CITIPORT

USER MANUAL

ANADOLU ISUZU

Revision No : 01

It is a symbolic photograph of Citiport vehicle.

FOREWORD

This user manual is prepared to give general information about the efficient and most economical use of **E6 Citiport** 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.S. reserves the right to change without any prior notification.

Thank you for choosing this product.

We wish you a nice drive.

Anadolu Isuzu Automotive Industry and Trade Inc.

Headquarters : Fatih Sultan Mehmet Mah. Balkan Cad. No : 58 Buyaka E Blok
Tepeüstü 34771 Ümraniye / İSTANBUL

Factory : Şekerpınar Mah. Otomotiv Cad. No : 2 41435 Çayırova / KOCAELİ

Telephone : 0850 200 1900

e – mail : isuzu@isuzu.com.tr

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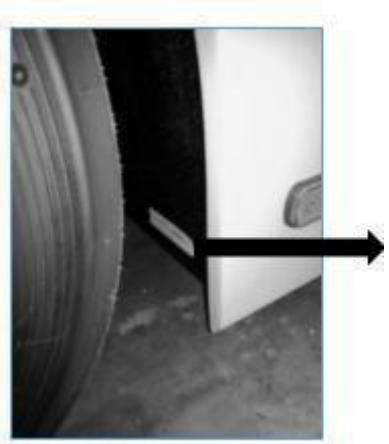
1.INTRODUCTION

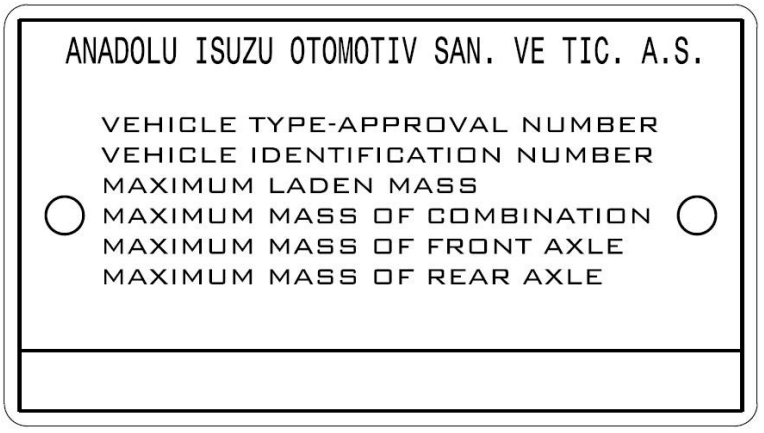
It is a symbolic photograph of Citiport vehicle.

CHASSIS NUMBER



The chassis number of the vehicle is available on the internal cover of tin plate of the front-wheel slot.

IDENTIFICATION PLATE



The identification plate is in the front door entry, under the right front seat. Type approval number, VIN number, the sum of the maximum axle load, maximum front axle load and the maximum rear axle load datum are located on the identification plate.

VIN number includes the vehicle's chassis number info along with vehicle model, maximum loaded weight, engine type, driving system, wheel base, and production place codes.

A detailed description of the composition of the VIN

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

(SAMPLE)

1 - 3	INTERNATIONAL WMI NO:	NNA:	(AIOS) ANADOLU ISUZU OTOMOTIV SANAYI VE TICARET ANONIM SIRKETI
4	MODEL LINE	M:	BUS GROUP
5	GVW OR CAP ACITY RATING	N:	14 PASSENGER SEATS
		H:	17 PASSENGER SEATS
		8	18 PASSENGER SEATS
		F	19 PASSENGER SEATS
		G	20 PASSENGER SEATS
		L	21 PASSENGER SEATS
		B	22 PASSENGER SEATS
		C:	23 PASSENGER SEATS
		4:	24 PASSENGER SEATS
		E:	25 PASSENGER SEATS
		M:	26 PASSENGER SEATS
		D:	27 PASSENGER SEATS
		R:	28 PASSENGER SEATS
		P:	29 PASSENGER SEATS
		T:	30 PASSENGER SEATS
		K:	31 PASSENGER SEATS
		S:	32 PASSENGER SEATS
		U	33 PASSENGER SEATS
		V	34 PASSENGER SEATS
		5	35 PASSENGER SEATS
		6	36 PASSENGER SEATS
		7	37 PASSENGER SEATS
		Z:	38 PASSENGER SEATS
		9	39 PASSENGER SEATS
		A:	43 PASSENGER SEATS
		0	INDEPENDENT FROM SEAT NUMBER
6	MODE EXTE NSION	S:	STANDARD TYPE
		A	DELUXE TYPE WITH AIR SUSPENSION
		Z	DELUXE TYPE WITH AIR SUSPENSION (EURO EXPORT)
		L:	DELUXE TYPE WITH MECHANICAL SPRINGS
		B:	PUBLIC TRANSPORT TYPE
		H:	STANDARD TYPE WITH ACTUATED DOORS
		E:	PUBLIC TRANSPORT (ALGERIAN EXPORT TYPE)
		2	INTERURBAN TYPE
7	ENGINE MODEL	D:	CUMMINS ISB6.7E5 300B
		E	CUMMINS ISB6.7E6 280B
		G:	CUMMINS ISLG 6B 300
		C:	CUMMINS ISLG 6C 300
		F:	CUMMINS ISB6.7E6C280B
		H:	CUMMINS ISB6.7E6C300B
8	DRIVING SYSTEM	L: R:	LEFT HAND DRIVE RIGHT HAND DRIVE
9	WHEEL BASE	B:	5850mm
10-11	MANUFACTURING PLANT	01: 02:	AIOS KARTAL PLANT AIOS GEBZE PLANT
12-17	PRODUCTION SEQUENCE NO		

ENGINE NUMBER

Engine number is indicated in 2 places on the engine.

On the engine identification label on the cylinder head cover.

On the body of the oil cooler in the engine block.

VEHICLE WARRANTY

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

OPTIONS

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

- Air conditioner with heater
- Preheater
- Automatic engine oil refill system
- Automatic fire extinguisher system at engine room
- Colored front route indicator panel
- Pre-arrangement for ticket vending
- Fuel tank flapped cap
- Information panel for passengers (at the rear)
- Water Heater/Cooler for Driver

RECOMMENDATIONS / WARNINGS

- Use only specified fuel (EN590 suitable sulfur content maximum 10ppm) in your vehicle.
- Use diesel exhaust emission fluid suited for DIN70070.
- Do not load your vehicle over its passenger capacity and do not change the places of the seats. Our factory is not responsible for the problems arising as a result of a change in the load balance of the vehicle.
- Examine exhaust pipe from time to time. If you see a damage (for example, a damaged connecting member caused by abrasion or a hole or a crack, corrosion and leaks in pipes ports), take it to the nearest authorized service for control and maintenance.
- Control the wheel pressures frequently and be sure that they are always at the right value.
- In order to control tire degradations, get pre-layout settings to be controlled in every 20000 km.
- Control the main and dipped beam settings, do not drive with defective headlights.
- Control brake, parking and plate lamps frequently, do not drive with defective or mud covered brake, parking and plate lamps.
- Take care of the maintenance of your vehicle to be done in authorized services in time and regularly in order to provide maximum performance in your vehicle.
- When the fluids such as waste oil, brake fluid and antifreeze you use in your vehicle and scrap batteries are thrown away indiscriminately, this gives great damage to the environment. Take care of eliminating such hazardous wastes in accordance with environmental regulations.
- Empty cans, bottles or other articles rolling on the floor, is extremely dangerous, be sure that especially the floor around the driver's seat is clean and tidy.
- Be sure that there are no combustible materials under or around the vehicle before starting it. The existence of such materials may cause fire.
- Be sure that you had trimmed the seat, steering wheel and the mirrors suitable for your correct driving position before the drive.
- Always wear your seat belt.
- Take care of front and side windows to be clean, keep the blinds not hindering your visibility and driving.
- Do not raise the speed of the engine before it was heated enough.
- Drive your vehicle carefully by complying with traffic rules and the road condition.
- If you realize an abnormality in a wheel during the drive, stop immediately in a safe place.
- If you go on your way with a deflated tire, this may cause the breaking of the bolts and the remove of the wheel by applying too much force to the wheel studs.
- Drive at a constant speed to the utmost. It is the waste of fuel to heat the engine overmuch and to make the engine high-speed.

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

2. GENERAL INFORMATION

STARTING THE ENGINE

Bring main switch to “ON” and the transmission to “N” position. By bringing the ignition switch to “M” position, turn it and press the starter button (“D” position).

Do not run the starter more than 30 seconds and do not press the accelerator pedal while operating. Wait two minutes between every attempt to run.

If the engine oil warning light does not turn off in 15 seconds, stop the engine in order to prevent the harm of it. Apply to the authorized service.

After starting the engine, run at idle for 3-5 minutes, increase the engine speed slowly. Do not run the engine over maximum speed, this may cause serious damages to the engine.

Starting The Engine In Cold Weathers

Bring main switch to “ON” and the transmission to “N” position. By bringing the ignition switch to “M” position, when the glow light turns off, turn the ignition switch (“D” position) and press the starter button.

If the vehicle would stay in parking for a long time (more than 1 days), bring the main switch to off position.

STOPPING THE ENGINE

Stop the engine by bringing the ignition switch to “St” position.

Do not close the main switch before 70 seconds when the ignition switch is on and after it is off.

OPENING AND CLOSING THE DOORS

The front door of the vehicle is opened/closed from the outside with the remote control. There are door open/close switches in front control panel in order the doors to be opened/closed from the inside.

Opening Doors in Emergencies

There are air drain taps above the doors for emergencies. Evacuate the air by turning the tap clockwise when necessary and open the doors by pulling them inward.

There are also air drain taps on the sides of the doors for opening the doors from outside when necessary. Turn the tap clockwise and open the door by pushing it inward.

There is also a red lock on/off control above the door for opening the door when the vehicle is locked with a key from outside, or in the event that there are passengers inside. The control is turned in the direction of the arrow when necessary and the air is evacuated by turning the air drain tap above the door, the door is opened by pulling inward.

EMERGENCY EXITS

In emergency cases, emergency exit may be ensured by breaking the windows at the right and left of the vehicle and on the trapdoor with the help of emergency attractive.

STEERING WHEEL ADJUSTMENT

Steering wheel may be adjusted to up, down, front and back according to the comfortable drive of the driver. For this adjustment, steering wheel level adjustment switch on the front control panel is used. There have to be enough air pressure in the vehicle during adjustment.

3. CONTROLS AND INDICATORS

DRIVER CONTROL PANEL

Driver Control Panel covers**;**

Front Control Panel

Side Control Panel

Gauge and Warning Lights Panel

FRONT CONTROL PANEL

1. Electrical Front Curtain Switch
2. Electrical Front Curtain Switch
3. Front Roof Vent Switch
4. Rear Roof Vent Switch
5. Ceiling Light Switch
6. Driver Ceiling Light Switch
7. ASR Cancel Switch
8. Outside Rearview Resistance Switch
9. Driver Side Window Resistance Switch
10. Steering Wheel Level Adjustment Switch
11. Optional
12. Hazard Switch
13. Optional
14. Optional
15. Optional
16. Headlights/Parking/Front-Rear Fog Lights Control Switch
17. Optional
18. Optional
19. Route Indicator Switch
20. Heater Switch
21. Switch which determines the operating mode of the front door
22. High Driving Switch
23. Tilting/Normal Level Switch
24. Optional
25. Optional
26. Disabled Passenger Ramp Switch
27. Optional
28. Optional
30. Front Door Wing Selecting Switch
31. Middle Door Open/Close Switch
32. Back Door Open/Close Switch
33. Middle and Back Door Open / Close Switch
36. Optional
37. Automatic Transmission Control Buttons
50. Retarder Control Lever
51. Ignition Switch
52. Signal and Wiper Lever
53. 7“ LCD Display

NOTE : The places of the switches may vary from vehicle to vehicle.

1. -2. Electrical Front Curtain Switch

It is used for opening and closing the curtain in front of the driver. When it is pressed on the lower end of the switch, curtain goes down. When the switch is released, the movement of the curtain stops and remains in the level which it was lowered. When it is pressed on the upper end of the switch, the curtain moves upstream.

3. Front Roof Vent Switch

When pressed on the upper end of the switch, front roof vent is opened. It is closed when pressed on the lower end of the switch. The backlights flash during the up and down movements of the roof vent. The backlight illuminates when the roof vent is opened. The roof vent is automatically closed when the heater, air condition or wipers were operating.

4. Rear Roof Vent Switch

When pressed on the upper end of the switch, rear roof vent is opened. It is closed when pressed on the lower end of the switch. The backlights flash during the up and down movements of the roof vent. The backlight illuminates when the roof vent is opened. The roof vent is automatically closed when the heater, air condition or wipers were operating.

5.Ceiling Light Switch

Function lamp lights up when pressed on the switch. The switch has 3 positions.

- When pressed on the upper end, partial lighting is obtained.
- It gets closed when it was in the middle position.
- When pressed on the lower end, full lighting is obtained.

6.Driver Ceiling Light Switch

The lights are on when pressed on the lower end of the switch, and off when pressed on the upper end.

7. ASR Cancel Switch

ASR system breakdowns when pressed on the lower end of the switch, and the system activates when pressed on the upper end.

8. Outside Rearview Resistance Switch

Outside rearview heating activates when pressed on the switch. When pressed again it breakdowns right away; when it is not pressed, it breakdowns automatically after 500 seconds. The backlight of the switch lights up during the heating.

9. Driver Side Window Resistance Switch

Driver side window heating activates when pressed on the switch. When pressed again it breakdowns right away; when it is not pressed, it breakdowns automatically after 500 seconds. The backlight of theswitch lights up during the heating.

10. Steering Wheel Level Adjustment Switch

The vehicle is equipped with air assisted adjustment system in terms of ensuring ease of setting. Steering wheel adjustment lock is opened when pressed on the switch, after setting the steering wheel is locked by pressing the switch again.

12. Hazard Switch

The hazards begin to operate when pressed on the lower end of the switch, they stop when pressed on the upper end. When pressed on the switch, signal warning lights on the indicator panel and the function lamp on the switch flash with all the signal lights of the vehicle andgive an audible warning.

16. Headlights/Parking/Front-Rear Fog Lights Control Switch

When it is in “0” position and turned to right once, parking lights lit, when turned one more time, headlights lit. When the switch is pulled up while the parking lights or dipped headlights were lighting, front fog lights turn on; if it is pulled up one more time, rear fog lights turn on.

19. Route Indicator Switch

Route display activates when pressed on the upper end of the switch, and breakdowns when pressed on the lower end.

20. Heater Switch

When pressed once on the lower end of the switch, 1st level activates; when pressed twice, 2nd level activates; when pressed for the third time, it breakdowns.

21. Switch Which Determines The Operating Mode of The Front Door

When pressed on the upper end of the switch the left wing, when pressed on the lower end the right wing, when remained in the middle both wings of the front door open and close.

22. High Driving Switch

This switch is used in the vehicle for a higher driving level than normal. The vehicle comes to a higher level when pressed on the upper end of the switch, and it comes to normal driving level when pressed on the lower end.

23. Tilting / Normal Level Switch

The vehicle tilts to right when pressed on the lower end of the switch, and comes back to driving position when pressed on the upper end.

26. Disabled Passenger Ramp Switch

Disabled passenger ramp is opened under the supervision of the driver when pressed on the lower end of the switch, the stop brake activates automatically. When pressed on the upper end of the switch, stop brake does not breakdown unless the disabled passenger ramp gets closed, it blocks the movement of the vehicle when the ramp is opened.

