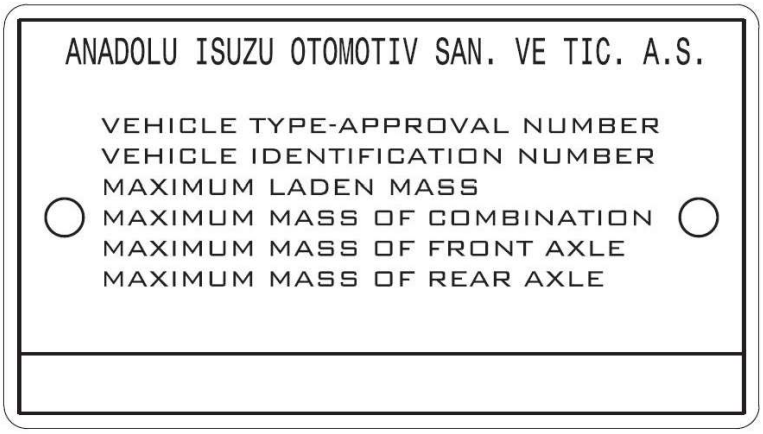
1. INTRODUCTION

CHASSIS NUMBER

FRONT

Chassis number of the vehicle is located on the profile behind the right front wheel.

IDENTIFICATION PLATE



The identification plate is located on the platform where the driver's seat is located at the entrance of the front door. Identification plate contains VIN number, maximum axle load sum, maximum front axle load and maximum rear axle load information.

The vehicle identification number (VIN) contains information about the vehicle model, maximum load weight, type of engine, driving system, axle distance, manufacturing location code and the chassis number of the vehicle.

BUS VIN SYSTEM

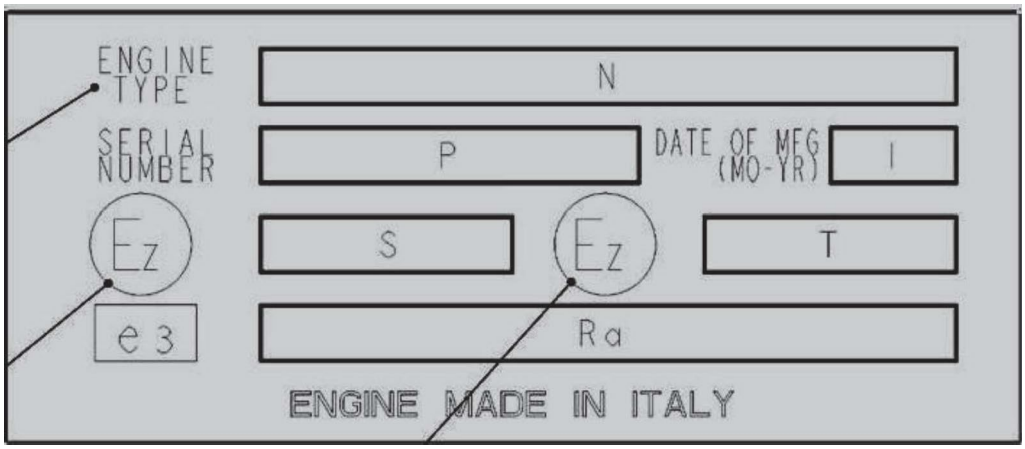
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
N	N	A	M	0	B	F	L	A	G	B	0	0	0	0	0	1

(EXAMPLE)

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
		1:	17 PASSENGER SEATS
		2:	18 PASSENGER SEATS
		3:	19 PASSENGER SEATS
		4:	20 PASSENGER SEATS
		5:	21 PASSENGER SEATS
		6:	22 PASSENGER SEATS
		7:	23 PASSENGER SEATS
		8:	24 PASSENGER SEATS
		9:	25 PASSENGER SEATS
6	MODEL EXTENSION	B:	PUBLIC TRANSPORT TYPE
		U:	INTERCITY TYPE
7	ENGINE TYPE	F:	FPT - NEF4
8	DRIVING SYSTEM	L:	LEFT HAND DRIVE
		R:	RIGHT HAND DRIVE
9	WHEELBASE	A:	4259 mm
10 -11	MANUFACTURING PLANT	GB:	AIOS GEBZE PLANT
12 -17	PRODUCTION SEQUENCE NO		

ENGINE LABEL

The engine label is located on the engine flywheel housing.



- N → Engine model
- P → Engine serial number
- I → Production date
- S → Engine power homologation certificate reference
- T → Exhaust fume homologation certificate reference
- Ra → Homologation certificate reference

VEHICLE WARRANTY

The warranty period and conditions of the vehicle are stated within the scope of the Warranty Certificate supplied with the vehicle. Please refer to the Warranty Certificate for detailed information on the warranty conditions and the conditions which are not covered by the warranty.

OPTIONS

Apart from the standard features of the vehicle, the following options can be applied to the vehicle at any time.

- Preheater
- Fire extinguisher
- Engine chamber fire extinguisher
- Rim caps
- Tropical climate air conditioner
- Park sensor
- Front fog lamp
- Rear view camera
- Front view camera
- Internal camera (2 pcs)
- Monitor
- Heated double glazing
- Curtain (driver side)
- Electrically controlled mirrors
- Driver's cabin (with fan)
- Route indicator (rotary type)
- Route indicator (rear)
- DVR
- DVD (with LCD)
- EVSC
- Tachograph
- Speaker for the driver (2 pcs)
- Microphone & Amplifier

RECOMMENDATIONS / WARNINGS

- For the spare key or when the key is lost, you need to inform the authorized service of the serial number on the ignition key, so please note down the serial number.
- Only use fuel that is of the specified specification (EN 590 appropriate sulfur ratio max. 10 ppm) in your vehicle.
- Diesel exhaust emission fluid (DEF) must comply with ISO 22241-1 or DIN 70070 standards. These two standards are equivalent to each other.
- Do not load your vehicle above the passenger capacity and do not change the seat positions. Our factory shall not be responsible for any problems that may arise due to a change of the load balance in the vehicle.
- Check the exhaust pipe at times. If you see any damage (for example, a damaged coupling piece due to wear or a hole or crack), have it checked and serviced by the nearest authorized service.
- Check tyre pressures frequently, always make sure they are at the correct value.
- Check the long and dipped beam settings, do not drive at night with defective headlights.
- Check the brake, parking and licence plate lamps frequently, do not drive with defective or muddy brakes, parking and license plate lamps.
- To ensure maximum performance in your vehicle, be sure to have all maintenances carried out on time and periodically at the authorized services.
- Liquid such as waste oil, brake fluid, antifreeze, waste filters and scrap batteries that you have used in your vehicle are harmful to the environment when they are thrown away randomly. Please note that such hazardous wastes should be able to be disposed of in accordance with environmental regulations.
- It is extremely dangerous to have empty boxes, empty bottles or other items that roll on the floor, please make sure that especially the floor around the driver's seat is clean and tidy.
- Before starting the engine, make sure that there are no flammable substances under or around the vehicle. Presence of such materials can lead to a fire.
- Before driving, make sure to adjust the seat, steering wheel and mirrors to the positions that provide the correct driving position for you.
- Always wear your seat belt.
- Make sure that the windshield and side windows are clean. Keep the curtains so as not to interrupt your vision and your driving.
- Do not increase the engine speed before the engine has warmed up sufficiently.
- Use your vehicle by paying attention to the traffic rules and to the road conditions.

- If you feel any abnormality in a tyre while driving, immediately stop in a safe place. If you continue to drive with a deflated tyre, excessive force may be applied to the wheel studs causing the bolts to break and the wheel to come out.
- Drive at a constant speed whenever possible. Heating the engine for longer than necessary and having a high engine speed waste the fuel.
- If a warning light turns on, do not ignore it and do not continue driving. Please note that you must take a corrective action by referring to the descriptions of the warning lamps and indicator lights.
- When the vehicle malfunctions while driving, run the the hazard lights and immediately take the vehicle to a safe location where it will obstruct the traffic. Place warning triangles to notify other vehicles of your presence. Get the other passengers out of the vehicle and have them wait in a safe place. Call the nearest authorized service.

2. GENERAL INFORMATION

ENGINE START

Take the main switch to the "ON" position and the gear to the "N" position. Turn the ignition switch to "M" position, turn the ignition switch and press the starter ("D" position).

Do not run the starter for more than 30 seconds and do not press the accelerator while running it. Wait two minutes between each running attempt.

If the engine oil warning light does not go out within 15 seconds, turn off the engine to prevent damage to the engine. Contact an authorized service.

Run the engine at idle for 3-5 minutes after starting the engine, gradually increase the engine speed. Do not operate the engine in such a way that it will exceed the maximum engine speed, which can seriously damage the engine.

Running the Engine in Cold Weather

Take the main switch to the "ON" position and the gear to the "N" position. Turn the ignition key to the "M" position and when the glow light is off, turn on the ignition key and press the starter ("D" position).

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

ENGINE STOP

Stop the engine by turning the ignition key to the "St" position.

Do not switch off the main switch when the ignition switch is open and before 70 seconds pass after the ignition switch has been switched off.

OPENING AND CLOSING THE DOORS

On the front control panel there are on/off switches for opening/closing the doors from inside. The doors automatically close when the vehicle speed exceeds 5 km/h. The front door opens/closes with a remote control from the outside.

Opening the Doors in Emergency Situations

The doors are equipped with drain valves for emergency situations. If necessary, discharge the air by turning the valve clockwise and open the doors by pulling inward.

There are also drain valves to open the doors from the outside when necessary. Turn the valve clockwise and open the doors by pushing inwards.

At the same time, there is a red on/off lock on the door to open the door with a key from the outside when the vehicle is locked or when there are passengers inside. When necessary, turn this lock to the arrow direction, discharge the air by rotating the drain valve on the door and open the door by pulling inward.

EMERGENCY EXIT

In case of emergency, emergency exit can be provided by breaking the windows on the right and left sides of the vehicle with the aid of the emergency hammer.

3. CONTROLS AND INDICATORS

FRONT CONTROL PANEL

LEFT SIDE SWITCHES

Outside Mirror Resistance Switch

When pressed the lower part of the switch, the outside rear view mirror resistance is activated. It is deactivated when pressed the second time. If it is not switched off by the driver, it is automatically deactivated after 20 minutes.

Driver Side Window Resistance Switch

When pressed the lower part of the switch, the driver side window resistance is activated. If it is not switched off by the driver, it is automatically deactivated after 20 minutes.

ASR Cancel Switch

ASR system is disabled when pressed the lower end of the switch. The ASR is activated when pressed the lower end of the switch.

Suspension Control Switch

This switch enables to automatically or manually control the tilting feature of the suspension system when the doors are opened.
When pressed the lower end of the switch, the vehicle automatically tilts on the right when the doors are opened and comes back into the driving position when the doors are closed. If the switch is in the normal state, the vehicle will not tilt on the right when the doors are opened. Tilting of the vehicle to the right side is provided with the suspension control switches.

Route Indicator Switch

The route indicator is activated when pressed the lower part of the switch and deactivated when pressed the upper part.

Retarder Switch

System is opened by pressing the lower edge of switch for retarder to activate. When the switch is on retarder can be activated with retarder handle or if the brake pedal is pressed, retarder will be activated automatically. The system is closed when pressed the upper edge of switch.

LCD Screen Switch (Optional)

The LCD screen is turned on when pressed the lower part of the switch. The LCD screen is turned off when pressed the upper part.

Emergency Switch

To use the emergency switch, lift upwards and open the red safety cover on it. When it is pushed forward, the power in the system is cut off, the engine stops, all interior lighting lights and the hazard lights turn on and the door switches are in a actively operating condition. When pulled back, the system returns to normal.

Lighter

Lighter is pushed towards the inner heat element and automatically ejects when heated.

Roof Lamp Switch

The roof lamps are turned on when pressed the lower part of the switch. The roof lamps are turned off when pressed the upper part.

Driver Spot Lamp Switch

When pressed the lower part of the switch, the spot lamp on the top of the driver compartment flashes on and when pressed the upper part, the lamp flashes off.

Preheater (Optional)

Heating

Instant heating with long press

Press the button for more than 2 seconds. The heater is on.

The display is on, the heater menu sign is displayed.

Press the button for more than 2 seconds. The heater is off.

Heating with a short press

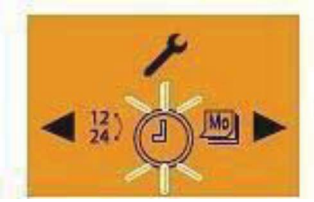
Press the button for less than 2 seconds. To set the temperature use the or button.

Press the button to confirm the set temperature.

Press the button for less than 2 seconds. The heater is off.

Settings

Use the ◄ or ► button to select the symbol from the menu bar. Press the ▭ button to confirm the sign of the settings menu.



Select symbols by pressing the ◄ or ► button to set time format, time and day. Then, confirm by pressing the ▭ button.

Rear Fog Lamp Switch

While the dipped beams are open, the rear fog lamp flashes on when the lower end of the switch is pressed and flashes off when the upper end is pressed. If the dipped beams do not flash on, the rear fog lamp will not flash on.

Front Fog Lamp Switch (Optional)

The front fog lamps turn on when the bottom of the switch is pressed. They flash off when pressed again.

Parking and Headlamp Switch

The parking lamps turn on when the lower end of the switch is pressed once. When it is pressed for the second time, the dipped beams flash on. The dipped beams flash off once the upper end of the switch is pressed again, the parking lamps flash off when the button is pressed the second time.

RIGHT SIDE SWITCHES

Hazard Light Switch

The hazard light switch flashes on when pressed the bottom part of the switch and it flashes off when pressed the upper part. When the hazard light switch is on, the signal lamps in the instrument panel and the function lamp in the switch flash on and a buzzer sound is given with all the signal lamps of the vehicle.

Stop Brake Switch

When pressed the lower edge of the switch, stop brake system activates: the system holds the vehicle still if the speed is "0". The system deactivates when pressed the upper edge of the switch.

If the speed is "0" and door(s) is open, regardless of position of the switch, stop brake system activates. When all the doors are closed, the system deactivates.

If the speed is "0" and disabled passengers ramp is open, regardless of position of the switch, stop brake system activates.

Tilting / Driving Level Switch

When pressed the lower part of the switch, the vehicle tilts to the right and when pressed the upper part, it returns to the normal driving position. The system is deactivated when pressed the upper part.
If the doors or disabled passenger ramp are closed and the accelerator pedal is depressed, the stop braking system will be deactivated.

ELC Control Switch

This switch is used to drive the vehicle at a higher or lower driving level than normal. When pressed the upper part of the switch, the vehicle switches to a higher driving level and when pressed the lower part, the driving level decreases.
When pressed the upper part of the Tilting/Driving level switch, the vehicle returns to normal driving level.

Front Door Control Switch

Front door is opened/closed when pressed the bottom part of the switch. The switch will not be active when the vehicle speed exceeds 5 km/h.

Rear Door Control Switch

Rear door is opened/closed when pressed the bottom part of the switch. The switch will not be active when the vehicle speed exceeds 5 km/h.

Gear Selector (In automatic vehicles)

The vehicle can be used in automatic and manual mode. The gear selector features are as follows:

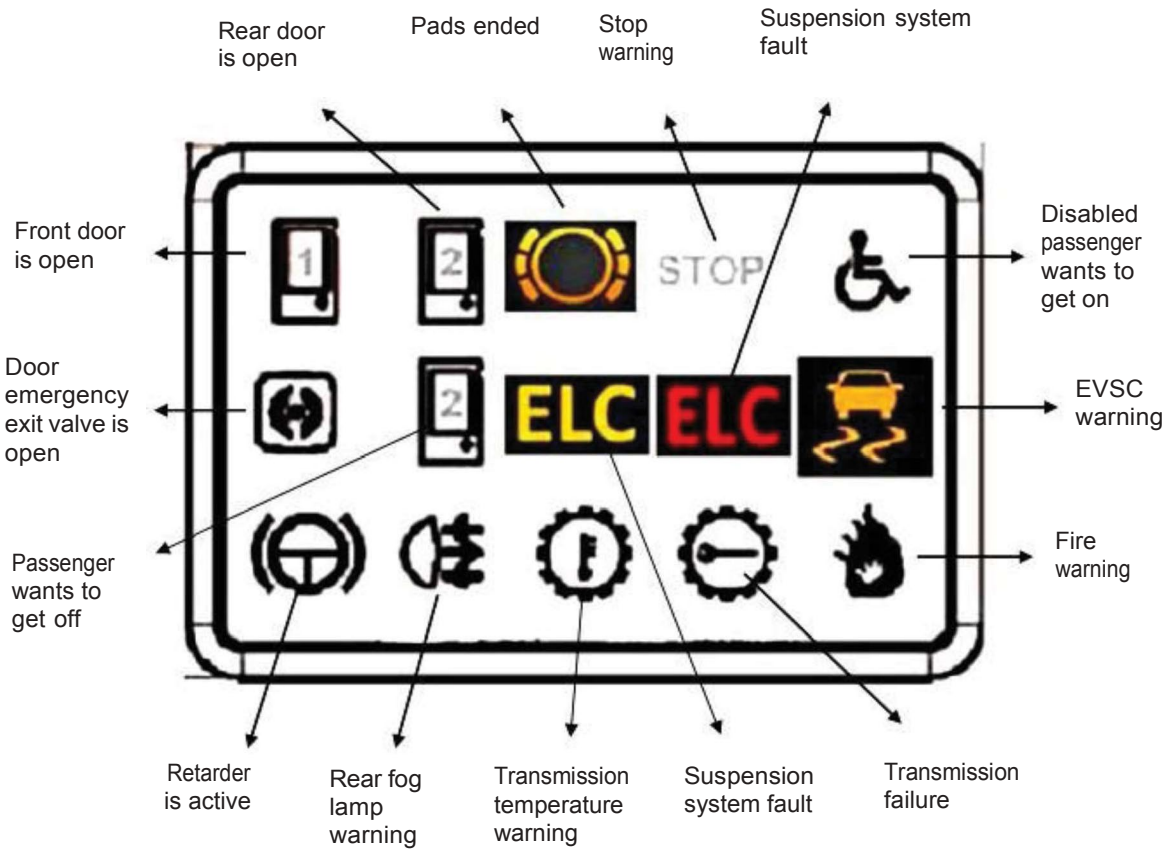
↑ + Increasing the gear
↓ - Decreasing gear
D Forward gear
N Neutral
R Reverse gear
Mode Performance/economy mode selection *

* According to the transmission calibration

Automatic Mode: This mode is indicated by the "6" (highest gear number) figure on the gear selector and information display. For example, "64" means that it is in the 4th gear in automatic mode.