30. Front Door Wing Selecting Switch

According to the determination with switch which determines the operating mode of the front door, front door opens or closes left, right or both wings. The backlight lights up when the door isopened, and turns off when it is closed. Opening door qualification does not activate in speeds more than 5 km.

31. Middle Door Open/Close Switch

Opens or closes the middle door. The backlight lights up when the door is opened, and turns off when it is closed. Opening door qualification does not activate in speeds more than 5 km.

32. Back Door Open/Close Switch

Opens or closes the back door. The backlight lights up when the door is opened, and turns off when it is closed. Opening door qualification does not activate in speeds more than 5 km.

33. Middle and Back Door Open/Close Switch

Opens or closes both the middle door and the back door at the same time. The backlight lights up when the door is opened, and turns off when it is closed. Opening door qualification does not activate in speeds more than 5 km.

37. Automatic Transmission Control Buttons

1 : Transmission does not exceed 1st gear.
2 : Transmission does not exceed 2nd gear.
3 : Transmission operates in all 3 gears.
D button : It is the forward drive gear.
N button : It is the position of idle gear, parking position.
R button : It is the driving back gear.

50. Retarder Control Lever

Retarder activates or breakdowns in 3 stages.

51. Ignition Switch

Ignition switch works against spring pressure in starter position and turns back again when released.

St	Closed
M	Ignition active
D	Starter active

Do not try to remove the ignition switch while the vehicle is on the move.

52. Signal and Wiper Lever

It signals to left when the lever is in the downstream and to right when the lever is in the upstream. It activates the wipers at intermittent in the first turn, at normal speed in the second turn and at high speed in the third turn. The fountain begins to work when pushed towards the steering wheel. The horn activates when pressed on the button at its end.

53. 7” LCD Display

The images of the cameras which provide the internaland external security of the vehicle during the driving are watched from this display. It switches to rear view position automatically when taken into reverse gear position. The display can be watched by dividing (2, 4,8 etc.) as desired.

SIDE CONTROL PANEL

Amplifier

Increasing and decreasing the volume of speakers are performed with amplifier.

Lighter

The lighter is pushed towards the heating element inside of it, it gets out automatically when heated.

Mirror Control Switch

This switch is used for the driver to adjust the directions of the rearview mirrors by himself. The mirror is rotated to the desired direction by rotating the arrow on the switch to the desired direction and directing the switch (right, left, up, down).

Emergency Switch

In order to use the emergency switch, the red colored safety cover on it is opened by holding up. When pushed forward, the electricity of the system cuts down, the engine stops, all internal lights and hazards turn on, door switches are in the active and workable position. When pulled back, system turns to normal.

Regeneration Switch

The regeneration is started by pushing on the switch.

LCD Switch

LCD activates when pressed on the lower end of the switch, breakdowns when pressed on the upper end.

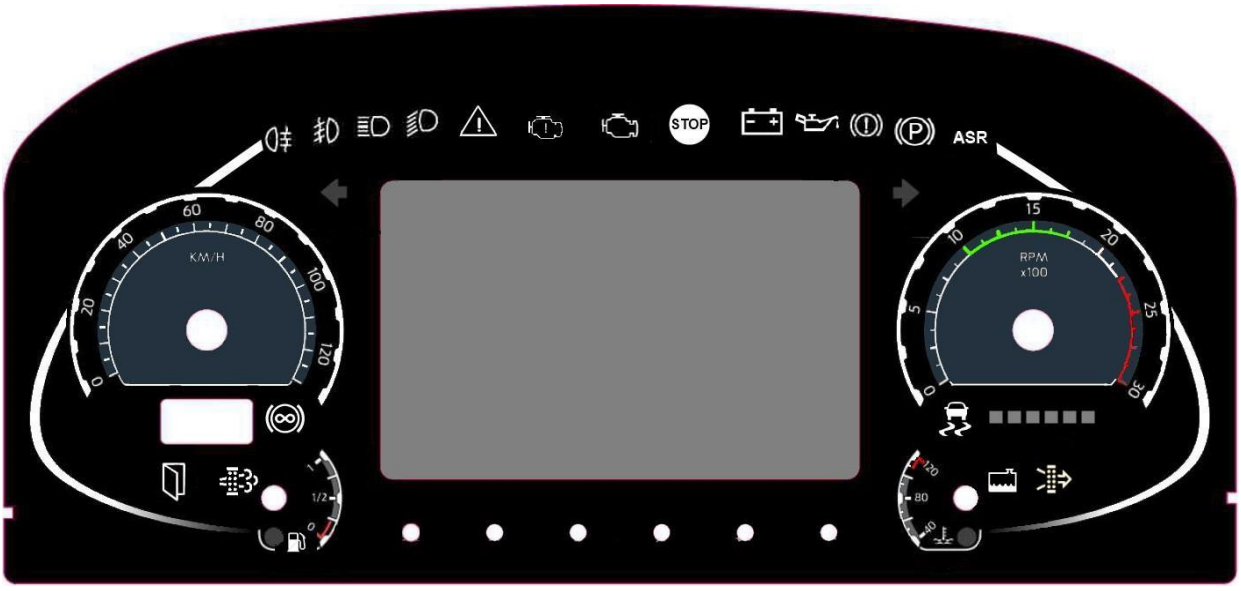
Driver Window Switch

The driver window moves down when pressed on the lower end of the switch, stops when pressed again, and moves up when pressed on the upper end.

Handbrake

Handbrake system is air typed and spring mechanismed. Handbrake lever is on the left control panel. The handbrake lever is pulled back when the vehicle is stopped, the lever has to be locked in the lower position. In order to relieve the brake, the lever is released to front by pulling slightly the ratch under the lever. There is the warning signal on the indicator panel that shows whether the handbrake system is activated or not. The warning light would be red if the brake air is not enough (below 6 bars) for driving (the vehicle is in operating position) when the handbrake is released, it is to be waited the turning off this light before moving.

GAUGE AND WARNING LIGHTS PANEL



Main Beam Warning: It is the blue colored warning which lights during the usage of the main beams or making selectors.

Low Beam Warning: It is the green colored warning which lights during the usage of low beams.

Front Fog Warning: It is the yellow colored warning which lights during the usage of front fog lamps.

Rear Fog Warning: It is the yellow colored warning which lights during the usage of rear fog lamps.

Signal Warnings: It is the green colored audible warning that shows the turns to right or left and that flashes when the signal lever on the steering wheel or hazard switch is used.

Stop Brake Warning: It is the green colored warning which lights when the stop brake is active. It activates when any of the doors are open and when the engine is running; it deactivates after all doors are closed.

Parking (Hand) Brake Warning: It is the red colored warning which lights when parking (hand) brake is applied and which shows the brakes are active.

Engine Failure Warning: It is the yellow colored warning which lights when there is an engine failure.

Engine Alert Warning: It is the yellow colored warning which lights when ECM alerts.

Engine Oil Warning: It is the red colored warning which lights when the engine oil pressure is low.

ASR Warning: It is the yellow colored warning which lights when ASR activates.

Retarder Warning: It is the yellow colored warning which lights when the retarder is active.

Charge Warning: It is the red colored warning which lights when the ignition is active and which turns off when the engine exceeds idling speed. It means that there is a failure in the charging system if it lights during the driving.

Driver Alert Warning: It is the red colored warning which lights in failure cases that has to be informed to the driver.

Engine STOP Warning: It is the red colored warning which lights when there is a critical engine failure, apply to the Authorized Service.

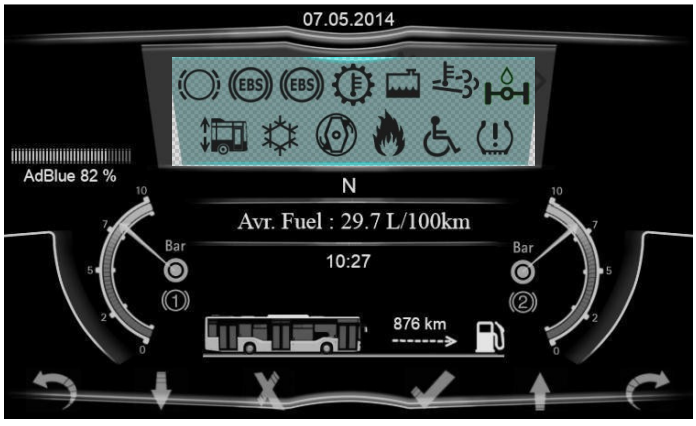
Air Suction Stopped Warning: It is the yellow colored warning which shows that the air suction is not sufficient.

Engine Cooling Fluid Level Warning: It is the red colored and audible warning which shows that the engine cooling fluid level decreased and it has to be added.

Regeneration Warning: It is the yellow colored warning which shows that the vehicle had to be taken into regeneration.

Information Display

The following information can be achieved from this screen.



- Average Fuel Consumption
- Distance that can be driven with the fuel available
- Gear
- Total distance traveled
- Digital clock
- Diesel exhaust emission heat level
- Brake pressures

Lining Pad Warning: It is the yellow colored warning which lights when the percentage of lining thickness coming from EBS decreases below 10%.

EBS Warning: It is the red or yellow colored warning which lights when a failure datum came from EBS module.

Transmission Heat Warning: It is the yellow colored warning which lights when the transmission oil is more than 107 °C.

Air Condition Is Active Warning: It is the blue colored warning which lights after 2 minutes from the activation of the air condition.

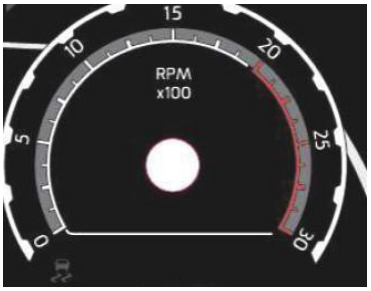
Fire Warning: It is the red colored and audible warning which lights when the temperature of the engine room exceeds 175 °C.

Stop Warning for Disabled Passengers: It lights when pressed stop button for disabled passengers.

Greasing Failure Warning: It is the yellow colored and audible warning which lights when there is a failure in automatic greasing system.

Tire Pressure Warning: It is the yellow colored warning which lights when the tire pressure is not between 123 – 138 psi. In case of rapid tire pressure losses red STOP light will appear.

Engine Speed Indicator



Engine speed indicator measures the number of engine speed per minute. It begins to work when the engine starts.

Speed (km/hour) Indicator

It is the indicator which shows the speed of the vehicle in terms of kilometers/hour. It starts to work after the moving of the vehicle.

Fuel Indicator

Fuel indicator shows the level of the fuel in fuel tank. When the needle nears “0”, the red light at the bottom right of the indicator lights; it means that the fuel is reduced. Extra fuel should be added before the fuel in the fuel tank completely finished, otherwise the system makes-up air.

Engine Heat Indicator

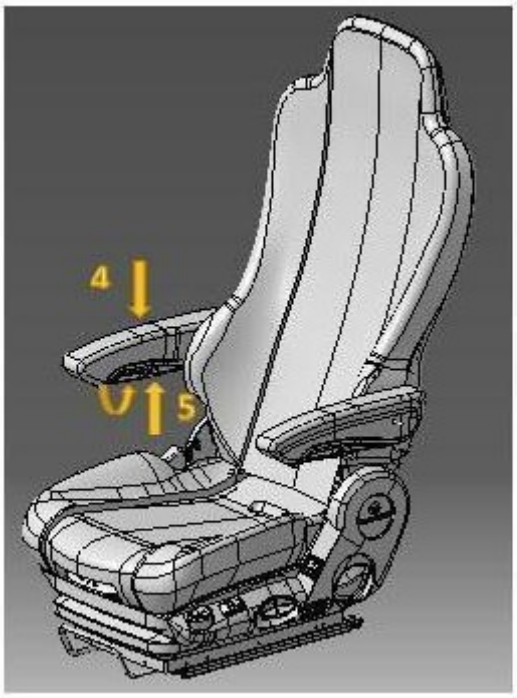
It shows the temperature of the engine cooling fluid.
When the temperature exceeds 107 °C, warning lights red.

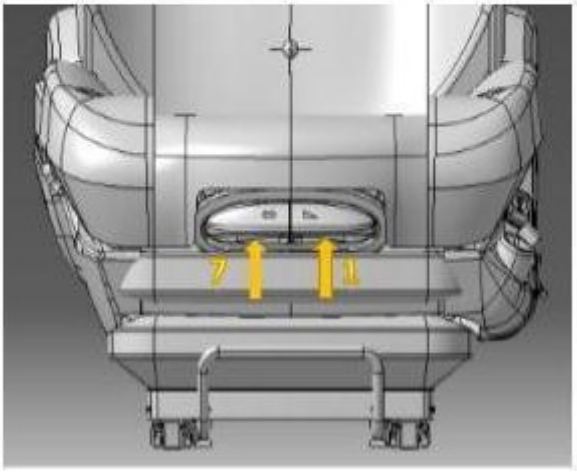
ROUTE INDICATOR CONTROL PANEL

There is a route indicator control panel on the upper console in the driver compartment. Route information which would be shown in route indicator are selected/changed by this control panel.

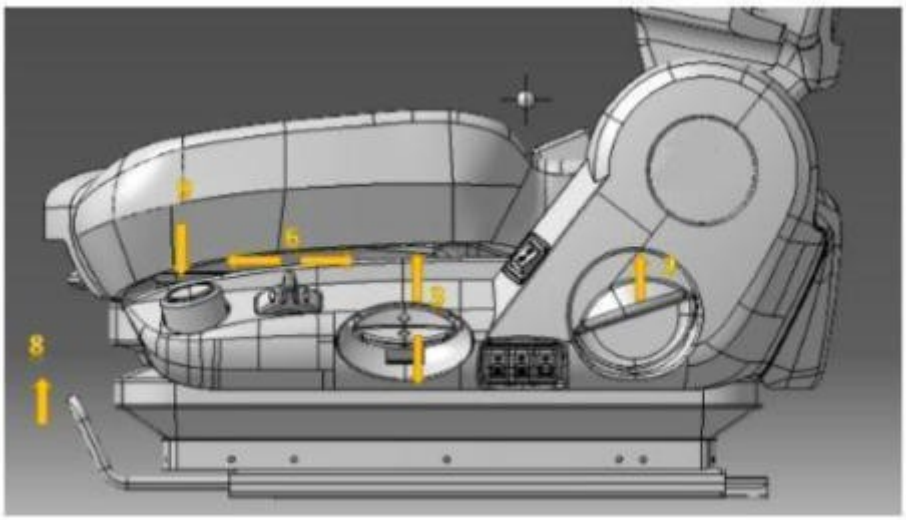
4.VEHICLE EQUIPMENT

DRIVER SEAT

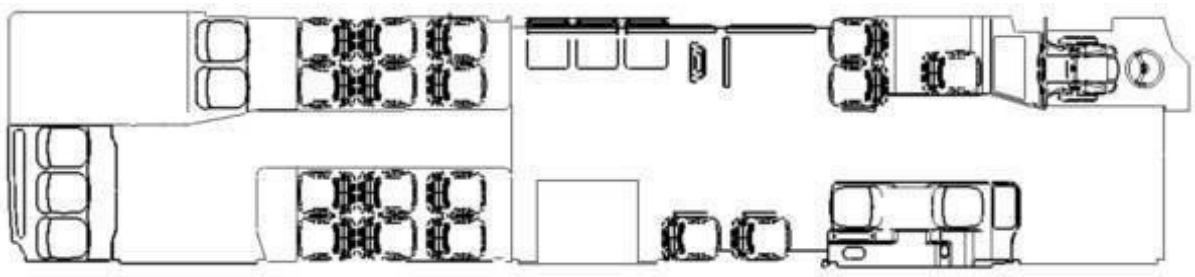




1. **Seat Tilt Adjustment:** The button on the left is pulled up in order to adjust the incline of the seat shell. By giving the weight to the front and back at the same time,the incline of the seat is comes to the desired position.
2. **Backrest Tilt Adjustment:** It is adjusted by unlocking the backrest (lock lever is pulled up) and the backrest is reclined by pushing backwards.
3. **Height Adjustment:** The height of the seat is changed by holding up or pushing down the foot latch.
4. **Mittens:** There are mittens in both sides of the seat that can be lowered and raised.
5. **Mittens Tilt Adjustment:** The incline of the mittens can be changed by turning the button.
6. **Shock Absorber Firmness Adjustment:** The flexural stiffness of the seat can be adjusted at 3 stages.
7. **Seat Depth Adjustment:** The button on the right is pulled up in order to adjust the width of the seat moving forward. The seat is adjusted to the desired position by pulling front and back at the same time.
8. **Forward/Backward Adjustment:** The seat can be moved forward or backward by pulling seat locking lever.
9. **Fast Download:** By pressing and fixing the button, the seat can be downloaded to the lowest position. When pressed to the button again, the seat rises to the driving position again.



PASSENGER SEATS



There are 27 passenger seats in the standard vehicle (24 + 3 folding seats). Passenger seats are upholstered. There is a triple seat at the rear, two single seats at the right ahead, one single seat on the left front wheel and dual seats in other sections in the vehicle. There are 3 folding seats available in front of the middle door. There are 4 priority seats inthe vehicle two of which are single priority and at the right front of the middle door and one of which is dual priority and at the left front of the middle door. There are mittens in these seats.

There is a wheel chair area and a backrest cushion available in front of the middle door for disabled passengers.

There is a passenger capacity label in front of the vehicle at the upper region. The capacity of the number of the sitting and standing passengers is shown on this label.

SIDE WINDOW WITH RESISTANCE

It is located at the left side of the driver. By driving electric engine, the switches on the front control panel can be controlled by the driver.
When the movable glass is broken or when the electric motor fails, apply to the authorized service.

WATER HEATER/COOLER FOR DRIVER (OPTIONAL)

There is a water heater/cooler available for driver at the right side of the driver seat. Cooling mode is at the range of 22°C below the ambient temperature; and the heating mode is at the range of up to 60 °C beverage temperature.

DVD PLAYER

There is a USB and AUX-IN entry DVD player at the upper console of the driver compartment.

DIGITAL TACHOGRAPH

It is the device in the upper console of the driver compartment, which records, monitorizes or prints the data of the driver and the vehicle. Recording is made on the internal memory unit in the device and on the tachograph card. The device as a standard shows the datum of the time, speed of the vehicle and the range.

ROLLER BLINDS

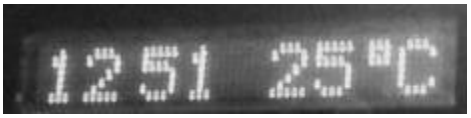
There are electrical roller blinds on the driver compartment part of the front window. The opening and closing of the roller blinds are provided by the curtain switches on front control panel. (In Citiport S vehicles, these roller blinds are opened and closed manually.)

There is also another roller blind at the left of the driver which can be opened and closed manually.

DIAGNOSTIC SOCKET

It is at the backwards of the driver seat. This socket is used for loading and changing the parameters of the vehicle data communication system and for diagnostics.

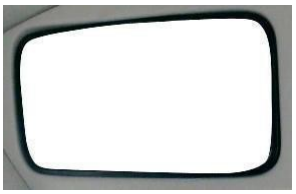
PASSENGER INFORMATION PANEL



There is a digital panel available at the right back of the driver for informing passengers. The time and the air temperature and alternately the date information areincluded at this panel.

Additionally, the “STOP” warning is monitorized on the passenger information panel when pressed on the stop buttons.

MIRRORS



There is 1 internal rearview mirror available in the vehicle. There are 2 external rearview mirrors, one of which is at right and one is at left. The formation of condensation or ice in external mirrors is prevented by resistance heating.

RIGHT EXTERNAL REARVIEW

LEFT EXTERNAL REARVIEW

DIGITAL ROUTE INDICATOR PANEL

There is one digital route indicator panel at the front (turning the corner) and one at the rear.
(In Citiport S vehicles, instead of turning the corner indicator panel, there are separate indicator panels. One is at the front and the other is on the right side.)

Digital Colored Front Route Indicator Panel (Optional)

There are 3 options available; one of which is at front (colored), one of which is lateral and one of which is at rear.

LCD Display

There is one 19'' LCD display at the front side of the vehicle. This screen may be used for informing the passengers and for ad impressions.

HALF POP-UP WINDOW

There are 7 half pop-up windows in the vehicle.

TRAPDOOR

There are 2 trapdoors including front and rear in the vehicle. They are electrically controlled. The opening/ closing operations of the covers according to the desired direction of the air inlet are realized with the air condition switch on the front control panel. Trapdoors are designed to be used as emergency exits when needed.

HANDLES

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

STOP BUTTON

There are 11 stop buttons 7 of which are on the holding pipes, 3 of which are on the side wall for priority passengers and 1 for disabled passengers in the vehicle. The passengers who want to get off the vehicle, informs the driver by pressing on these buttons. The related door button lights and the “STOP” expression is seen on the passenger information panel. Additionally audible warning activates. When doors are opened, “STOP” article and the warning lights on door buttons turn off.

PACK AREA

There is a pack area (except Citiport S vehicles) on the front wheel arch in which passengers may put the things in their hands (umbrella, package, suitcases etc.) designed passengers to travel in comfort.

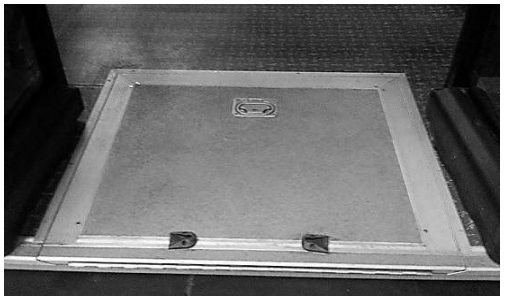
WHEEL CHAIR FIXING AREA

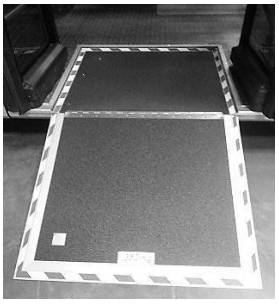
There is a special place in front of the middle door for the passenger who enters the vehicle with wheel chair in order for him to travel in secure.

DISABLED PASSENGERS RAMP

A manual opening/closing ramp is installed to the middle door in order to ease the entry/exit of the disabled passengers with wheel chairs.

The Use of Ramp





Stop the vehicle in a place where the traffic is suitable.

- Open the middle door.
- Open the ramp by holding it from its handle on it and by pushing towards the outside of the vehicle.
- Provide the entry/exit of disabled passengers.
- Close the ramp by folding towards inside of the vehicle.

Disabled Ramp warning light and voice shall activate when the ramp is opened.

EXTERNAL CAMERA SYSTEM

There are 2 external cameras beside right and left rearview mirrors in order to see the barriers around during the movement of the vehicle. The camera at right also helps to follow the getting off the passengers from the middle or back doors.

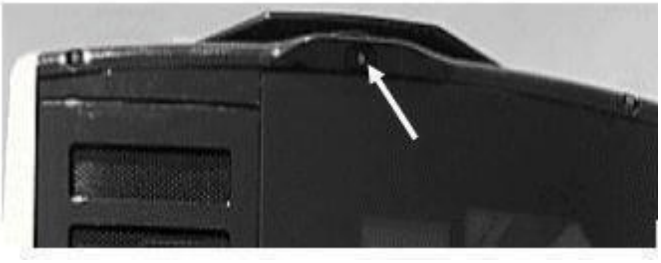
INTERNAL CAMERA SYSTEM

There are 5 cameras inside the vehicle 3 of which is used for controlling the entry and exit of the passengers, and one each for watching the driver and the road. The sights obtained from the camera are monitorized on the LCD display on the front control panel.

DVR (Digital Video Recorder)

DVR is installed under the front trapdoor in driver compartment. DVR provides the recording of the audios and videos captured to the camera.

REAR VIEW SYSTEM



There is a closed-circuit camera system available which monitorizes the area behind the vehicle when parking or reversing the vehicle. The sights obtained from the camera are monitorized on the LCD display on the front control panel.

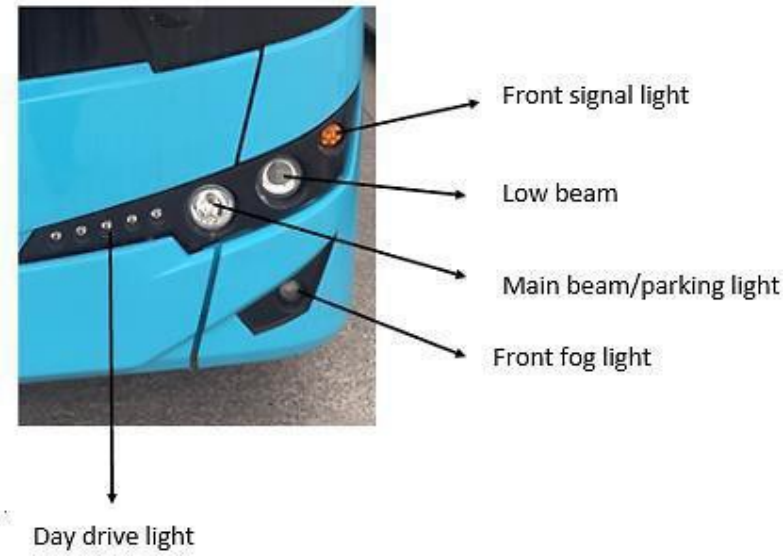
PARKING SENSORS

There are 4 parking sensors mounted on the fender. Sensor activates when the reverse gear is engaged. It buzzers the driver during the reversing according to the distance between the fender and the backward barriers.

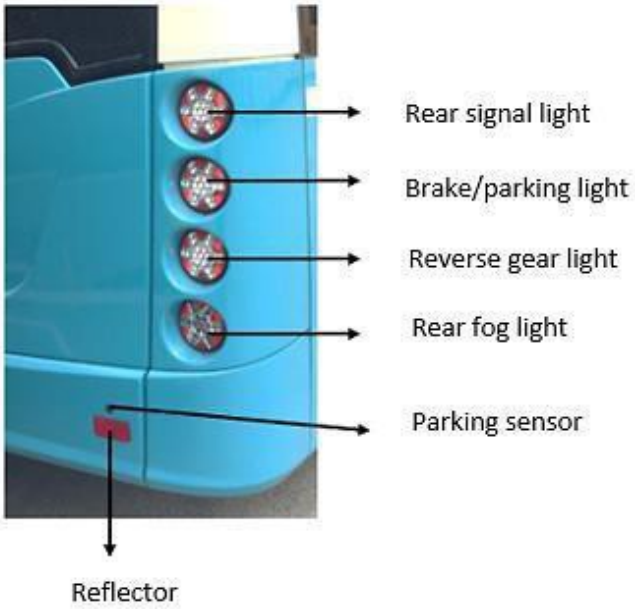
EXTERNAL ALERT AND LIGHTING LAMPS

Lamps	Number in the vehicle
Main beam/parking	2 pcs
Low beam	2 pcs
Front fog lights	2 pcs
Front signal lights (with led)	2 pcs
Front clearance lights (with led)	2 pcs
Lateral signal lights (with led)	2 pcs
Sidemarker(with led)	10 pcs
Rear signal lights	2 pcs
Brake/parking lights	2 pcs
Reverse gear lights	2 pcs
Rear fog lights	2 pcs
Rear plate lights (with led)	2 pcs
Rear clearance lights (with led)	2 pcs
Day drive lights (with led)	1 set
Reflector	2 pcs
Engine Ilumination light (with led)	1 pcs

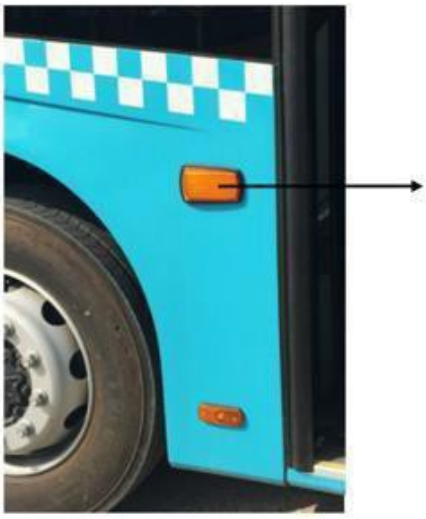
Set of Front Headlight



Rear Lights



Side Signal Lights

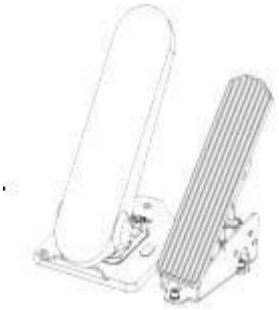


There are totally 2 side signal lights at right and left of the vehicle. They work with front and rear signal lights.

Sidemarkers and Clearance Lights

There are 4 clearance lights, 2 of which are at the upper front and 2 of which are at the upper rear of the vehicle. Additionally there are 10 sidemarkers, 5 of which are at right and 5 at left.

PEDALS



Brake Pedal: The pedal at left is brake pedal. This pedal is part of electronic brake system (EBS). An electric signal is sent to the central control unit when pressed on the brake pedal and the air is dispersed to brake elements.

Gas Pedal: The pedal at right is gas pedal. The electronic signal sent by the position sensor connected to the gas pedal is evaluated by ECU (Electronic Control Unit) and the amount of fuel delivered to the engine is adjusted. At the end of gas pedal there is kick-down button which increases the engine speed.

TRANSMISSION

There is a gear selector with 6 buttons in the vehicle. These buttons are:

1, 2, 3 buttons : They are used for limiting the maximum gear value that the transmission can raise.

D button : Automatically Forward

N button : Idle Gear

R button : Reverse Gear

The transmission should be at “N” position while the engine was running. When the ignition switch is turned on first of all all the buttons light for 1 - 2 seconds, then only the selected button lights. If the selected button flashes, it means that the selected gear was not accepted by the transmission control unit since the suitable conditions could not provided for the shift of the gear. If all the lights are flashing, it means that the gear selector was malfunctioning or there is a problem in the wirings of the vehicle data communication system (CAN). When pressed on more than one button by fault, the transmission performs the lowest gear selected. For example when it is pressed on D and 3 buttons at the same time, the transmission shall consider the 3 button.

While shifting the gear;

- Do not press on the gas pedal
- The speed of the engine should be less than 900 rpm
- The vehicle must be in stop position
- It should be pressed on the brake pedal
- It should be pressed on the gear which shall be selected

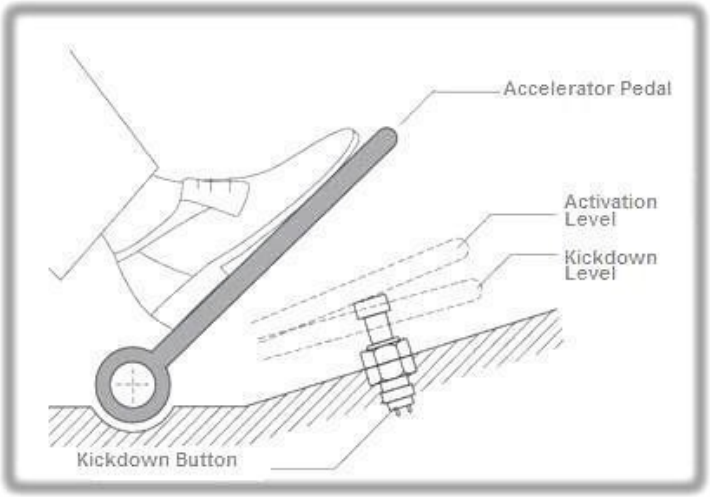
The transmission does not allow to select the gear in the following cases and its light flashes when pressed on the button.