Manual Mode: This mode is automatically selected when the up/down button is pressed. The manual mode is indicated by the left digit on the gear selector LCD. The gear number associated with the number of button presses is indicated by the digit to the left. This means that the selected gear position is the gear limit. The driving position is automatically selected by the transmission box control unit when a button is not pressed.

Warning Lens Panel Shows the status when the functions or faults are active.



Signal and Wiper Arm

The lever signals to the left while it is in the downward direction and to the right while in the upward direction. At first rotation, it activates the wipers intermittently, at the second, at normal speed and at the third, at high speed. The water sprinkler runs when it is pushed towards the steering wheel. When pressed the button on the end, the horn is activated.

Exhaust Brake Control Lever

This lever activates the exhaust brake.

SIDE CONTROL PANEL

Parking Brake

The parking brake system is of pneumatic type and spring installed. The parking brake is on the left side of the control panel. When the vehicle is stopped, the parking brake handle is pulled back, the handle must be locked in the lower position. To release the brake, pull the locking latch at the bottom of the handle slightly upwards and release the handle forward. There is a warning light on the instrument panel indicating whether the parking brake system is active.

When the parking brake system is activated, the gear automatically shifts to the N position and the gear selector on the LCD screen starts to blink. Even when the parking brake is deactivated, the gear will remain in the N position. The Driving/Rear position must be re-selected to drive the vehicle. For driving (vehicle active), if the brake air is insufficient when the parking brake is deactivated (below 6 bars), the warning light flashes red. This light must flash off before driving.

Emergency Brake Release Valve

It is located on the left side of the driver, on the side control panel.

In case that the vehicle is left without air and malfunctions on the road, the valve is rotated without releasing it (since it has a spring, it will go to its initial position once released) with the left hand and the steering wheel is held with the right hand and the vehicle is pulled to the emergency lane. When the handle is rotated, the air reserved in an additional tank is sent to the brake cylinder and the parking brake is released.

USB PHONE CHARGER

On the side control panel, there is a charger with USB socket where the driver can charge his/her mobile phone. There are two sockets for normal and fast charging.

INSTRUMENT AND WARNING LIGHTS PANEL

Low Pressure Warning: When the brake circuit system pressure drops below 6 bars, the red warning light flashes on and a buzzer is given.

Charge Warning: It is the red warning that flashes on when the ignition is on and flashes off when the engine is running and has passed the idling speed. If it flashes on during driving, it indicates that there is a malfunction in the charging system.

Transmission Failure Warning: It is a yellow warning that indicates a fault in the transmission.

ABS Fault Warning: The yellow warning flashes on when there is a fault in the anti-lock brake system.

Engine Water Temperature Warning : The yellow warning flashes on when the engine water temperature is 102 °C Red warning flashes on and warning buzzer will sound when the temperature is 106 °C.

Brake System Fault Warning : When the brake circuit system pressure drops below 6 bars, the red warning light flashes on.

Driver Warning: It is a yellow warning that flashes on so that the driver can detect any problems and causes in the NOx control system.

- If the diesel exhaust emission fluid level is below the level of warning,
- If an inadequate quality diesel exhaust emission fluid is used,
- If an inadequate amount of diesel exhaust emission fluid is used,
- In the case where the diesel exhaust emission fluid is intermittently sprayed,
- If the EGR valve or the system sensors do not work properly, the Driver warning flashes on.

Engine STOP Warning: It is the red warning that flashes on when the ignition is switched on and that flashes off when the engine runs. If the warning flashes on while the engine is running, the vehicle must be stopped safely and the engine should be switched off.

- If there is a major fault in the vehicle,
- If automatic engine protection and shut off will take place,
- If there is a fault in the SCR system,
- If there is a diagnostic error code in the system,

the Engine STOP warning will flash on.

Engine Oil Pressure Low Warning: The red warning light flashes on when a fault is detected in the engine lubricating system. The engine must be stopped when the warning flashes on.

- If the oil level is low,
- If the viscosity of the oil is not suitable,
- If the oil filter is clogged,
- If the oil pressure switch is defective,
- If the oil pump is defective, the Engine oil warning flashes on.

Fault Display Warning: A yellow warning light flashes on in case of a fault with the emission control system. When the warning flashes on, the vehicle must be taken to the nearest authorizes service.

Engine Warning: It is the yellow warning that flashes on when a fault is detected which does not inhibit vehicle s movement and which is not active and critical. If a warning is lit while the engine is running, the vehicle must be taken to the nearest authorized service.

- If a switch off at idle will be performed,
- If it blinks when the ignition switch is turned on,
- If there are maintenance faults and there is a diagnostic error code

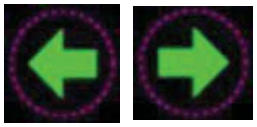
in the system, the Engine warning flashes on.

DPF Warning: It is a yellow warning that flashes on when the DPF (diesel particulate filter) gets full.

- The warning blinks when the amount of particles reaches a high level. Go to the Isuzu service to initiate the regeneration process. When the particle level reaches a critical level, the DPF warning light flashes off, the red engine warning light flashes on, the vehicle must be stopped in a safe place and an authorized service must be consulted.

Exhaust System High Temperature Warning: When active regeneration starts in the vehicle or when the exhaust temperature exceeds a programmable limit, the yellow warning light flashes on. When the exhaust temperature falls to an appropriate value, the warning light flashes off. When the warning flashes on while the vehicle is in a parked position, there should be no flammable material at the exit of the exhaust pipe.

Diesel Exhaust Emission Fluid Level Low Warning: The yellow warning light flashes on when the diesel exhaust emission level is low.



Signal Warnings: It is a green light, buzzer warning that shows right and left turns, that blinks when the signal lever or the hazard light switch is used.

Front Fog Warning: The green warning light flashes on when the front fog lights are in use.

Glow Plug Warning: It is a yellow warning that flashes on when the ignition is switched on and flashes off after a while. The lamp must flash off before starting the engine.

Water in the Fuel Warning: It is a yellow warning that flashes on when there is water in the fuel. The fuel quality should be checked if the warning flashes constantly.

Fuel Level Warning: The yellow warning light flashes on when the fuel level decreases. After the light flashes on, the vehicle can travel 50 km more.

High Beam Warning: It is a blue warning light that flashes on when the high beams are in use or when the headlights are flashed.

Speed Unit: It is the unit of value in the speedometer.

Tachometer

Tachometer measures the number of engine revolutions per minute. It starts running when the engine is started.

Speed (km/h) Indicator

It displays the speed of the vehicle in kilometre/hour and it starts running after the vehicle starts moving.

Fuel Gauge

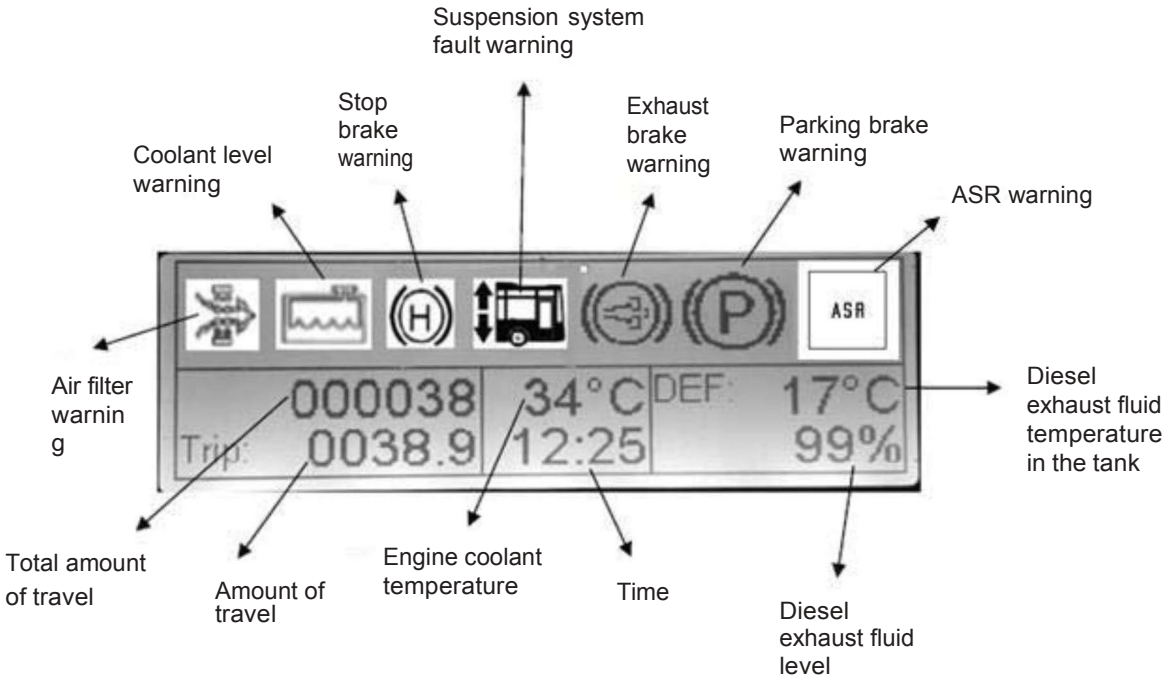
The fuel gauge shows the fuel level in the fuel tank. The yellow light at the bottom right of the display flashes on when the dial approaches the letter "E", which means the fuel is getting low. Fuel should be added before the fuel in the tank completely runs out, otherwise the system will be filled with air.

Brake Pressure Indicators: It shows the front brake and rear brake air pressure values.

Front brake pressure

Rear brake pressure

Information Screen

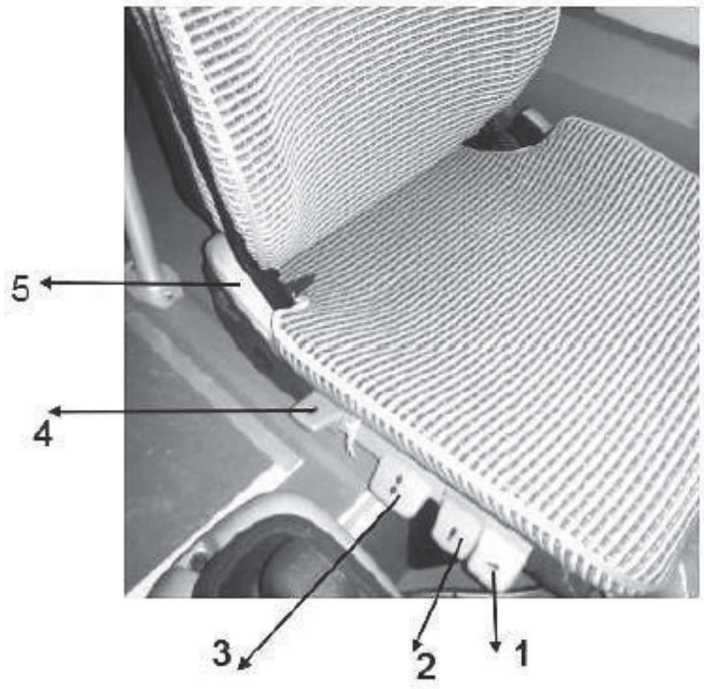


ROUTE INDICATOR CONTROL PANEL

There is a route indicator control panel on the upper part of driver's compartment. The route information is selected/changed via the control panel.

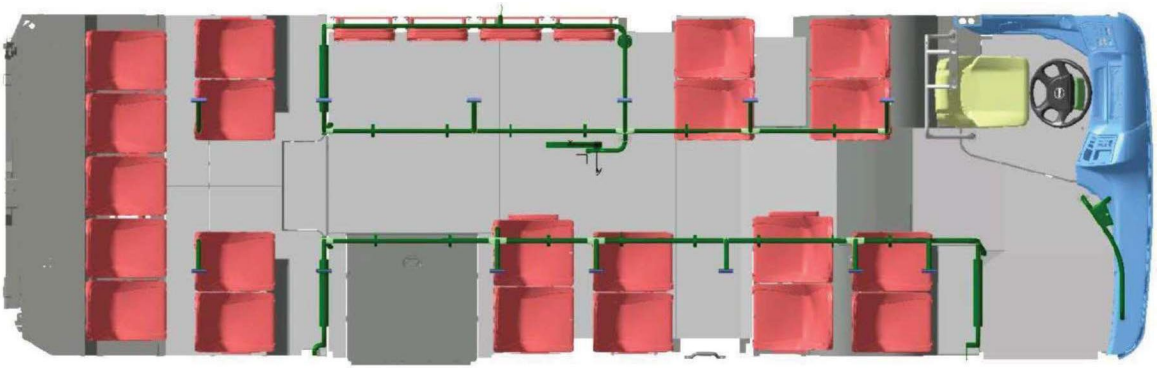
4. VEHICLE EQUIPMENT

DRIVER SEAT



1	Seat Tilt Adjustment
2	Shock Absorber Adjustment
3	Height Adjustment
4	Quick Lowering Adjustment
5	Backrest Tilt Adjustment

PASSENGER SEATS



As a standard, there are 25 passenger seats in the vehicle, including 4 folding seats. Passenger seats are of fabric upholstery. There is a wheel chair fixing area for disabled passengers, opposite the back door.

There is a passenger capacity label in front of the vehicle at the upper region. This label shows the number of sitting and standing passengers.

DIGITAL CLOCK

Hour **Minute**

There is a digital clock on the front of the vehicle. Time and air temperature are shown alternatively on the screen. In addition, when the Stop button is pressed, "STOP" statement appears. The clock settings can be done via the left button and the minute setting can be done via the right buttons.

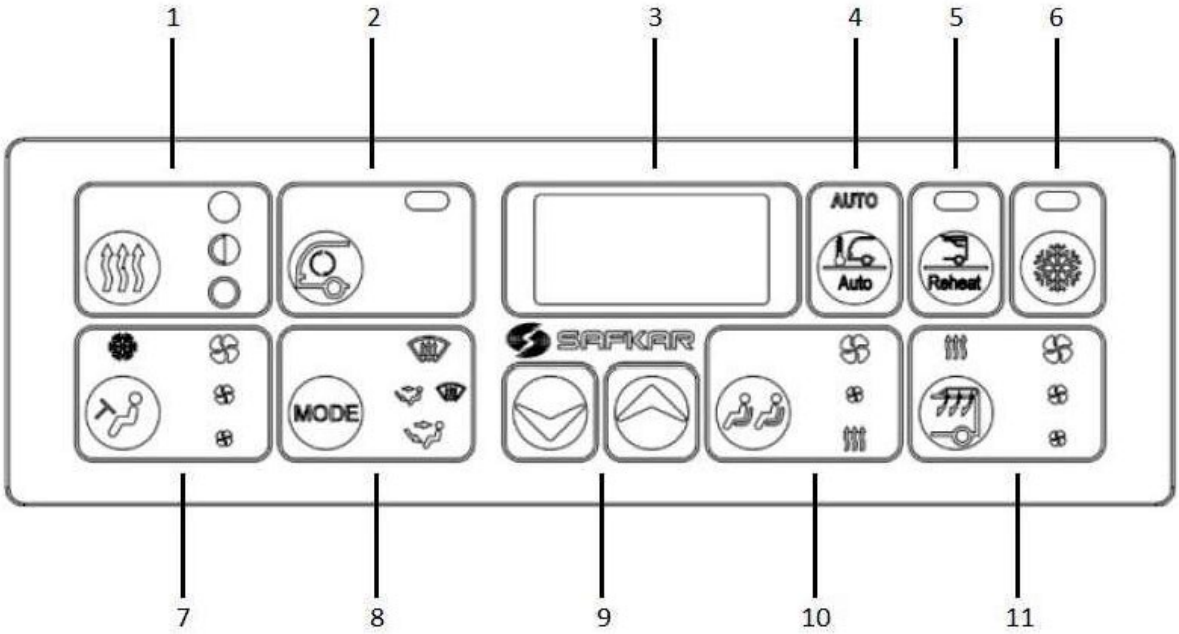
ROLLER BLIND

On the windshield, at driver's side, there is a manual roller blind. On the left side of the roller blind, there are two ropes for adjustment. When you pull one of these, the roller blind goes down and when you pull the other, the roller blind goes up.

RADIO & MP3 PLAYER

There is a radio & MP3 player in the vehicle with USB and AUX inputs. Up to 30 radio channels can be stored into the memory.