- If pressed on the gas pedal
- If the engine speed is over 900 rpm
- If the vehicle is moving at the speed of more than 3 km/h and if it is moving in the opposite direction of the desired
- If the transmission oil heat is less than - 20 °C

Pull your foot from the brake pedal after 1 - 2 seconds of gear selection, the vehicle shall move. When the foot is pulled from the brake pedal while the vehicle is uphill, the transmission brakes so as to prevent the vehicle from rolling back.

Downhill

While driving downhill, in order to limit the gear when needed it is to be limited the gear increase by selecting 1, 2 or 3 numbered gears.



Kickdown Specification

When high engine power is needed, the gear is reduced with the specification of kickdown. To do so, it is to be pressed on the gas pedal until passing the kickdown activation point. The usage of kickdown specification increases the fuel consumption.

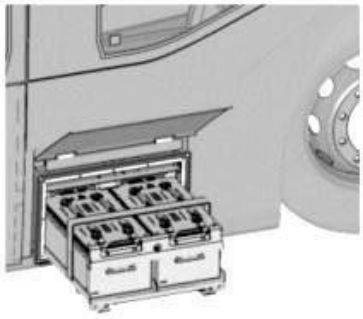
Retarder Specification

Retarder is the hydrodynamic brake specification of transmission which is used for extending the life of service brakes. It works at three stages with lever and/or brake pedal. Retarder works at 1st stage when pressed on the brake pedal first, when the pedal is being pressed it raises up to 3rd stage and by this way it increases the brake torque. If it is pressed on the pedal much more, service brakes activate, too. When the transmission oil exceeds the critical temperature, the performance of the retarder decreases or the transmission closes its retarder specification. When the transmission heat excessively increases, warning lights on the indicator.

FUEL TANK AND CAP

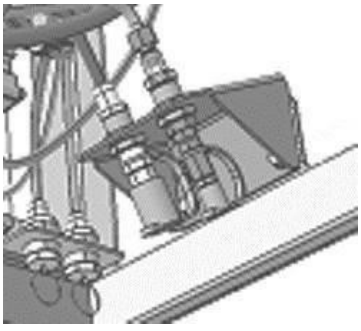
Fuel tank is at the right side of the vehicle and on the front wheel. The capacity of the tank is 300 lt. The fuel tank cover is achieved by opening protection cap. The cap is opened with fuel tank key. After filling, the tank cover is locked by turning clockwise. There is 1 fuel tank maintenance cap under the seat group at the right front of the vehicle. For cleaning the fuel tank, the drain plug is achieved by removing the bolts of the cover. The plug is opened by turning and discharge of residues in the fuel tank is provided.

ACCUMULATORS



The accumulators are located at the front side of the left rear wheel, they are installed on the sliding rails in the manner that can be easily inserted and removed. There are 2 accumulators in the vehicle. Each of them are 12V and 240 Ah.

TIRE INFLATOR KIT



The ports which bleed air from the vehicle and supply air to the vehicle are located at the bottom between middle door and the wheel. If the air pressure in the wheels of the vehicle reduces, wheel pressures may be adjusted by using tire inflator kit in the toolboxes. To do so;

- Park the vehicle in the way not blocking the traffic.
- Get the gear into neutral by pulling the handbrake, start the engine.
- Take the tire inflator kit.
- Insert one end of the hose to the tire valve and the other end to the air outlet end behind the middle door.
- Complete the tire inflation by giving gas to the engine.

HEATING AND COOLING SYSTEM

Air Condition Control Unit

The control unit is located on the upper console of the driver compartment. There is one 22 pin, one 20 pin and one 6 pin connection socket on the rear panel of the control unit. There are 11 push buttons available on the front panel of the unit for conducting the various functions of the air condition. Different data and values such as desired (adjusted) and existing temperature level can be read from the three-digited and seven-segmented indicator located on the control unit of the passenger side.

Driver's Side Control Buttons **Passenger's Side Control Buttons**

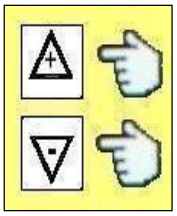
Control Unit Button Functions

Button no	Function of the Button
T1	Opens/Closes the heating mode on driver's side
T2	Selects the circulation / fresh air mode on driver's side
T3	Selects the position of air flaps on driver's side (foot/foot-glove box/front window)
T4	Takes mist of the glass on driver's side
T5	Adjusts the fan efficiency manually on driver's side
T6	Starts the cooling mode on driver's side
T7	Opens/closes air condition on passenger's side
T8	Activates the fan efficiency manually on passenger's side
T9	Selects circulation / fresh air on passenger's side
T10	Raises comfortable heating degree up to 15 °C - 30 °C on passenger's side
T11	Reduces comfortable heating degree down to 30 °C - 15 °C on passenger's side
T10 -T11	Calls sensor values (when pressed both buttons together)
D	Display

Reading The Internal Temperature Value

It shows the ever-present internal temperature on the indicator automatically when the vehicle starts.

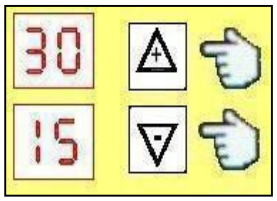
Reading The External Temperature Value Manually



P1 appears on the indicator when T10 and T11 buttons were pressed together. It is pressed on to + button until P5 appears on the screen, the screen shows the external temperature degree for 5 seconds. Then it shows the passenger's side degree automatically.

The Adjustment of The Degree of The Passenger Side Air Condition

Press on the Auto (T7) button on the control unit, (led active)



Increase the desired ambiance temperature value by pressing on T10 button. Maximum 30 °C may be adjusted.
Decrease the desired ambiance temperature value by pressing on T11 button. Minimum 15 °C may be adjusted.

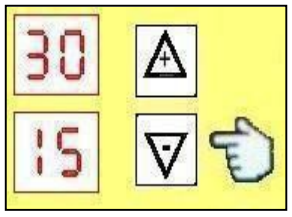
Then the indicator automatically shows the temperature of the passenger side (internal temperature) again.

Operating The Ceiling Air Condition in Cooling Mode

Start the engine of your vehicle.

Press on the Auto button on the control unit, when you press on "**Auto**" button your air condition shall begin to run in "**Automatic Mode**". The red led lights when Auto is active, and the red and green led light together in cooling mode.

Note: The set value would remain 21 °C automatically when pressed on Auto button.

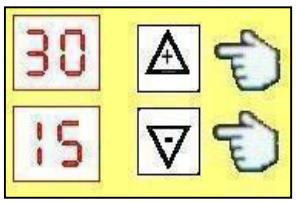


When you adjusted the desired comfortable temperature value for running in "cooling mode" of the device minimum **1.5 degrees less than** the passenger side temperature, it would begin to run in cooling mode 60 seconds later. Blowing fans accelerate and decelerate depending on the temperature. Automatic running mode is quitted by pressing on Auto button again. Condenser fans breakdown 20 seconds later.

Operating The Passenger Side Air Condition in Heating Mode

It opens the heated air condition (optional) if there is in the vehicle. Start the engine of your vehicle.

Press Auto button on the control unit, your air condition begins to work in "**Automatic Mode**" when you press on "**Auto**" button. The red led lights when Auto is active.



When you adjusted the desired comfortable temperature value for running in “heating mode” of the passenger air condition minimum **1.5 degrees more than** the passenger side temperature, the ceiling air condition would begin to work in heating mode. Blowing fans operate at 1st stage in heating mode. Automatic running mode is quitted by pressing on (Auto) button again.

Manuel Adjustment of Ventilation Efficiency of Passenger Side Air Condition

It is possible to control the ventilation efficiency of the passenger air condition manually.

You may increase, decrease or close the ventilation efficiency gradually by pressing repeatedly on T-8 button.

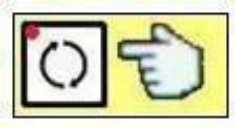
There are fan symbols on three alongside buttons on which you may see the speed of the fan. With the activation of the led on this symbol, the fan speed you had chosen may be seen.

Led I (Evaporator blower fan 1st stage active (related led lights)

Led II (Evaporator blower fan 2nd stage active (related led lights)

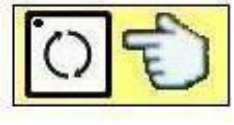
Led III (Evaporator blower fan 3rd stage active (related led lights)

Operating The Passenger Side Air Condition in Air Circulation Mode



It operates in the “Air Circulation Mode” when you press on T9 flap button on the control unit. The related led activates. The air condition begins to work in “air circulation mode” automatically when it is in the “Auto” mode. The related led lights.

Operating The Passenger Side Air Condition in Fresh Air Mode



If the related led does not turn on when you press T9 flap button on the control unit, it begins to work in “fresh air mode”. The related led does not light.

Operating The Front/Driver Side Air Condition in Cooling Mode

The solenoid valve turns on when you press T6 driver side cooling button on the control unit and cooling starts. The related led turns on. When you press the same button once again to close, the led turns off and closes.

Note: The front/driver side air condition shall make cooling only when the passenger side air condition operates in cooling mode.

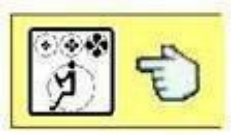
Operating The Front/Driver Side Air Condition in Heating Mode

The heating valve is turned on when you press T1 temperature button on the control unit and heating starts. The heating efficiency may be adjusted by pressing repeatedly on T1 button at 2 stages.

When you press T1 button once, the motorized valve is opened at 50%; when you press once more, it is opened at 100%.

Manual Adjustment of Ventilation Efficiency of Front/Driver Side Air Condition

The ventilation efficiency of the front/driver side air condition can only be controlled manually.



You may increase, decrease or turn off the ventilation efficiency by pressing T5 fan button repeatedly.

Led I (Evaporator blower fan 1st stage active (related led lights)

Led II (Evaporator blower fan 2nd stage active (related led lights)

Led III (Evaporator blower fan 3rd stage active (related led lights)

At the same time, when you press T5 fan button, you can see the fan speed you had chosen on the control unit screen with the following codes.

Screenshot dF0/ Blowing Fan 0/off

Screenshot dF1/Blowing Fan 1st stage

Screenshot dF2/ Blowing Fan 2nd stage

Screenshot dF3/ Blowing Fan 3rd stage

Taking Mist of Front Window with Front/Driver Side Air Condition

The front window mist taking starts automatically when you press T4“DEF”. The fans raise to at most the 3rd stage automatically, the heating valve is opened at 100% automatically, the position of the air blowing flap passes to the front window automatically.

To close, press again on T4”DEF” button (the related led turns off).

The Positioning of Air Flap of Front/Driver Side Air Condition

You may adjust the air circulation in the driver side at the 3 different positions by pressing repeatedly on T3 air flap positioning button.

1. Air flap position to feet. (the led on the symbol lights if it is active)
2. Air flap position foot and front glove. (the led on the symbol lights if it is active)
3. Air flap position front window. (the led on the symbol lights if it is active)

The Definitions of Display Codes:

P1 - Internal Environment Sensor Right

P2 - Internal Environment Sensor Left

P3 - Internal Environment Sensor Right/Optional

P4 - Internal Environment Sensor Left/Optional

P5 - External Sensor

F0 - Passenger side blowing fan is off

F1 - Passenger side blowing fan 1st stage

F2 - Passenger side blowing fan 2nd stage

F3 - Passenger side blowing fan 3rd stage

dF0 - Driver side frontbox blowing fan / off

dF1 - Driver side frontbox blowing fan / 1st stage

dF2 - Driver side frontbox blowing fan / 2nd stage

dF3 - Driver side frontbox blowing fan / 3rd stage

Error Codes

There are 10 error codes designated to the air condition control unit. EEE-Error,

A1 – No main supply

C1 – Magnetic clutch coil does not pick.

H1 – Heating valve does not activate.

E1 – Internal Environment Sensor error (right)

E2 – Internal Environment Sensor error (left)

E5 – External environment sensor error

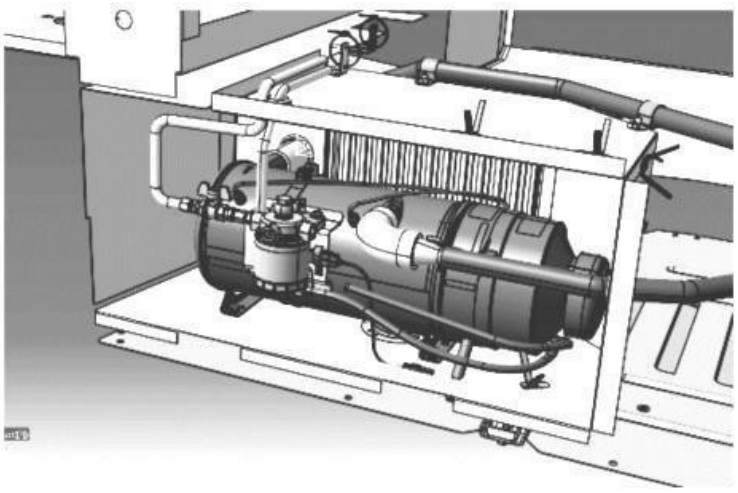
E6 – Right flap positioning error

E7 – Left flap positioning error

E10 – 3-way motorized valve positioning error

E12 – Frontbox air direction flap positioning error

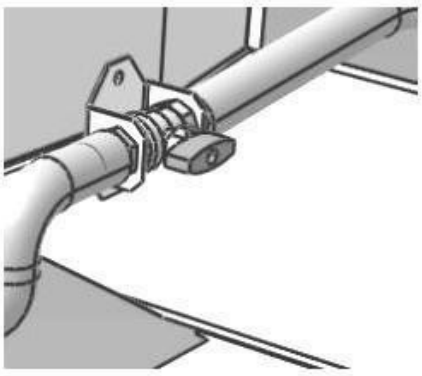
PREHEATER (OPTIONAL)

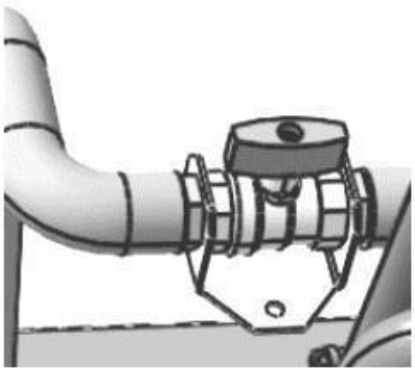


Preheater is in the cupboard behind the rear wheels. The 3-way valve is closed only for preheating the motor coolant (it is to be pressed on – position). The desired programming may be adjusted with the program clock. The 3-way valve is opened in order to support heating system (it is to be pressed on + position).

The filter valve should be open while starting the preheater. The filter must be cleaned in periodic maintenances.

Check if there is a fuel leakage in the fuel line and on the preheater before starting. The air adjustment of the preheater should be realizedin very cold regions and in regions higher than the sea level. If the air adjustment is not realized, a black smoke comes from the preheater exhaust (the air adjustment is only performed by authorized preheater service). The preheater should not be operated when the heating system was in summer position (when the manual valves were off).





Additionally, after closing the preheater, battery switch and main power switch should not be closed. The preheater takes itself to cooling for 5 minutes after being closed. The preheater can damage if the power switches were closed.

The preheater may close itself due to overheating for any reason. If the preheater closes itself because of overheating several times, the control circuit closes the heater automatically. Apply to the authorized heaterservice for opening the heater and solving the problem.