AIR CONDITIONER CONTROL PANEL



No.	Name
1	Heater Control (Driver Side)
2	Air Selector (Driver Side)
3	LED Display
4	Automatic Mode
5	Air Selector (Passenger Side)
6	Air Conditioner On/Off (Passenger Side)
7	Fan Speed Control (Driver Side)
8	Outlet Selector (Driver Side)
9	Control Switches
10	Heater Control (Passenger Side)
11	Roof Fan Speed Control

1. Heater Control (Driver Side)
   Use this switch when manually selecting the heating on the driver side.
   Pressing the switch increases temperature.

2. Air Selector (Driver Side)
   Use this switch to change between ventilation of outside air and recirculation of the interior air. Led is active when interior air recirculates.

3. LED Display
   LED display shows temperature values and error codes.

4. Automatic Mode
   When pressed shortly, outer temperature is shown on LED display.
   Press the switch for 3 seconds to use the air conditioning system in automatic mode. When the switch is pressed, the system automatically warms up or cools down to 21°C. Led is active when the automatic mode is on.

5. Air Selector (Passenger Side)
   Use this switch to change between ventilation of outside air and recirculation of the interior air. Led is active when outside air ventilates.
   When air conditioning activates, interior air automatically starts recirculating.
   Press the switch for 3 seconds to activate passenger defrosting.
   When defrosting is activated, defrosting operates for 6 minutes then turns off.

6. Air Conditioner On/Off (Passenger Side)
   Use this switch to turn the air conditioning on or off.
   Blue led lights and interior air recirculates when the air condition is operating.
   Press the switch for 3 seconds to save air conditioning setup.

7. Fan Speed Control (Driver Side)
   Use this switch when manually selecting the fan speed on the driver side.
   Pressing the switch increases the fan speed.
   Press the switch for 3 seconds to open/close air conditioning on driver side.
   Led is active when the air conditioning operates.

8. Outlet Selector (Driver Side)
   The air outlet will change each time you press this switch.
   When defrosting is activated, defrosting operates for 10 minutes then turns off.
   Use this switch as approval button for service menu.

9. Control Switches
   Use the control switches to set temperature and to change functions.
   Press down switch for 3 seconds to adjust temperature value of driver side.
   Press up switch for 3 seconds to adjust temperature value of passenger side.

10. Heater Control (Passenger Side)
    Use this switch when manually selecting the heating on the passenger side.
    Pressing the switch increases the fan speed.
    Blinking of heating led means that engine temperature has not reached suitable value.

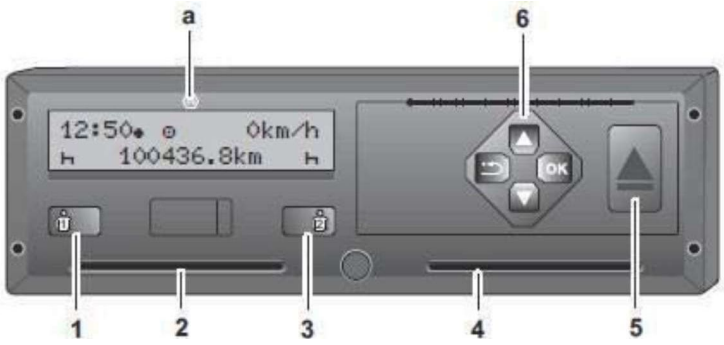
11. Roof Fan Speed Control
    Use this switch when manually selecting the roof fan speed.
    Pressing the switch increases the fan speed.
    When cooling function is activated, fans start to run at minimum level automatically. It cannot be closed.
    If the vehicle is equipped with roof heating, roof fans can operate at 1st level.

The air conditioning system uses a sun sensor, room temperature sensor and outside air temperature sensor to ensure effective and comfortable air conditioning. Do not place anything on the sensors or get them wet. Air conditioning control will become inaccurate.

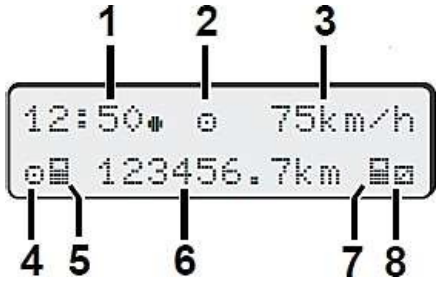
When the driver's air conditioner is activated first and then the ceiling air conditioner is needs to be activated, the ceiling blowers will only operate in the first stage. If the ceiling air conditioner is activated first, the ceiling blower steps can be adjusted.

TACHOGRAPH (OPTIONAL)

The tachograph records the vehicle's speed, travel time, distance and other information. The tachograph can help to achieve economic driving and optimal management of the operations.



1 Driver 1 combined button	Adjusting the activity and removing the driver card
2 Card slot 1	
3 Driver 2 combined button	Adjusting the activity and removing the driver card
4 Card slot 2	
5 Printer drawer opening button	
6 Menu keys	/ Select the desired function or selection OK Confirm the selected function \ option Exit, exit from menu



1	Time with local time)
2	Operation mode
3	Speed
4	Driver 1 active
5	Driver 1 card symbol
6	Total kilometer
7	Driver 2 card symbol
8	Driver 2 active

DIAGNOSTIC SOCKET

The diagnostic socket is located inside the cabin at the right bottom part of the torpedo, at the front door entrance. This socket is used to load, change a parameter to the engine control unit and for the diagnosis.

MIRRORS

There is an inside rear view mirror in the vehicle.

There are two outside rear view mirrors, one on the right and one on the left.

Right Outside Rear View Mirror

Left Outside Rear View Mirror

INTERNAL CAMERA (OPTIONAL)

There are 2 internal cameras in the vehicle, showing the front door and the rear door. On the left side of the driver, there is a monitor (optional) on the front panel, which allows the driver to monitor the passenger entry and exit with the displays reflected from the camera.

DIGITAL ROUTE INDICATOR

There are digital route indicators, 1 at the front and 1 at the side, optionally a rotary type can also be mounted. In addition, optionally one can be mounted at the rear of the vehicle.

HANDLES

There are handles on the holding pipes for passengers to hold.

STOP BUTTONS

There are three types of stop buttons in the vehicle.

Standard

For disabled passengers

For priority passengers

Passengers who want to get out of the vehicle inform the driver by pressing these buttons. The corresponding door's button flashes on and the 'STOP' message appears on the digital clock. In addition, the buzzer is also activated. When the doors are opened, the words 'STOP' and the warning lights on the door flash off.

WHEEL CHAIR FIXING AREA

There is a private area opposite the back door so that the passengers who get on the vehicle with a wheel chair can travel safely.

DISABLED PASSENGER RAMP

There is a manually opening/closing ramp at the rear door to enable the disabled passengers with wheel chairs enter/exit the vehicle comfortably.

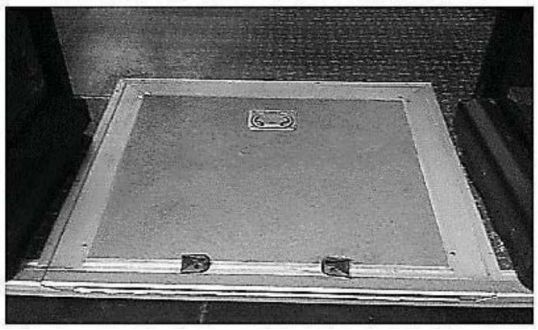
Use of the Ramp

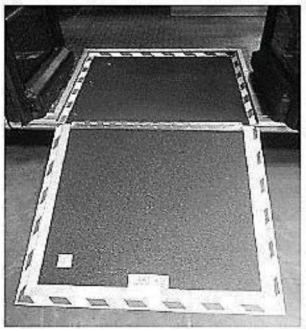
When disabled passengers who want to get on the vehicle press the button, 

warning  lights.

In this case:

Stop the vehicle at a point where the traffic is convenient.



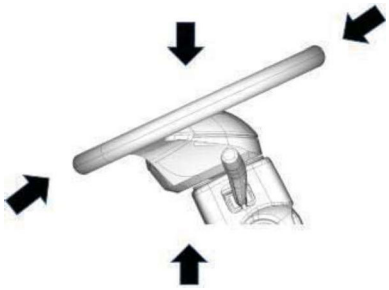


- Open the rear door.
- Open the ramp by holding the grip and push it out of the vehicle.
- Enable the disabled passenger to get on/out.
- Close the ramp by folding it into the vehicle.

When the ramp is open, the  (rear door open) warning light flashes on.

Disabled passenger symbol  appears on the information screen. A buzzer is also heard.

STEERING WHEEL ADJUSTMENT



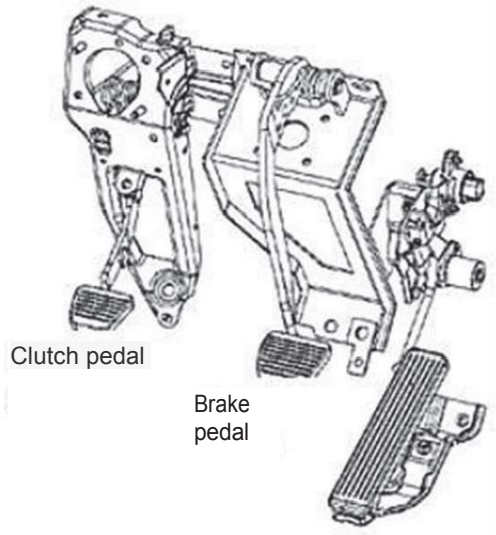
Steering wheel is tilt and telescopic. For this setting, the lever on the right side under the steering wheel is pulled upwards. The lever is pushed back when desired position is reached.

HORN

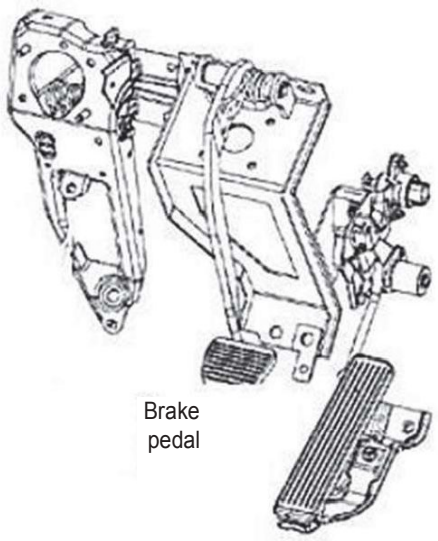
The horn sounds when you press the centre of the steering wheel and the horn button on the signal lever.

PEDALS

In a vehicle with a manual transmission;



In a vehicle with an automatic transmission;



Brake Pedal

The brake pedal is a part of the electronic brake system (EBS). When the brake pedal is depressed, an electric signal is supplied to the central control unit and air is distributed to the brake elements. The retarder engages automatically when the brake pedal is depressed.

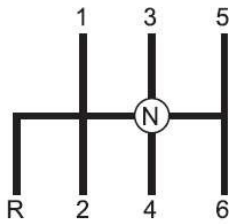
It is integrated into the vehicle s brake system and will run when the brake pedal is pressed. Depressing the brake pedal lightly will apply the retarder gradually. The retarder is activated on before service brakes are applied.

Accelerator Pedal

The pedal on the right is the accelerator pedal. The electronic signal sent by the position sensor connected to the accelerator pedal is evaluated by the ECU (Electronic Control Unit) and the amount of fuel going to the engine is set. In vehicles with automatic transmission, there is a kick-down button at the end of the accelerator pedal that increases the engine speed.

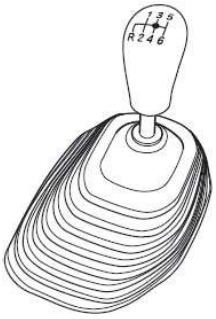
TRANSMISSION

1) Manual Transmission Model



Your vehicle has a manual transmission with 6 forward and 1 reverse gear options.

When the shift lever is set to R (Reverse), the reverse gear lamps turn on and the buzzer sounds.



Switch from the forward gear to the reverse gear or from reverse gear to forward gear only when the vehicle stops completely. Otherwise, the transmission may get damaged.

2) Automatic Transmission Model

The vehicle can be used in automatic and manual mode. The gear selector features are as follows:

+ Increasing the gear
- Decreasing gear
D Forward gear
N Neutral
R Reverse gear
Mode Performance/economy mode selection *

* According to the transmission calibration

Automatic Mode: This mode is indicated by the "6" (highest gear number) figure on the gear selector and information display. For example, "64" means that it is in the 4th gear in automatic mode.

Manual Mode: This mode is automatically selected when the up/down button is pressed. The manual mode is indicated by the left digit on the gear selector LCD. The gear number associated with the number of button presses is indicated by the digit to the left. This means that the selected gear position is the gear limit. The driving position is automatically selected by the transmission box control unit when a button is not pressed.

Use of Transmission

Automatic Mode

While the vehicle is stationary, press the brake pedal and select the "D" position. "61" is displayed on the LCD screen. When the brake pedal is released and the accelerator pedal is depressed, the driving gear is automatically started and the vehicle starts to move. During travel, the gear will be increased/decreased automatically.

At any time during travel, for example, in difficult conditions, the gear position can be changed manually by pressing the up/down arrows on the gear selector.

Manual Mode

Depress the brake pedal and select the "D" position while the vehicle is stationary. Then press the down arrow button, the figure on the left will show the lowest gear position which is "11". When the brake pedal is released and the accelerator pedal is depressed, the driving gear is automatically started and the vehicle starts to move. High gear positions can be selected by pressing the up arrow button and low gear positions can be selected by pressing the down button. When the down arrow button is pressed while the vehicle is moving, the number on the left will be equal to the number on the right.

Engine Start Up

While the vehicle stationary, depress the brake pedal, select the "N" position and turn the ignition to the starting position. The engine will start.

Use of the Rear Gear

The "R" position can be selected while the vehicle is stationary or when the vehicle speed is below 5 km/h. If the vehicle is stationary, press the brake pedal and select the "R" position. Select the "R" position if the vehicle is moving. After both selections, the left digit will display "R". The "R" position cannot be selected while the vehicle speed is over 5 km/h.

Transmission Malfunctions and Indicator Warning

This indicator means that there is an electronic malfunction. If necessary, park the vehicle securely. Close and reopen the ignition switch. Check if the fault is still present, if so call the service.

The control module will generate an error code relating to the problem. This code can be read by connecting with a computer.

Kickdown Feature

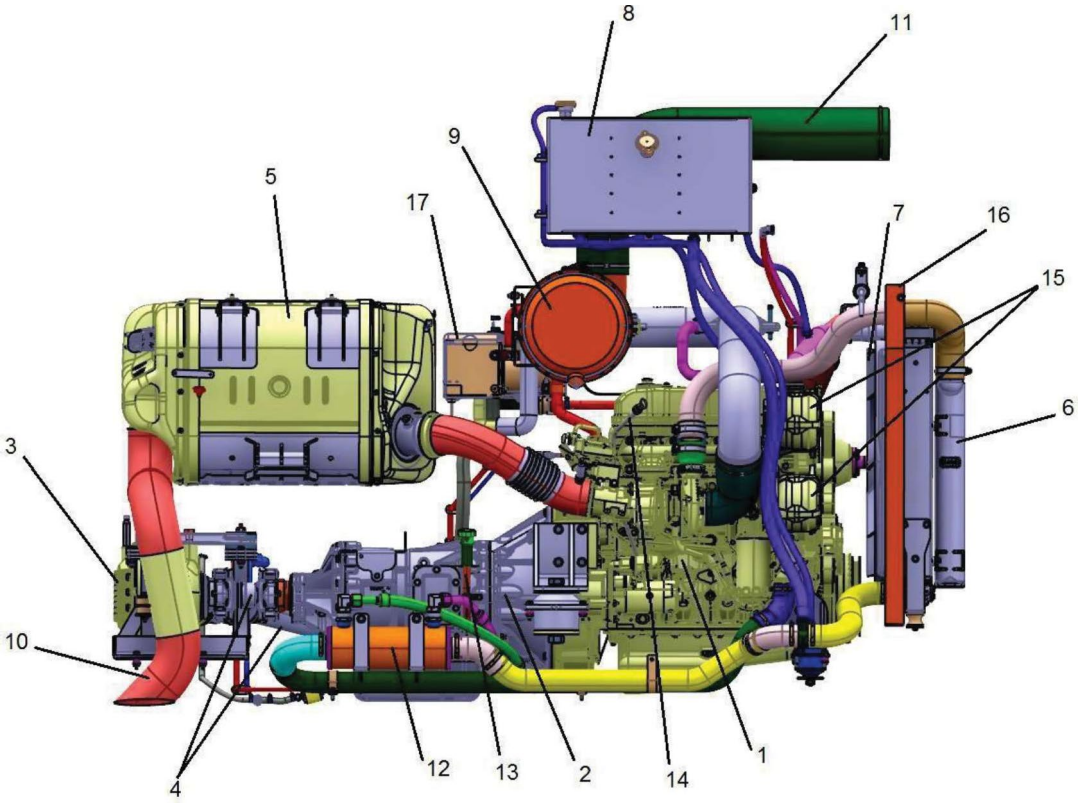
When high engine power is needed, gear is decreased by the kickdown feature. It is activated by using the kickdown button under the accelerator pedal.

Using this feature increases fuel consumption.