Preheater is commanded with the control on the console above the driver.

Usage of Preheater

Preheater control unit is located on the upper console of the driver compartment.

Main Functions of The Push Buttons:

You may start the heater or confirm the entries with this button.

You may close the heater, quit the menus or stop the functions with this button.

You may select the functions and make settings with these buttons.

Ventilation symbol operating unit may only be seen if it is connected to the heaters which support this function (dry-type heaters).

Operating The Ventilation

Select, confirm with

set the operating time with these buttons.

confirm the settings with it, ventilation starts. To close, press on button for 2 seconds.

Heating Symbol

Operating The Heater

Select, confirm with

set the desired environment temperature values (only in dry-type heaters) and the operating time.

confirm the settings with it. The heater begins to work. To close, press on

button for 2 seconds.

Additional Unit Symbol

Additional unit function can be activated by authorized services of Eberspaecher.

Operating The Ventilation With Additional Unit

Select, confirm with

Apply the steps in Operating The Ventilation section. To close, press on button for 2 seconds.

Operating The Heater With Additional Unit

Select, confirm with

Apply the steps in Operating The Heater section. To close, press on button for 2 seconds.

P Programming Symbol

For Programming

P select, confirm with.

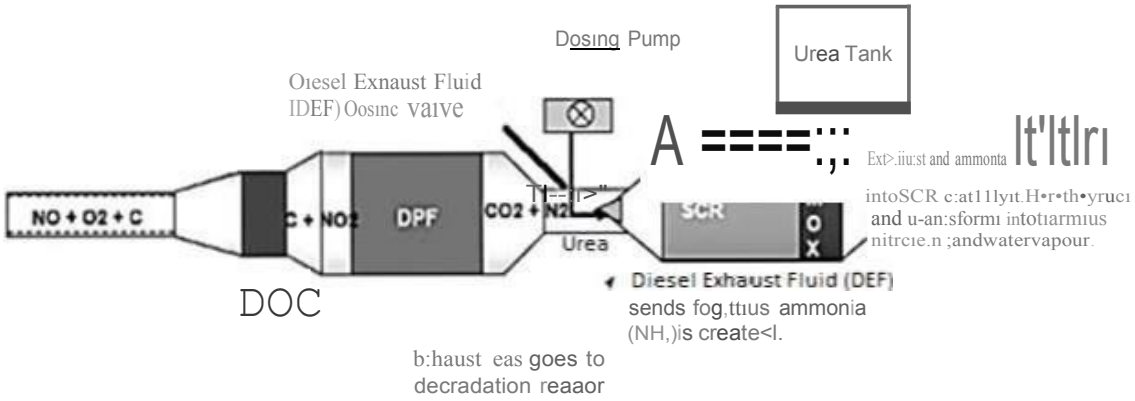
select one of the programming memories with these buttons, confirm with.

In order to activate the recorded program; bring the program “ON” position with buttons. Confirm with.

For the cancellation of selected program; bring the program “OFF” position with button. Confirm with.

SCR SYSTEM and DIESEL EXHAUST EMISSION FLUID TANK

There is EGR (Exhaust Gas Treating Unit) system available in the vehicle in order to provide Euro6 emission.
EGR system provides to send the burnt exhaust gases to system again after cooling, and in the result of this, it provides to reduce the NOx level by decreasing the combustion temperatures. Since it is not enough alone in Euro6 applications, there is exhaust gas treating unit in the following specifications.


Dosing Pump
Urea Tank
Oıesel Exnaust Fluid
IDEF) Oosinc valve
NO + O2 + C
DPF
CO2 + N2
Urea
SCR
DOC
Diesel Exhaust Fluid (DEF)
sends fog,ttıus ammonia
(NH,)is create<l.
b:haust eas goes to
decradation reaaor
intoSCR c:at111yıt.H•r•th•yrucı
and u-an:sformı intotıarmıus
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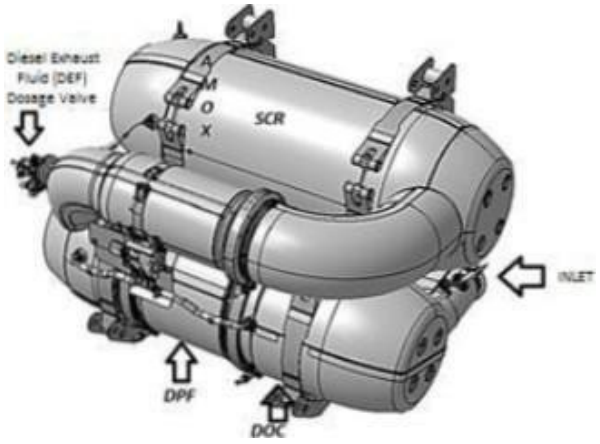
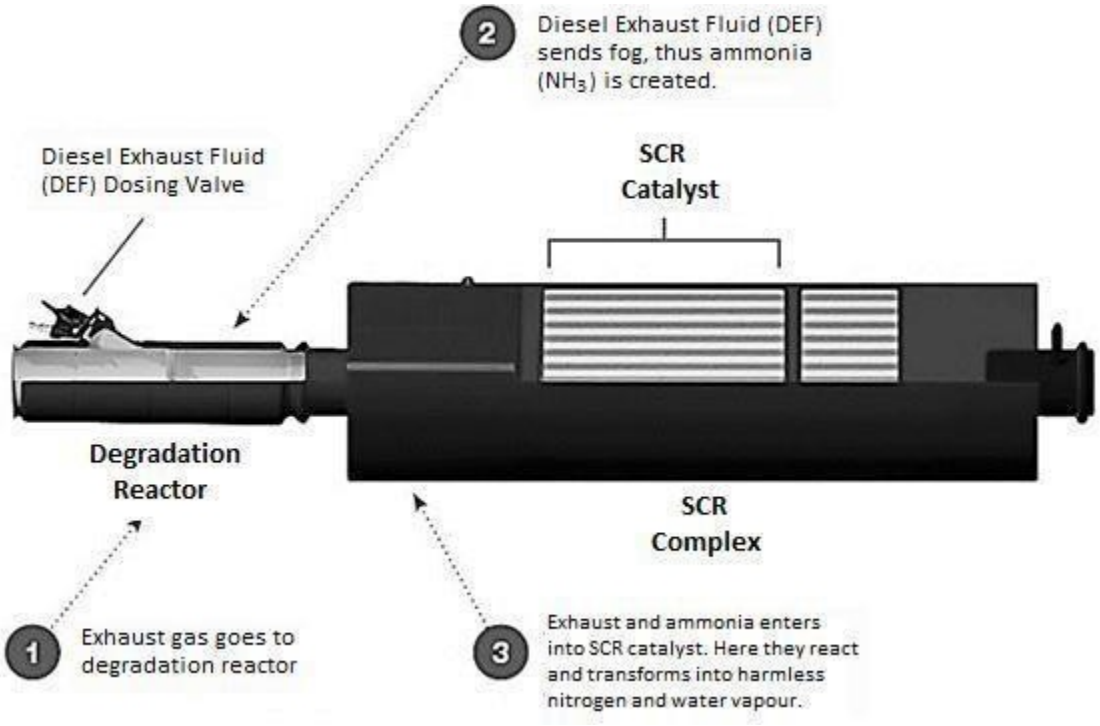

Diesel Exhaust
Fluid (DEF)
Dosage Valve
SCR
INLET
DPF
DOC

Diesel exhaust emission fluid is an urea solution in demineralized water at the rate of 32,5%. It is the fluid consumed for reducing the emission rates of the engine.
Diesel exhaust emission fluid is sprayed into exhaust gases by dosing pump. It converts these gases into pure nitrogen and water by reacting with the exhausted nitrogen oxide gases which were formed during combustion. This operation is called as “Selective Catalytic Reduction” (SCR).



Diesel exhaust emission fluid tank filler cap is located behind the left rear wheel in the vehicle. The capacity of diesel exhaust emission fluid tank is 47 lt. The fluid level of the tank is always controlled, the warning light on the indicator lights yellow if the fluid decreases below a specified level. In this case it is to be complete the fluid level as soon as possible. There has to be at least 18% fluid in the tank for the smooth operation of the vehicle. The engine shall light up a warning light below this. When the level of exhaust emission fluid decreases below 6%, the engine gives error code and cuts the power. The diesel exhaust emission fluid you bought should be certified according to DIN 70700 or ISO 22241-1 standards for the efficiency and long life of SCR system. Its compliance to these standards guarantees the fluid to have sufficient purity and concentration (32.5%). No additives should be included in diesel emission fluid.

Regeneration:

Regeneration is the operation of increasing the Diesel Particulate Filter (DPF) temperature by burning some fuel in Diesel Oxidation Catalyzer (DOC) and by this way burning the particulates in DPF.

There are two types of regeneration:

Moving Regeneration: It is the regeneration performed when the vehicle wasmoving. This regeneration shall start automatically when the DPF is near occlusionor after 100 hours of use from the last regeneration; and when the speed of the vehicle and the gas flow of the exhaust system exceeded specified values. It is not to be pressed on regeneration button for this regeneration. Only in unsuitable cases it can be pressed on the button to finish the moving regeneration.

Static Regeneration: It is the regeneration which has to be performed when the DPF light lit and while the vehicle was stopped. It is started with regeneration button. For this regeneration;

- It must not to be pressed on gas pedal
- It must not to be pressed on brakes (parking brakes should be active)
- The transmission should be in Neutr 'N' position
- There must not be any engine failure warning.

With the starting of static regeneration, the engine speed begins to increase slowly. Diesel Particulate Filter (DPF) Warning Lights:

If the DPF lamp lights continuously; There is a regeneration need in the exhaust system. In this case by being sure that the regeneration buttonis not pressed on;

- The vehicle is to be driven by forcing it in order to start the regeneration while it was moving, for example it has to be driven at a high speed in the highway at least for 20 minutes if possible; the regeneration should be realized while the vehicle was moving or,
- The static regeneration should be performed with the button by parking the vehicle in a safe place

If the DPF lamp lights continuously and engine warning lamp lights; In this case, there is an urgent regeneration need in the exhaust system. The engine reduces its power automatically and the engine speed shall not exceed 1200 rpm. The static regeneration should be performed with the button by parking the vehicle in a safe place.

Exhaust System Overheating Warning: It is the yellow colored warning which lights when active regeneration starts or vehicle speed is less than 8 km/h and DPF outlet exhaust gas temperature is higher than critical value. It goes off when exhaust temperature decreases to appropriate value.

If the engine warning lamp (yellow) lights; Engine Stop light shall light up if the static regeneration was not performed. The vehicle must be parked in a safe place, the engine should be stopped and it must not be started without an authorized service intervene.

DIESEL EXHAUST EMISSION FLUID HEATING SYSTEM

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

ELECTRONIC BRAKE SYSTEM (EBS)

Electronic brake system has both electronic and pneumatic infrastructure. Under normal conditions the brake system is controlled electronically. The brake demand coming from the driver is operated by control unit, the most suitable brake at that condition is generated. This system has a higher performance as compared to conventional systems. The system does not close itself in case of electronic failures, it continues to run pneumatically.

EBS system includes the following functions:

1) Anti-Lock Braking System (ABS): It prevents the rolling of the vehicle by precluding the locking of the wheels during braking. It provides the steering stability in sudden brakings.

2) Traction System (ASR): The ASR activates when the drive wheels spin in ramps, slippery surfaces and during acceleration and it increases the driving safety by reducing skid at minimum.

3) Drag Torque Control (DTC): The wheels may be locked due to the inertia of the drivelines in slippery surfaces, this system activates and increases the engine torque and tries to provide roadholding.

4) Electronic Brake Balancing (EBD): It distributes the necessary brake force among wheels according to the vehicle's load status and pad wear.

5) Pad wear can be controlled, the thickness of the pads are continuously followed on the dashboard.

6) Retarder Integration: The system always interacts with retarder. The retarder precludes the pads wear in light brakings, at the same time it reinforces the brake system under normal conditions. Retarder system breakdowns when ABS function operates.

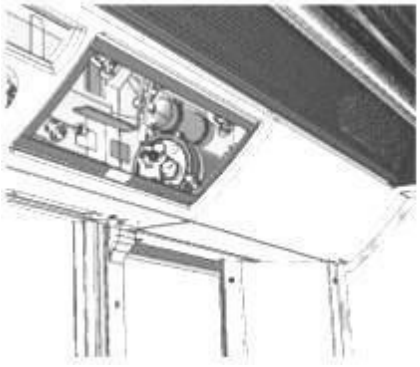
Security functions do not work in electric failure events, the performance of the brakes reduces, in this case the driver has to apply to the nearest authorized service carefully. The security functions such as ABS, ASR and DTC are effective in reducing the accidental risk, but the most important issue is to drive the vehicle appropriate to the traffic and road conditions.

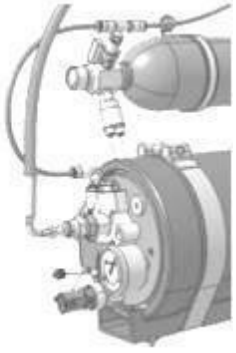
ENGINE ROOM FIRE DETECTION SYSTEM

This is a system which gives a red-colored and audible warning  when the engine room temperature exceeds 175 °C. There are fire detection sensors available in the engine room.

ENGINE ROOM FIRE EXTINGUISHING SYSTEM (OPTIONAL)

This is a system which consists of a pressure fire detection hose and fire spout nozzles which pass from the areas where a fire may occur in the engine room. There are 2 tanks in the system, one is the nitrogen tank which provides the detection of fire, and the other one is the fighting tank in which there was fire extinguishing fluid. Illuminated and audible lights alert during the fire detection.
During fire extinguishing, the fire extinguisher is sprayed from nozzles which reduce the temperature, cut contact with air and convert them to columnar smoke clouds. The fire extinguisher is mainly antifreeze water based. Extinguishing time is between 3 - 5 seconds at normal but the effective time is 50 - 75 seconds.





In case of fire;

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

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

- Wash all component surfaces with water in order for the parts in the engine room effected by the system not to corrode

- Wash inside of the pipes and nozzles by giving water to the fire extinguishing

piping system, but if it was too late for this, remove the nozzles and clean nozzles and pipes with water. Replace the nozzles if required.

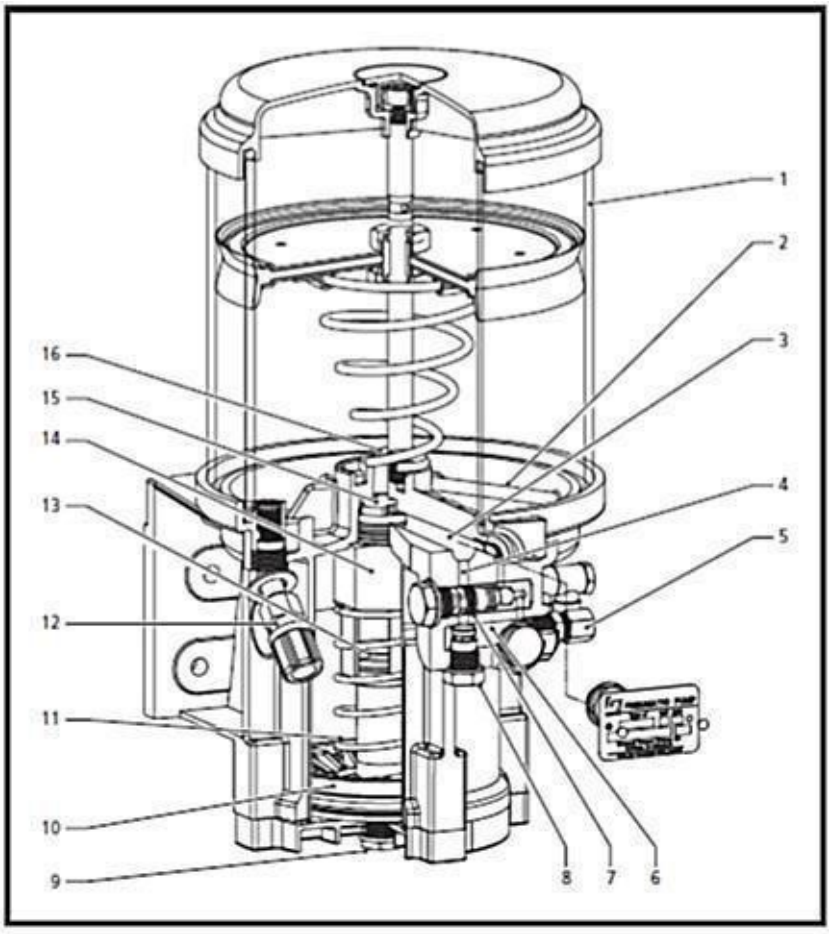
- Insert protection covers to nozzles again.
- Activate the system again by mounting filled tanks.