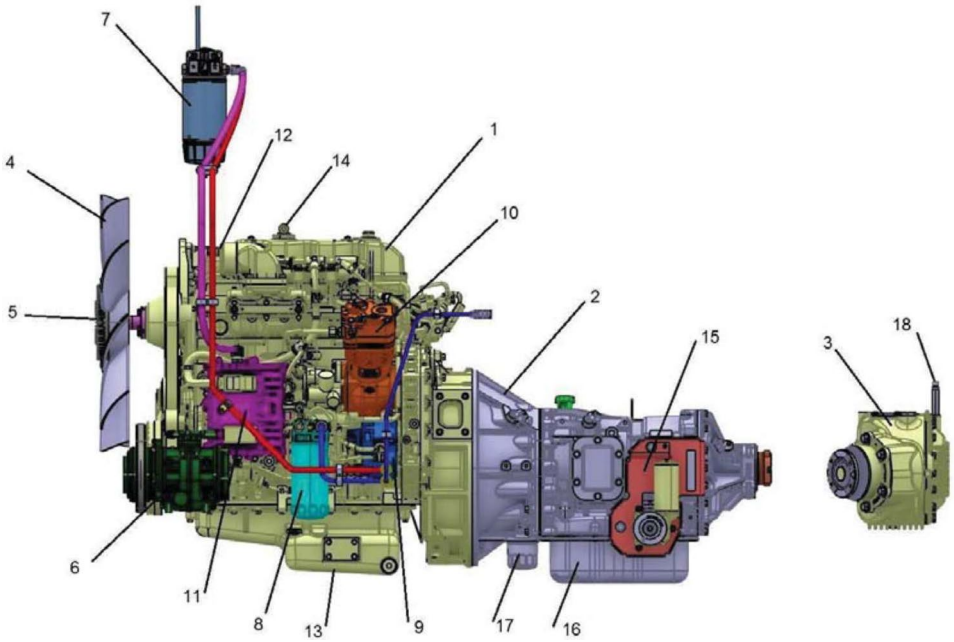
Retarder Feature

The vehicle has a hydraulically controlled retarder system which is equipped on transmission. Because of the hydraulic system, retarder operation will increase the oil temperature, so be careful if the oil temperature indicator is activated on dashboard. Retarder, which is activated by depressing the brake pedal extends the service brake life. It can be disabled via the retarder switch on dashboard if required.

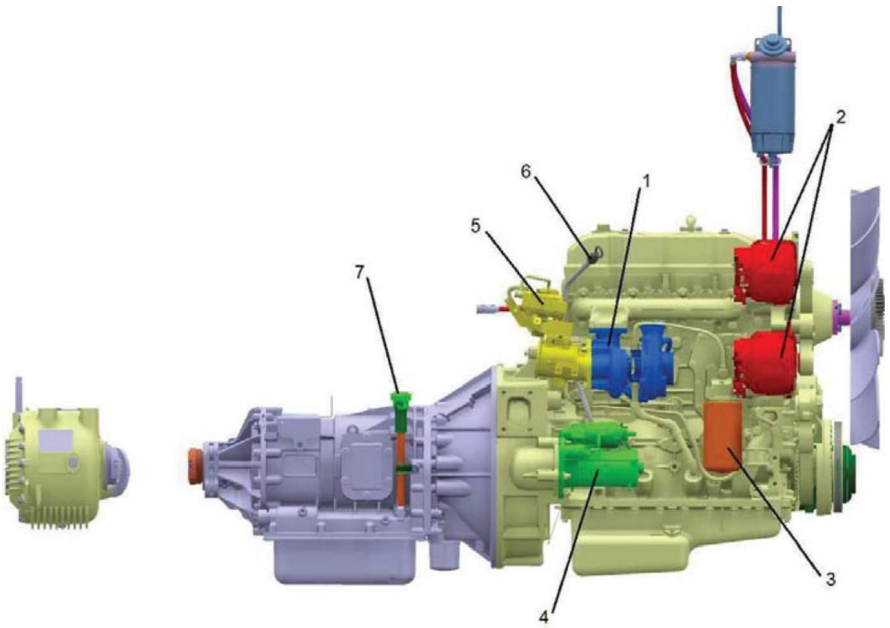
ENGINE



1. Engine
2. Automatic Transmission
3. Angle Drive
4. Long and Short Shafts
5. Exhaust Gas Processing Unit
6. Cooling Unit
7. Blower Fan
8. Expansion Tank
9. Air Filter
10. Exhaust Tail Pipe
11. Air Intake Hose
12. Transmission Oil Cooler
13. Transmission Oil Dipstick
14. Engine Oil Dipstick
15. Alternator
16. Insulation
17. Preheater



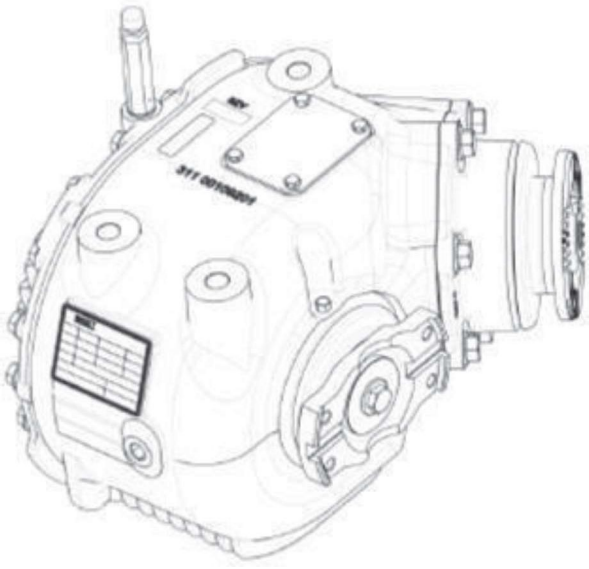
1. Engine
2. Transmission
3. Angle Drive
4. Fan Propeller
5. Viscous Coupling
6. Air Conditioner Compressor
7. Fuel Filter with Water Separator
8. Engine Fuel Filter
9. Engine Fuel Injection Pump
10. Air Compressor
11. Engine Control Module (ECM)
12. Engine Oil Filling Cover
13. Engine Oil Pan
14. Engine Oil Pan Ventilation
15. Transmission Gear Selector Activator
16. Transmission Oil Pan
17. Transmission Oil Filter



1. Turbo Unit
2. Alternator
3. Engine Oil Level
4. Starter
5. Exhaust Brake
6. Engine Oil Dipstick
7. Automatic Transmission Oil Filling Pipe and Oil Dipstick

ANGLE DRIVE

The angle drive ensures transmission of the power transferred by the shaft via the power pack with a second shaft to the differential on the driving axis with 35 degrees angle.



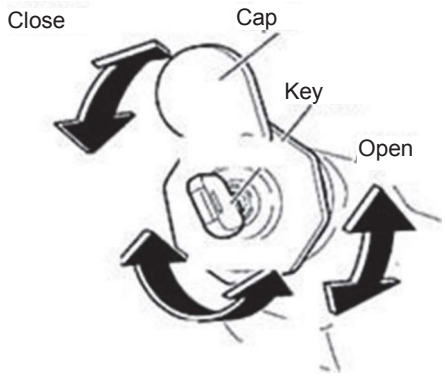
FUEL TANK

Fuel tank capacity is 130 litres. The fuel filler cap is behind the left front wheel of the vehicle.

The protective cover must be opened before the fuel tank cover. The cover is opened with the fuel tank key. After filling, the tank cover is locked by turning clockwise. Under the front axle of the vehicle and just above the frame structure, a drain plug of the fuel tank is available. The plug is opened by turning and the residues are discharged from the fuel tank.

Fuel should not be filled while the engine is running. Smoking is not allowed during refueling. Otherwise, fire may occur. After refueling, the fuel tank cover must be tightly closed. Otherwise, the fuel leakage may cause fire during driving.

Opening and Closing the Fuel Tank Cover



Remove the static electricity from your body before opening the fuel tank cover.

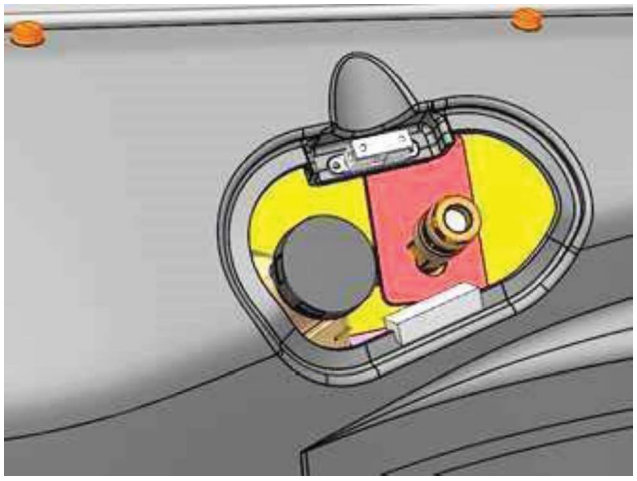
- Open the cover, fully insert the key and turn to the "OPEN" position.
- Turn counterclockwise to open the cover.
- Fill the tank
- Fit the fuel tank cover securely
- To lock the fuel filler cover, turn the key to the "CLOSE" position
- Pull out the key and then make sure that the fuel tank filler cover is closed securely.

BATTERIES

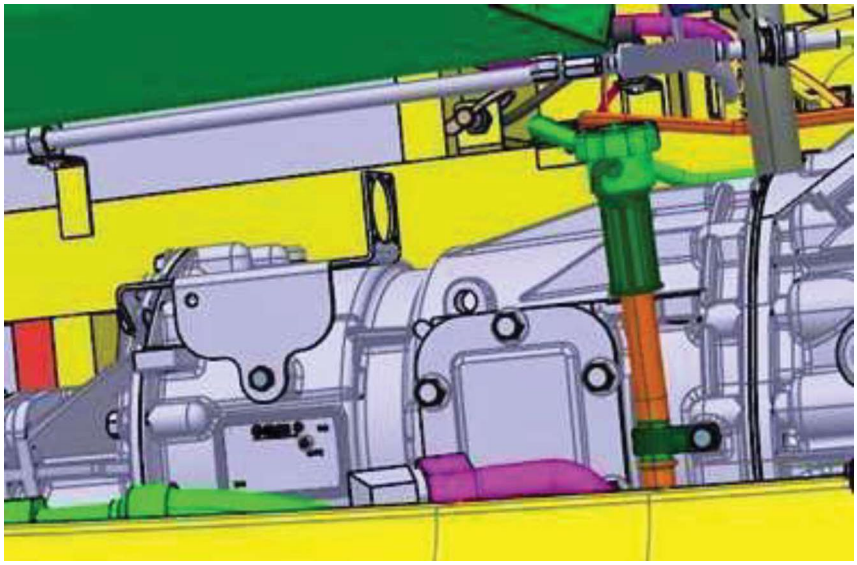
Batteries are inside the cabin at the rear of the vehicle. There are 2 batteries inside the vehicle. Each battery is 12 V and 125 Ah.

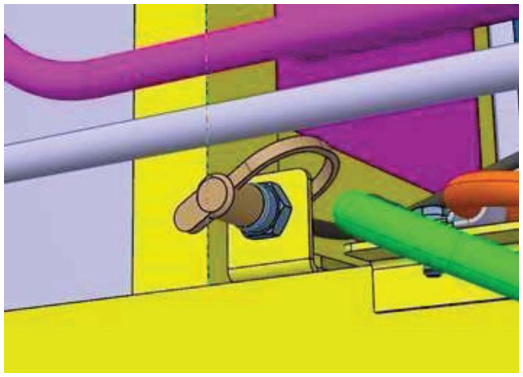
TYRE INFLATION SET

The tyre inflation port is located at the left of the driver, on the side control panel. The cover is removed manually to reach the port.



The vehicle ventilation port is on the top front section of the transmission.





If the air pressure in the vehicle tyres is low, the tyre inflation set among from the tools is used to adjust the tyre pressure. To do this:

- Park the vehicle so as not to obstruct traffic.
- Pull the parking brake, shift the gear to neutral and start the engine. Take the tyre inflation set.
- Attach one end of the hose to the tyre valve and the other end to the air outlet. Complete the inflation process by supplying gas to the engine.

ANTI - LOCK BRAKE SYSTEM (ABS)

Wheels can be locked or slid in case of sudden braking or on slippery road surfaces such as snowy roads. ABS is a device used to detect slippery conditions during braking, to prevent the wheels from slipping and to ensure vehicle's direction stability and road holding balance. ABS is only to assist in slippery conditions and will not prevent an accident if you exceed the safe driving speeds set for the road conditions. Always drive with caution.

When the starter switch is turned to "ON", the ABS warning lamp flashes on and then flashes out after approx. 2 seconds. If the warning lamp flashes out, then the ABS is in normal condition.

If

- The ABS warning lamp flashes on during driving
- When the starter switch is turned to "ON", the lamp does not flash on.

Contact your nearest Isuzu Authorized Service.

Even if there is a problem with the ABS, the normal brakes will continue to work properly. However, ABS will not work.

ANTI - SLIP REGULATOR (ASR)

ASR helps to prevent slippage of the drive wheels and to improve vehicle motion balance when driving on snowy or otherwise slippery road surfaces. ASR is automatically activated when the engine is started. You can cancel the use of ASR by using the ASR OFF switch.

If

- If the ASR indicator lamp remains on while driving on a non-skidding, dry road,
- If the ASR indicator lamp flashes on (dark yellow) while driving (when the ASR CLOSE switch is not used)
- If the lamp does not flash on when the starter switch is turned to the "ON" position, please contact the nearest Isuzu Authorized Service.

If the ASR is faulty, this will not prevent normal driving. However, ASR will not work.

ELECTRONIC VEHICLE STABILITY CONTROL (EVSC) (OPTIONAL)

In the case of vehicles carrying loads and passengers, the wheel brakes can be controlled independently using electronic control during sudden maneuvers. The aim is to prevent possible accidents, such as vehicle's yawing or overturning. More reliable driving dynamics are guaranteed.

Angular Speed Sensor

The speed sensor is located on the floor of the boot area near the centre of gravity of the vehicle.
The axial deflection in the vehicle is detected as momentary angular acceleration and transmitted to the brake system control unit in the form of an electronic signal. In a critical situation, the amount of deflection from the route is checked. It gives information on how to activate the stability control functions.

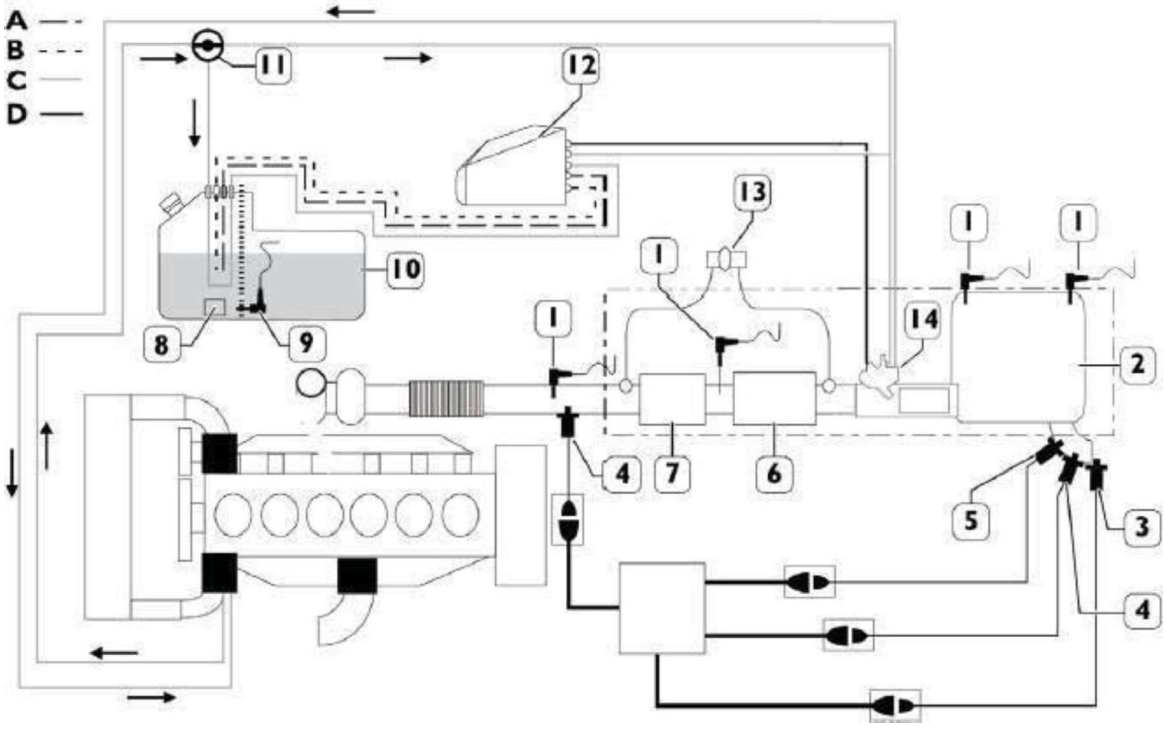
Steering Angle Sensor

The angle sensor through the steering column is located under the signal group. It transmits the maneuver request from the driver to the brake system control unit according to the amount of turning the steering wheel. The transmitted information is sent as an electronic signal. Calibration is performed when the system is first installed to match the signal from the sensor to the angle of rotation of the vehicle.
The EVSC system will be faulty if the steering wheel is removed, installed, replaced or renewed at the front alignment adjustment In these cases, installation must be performed at authorized services.

DIESEL EXHAUST EMISSION FLUID (DEF) HEATING SYSTEM

The diesel exhaust emission fluid (DEF) used in the vehicle starts to freeze at -11°C. When the temperature rises, the engine starts spraying DEF onto the exhaust system. If the fluid in the tank remains frozen while the engine is warmed up, the engine will be de-energized because DEF is not sprayed. For this reason, in cold climate conditions (at -7°C and lower temperatures), the engine heats the DEF tank with hot water and the DEF line from the tank to the injector with the electric heater.

EXHAUST GAS TREATMENT SYSTEM



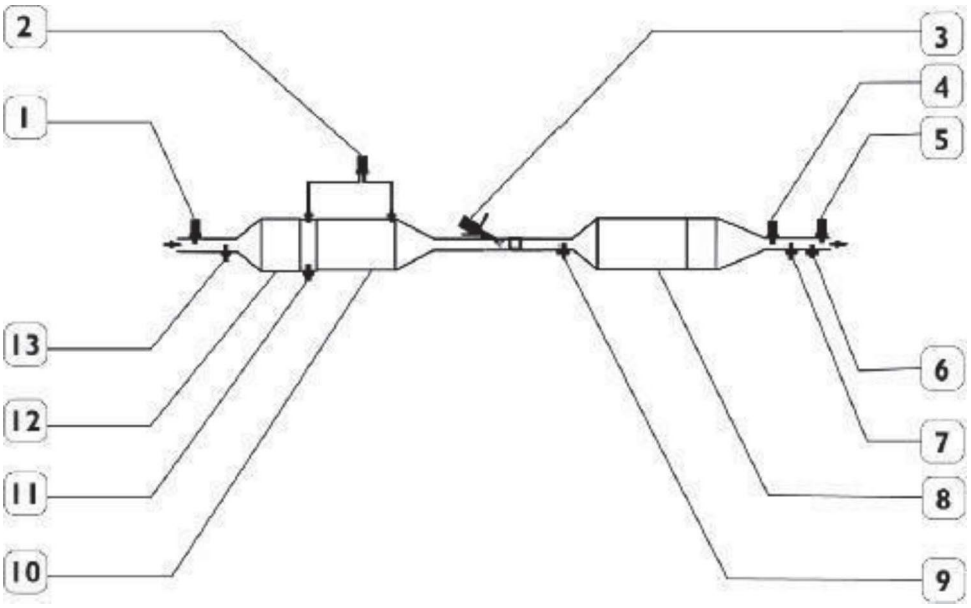
A: DEF pump module feeder line
B: DEF tank return line
C: DEF system heating line
D: DEF distribution line to the dosing module

The exhaust gas treatment system consists mainly of the following.

- DOC diesel oxidation catalytic converter (7)
- DPF diesel particulate filter (6)
- A DPF differential pressure sensor that detects the pressure difference at the inlet and outlet of the particle filter (13)
- A tank (10) for the reagent solution (water-DEF) with a level indicator (8) and a DEF quality sensor (9)
- The H_2O change over valve (11)
- DEF pump module (12)
- Injection and DEF dosage module (14)

- SCR catalytic converter (2)
- Four exhaust gas temperature sensors (1): one at the DOC catalytic converter inlet and outlet (7), the other at the DPF diesel particulate filter (6) and from the catalytic converter (2) at the exhaust gas outlet pipe
- A humidity detection sensor attached to the engine air inlet tube at the air filter outlet
- Two nitrogen oxide (NOx) detection sensors (3, 4) installed upstream and downstream of the SCR catalytic converter
- The ammonia (NH_3) detection sensor at the exhaust gas outlet (5)

The DEF pump module takes the reactive solution from the tank and sends to the mixing under pressure and injection module to be injected into the exhaust pipe.



1. Upstream NOx sensor flow of the SCR catalytic converter
2. DPF differential pressure sensor
3. DEF dosage module
4. Downstream NOx sensor flow of the SCR catalytic converter
5. NH_3 sensor
6. Particle sensor
7. SCR catalytic converter outlet temperature sensor
8. SCR catalytic converter
9. SCR catalytic converter inlet temperature sensor
10. DPF diesel particulate filter
11. DOC diesel oxidation catalytic converter outlet temperature sensor
12. DOC diesel oxidation catalytic converter
13. DOC diesel oxidation catalytic converter inlet temperature sensor

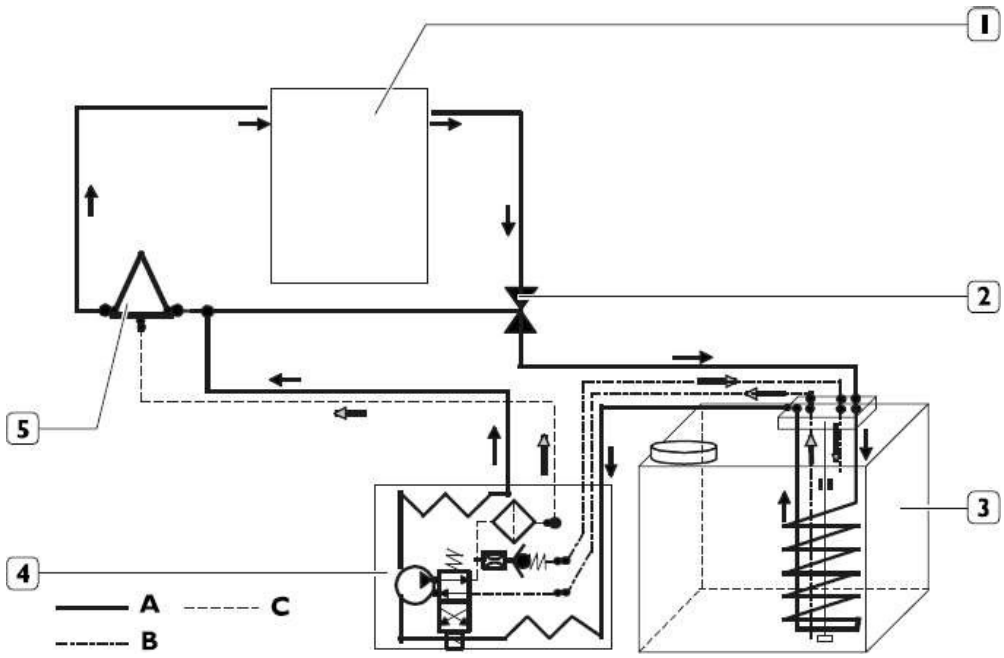
DEF is a 32.5% urea solution in demineralised water. It is fluid consumed to reduce the emission ratios of the engine.

DEF is pumped into the exhaust gases by the dosing pump. It forms during combustion and reacts with nitrogen-oxide gases being discharged and converts these gases into pure nitrogen and water. This process is called "Selective Catalytic Reduction" (SCR). The capacity of the DEF tank is 30 lt. The fluid level in the tank is constantly checked, the warning lamp on the display flashes yellow when the level decreases below a certain value. In this case it is required to complete the fluid level as soon as possible. The tank must always contain 18% fluid at least for healthy operation of the vehicle. Below this level, the engine will flash the warning light. When DEF level drops below 6%, the engine gives a fault code and cuts off the power. DEF you have purchased for efficient operation and long life of the SCR system must be certified in terms of being compliant with the DIN 70700 or ISO 22241-1 standards. Adhering to these standards guarantees that the fluid has the appropriate purity and concentration (32.5%). No additive should be added to the DEF.

Exhaust gas treatment system heating/cooling

The system has two functions:

- Continuous cooling of the DEF dosage module
- DEF tank, DEF feeding module and DEF pipes heating



A : Engine coolant
B : DEF
C : Cooling fluid circuit
I : Engine
2 : Diverter valve
3 : DEF tank
4 : DEF feeding module
5 : DEF dosage module

The system is equipped with a heating circuit (DEF freezes at -11 °C) to adjust the DEF temperature and prevent the risk of freezing. The diverter valve allows a portion of the engine coolant fluid to pass into the coil inside the DEF tank and then into the DEF feeding module. The system heats the pipes and the tank when the engine is started; the DEF measurement is only enabled when there is no frozen DEF remaining in the system.
The DEF dosing module is connected to the engine cooling circuit and is cooled continuously.

REGENERATION

Regeneration is the burning process performed by the system for the particles that accumulate in the DPF (diesel particle filter) system within the exhaust gas treatment system according to the amount of time period or amount of clogging. The system is capable of passive regeneration.

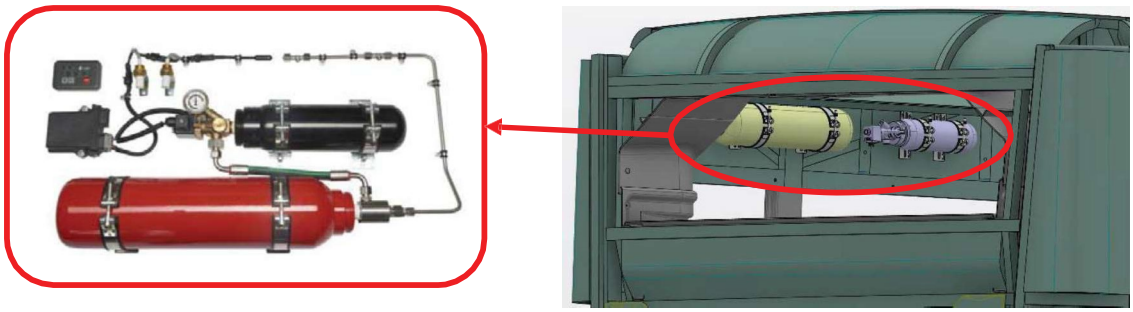
Passive regeneration: It is a particle burning process that is performed when exhaust gases reach high temperatures under normal use conditions.

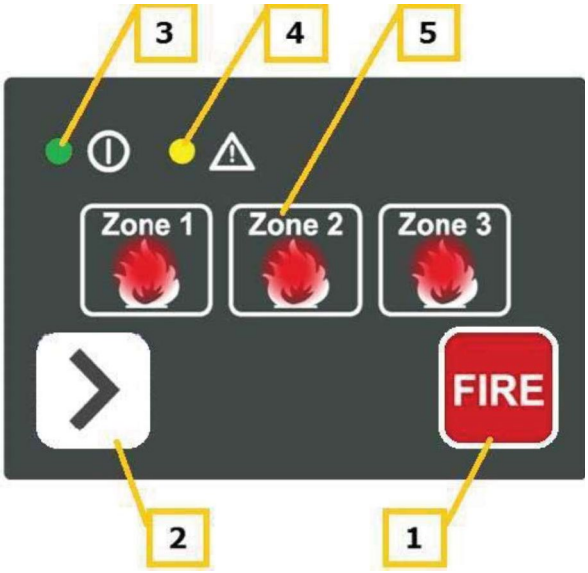
ENGINE CHAMBER FIRE DETECTION SYSTEM

Fire detection system gives a red light and buzzer on the warning lens panel when a temperature value above 120° C in engine chamber is detected.

ENGINE CHAMBER FIRE EXTINGUISHING SYSTEM (OPTIONAL)

Fire extinguishing system consists of temperature sensors and water-spray nozzles in the engine chamber where fire is likely to occur. The water is atomized at 200 bar pressure and the nozzles discharge the water mist. The increased surface area of the water droplets produces an immediate cooling effect and displaces oxygen in the engine compartment, smothering the fire.





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

2. ACTION button

   2.1. Normal operation mode:
   - Short press has no functionality.
   - Long press will start the LED & Alarm self-test.

   2.2. Warning/diagnosis mode:
   - Short press:
     - First press will silence/mute the warning signal.
     - Every further press will show you the Fault Display. If there is at least one error.
   - Long press will reset the warnings.

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

3. Green LED
   - Blinking: the system is booting.
   - Blinking slowly: the system is in the emergency current mode.
   - Constantly: the system is on normal operation mode.

4. Yellow LED
   Warning/Diagnosis mode
   - Blinking: there was a warning, but it has not yet been queried.
   - Constantly: there is currently a warning.

5. Red Zone LED
   Fire in zone X detected. The suppression system is automatically activated.
   - Blinking: alarm countdown for activation.
   - Constantly: alarm activated.

In case of fire:
1. Pull the vehicle over in a safe place
2. Stop the engine
3. Press the emergency switch
4. Empty the vehicle out
5. Check whether the fire extinguishing system is activated

5.1. If the fire extinguishing system is activated:

Check whether there is flame in the engine chamber before opening the engine cover.

5.1.1. If there is no flame:

- Open the engine cover, use a portable fire extinguisher if necessary
- Contact the authorized service

5.1.2. If there is flame:

- Allow the extinguishing system to fully discharge
- Open the engine cover, use a portable fire extinguisher if necessary
- Contact the authorized service

5.2. If the fire extinguishing system is not activated:

Check whether there is flame in the engine chamber before opening the engine cover.

5.2.1. If there is no flame:

- Open the engine cover, use a portable fire extinguisher if necessary
- Contact the authorized service

5.2.2. If there is flame:

- Allow the extinguishing system to fully discharge
- Open the engine cover, use a portable fire extinguisher if necessary
- Contact the authorized service

If the fire extinguishing system comes into an active state for any reason other than fire and the tanks are empty, the following procedures must be carried out:

1. Wash all component surfaces affected by the system with water to avoid corrosion of the parts in the engine chamber.
2. Supply water to the fire extinguishing tubing system and wash inside of the pipes and nozzles. If it is late for this process, remove the nozzles and pipes in order to clean. Change the nozzles if necessary.
3. Put on protective covers on the nozzles again.
4. Mount the filled tanks and reengage the system.

5. SERVICE AND **MAINTENANCE**

CLEANING VEHICLE

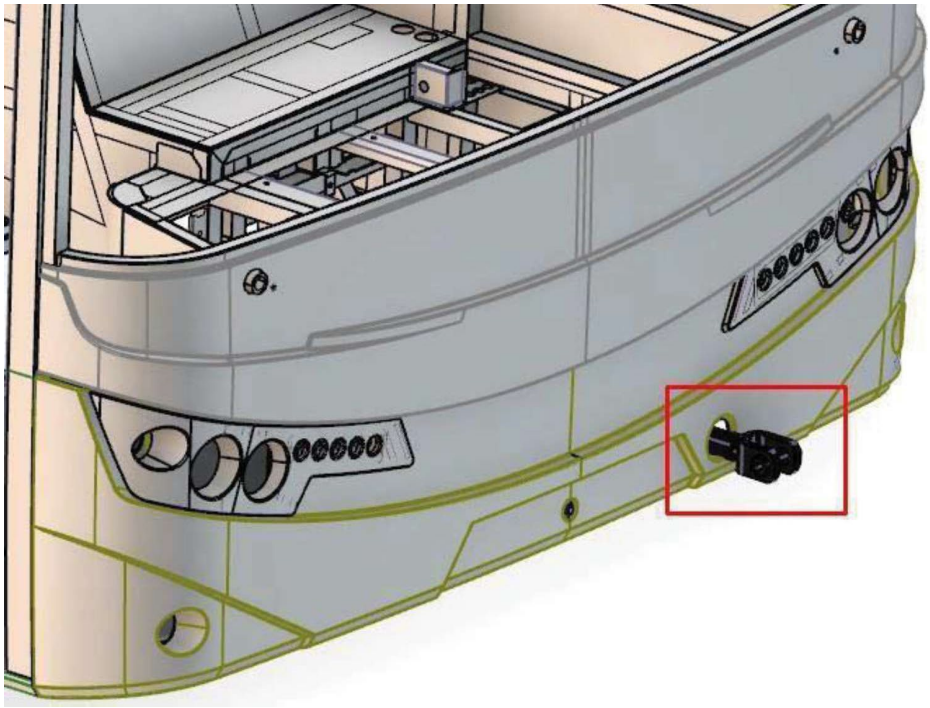
Exterior Cleaning

- Do not clean your vehicle with detergents and chemicals, do not wipe with gasoline.
- Use pressurized water to clean the vehicle (except for the engine compartment), make sure that there is no water on the vehicle after cleaning, remove excess water with a cloth or chamois.
- Do not wash your vehicle under direct sunlight.
- Keep the interior of the fenders clean during the winter season.
- Use only soap and water when cleaning the air bellows.

Interior Cleaning

- Clean the instrument panel with a damp cloth, do not use substances such as alcohol or thinner.
- Clean the seats with a damp cloth or a foamed artificial leather cleaner.
- Wipe the passenger floor with a wet mat and then dry.

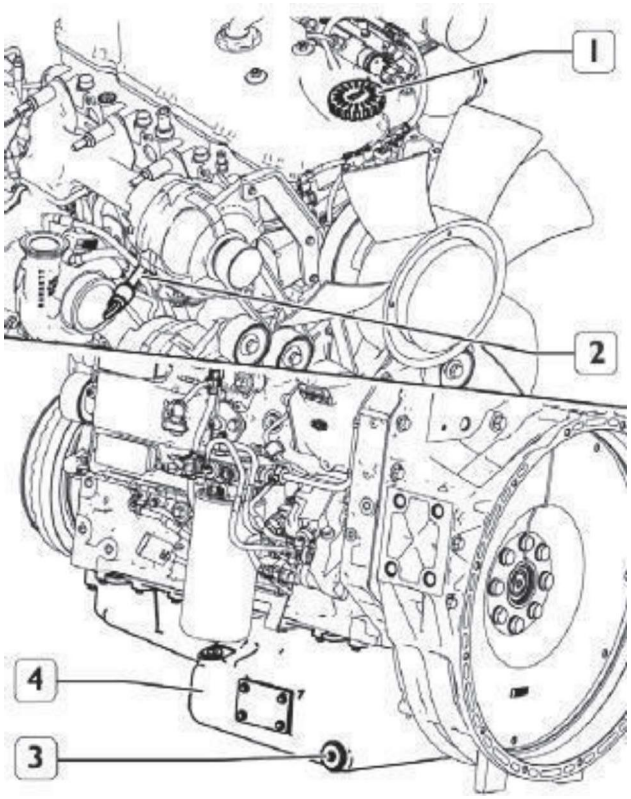
TOWING VEHICLE



- Open the towing hook cover at the front bumper.
- Take the towing hook inside the toolbox.
- Screw the towing hook firmly into the slot in the chassis and make sure it is fitted.