AUTOMATIC GREASING SYSTEM (OPTIONAL)

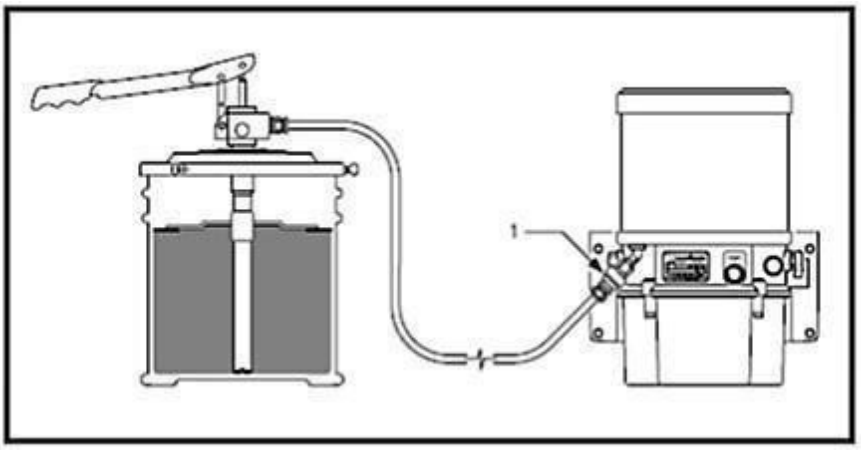
Automatic Greasing System is a system which sends oil to 10 grease points on the front axle at certain periods. The pumping and greasing unit of the system is located on the front part of the vehicle. The front axle provides oil sending at certain periods including 0.2 and 0.15 cc.

The yellow and audible warning on the information display activates when there is a failure in the system.

Filling Procedure of Automatic Greasing System



Number 12, in the picture shows filling area.



When the lubricant in the reservoir has fallen to the minimum level it must be refilled. Generally a filler pump is used for this purpose. The procedure is as follows:

- With a new filler pump (or filling hose) the hose should first be primed with lubricant. This avoids the pumping of air into the reservoir. For this ball (1) in the snap-on connector on the filler hose should be depressed while pumping lubricant through the hose until it is filled with the lubricant
- Remove the dust cap from the filler connector
- Carefully clean the filler connector and the connector on the filler hose
- Secure the filler hose to the filler connector
- Fill the reservoir to not more than the maximum level (2 cm below the top of the reservoir) or until the follower plate meets its stop
- Replace the dust cap on the filler connector
- There is a filter within the filler connector in the reservoir. If pumping is very difficult the filter could be blocked. In this case, dismantle and clean the filter.

5.SERVICE and MAINTENANCE

CLEANING VEHICLE

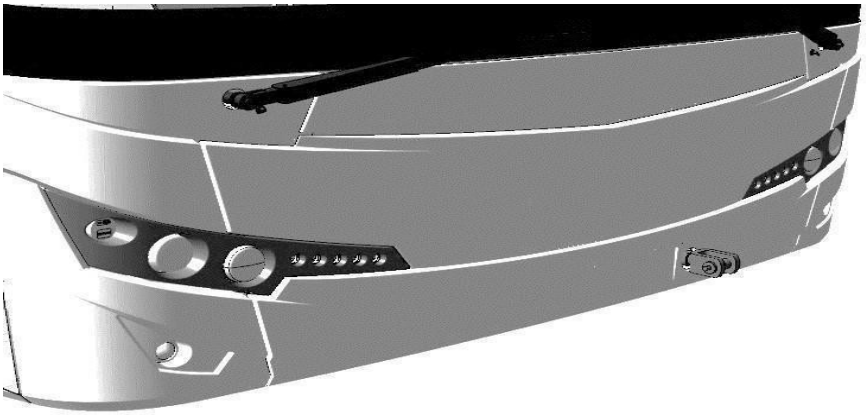
External Cleaning

- Do not clean your vehicle with detergents and chemicals, do not wipe with gas.
- Use pressured water for vehicle cleaning (except for engine area), do not remain the residual water on the vehicle after cleaning, take the residual water with cloth or chamois leather.
- Do not wash your vehicle under hot sun.
- Keep the inside of mudguards clean during the winter months
- Use only soap and water in cleaning the air bellows in the vehicle.

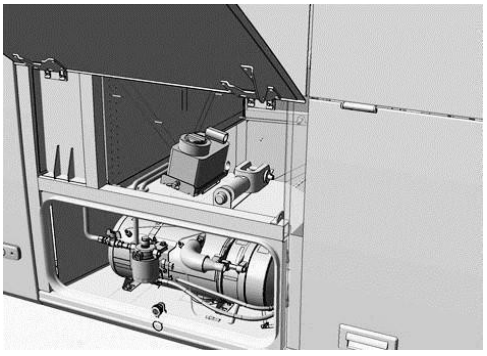
Internal Cleaning

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

TOWING VEHICLE



- Open the tow hitch cover on the fender
- Take the tow hitch from the preheater cabinet behind the left rear wheel
- Screw the tow hitch to the slot on the fender, be sure that it screwed into its place.



ENGINE MAINTENANCE

It is achieved to the engine of the vehicle from 4 parts.
It is possible to achieve the engine from the rear, left, inside and below the vehicle.

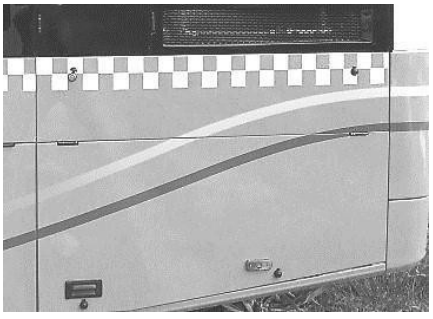
Rear Lower Cap

It can be reached to alternators, air conditioning compressor, V belts, recirculation pump, fuel water separator, the oil tank of engine oil complement, diesel exhaust emission fluid tank, ECM (Electric Control Module), dipstick, steering tank, dosage pump and dosage pump air filter by opening the rear lower cap.

Rear Upper Cap

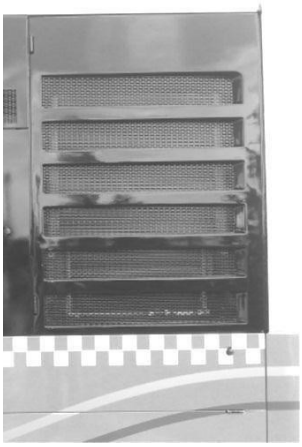
Hydraulic fan oil tank and hydraulic fan engine can be reached by opening the rear upper cap.

Left Side Lower Cap



Oil filter, fuel filter, starter, alternators and turbo unit can be reached by opening the left side lower cap.

Left Side Radiator Cap



Cooling unit, expansion tank water filling collar and level surveillance window can be reached by opening left side radiator cap.

Left Side Filter Cap

Air filter, the valve related to the heating system, valve and the pump can be reached by opening the left side filter cap.

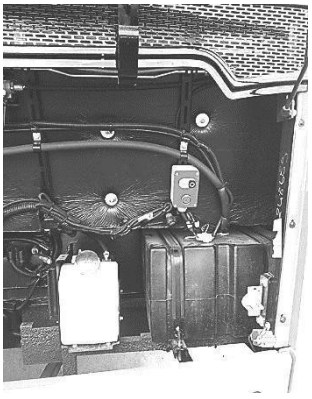
Internal Caps

By opening 2 caps inside the vehicle it can be reached to air compressor, hydraulic fan, steering pump, fuel filter, fuel pump, heat and NOX sensor on exhaust gas treating unit, urea injector, valve cover, engine oil filler tube, transmission oil filling and level measurement collar.

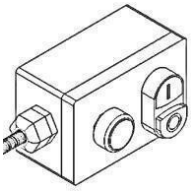
Lower Cap

The engine oil sump can be achieved by opening the cap below the vehicle.

Start / Stop Button Group



If it is needed to start the engine during a maintenance and repairing activity of the engine, the rear lower cap of the vehicle is opened and the start/stop button group here is used.



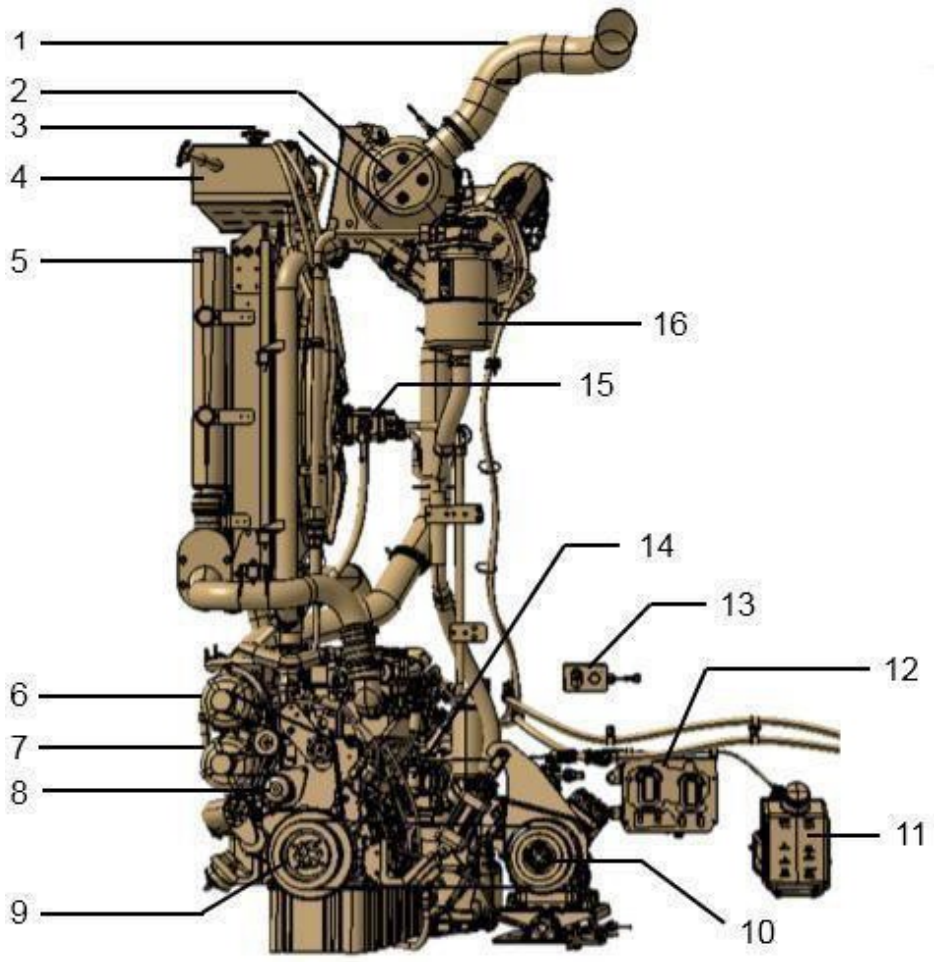
In order to start the engine, the ignition switch is brought to “M” position while the transmission was in “N” position and this button is pressed on.

Press this button to stop the engine.

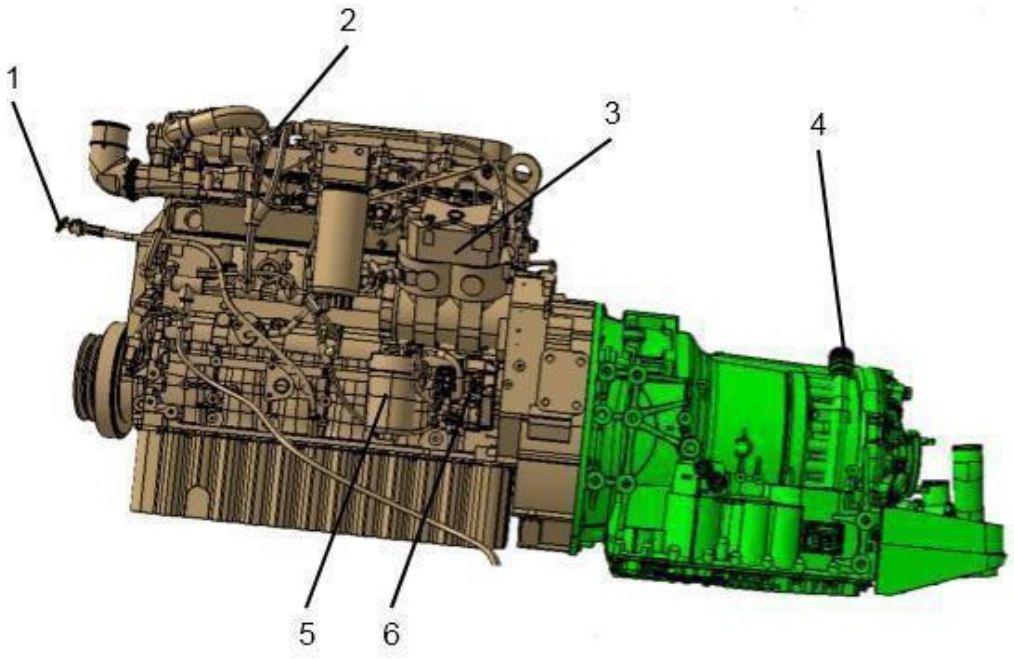
Press this (green) button to enlighten the engine.

There is a safety switch available for preventing to start the engine from the driver side when the rear cap is opened.