REPLACEMENT OF ENGINE OIL

To replace the engine oil:



- Place a container under the oil tank (4) to take out the oil
- Loosen the oil drain plug (3), pull the oil dipstick (2), remove the oil filler cover (I)
- Wait until the oil tank (4) is completely drained, then tighten the oil drain plug (3) (45 ± 5 Nm of torque)
- Switch to oil filling, using the dipstick (2), check that the oil level is between "MIN" and "MAX".
- Tighten the oil filler cover (I).

Use the appropriate engine oil specified in the "Oil and Fluid Specifications" section.

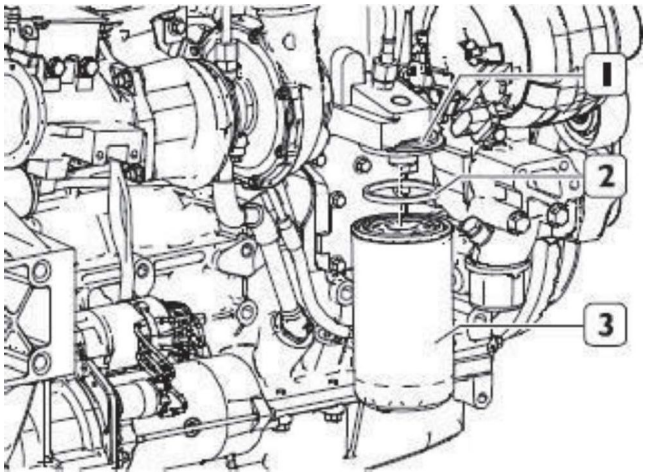
Fluid Level Check

The engine must be stopped and be cold before checking the oil level.

For oil level check;

- Pull the oil dipstick
- Wipe it with a clean cloth
- Place the stick and pull again
- Check the oil level
- If oil level is insufficient, add oil.

REPLACEMENT OF OIL FILTER



- Place a container under the filter support (4) to take out the oil
- Loosen and remove the filter (3) from the support to which it is attached
- Place the filter element and the sealing gasket (2) inside the filter
- Carefully clean the surface of the support.
- Slightly cover the sealing ring (2) of the new filter (3)
- Tighten the new filter (3) until it gets in contact with the sealing ring (2) (with 20 ± 2 Nm torque)
- Run the engine for a few minutes, check the oil level using the oil dipstick

ENGINE COOLING SYSTEM

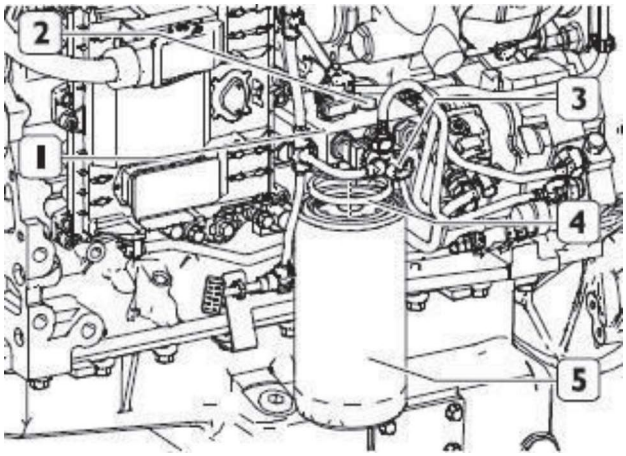
Engine cooling system ensures that the engine operates efficiently by keeping the engine at a suitable temperature range and prevents wearing of the engine parts by maintaining proper oil viscosity.
The system also cools the transmission. It meets the hot water requirement of the cabin heating system and heats the DEF tank at very low temperatures. The coolant used in the cooling system is a mixture of 50% water and 50% antifreeze. The freezing point of this mixture is -36°C and the boiling point +108°C. No additives shall be used in the coolant.

ENGINE COOLING, HEATER AND AIR CONDITIONING SYSTEMS LINE FILLING AND AIR RELIEF

1. Park the vehicle on a flat surface.
2. Open the top and side covers of the expansion tank.
3. Start filling the engine coolant with a mixture of 50% antifreeze and 50% water from the cover on the side of the expansion tank.
4. When the expansion tank is full, stop filling. Before starting the engine, wait for 1-2 minutes to allow a natural discharge of the air entered into the system and balancing the coolant levels. Then add water to the tank again.
5. Start the engine and open the three-way valve manually.
6. While the vehicle is running, keep on to add engine coolant to the expansion tank up to the maximum level.
7. When the engine is running cold, increase the engine speed gradually to ensure that sufficient oil is supplied to the engine bearings and the oil pressure is stable.
8. For air evacuation, run the engine at high idle speed and vent the air from the air relief valves on the cabin heater (the system air must also be discharged from the air relief valves on the cabin heater).
9. It takes about 15 minutes to discharge all the air in the heating system. Make sure the air relief is complete and close it.
10. Start the engine again and run at high idle speed until the coolant temperature reaches the thermostat opening temperature. The radiator grille can be covered with a cloth (linoleum, etc.) for reaching higher temperatures faster.
11. After the engine coolant temperature reaches the thermostat opening temperature (80-95°C), the engine should be run at this temperature for a further 5 minutes at high idle speed.
12. Allow the parts such as piston, cylinder, bearing and turbocharger to cool down sufficiently by running at low idle speed for 1 minute before starting the engine.
13. Close the engine and keep on to add engine coolant to the expansion tank up to the maximum level.

14. Restart the engine at high idle speed, raise the engine coolant temperature to the thermostat opening temperature value which is 80-95°C and hold for 1 minute at this temperature level.
15. Allow the parts such as piston, cylinder, bearing and turbocharger to cool down sufficiently by running at low idle speed for 1 minute before starting the engine.
16. Switch off the engine and add coolant to the expansion tank, if possible. If more than 1 litre of coolant can be added to the system, repeat the procedure from article 14.
17. During filling and air relief, check for any coolant leakage in the installation and main parts.
18. It is the responsibility of the customer to check the level of the coolant on a daily basis and if necessary to fill it.

REPLACEMENT OF FUEL FILTER



To replace the fuel filter:

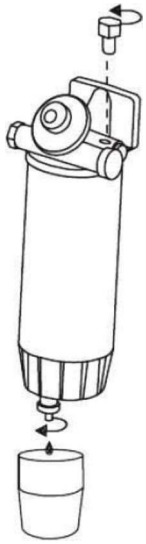
- Place a container under the filter support (I) to take out the oil
- Loosen and remove the filter (5) from the support to which it is attached
- Replace the filter element and the o-ring (4)
- Carefully clean the surface of the support (I) that contacts with the o-ring (4).
- Cover the o-ring (4) of the new filter with oil (5)
- Tighten the new filter (5) until it gets in contact with the seal (4) (with 20 ± 2 Nm torque)

FUEL WATER SEPARATOR

The fuel water separator is located in the upper right section when the rear engine cover is opened. Its function is to separate the water in the fuel and ensure that there is only fuel remaining inside the system.

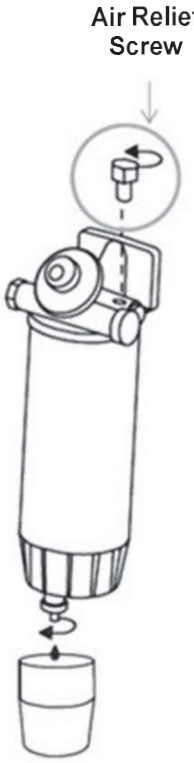
Fuel Water Separator Filter Element Replacement

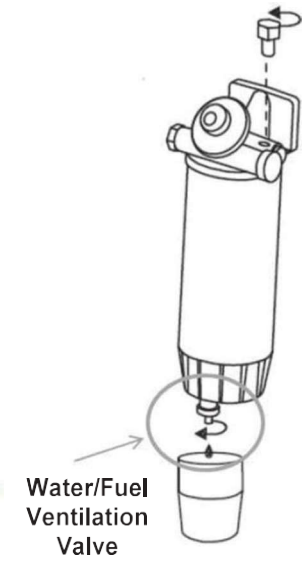
1. Discharging the Filter



The filter and the fuel line of the vehicle must be isolated from each other.

The air relief screw in the filter head must be opened. (After discharging, the relief screw must be tightened again, tightening torque should be 2.26 Nm and 3.39 Nm.)

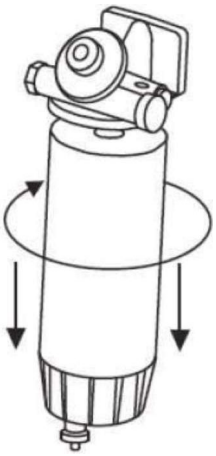




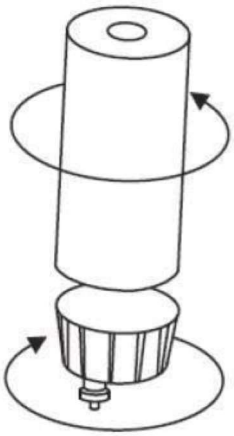
After the filter has been isolated from the fuel line, relief valve on the water tank must be rotated and all the fuel/water mixture in the filter should be drained.

2. Removing the Filter Element

After the filter is fully discharged, the filter element must be removed together with the water tank.
It is convenient to rotate it through the water tank while using an auxiliary tool.



3. Separation of the Filter Element and the Water Element



Separate the filter element from the water tank. Since it is reusable, do not throw away the water tank; you can fit it to the new item once you clean it.

4. Installation of the New Filter Element and Water Tank

Be sure to change the gasket on the water tank before combining the filter element and the water tank. Always lubricate the gasket with engine oil before attaching the appropriate gasket to the water tank supplied with the filter element.

Warning: No grease should be used when greasing the gaskets.

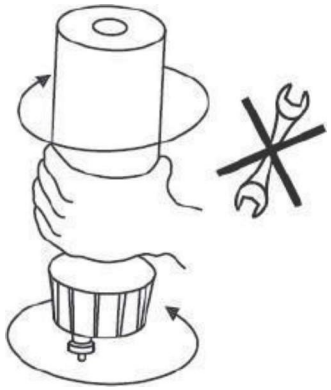
Be sure to change the gasket on the water tank before combining the filter element and the water tank. Always lubricate the gasket with engine oil before attaching the appropriate gasket to the water tank supplied with the filter element.

Warning: No grease should be used when greasing the gaskets.

5. Installation of the New Filter Element and Water Tank

No hand tool should be used while the filter element and water tank are connected. It would be sufficient to mount the two pieces together with a manual tightness.

You may damage the filter element when you operate with a hand tool or when you fix it on the clamp.



6. Installation of the New Filter Element and Water Tank to the Filter Head

Be sure to change the gasket on the water tank before combining the filter element and the filter head. Always lubricate the gasket with engine oil before attaching the appropriate gasket to the filter element supplied with the filter element.

Warning: No grease should be used when greasing the gaskets.

When the filter element and the filter head are combined, it will be sufficient to mount the two parts hand-tight without using a hand tool. If it is desired as the last operation, the filter must be rotated again 180 degrees from the water tank by hand tool.

You may damage the filter element when you operate with a hand tool or when you fix it on the clamp. Always use the hand tool from the water tank.

7. Feeding of Fuel to the System with Hand Pump

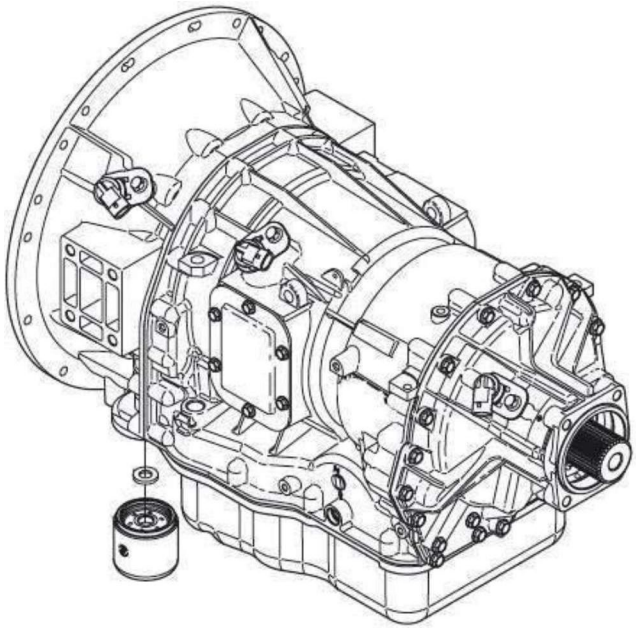
After the filter element is changed and the filter head is installed properly, the air formed in the system must be discharged. The hand pump must be pressed after the air vent screw is opened.

When the hand pump on the filter head is pressed, fuel starts to fill in the filter, and during this time, the air inside the filter element and the water tank is discharged from the place where the relief screw is located.

8. Closing the Air Relief Screw

After the screw is closed, it will be appropriate to feed the system with fuel several times by hand pump.
It can be observed through the water tank that the filter is filled with fuel.

TRANSMISSION MAINTENANCE



Ambient Temperature Limit Required for Preheating		
Viscosity grade	**Centigrade**	**Fahrenheit**
TES 295	-35 °	-31 °

Importance of the Transmission Oil

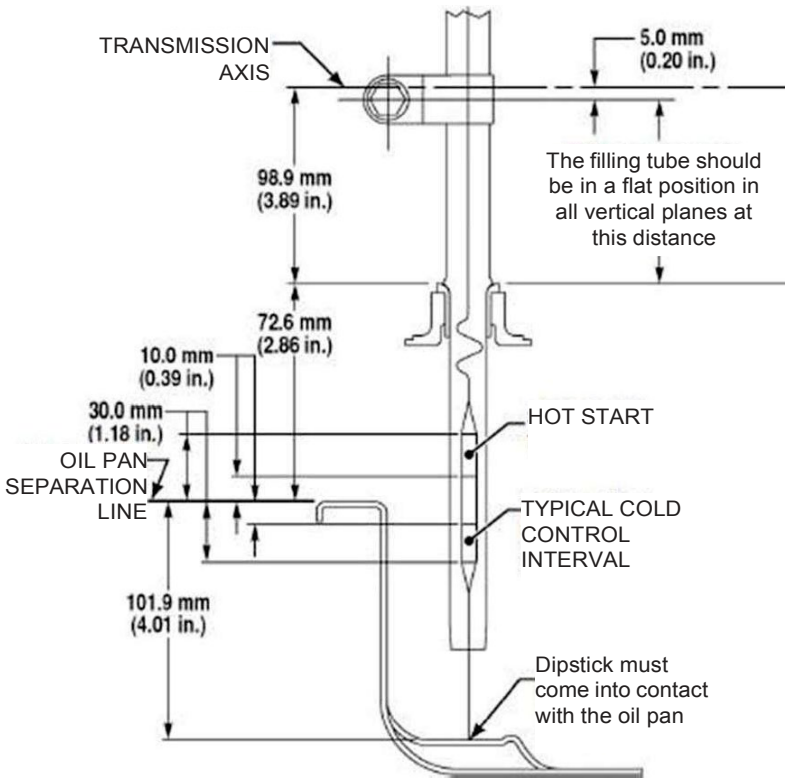
Choosing the right transmission oil is important in terms of the performance, reliability and longevity of the transmission. All oils that meet the TES 295 specification are suitable for use with this transmission.

When determining the optimum viscosity grade of the oil, the operating conditions of the vehicle, preheating properties and geographical position must also be taken into account. The table below lists the minimum oil temperatures at which the transmission can safely be operated during the first oil filling phase. Preheat the vehicle by operating it with auxiliary heating equipment for at least 20 minutes or when the vehicle is in the P (Park) or N (Neutral) position before running within the gear range.

Until the transmission temperature requirements are met, gear shifting is inhibited and the torque converter clutch mode is inaccessible. As the transmission reaches its normal operating temperature, all gear ranges and torque converter clutch mode starts running.

Transmission Oil Level Controls

Long Filling Tube and Dipstick



Manual Oil Control Procedure

Before removing the dipstick, clean the dirt around the top of the oil filling tube. Do not allow dirt or foreign materials to enter the transmission, otherwise the transmission parts may wear out early, causing the valves to become trapped and the channels to be clogged. Check the fluid level using the following procedure.

Cold Check Procedure

The purpose of the cold check is to determine whether there is enough oil to run safely until a HOT CHECK can be performed in the transmission.

As the fluid temperature increases, the fluid level increases. If the transmission oil temperature is lower than the normal operating temperature, never fill the transmission above the COLD CHECK range. An overfilled transmission can overheat while running and the transmission can be damaged. Excess oil also will be thrown out from the ventilation.

- Park the vehicle.
- Put a wedge under the wheels and take all precautions to avoid the vehicle to move.
- Run the engine for at least one minute. Press the brake pedal and shift the gear first to D (Drive), then N (Neutral) and then to R (Reverse) to fill the hydraulic system. Finally, shift the gear to P (Park) or N (Neutral) position, allowing the engine to switch to idle.
- While the engine is running, remove the dipstick from the pipe and wipe it clean.
- Insert the dipstick into the pipe and then remove it and check the fluid level. Repeat the control procedure to ensure that the value is correct.
- If the fluid level is within the COLD CHECK band, the transmission can be operated until the oil is heated to the level where HOT CHECK can be performed. If the fluid level is not within the the COLD CHECK band, add fluid or discharge it until it reaches to the centre of the COLD CHECK band.
- Apply HOT CHECK after it reaches 71°C - 93°C (160°F - 199°F) which is the normal oil pan temperature.

Hot Control Procedure

The oil must be hot for a proper control. As the temperature increases, the fluid level increases.

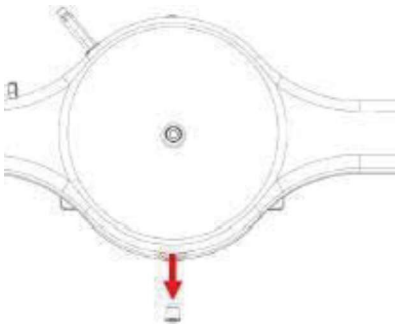
- Run at the gear D (Drive) until the transmission reaches its normal operating temperature:
  - The oil pan temperature is 71°C - 93°C (160°F - 199°F)
  - Converter output temperature is 82°C - 104°C (180°F - 219°F)
- Park the vehicle.
- While the engine is running, remove the dipstick from the pipe and wipe it clean.
- Insert the dipstick into the pipe and then take it out. Check the fluid level value. Repeat the control procedure to ensure that the value is correct.
- The safe level of operation is the level within the HOT RUN band on the dipstick. If the fluid level is not within the HOT RUN band, add or discharge it to bring it into the HOT RUN band.

Transmission Oil Capacity

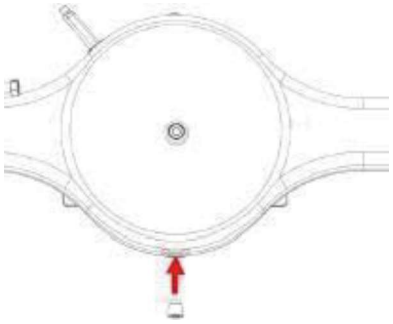
Oil pan tank	First fill	Refill
Standard	14 lt	11 lt

REPLACEMENT OF DIFFERENTIAL OIL

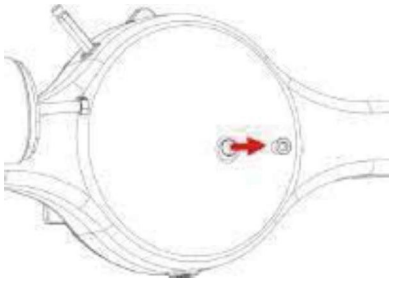
Place a bucket under the drain hole for used oil as the oil will drain when the magnetic plug is removed.



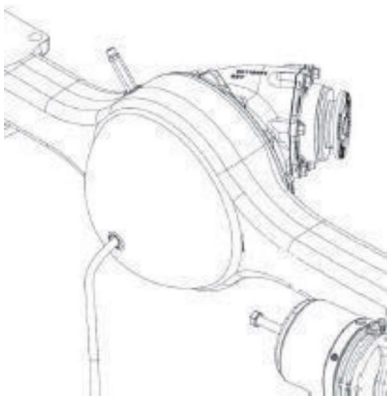
Remove the magnetic plug to drain the oil.



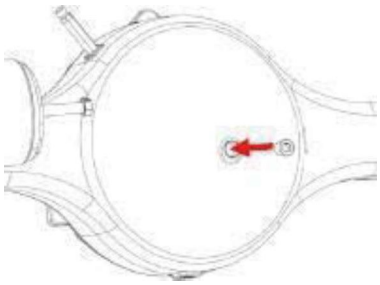
Re-install the magnetic plug, tighten with 60 Nm of torque.



Remove the plug.

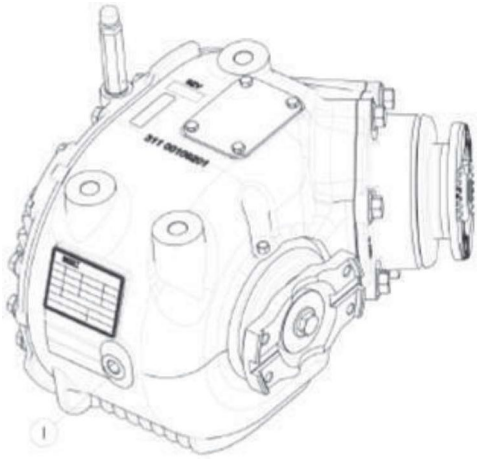


Fill in the oil. (Oil capacity: 5.7 lt)



Tighten the plug with 60 Nm of torque.

REPLACEMENT OF ANGLE DRIVE OIL



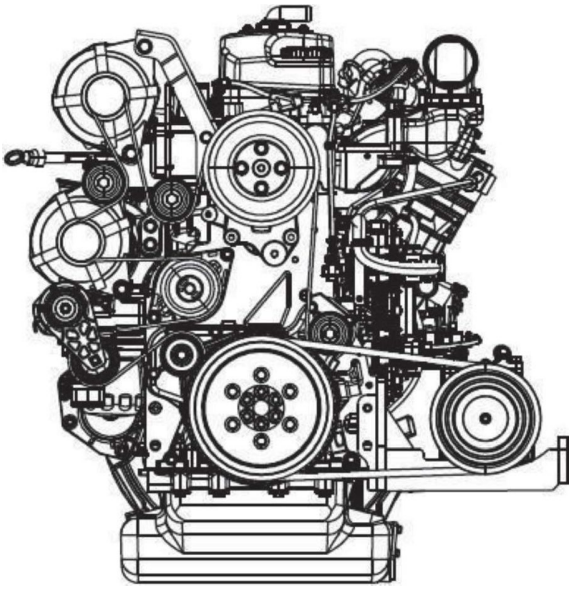
- Loosen and remove the plug (1)
  - Fill the oil
- Wait for 15 minutes
- Check the oil level
- Tighten the plug with 60 Nm of torque

CONTROL OF BRAKE DISCS AND LININGS

The brake lining wear indicator should be checked regularly. When the brake lining indicator reaches 10%, contact Isuzu service for replacement.

The right and left brake linings in the same axle shaft must be replaced together.
The original brake part defined by the vehicle manufacturer must be used.
The brake discs must also be checked and replaced when replacing the brake lining. Otherwise, brake performance may be adversely affected.

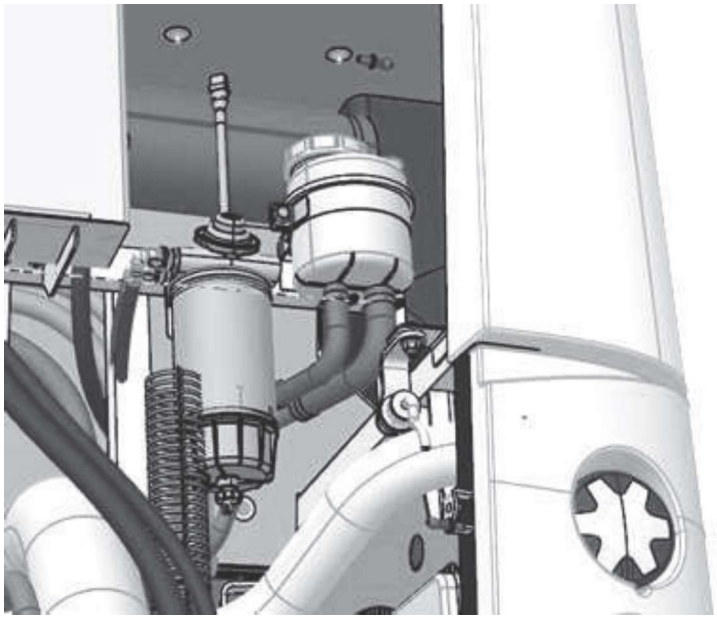
AIR CONDITIONER COMPRESSOR BELT

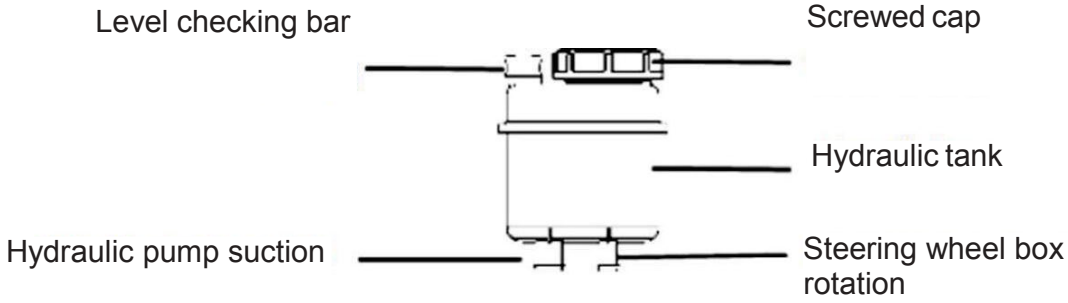


The air conditioner compressor belt is XPB.
When the belt is damaged or ruptured, please contact your authorized service.

STEERING WHEEL HYDRAULIC TANK

The engine is located on the upper right section when the engine rear cover is opened.





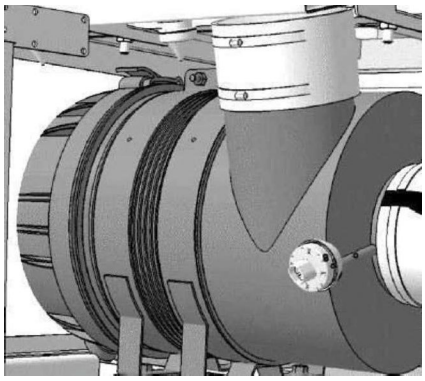
The tank has a screwed cap and oil level checking bar. Oil level check should be done every 3,000 km. The bar is removed for oil level checking, the bar has minimum and maximum lines, the oil level must be between these two lines. For the hydraulic steering wheel and the pump to operate smoothly, the oil specified by the vehicle manufacturer must be used.
The vehicle should not be started if there is not enough oil in the steering system; otherwise the steering wheel may be damaged. If the amount of oil is reduced, oil must be filled up to the maximum line in the bar.

WINDOW SPRINKLER WATER TANK

Window sprinkler water tank can be accessed by opening the front left body cover. A maximum of 10 liters of window washing water can be filled after opening the cover.

In cold weather, antifreeze should be used to prevent glass from freezing in cold weather.

CLEANING THE AIR FILTER



The air filter can be accessed by opening the left rear filter cover.
To clean the air filter, the rubber dust valve in the bottom part is squeezed from the edges to discharge the accumulated dust.

Air filter element
The air filter can be accessed by opening the left rear filter cover.

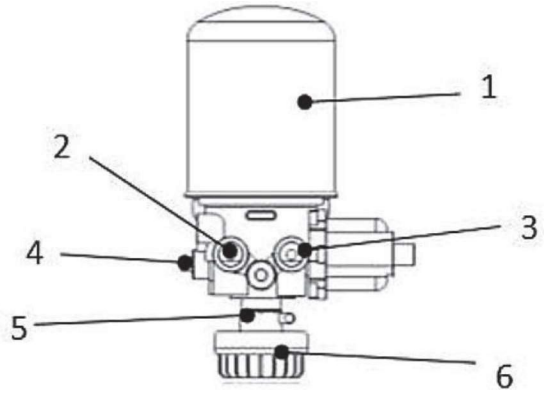
To clean the air filter, the rubber dust valve in the bottom part is squeezed from the edges to discharge the accumulated dust.

The air filter element must be replaced every 30000 km. To replace, follow these steps:

1. Open the lock on the cover
2. Turn the cover counterclockwise
3. Remove the cover from the frame
4. Remove filter element
5. Clean the frame and the cover

6. Install the filter element
7. Install the cover; the dust discharge valve on the cover should be in the lower position when the cover is locked.

AIR DRYER

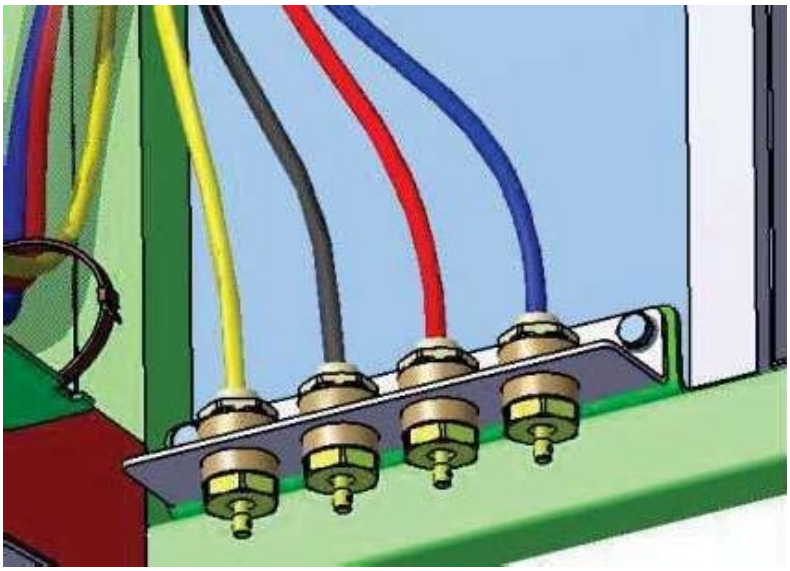


1. Cartridge
2. Compressor connection
3. 4 way valve connection
4. Heater
5. Air relief
6. Silencer

The air dryer is located behind the rear axle. The function of the air dryer is to regulate the air system pressure and to reduce the moisture and oil in the air supplied from the compressor. In the dryer, there is a heater that prevents freezing, which is activated especially at low temperatures and deactivated at high temperatures. The air dryer fills the system with air until the circuit breaker is activated at 8.6 bars. When the filling process is completed, it cleans itself by discharging the water and the oil which are accumulated in the lower part with pressure.

DRAINING WATER IN AIR TANKS

There are 4 air tank drain valves on the lower part of the front area of the left front tyre.



Drain water in air tanks daily by pumping manually.

REPLACEMENT OF WINDSHIELD WIPERS

There are two external wiper arms including right and left.

To replace the wiper blade, remove the bolt and ring nut in the middle of the blade (Figure 1 and Figure 2).

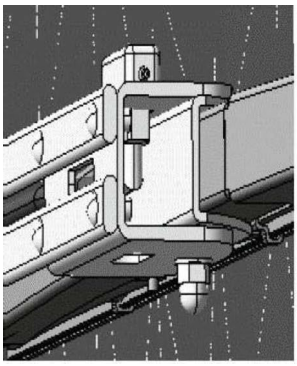


Figure 1

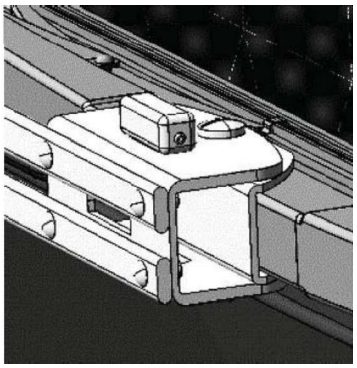


Figure 2

To replace the entire wiper arm, open the plastic cover at the point where the arm is connected to the vehicle body, remove the ring nuts and the wiper arm here (Fig. 3). When removing the wiper arm, the water sprinkler hose connected to the arm must be pulled and removed from the point it is connected to the vehicle body.

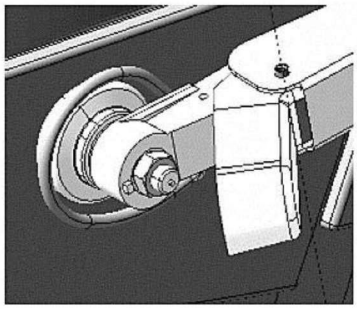


Figure 3

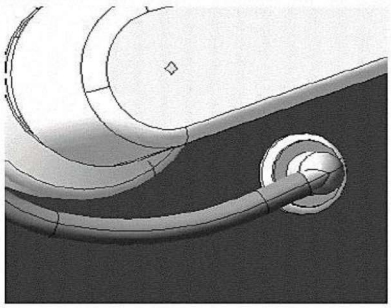


Figure 4

Wiper blades should be checked during the winter season and renewed if necessary. Interior mechanism of the wipers must be changed by authorized service personnel.

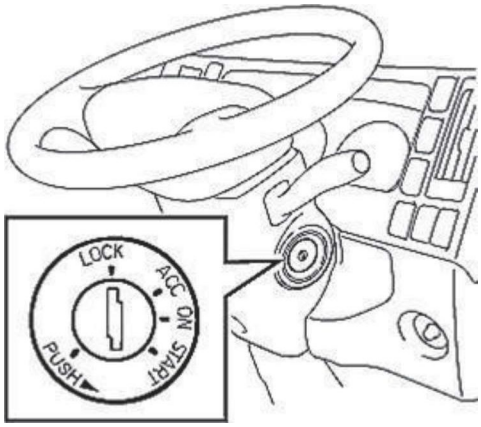
FUSES/RELAYS

The fuse and the relays are located in the lower right cabin at the front door entrance of the vehicle. The fuse label is on the console cover. The fuses used in the vehicle are of blade type. When a short circuit or malfunction occurs in the system, the corresponding fuse trips to protect the electronic parts. After the power fault is eliminated, it is replaced by a fuse with the same amperage value.

PRECAUTIONS FOR BATTERY USAGE

Keep the battery clean. If the battery is left in a dirty condition, the contaminants may mix with the battery fluid, the battery plates may be damaged, a short circuit may occur at the upper section of the battery and the service life of the battery may be reduced.

While Performing Checking or Maintenance Operations



Before checking and maintenance of the battery and other parts of the electrical system, turn the ignition key to the "LOCK" position, turn all other switches to the "OFF" position and disconnect the negative cables of the battery.
If the battery is checked or serviced while it is connected, danger of electric parts damage occur.

Removal of the Battery

When the battery is unplugged, first disconnect the battery cable from the negative terminal. If the battery cable is connected to a negative terminal, in case of contact of the tools with the positive terminal, a short circuit may occur in the vehicle and cause dangerous electric shocks. The electrical system can also be damaged.