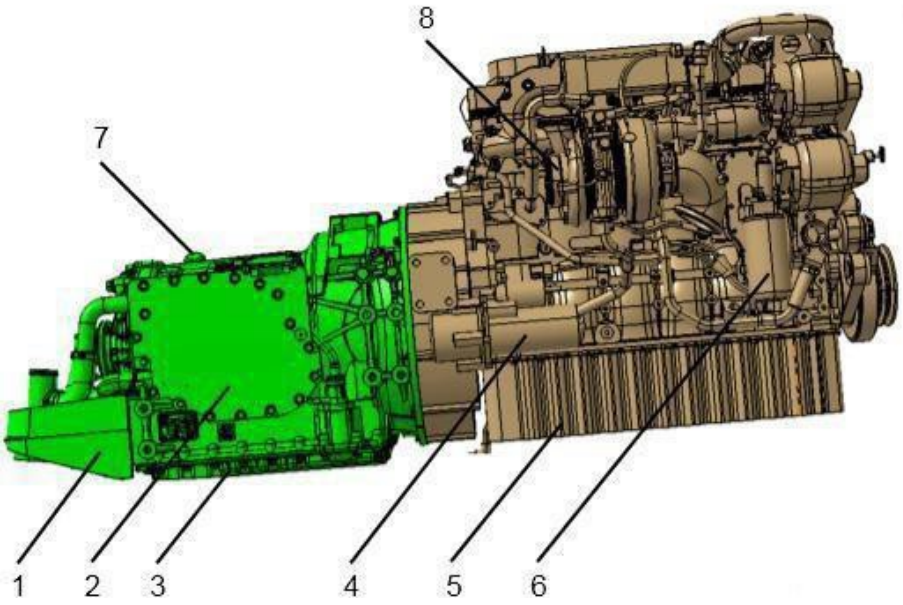
ENGINE



1) Exhaust Tail Pipe
2) Exhaust Gas Processor Unit
3) Water Filler Cap
4) Expansion Tank
5) Cooling Unit
6) Alternator
7) Alternator
8) Water Pump
9) Crankshaft Pulley
10) A/C Compressor
11) Urea Tank
12) Engine Control Module
13) Start / Stop Button Group
14) Tandem Pump (Fan & Steering)
15) Hydraulic Fan Motor
16) Hydraulic Oil Tank



1) Oil Dipstick
2) Engine Oil Filler Cap
3) Air Compressor
4) Transmission Oil Filler Cap
5) Fuel filter
6) Fuel Pump



1) Torque Converter Oil Cooler
2) Transmission Oil Cooler
3) Transmission Oil Pan
4) Starter
5) Engine Oil Pan
6) Oil filter
7) Transmission Oil Filler Cap
8) Turbo Compressor Unit

ENGINE LUBRICATION SYSTEM

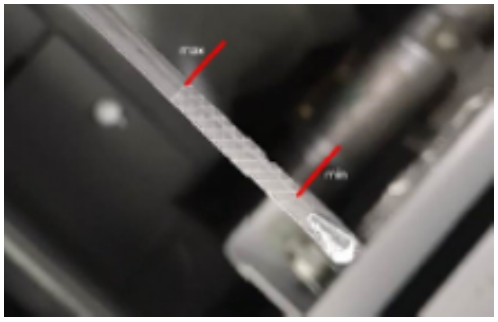
Replacement of Engine Oil

- Bring the vehicle to a horizontal position
- Run the engine till the cooling fluid reaches to 60 °C temperature
- Turn off the engine
- Remove the oil drain plug, pour the oil to the oil collection container (if the oil draining operation is performed as a service maintenance interval, remove the oil filter and replace it)
- Replace the oil drain plug with a new sailing washer and tighten it with a 80 Nm torque.

Use a specified engine oil in fluid specifications.

- Realize the oil filling operation from the oil filling collar on the valve cover
- Open the cover, fill the amount of oil specified in the fluid specifications
- After waiting 5 minutes for oil to reach the sump, check the oil level (H level) from the dipstick, close the cover.

Oil Level Control



You can reach the oil level dipstick by opening the rear engine cap. For the control of oil level;

- Pull the dipstick
- Wipe with a clean cloth
- Replace the dipstick and pull again
- Check the oil level, fill it up to H level

If the oil level is slightly above the L level, supplementation must be done surely (in the vehicles which do not have oil complement system). The oil level should not reduce below L.

AUTOMATIC ENGINE OIL REFILL SYSTEM (OPTIONAL)

Engine oil refill system is a system which completes the engine oil of the vehicle when it reduced. There is a 6 lt capacity oil tank in the engine area of the vehicle. When the ignition switch turned on after turned off for a time of 3 hours, the system controls the oil level automatically. When the engine oil of the vehicle reduces, the pump connected to the oil tank provides 0.5 lt oil supply to the engine.

There is a warning light  on the information display which alerts in the event of a failure during the supplementation of engine oil.

ENGINE COOLING SYSTEM

Engine cooling system provides the engine heat to remain in appropriate temperature interval, thus the engine works efficiently and by maintaining the oil viscosity the wear of the engine parts is prevented. The system also cools the transmission. At the same time, it also ensures the hot water necessity of the heating system and the heating of diesel exhaust emission fluid tank (optional) in very low temperatures. The cooling fluid used in cooling system is a mixture of 50% water and 50% antifreeze, the antifreeze that shall be used have to be suitable for ASTM D6210 standard. This mixture has the freezing point of - 36 °C and boiling point of +108 °C. No additives should be used in cooling fluid.

ENGINE COOLING, CABIN HEATER and A/C SYSTEMS LINE FILLING AND AIR RELIEF

1. Position the vehicle on a flat ground.
2. When there is a situation in which it is not necessary to run the cabin heater and A/C system, service maintenance is required, and the vehicle must be transferred to a place to start immediately, processes stated in the 12th and following articles must be applied.
3. Open the manual valves and air relief valves on the waterlines tied to cabin heater and A/C units (in the engine water Inlet and outlet).
4. Open the top and side caps of expansion tank.
5. Starts filling the engine cooling system fluid with the mixture of 50% antifreeze and 50% diluted water from the cap on the side surface of expansion tank.
6. When the expansion tank is full, stop filling. Wait for 1-2 minutes before starting the engine to make sure that air which entered in the system from natural ways is discharged and cooling fluid level is balanced. Then add water to the tank again.
7. Start the engine and open the entire heating system in the maximum position. Take the controller to manual maximum heating mode, quickly press the degree increasing key on the control panel to take to shocking mode and make sure that electronic three way cock is open. System pump and heated A/C pump will be operating thus and there will be an “operating” signal on the A/C controller screen.
8. As the vehicle runs, keep adding engine cooling system fluid up to the maximum level of the expansion tank.
9. After starting a cool engine, gradually increase the engine speed to make sure that sufficient amount of oil goes to engine bearings and oil pressure is balanced.
10. For air relief, start the engine in raised idling speed and release the air from air release valves on the cabin heaters (System's air must also be relieved from theair relief valves on the heated cabin heater).

11. Check whether the cabin heater temperatures have risen. Total air relief for cabin heater and A/C system lasts for about 15 minutes. Make sure that air relief is completed.

12. Close the manual valves on the waterlines tied to cabin heater and A/C units (engine water inlet and outlet).

13. Restart the engine and run the engine at high speed until cooling water temperature has reached the thermostat opening temperature values. Radiator frille may be covered with a cloth (linoleum etc.) to reach the high temperature quicker.

14. It must be continued to run the engine at raised idle speed for 5 minutes and keeping the engine cooling water thermostat opening temperature (90-95°C) range once these temperatures have been reached.

15. Run the engine in low idle for 1 minute before shutting off, which enables components such as piston, cylinder, bearings and turbocharge to cool adequately.

16. Shut off the engine and keep adding cooling fluid up to the maximum level of the expansion tank.

17. Restart the engine at raised idling speed and increase the engine cooling water temperatures to thermostat opening temperature values 90-95°C range and keep this temperature level for 1 minute.

18. Run the engine in low idle for 1 minute before shutting off, which enables components such as piston, cylinder, bearings and turbocharge to cool adequately.

19. Shut off the engine and fill the cooling fluid if it is possible to fill from expansion tank. If 1 lt or more cooling fluid can be added to the system, repeat the operations from the 17th article.

20. Check whether there is cooling fluid leakage in layout and main components during filling and air relief processes.

21. It is the customer's responsibility to daily check the cooling fluid level and fill if required.

OIL FILTER REPLACEMENT

Oil filter can be reached from left side lower cap. For the replacement of oil filter;

1. Clean the oil filter cap and remove the filter with the help of filter removal attachments
2. Fill the new filter which would be inserted with clean engine oil
3. Grease a thin layer of engine oil on oil filter o-ring
4. Tighten the oil filter with hand until it touches to the rubber gasket surface, then tighten ¾ revs more with filter attachments
5. Start the engine and check the filter for any leaks.

FUEL FILTER REPLACEMENT

Fuel filter can be reached from left lower cap. For the replacement of fuel filter;

- Remove the fuel filter
- Remove the filter element made out of paper from the filter
- Remove the o-ring from filter
- Insert the new filter element into the filter properly
- Insert the new o-ring to the filter
- Lubricate the fuel filter o-ring with a clean lubrication oil
- Fill the fuel filter with fuel
- Insert the fuel filter to the fuel filter head in a way holded by a cog
- Tighten the filter with 32 Nm torque

FUEL WATER SEPARATOR

Fuel water separator is located on the middle region mounted on the body when the rear door of the vehicle is opened. Its fuction is to provide the efficient usage of fuel by distilling the water in fuel. In order to empty the water piled up in the fuel water separator filter;

- Open the water drain tap by turning
- Tighten it again in a controlled manner while passing from water to fuel
- Check whether there is a leakage after starting the engine.

For the replacement of fuel water separator filter;

- Remove the connection cable of fuel water control sensor can
- Remove the fuel filter
- Empty the fuel filter, remove the fuel water control sensor can from the fuel filter
- Check if there is a damage or a crack on the sensor can
- Insert the fuel water control sensor can to the new filter
- Lubricate the fuel filter o-ring with clean engine oil.
- Replace the filter.

CONTROL OF BRAKE DISCS AND PADS

Pad warning indicator must be controlled regularly. It has to be taken to the authorized service when the pad indicator value is 10%. Right and left brake pads on the same axle must be replaced together. The original brake parts specified by the manufacturer of the vehicle must beused.

The brake discs have to be controlled and replaced if needed while replacing the pads. Otherwise the performance of the brakes could be effected negatively.

TRANSMISSION MAINTENANCE

The oil type must be TE-ML20.110 according to ZF specs and 20E or 20F. The transmission contains 38 lt oil at first filling. While replacing the oil, it has to be waited approximately 10 minutes for the oil to discharge and then 24 lt oil must be added.

Oil Level Control

Oil level control when the transmission is cold (30°C):

- Park the vehicle on a flat area
- Bring the transmission to “N” position
- Operate the engine at 1200–1500 rpm for 10-20 seconds
- Take the engine to idle
- Oil level should be 30 °C (cold) level on the oil dipstick.

Oil level control when the transmission is hot (90 °C)

- Park the vehicle on a flat area
- Bring the transmission to “N” position
- Operate the engine at 1200–1500 rpm for 10-20 seconds
- Take the engine to idle
- Oil level should be 90 °C (hot) level on the oil dipstick

Oil Replacing Interval

The transmission oil should be replaced at every **180000 km**. The transmission pressure filter should also be replaced in every oil replacement.

Discharging Oil

- Discharge the transmission oil during 10 minutes when the transmission was hot
- Stop the engine
- Remove the oil plug
- Discharge the oil in filter chamber by removing the plug on the filter cap
- Remove the filter cap
- Replace the cartridge filter (pressure filter) and o-ring on the filter cap plug.

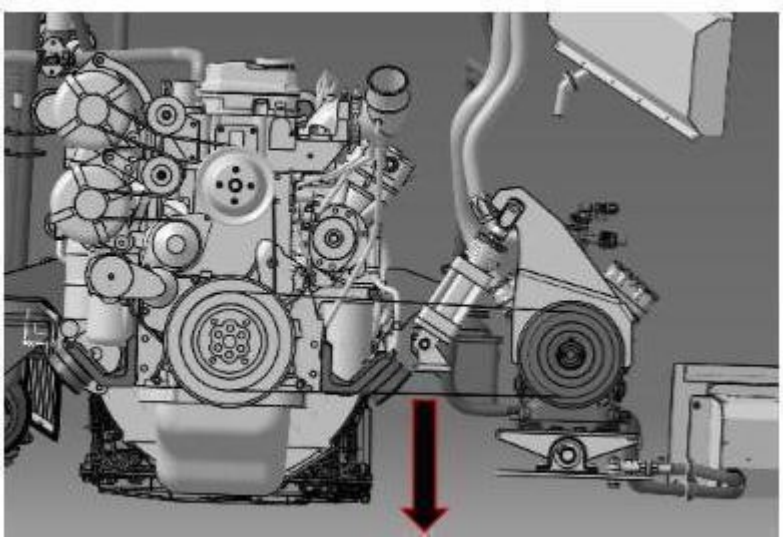
Filling Oil

- Tighten the bolts with 29 Nm torque while inserting the filter cap, take care of the bolt lengths
- Insert the plug on the the filter cap (tightening torque is 25 Nm)
- Tighten the oil plug with 35 Nm torque
- Supply oil from oil filling collar
- Control the oil level with dipstick.

DIFFERENTIAL OIL CHANGE

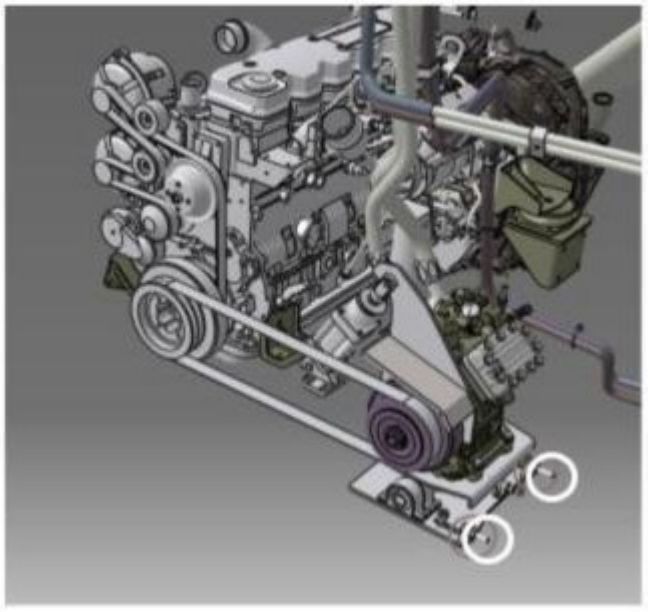
- Locate an oil drain container for oil draining under differential sleeve
- Remove the oil drain plugs under the sleeve, drain the oil to the container
- After draining replace the plug washers and tighten the plugs with 35-40 Nm torque
- Remove the filling plug while the level control plug was off and do the oil filling (the oil capacity of the differential is 16.5 lt)
- Wait for 15 minutes in order the oil to suffuse on axles
- Remove the level control plug for controlling the filled oil level (the oil level must be at the level of plug socket)
- Replace and tighten the plug washers with 130 Nm torque when the desired level is reached.

AIR CONDITION COMPRESSOR BELT



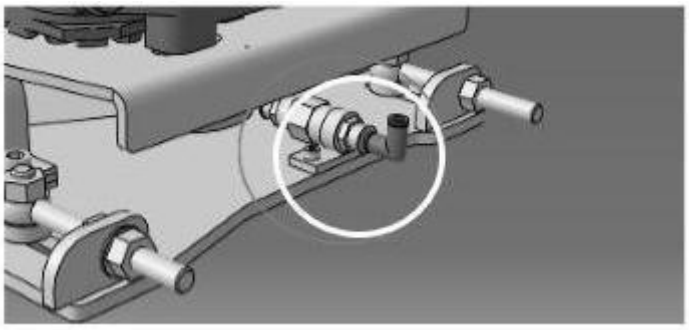
Air condition compressor belt is double 17, V belt. The codes on the belt are shown below. When the belts damage or break, apply to the authorized service for change.

BANDO RPF-J 2-5702P 2X17X1750Li



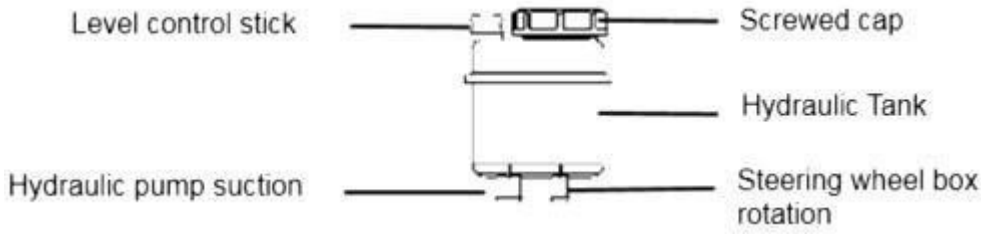
The compressor belt must be stretched by tightening the bolt nuts from specified points (must be performed by the authorized service).