If the battery switch will be turned off, you should wait at least 3 minutes after the ignition is switched off to avoid damage to the ECM.

Charging The Battery

- Before replacing the battery, remove the battery from the vehicle, put it in a well ventilated place and remove the battery covers. If the battery is to be charged while it is in the vehicle, be sure to disconnect the battery cables first.
- Make sure it is switched off when a charger is connected to or removed from the battery.
- In case of fast charging, battery cables must be disconnected. Failure to implement this measure may result in fuel consumption in the alternator.

Installing the Battery

1. When installing the battery to your vehicle, be sure that its directions are set correctly and that it is securely installed without any looseness. If the battery is not inserted properly, the battery box and the battery plate can be damaged as a result of the shocks during the drive.
2. When connecting the battery cables, start with the positive terminal and then connect the negative terminal.

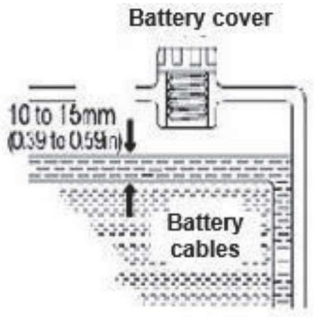
Direct Use of the Battery as a Power Source

The battery should not be used directly as a 12 volt power supply.
If you need to use the battery directly as a power source, consult your Isuzu authorized service.

Checking the Battery Water Level

Daily Check
Open the battery cover and check if the fluid inside the battery chamber is within the specified range.
The surface of the battery fluid should be between the "TOP LEVEL" and the "BOTTOM LEVEL". If you cannot see the fluid surface easily, shake the vehicle slightly.
If there is no level mark in the frame, 10-15 mm gap from the top of the battery plates is considered acceptable.

Filling the Battery Water



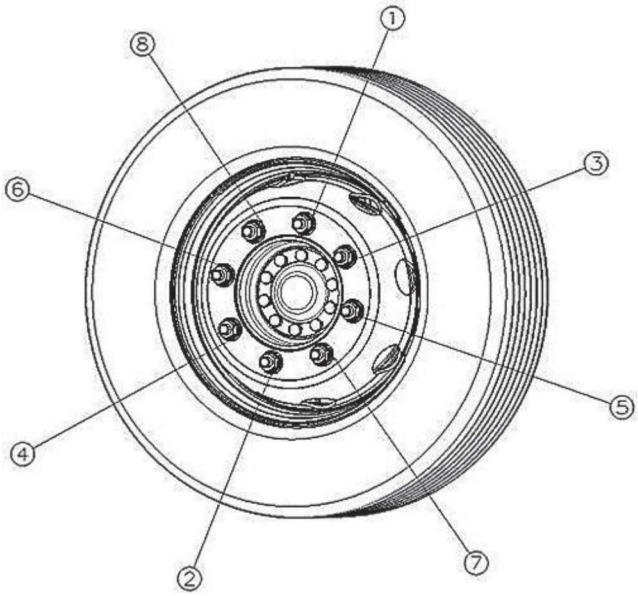
If the amount of battery fluid inside the battery is insufficient, remove the covers and add pure water until the surface is close to the "TOP LEVEL" mark or until it is 10-15 mm to the battery plates from the top. After you have finished checking the oil level, install the cap and the cover securely.

- The battery water should never be filled up to the top of the "TOP LEVEL" line. Failure to observe this precaution may cause battery water to spill and battery terminals and other parts to wear out. The spilled battery water should be cleaned with water immediately.
- After the battery water is added, the battery must be recharged (by driving). If you do not recharge the battery in the winter months, the battery water may freeze and the battery box may be damaged.
- If the battery water level continues to fall rapidly which can rarely occur, get a service at the nearest Isuzu service immediately.

USING JACK AND CHANGING TYRES

The jack points on the vehicle are in front of the front wheels and behind the rear wheels. When using a jack;

- Make sure the relief screw is tight
- Use your own jack lever to lift the jack
- To lower the jack, turn the relief screw two turns to the left. Tyre replacement;
- Place a wedge on the tyre opposite to the tyre you are lifting crosswise
- Loosen but do not remove the wheel nuts of the tyre to be replaced
- Lift the vehicle using the jack point at the rear of the tyre to be replaced until the tyre is completely separated from the ground
- Remove the wheel nuts and the tyre
- Install the spare tyre
- Make sure the tyre fits
- Tighten the transverse bolt nuts in three steps with a torque of 500 ± 50 Nm.

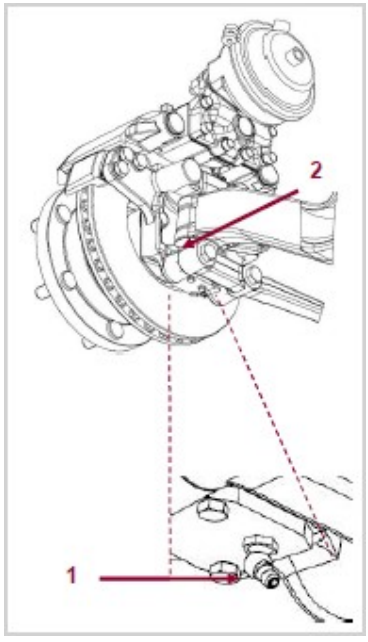


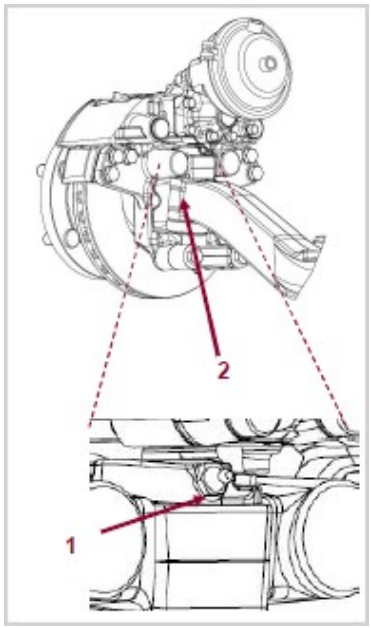
- Slightly loosen the relief screw on the jack to lower the vehicle.

- Make sure that the jack is placed on a flat and solid ground
- Do not operate the engine while the vehicle is on the jack
- Do not drive while a jack is being used
- Get the passengers out during tyre change
- Make sure the vehicle is parked, pull the parking brake and flash on the hazard lights.

NOTE: If the tyre pressure is constantly decreasing, there may be an object stuck to the tyre. Check for leaks in the tyre or in the valve.

GREASING FOR KING PIN





- Grease the lower set of bearings of the king pin via the grease plug (1).
- Grease until the grease comes out between knuckle and axle beam (2).

NOTE: This operation must be done every time the king pin is disassembled or every 30.000 km.

PERIODICAL MAINTENANCE

Daily Maintenance

- Check the tyres.
- Check the brakes.
- Check the engine coolant level.
- Check the engine oil level. If oil level is insufficient, add oil.
- Discharge the water that is condensing in air tanks (especially in winter).
- Check the DEF level.
- Check the transmission oil (electronic control).
- Check if the exterior lighting lamps are suitable for a safe drive.
- Check the air intake hoses, exhaust pipes and belts
- Check the fan system for hydraulic leaks.
- Discharge the water that accumulates in the fuel water separator.
- Check bus accident and original parts situation.
- Check corrosion chassis and parts of body.

Weekly Maintenance

- Check tyre pressures with an air meter.
- Check the power steering fluid tank level.
- Check the air suspension bellows (for hole, damage, etc.) while the engine is running.
- Check the air cleaner limit.
- Check the glass wash water level.
- Check the water that accumulates in the fuel water separator.
- Discharge the water that accumulates in the fuel separator.
- Check washing the entire bus weekly, making sure to remove all road chemicals
- 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

Periodic Maintenance Table

The main periodic maintenance interval is 240000 km. Maintenance after 240000 km is the same as maintenance intervals after 30000 km.

I: Inspect then clean, repair or replace as necessary

A: Adjust

R: Replace

NOTE : Replace the filters/fluid before the recommended distance or month (whichever is before)

Service Interval (x1000 km)	30	60	90	120	150	180	210	240	Month/Hour*
Engine malfunction diagnostics	I	I	I	I	I	I	I	I	
Engine oil [1]	R	R	R	R	R	R	R	R	12 / 800
Engine blow-by filter	R	R	R	R	R	R	R	R	12 / 800
Valve clearance setting				A				A	48
Oil filter [2]	R	R	R	R	R	R	R	R	12 / 800
Fuel filter		R		R		R		R	24 / 1600
Fuel water separator filter		R		R		R		R	12 / 1600
Engine component holder	I	I	I	I	I	I	I	I	12
Engine coolant	R : every 24 months								
Coolant density	I : every 12 months								
Air filter element [3]		R		R		R		R	12 / 1600
Air dryer filter	R	R	R	R	R	R	R	R	12
Discharging the cooling tank		I		I		I		I	
Fuel tubes and hoses	I	I	I	I	I	I	I	I	
Cooling system leakage	I	I	I	I	I	I	I	I	
Fan function	I	I	I	I	I	I	I	I	
Fan clearance control and adjustment	A	A	A	A	A	A	A	A	
Urea system leakage	R : every 12 months								
Diesel particulate filter	R : every 300.000 km								
Exhaust brake	I	I	I	I	I	I	I	I	
Urea pump filter	R : every 300.000 km								
Turbocharging visual	I	I	I	I	I	I	I	I	12
Exterior cleaning of radiator		I		I		I		I	
Oil pan ventilation hoses and radiator pressure cover			I			I			
Belt tension and damage	I	I	I	I	R	I	I	I	
Intercooler, pipes and air compressor	I	I	I	I	I	I	I	I	
Vibration damper					I				
Transmission oil A/T (w/o retarder)				R				R	36 / 3000
Transmission oil filter A/T (w/o retarder)		R		R		R		R	24 / 2000
Transmission oil A/T [4] (w/ retarder)	R : every 240.000 km or 48 months or 6000 hours								
Transmission oil filter A/T [5] (w/ retarder)				R				R	36 / 3000
Transmission oil M/T [6]				R				R	12
Transmission oil leakage	I	I	I	I	I	I	I	I	
Transmission bolt torque	I	I	I	I	I	I	I	I	
Grease the king pin bearing	L	L	L	L	L	L	L	L	
Front axle caps	I	I	I	I	I	I	I	I	
Front axle bushing	I	I	I	I	I	I	I	I	
Differential oil		R		R		R		R	12
Differential blow-by filter [7]	I	I	I	I	I	I	I	I	12
Angle drive oil	R	R	R	R	R	R	R	R	12
Rear axle and brake caliper connection	I	I	I	I	I	I	I	I	
Hydraulic steering oil	R : every 240.000 km or 24 months								

Service Interval (x1000 km)	30	60	90	120	150	180	210	240	Month/Hour*
Oil leakage in the power steering system	I	I	I	I	I	I	I	I	
Hydraulic steering connection	I	I	I	I	I	I	I	I	
Hydraulic steering hose	I	I	I	I	I	I	I	I	
Tyre nuts	I	I	I	I	I	I	I	I	
Tyre air pressure	I	I	I	I	I	I	I	I	
Hub bearing	I	I	I	I	I	I	I	I	
Brake tube and brake hose leakages	I	I	I	I	I	I	I	I	
Brake linings and disc control	I	I	I	I	I	I	I	I	
Clutch fluid	I	I	I	R	I	I	I	R	24
Looseness in the shock absorbers and couplers	I	I	I	I	I	I	I	I	
Level valves	I	I	I	I	I	I	I	I	
Air boots	I	I	I	I	I	I	I	I	
Brake, signal, parking, fog and brake lamps	I	I	I	I	I	I	I	I	
Interior lighting	I	I	I	I	I	I	I	I	
Windshield wiper and windshield wash system	I	I	I	I	I	I	I	I	
Fuse panel electric cabling and socket connections	I	I	I	I	I	I	I	I	
Battery connection cables	I	I	I	I	I	I	I	I	
Battery electrolyte condensation	I	I	I	I	I	I	I	I	
Engine starter electrical connections			I			I			
Pneumatic door adjustment	I	I	I	I	I	I	I	I	
Safety equipment function of all doors	I	I	I	I	I	I	I	I	
Air leakage of the door elements, damage, tightness and door function	I	I	I	I	I	I	I	I	
Rearview mirrors connection	I	I	I	I	I	I	I	I	
Gas, brake and clutch pedal	I	I	I	I	I	I	I	I	
Wear of chassis and body parts			I			I			
Replacement of the addition heating fuel filter (replace sooner if necessary)		R		R		R		R	
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								
Air conditioner compressor oil	I : every 24 months & R : when decreased								
Refrigerant and oil	I : every 24 months & R : when decreased								

NOTE

- * The clock shows the total running time of the engine, including idling.
- [1] Change engine oil every 30.000 km or every 12 months or 800 hours. Perform every year even if the specified operating hour interval is not reached. Oil sump minimum and maximum levels are 6.8 lt and 11 lt respectively.
- [2] Change oil filter every 30.000 km or every 12 months or 800 hours. Perform every year even if the specified operating hour interval is not reached.
- [3] The air filter element should be replaced every 60.000 km or 12 months or 1600 hours or when the air filter warning is lit.
- [4] These values are valid for Allison TES 295 approved fluids. For other fluids, change transmission oil every 30.000 km or 6 months or 500 hours.
- [5] These values are valid for Allison TES 295 approved fluids. For other fluids, change transmission oil filter every 30.000 km or 6 months or 500 hours.
- [6] The first oil change period in manual transmission is 360.000 km or 36 months. After 360.000 km or 36 months, change manual transmission oil every 120.000 km or 12 months.
- [7] Clean differential blow-by filter at every inspection.
- For fire extinguishing system, the extinguishing fluid should be replaced every 5 years and the tanks should be replaced every 10 years.
- In difficult conditions (frequently repeated short driving distances, dusty or rough roads, trailer maintenance or mountain climbing) maintenance intervals should be reduced by half.
- The air intake filters of the air conditioner should be removed and cleaned on a weekly basis. The time may be extended depending on the pollution situation. Since
- air conditioner air intake filters can be reused, they are not easily deformed. It should be changed when there is excessive deformation and visible deformation of the filter.
- Air dryer filter must be replaced every 30.000 km or every year.
- Suspension bushings (stabilizer and other) should be replaced if 30.000 km wear control is required.

6. TECHNICAL **INFORMATION**

Dimensions (mm)	
Maximum length	8010
Maximum width	2435
Maximum height	2887 (without air conditioner) 3184 (with air conditioner)
Wheelbase	4259
Front overhang	1940
Rear overhang	1664
Front track width	2081
Rear track width	1900
Inner height	2475
Masses (kg)	
Gross vehicle mass	10755
Front axle capacity	4255
Rear axle capacity	6500
Engine	
Model	FPT NEF4
Type	Electronic Common Rail Turbo Diesel Intercooler
Number of cylinders	4
Engine volume	4500
Maximum power (kW/ rpm)	137 kW @ 2500 rpm
Maximum torque (Nm/ rpm)	680 Nm @ 1400 rpm
Maximum speed	90 km/h
Exhaust gas emission class	Euro VI
Gearbox	
Model	MT : ZF 6S 1010 BO AT : ALLISON 2100 (Opt.)
Number of gears, Type	6 forward, 1 reverse, manual
Final gear ratio	4.454
Steering system	Hydraulic
Tyres	225/75 R17.5
Suspensions	
Front	Air suspension - rigid axle
Rear	Air suspension
Brake system	
Front/Rear	Disc / Disc
System	Full air brake system with automatic adjuster dual circuit and ABS
Parking brake	Air actuated acted on rear axle
Fuel Tank (lt)	130
Diesel exhaust emission fluid tank (lt)	30
Generator	
Nominal voltage	24 V
Battery	24V(2x12) 125Ah
Air Conditioner	Capacity : 22 kW + 5.56 kW

NOTE : The stated technical values are approximate and may vary depending on the vehicle type and options.

PRESSURE VALUES		
Four Circuit Protection Valve	Static Closing Pressure	> 5.5 bar
Air Dryer	Minimum Cut in Pressure	7.2 bar
Air Dryer	Maximum Cut out Pressure	9 bar
Tyres	Cold Inflation Pressure	7.25 bar / 105 psi

OIL AND FLUID SPECIFICATIONS			
DESCRIPTION	CAPACITY	NORM	CLASS
Engine oil	11 lt	SAE 10W 40	CES-20086, API CK-4 or CES-20081, ACEA E-9
Transmission oil (A/T)	11 lt	ATF	ALLISON TES 295
Transmission oil (Manual)	9 lt	SAE 75W 80	ZF TE-ML 02E
Differential oil & rear axle	5.7 lt	SAE 80W 90	API GL5
Angle drive oil	3 lt	SAE 75W 90	API GL5
Hydraulic steering fluid	4.5 lt	GM Dexron-III	AUT RAN DX III
Air conditioner compressor oil	600 cc	Viscosity ISO 46	ZXL 100PG POE oil
Antifreeze (50%) + Water (50%)	43lt	CES 14603 or ASTM D6210	
Refrigerant	4.5 kg	1,1,1,2-Tetrafluoroethane (Refrigerant R134)	LINDE

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	Presečki grupa d.o.o.	Frana Galoviča 15 49 000Krapina	+385 (0)49 328 000
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	Auto Cacak Komerc Doo	Bore Stankovica 16 11 030 Belgrade, Makiš	+381 32 376 228
SLOVAKIA	Turancar	Bratislavská 29 94901 Nitra	+421 37 6555 777