In addition, the stretching system always stretches the belt with a pneumatic piston actively. Before the first start, it has to be controlled whether the air valve below is opened or not. The air valve must be open. 6 bars air stretches the compressor with piston.



Do not start the engine if the valve is closed. There is the risk of burst and breaking since the belt was not stretched.
Do not get close while the engine was running and the belt was on the way and do not touch the belt with hand.

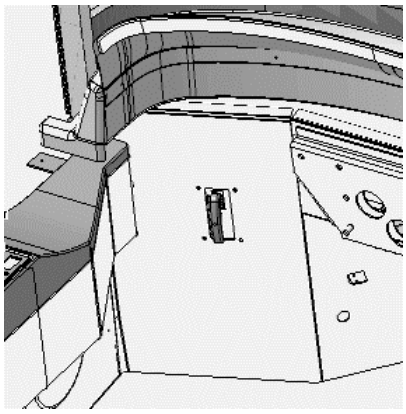
STEERING WHEEL HYDRAULIC TANK



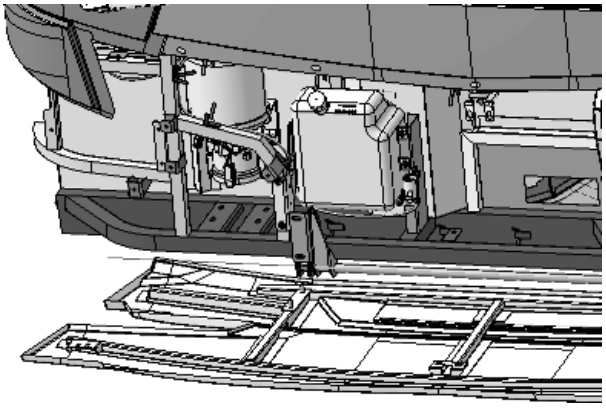
It is located at right side of the engine when the engine rear maintenance cap was opened. There is a screw cap and a dipstick available on the tank. Oil level control must be realized in every 3000 km. For oil level control, level dipstick of the tanksis removed, there is a minimum and a maximum line on the dipstick, the oil level must be between these two lines. The oil specified by the manufacturer of the vehiclemust be used for the working of hydraulic steering wheel without problems. The vehicle must not be started if there is not enough oil in the steering wheel system, thesteering wheel pump may damage. If the oil is reduced, it is supplied with oil up tothe maximum line of the dipstick.

GLASS FOUNTAIN WATER TANK

Picture 1



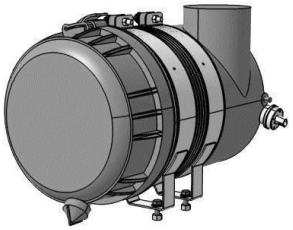
The dashboard cover of the vehicle is opened (Picture 2) with the help of lever at the level of left knee of the driver (Picture 1). After the cover was opened, maximum till to the level of 10 lt window washing water can be put into the tank.



Picture 2

Antifreezed window water must be used in cold weathers in order to prevent the freezing of water.

AIR FILTER



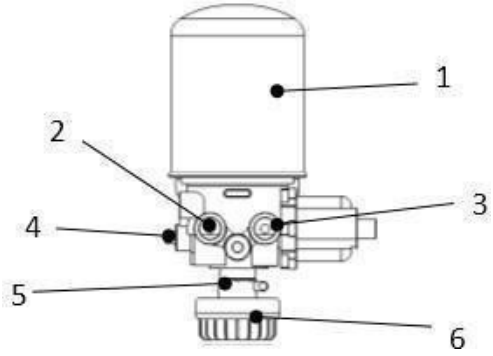
The air filter can be reached by opening the left rear side cover of the vehicle. The rubber dust valve below is used to discharge the accumulated dust by squeezing the edges in order to clean the air filter.

Air Filter Elements

The replacement of air filter elements must be realized in every 30000 km, for replacement the steps below must be followed:

1. Open the lock on the cap.
2. Turn the cap in the opposite direction of the clockwise.
3. Remove the cap by pulling it towards yourself.
4. Remove the filter element.
5. Clean the air filter box and cap.
6. Mount the filter element.
7. Replace the cap, air-venting valve must face downward when the cap was locked.

AIR DRYER

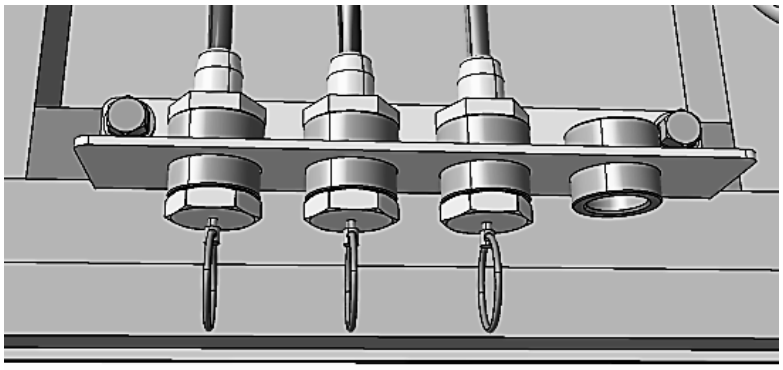


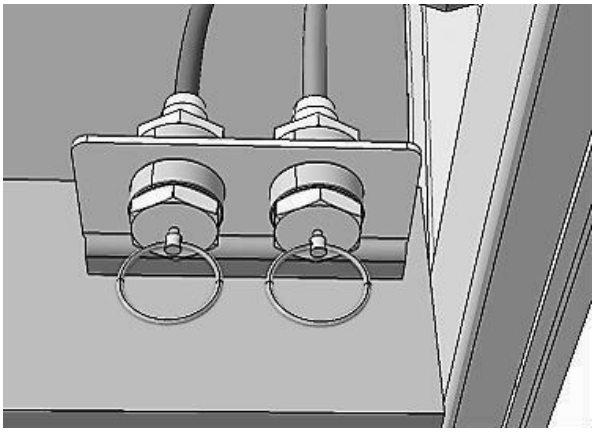
1. Cartridge
2. Compressor connection
3. Four-way valve connection
4. Heater
5. Air drain
6. Silencer

The air dryer is located on the front region of right rear wheel. The mission of the air dryer is to adjust the air pressure and to reduce the humidity and oil in the air pumped from the compressor. The dryer has the heater specification which prevents itself to freeze in cold weathers, this qualification activates in low temperatures, and breakdowns in high temperatures. The air dryer pumps air to the system at 9.8 bars until cut-off drain. After the filling has completed, the dryer throws out the accumulated water and oil from the silencer located under it. Thus, it cleans itself. The cartridge of the air dryer must be replaced after the usage of **1 year or 30000 km.**

DRAINING WATER IN AIR TANKS

There are 3 air tank drain valves under driver region and 2 air tank drain valves in the lower part, between middle door and rear wheel on the right.

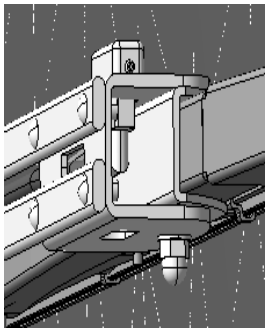




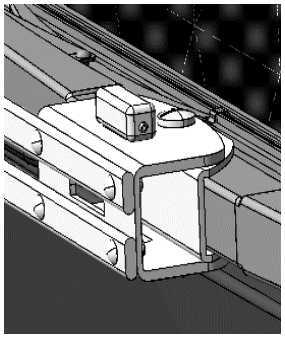
Drain water in air tanks daily, by pressing on the valves.

REPLACING WIPERS

There are 2 external wiper levers in the vehicle at right and left.
For the replacement of the wiper, the bolts and nuts on the middle side of the wiper are removed (Picture 1 and Picture 2).

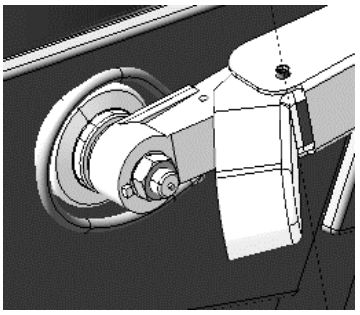


Picture 1

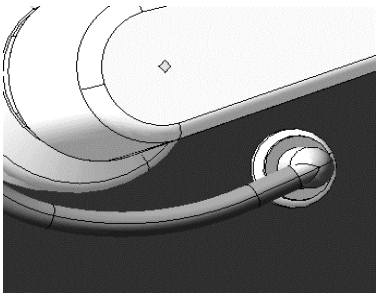


Picture 2

For the complete replacement of external wiper lever, the plastic cap on the point where it connects to the vehicle's body is opened, the wiper lever is removed by removing the nuts there (Picture 3). During the removement of wiper lever, the sprinkler hose connected to the lever must be removed by pulling from the point where it was connected to the body of the vehicle (Picture 4).



Picture 3



Picture 4

The wiper blades must be checked in winter, they have to renewed if needed.
The replacement of the internal mechanism of the wiper must be realized by the authorized services.

FUSES/RELAYS

Fuse and relays panel is located on the left ventilation cap coming from over of the battery cabinet. The fuse settlement and their values are written on the fuse label below the cap. The fuses used in the vehicle are blade-type fuses.
The fuse blows as an open-circuit in order to prevent the electrical components when a short circuit or current leakage occurred in the system. After the error was resolved, the fuse is replaced with a fuse equivalent of the same amperage.

REPLACEMENT OF BULBS

The Replacement of Low Beam Bulb

- Open the front hood
- Remove the rubber protective behind the headlights unit by pulling
- Remove the bulb by pressing the wire clips inwards
- Replace with an equivalent bulb
- Insert it in the position of rubber protective hole facing downward

The Replacement of Main Beam/Parking Bulbs

The replacement of the main beam bulb

- Open the front hood
- Remove the rubber protective behind the headlights unit by pulling
- Remove the bulb by pressing the wire clips inwards
- Replace with an equivalent bulb

- Insert it in the position of rubber protective hole facing downward

Replacement of parking light bulb

- Open the front hood
- Pull the socket end on which there is a bulb and which is located under the headlights unit
- Replace with an equivalent bulb
- Insert the socket again

The Replacement of Side Signal Bulbs

- Remove the lens from the case
- Pull the bulb outwards by removing the screws of the case
- Remove the socket
- Replace with an equivalent bulb
- Insert the lens by screwing the case to its place

The Replacement of Rear Signal, Rear Brake/Parking, Reverse Gear, Rear Fog Lights Bulbs

- Remove the lens by removing its screws
- Remove the bulb by turning
- Replace with an equivalent bulb
- Screw the lens with its rubber gasket

The Replacement of the Front Signal Bulbs

- Open the front hood
- Remove the headlights cap completely
- Remove the front signal lights screws
- Remove it from the socket
- Replace with an equivalent bulb
- Insert the front signal bulb to its place by screwing

The Replacement of the Day Drive Bulbs

- Open the hood
- Remove the headlights cap
- Remove the brackets which prevent the bulbs on the cap dislodging by removing their screws
- Remove the bulbs from their slots
- Remove the adapter (driver)
- Replace with the equivalent bulb set
- Insert the headlights cap by screwing the brackets
- Insert the adapter (driver) by screwing

Genel / Public

The Replacement of the Front Fog Lights Lamp

- Remove the rubber protective behind the headlights unit by pulling
- Remove the bulb by pressing the wire clips inwards
- Replace with an equivalent bulb
- Insert it in the position of rubber protective hole facing downward

The Replacement of the Ceiling Lights Leds

There are illumination lamps at right and left side of the ceiling. These lamps consist of led groups at specified sizes. When there is a problem in the leds in ceiling illumination, the operation is concluded by changing the problematic leds/led groups with new ones by removing the polycarbonate lens on the illumination.

The Replacement of the Rear Reflector

- Remove the rear reflector
- Clean the adhesive residues on the fender
- Remove the adhesive protector on the rear reflector
- Paste the rear reflector to its place

The Replacement of the Front and Rear Clearance Bulbs

- Remove the bulb
- Remove it from the socket by pulling outwards
- Replace with an equivalent bulb
- Insert the bulb to its place with the gasket

The Replacement of the Sidemarker Bulbs

- Remove the sidemarker bulb by removing the screws
- Remove the bulb from the socket by pulling outwards
- Replace with an equivalent bulb
- Insert the bulb to its place by screwing with gaskets

The Replacement of the Engine Lighting Bulbs

- Open the rear radiator cap
- Remove the engine illumination bulb by removing its screws
- Remove it from the socket
- Replace with an equivalent bulb
- Insert the engine illumination bulb by screwing

The Replacement of the Rear Plate Bulbs

- Remove the bulb by loosening screws
- Remove it from the socket
- Replace with an equivalent bulb
- Insert the bulb by screwing

USE OF THE JACK AND TIRE REPLACEMENT

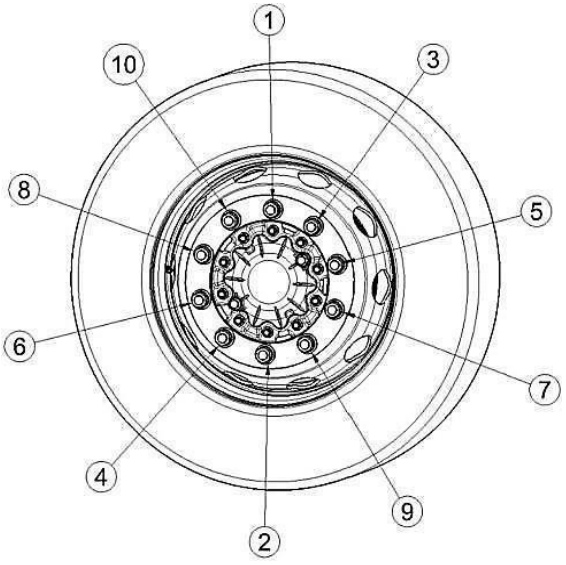
The jacking points of the vehicle are on the body and behind the front and rear wheels.

The Usage of Jack

- Be sure that the drain plug is tightened
- Use its own jack handle in order to hold the jack
- For downing the jack, turn the drain plug two turns to left.

Replacement of Wheels

- Put a chock to the wheel cross on the opposite side of the wheel you would hold
- Loosen the wheel nuts on the side of the wheel which would be replaced, but do not remove from its place.
- Hold the vehicle from the jacking point behind the wheel which would be replaced till the wheel is completely off the ground
- Remove the wheel nuts and remove the wheel
- Insert the spare wheel
- Get the cavity of the wheel nuts and ensure the wheel to fit into its slot
- Tighten the wheel nuts in cross-order and at three stages with **600 +/- 60 Nm** torque



Down the vehicle by loosing the drain plug slightly.

Be sure that the jack is placed on a flat and a solid ground. Do not start the engine when the vehicle is on jack. Do not crawl under the vehicle while using the jack. Debus the passengers during the replacement of wheels, be sure that the gear is in the parking position, pull the handbrakeand light the hazards.

NOTE : If the pressure of the wheel reduces continuously, there may be an object stuck in the tire. Additionally, it has to be controlled that whether there had been a leakage from the rims or valves.

THE PERIODIC MAINTENANCE

DAILY MAINTENANCE

- Check the tires
- Check the brakes
- Check the engine coolant level
- Check the engine oil level
- Drain the condensed water from the air tanks especially in winter months
- Check the diesel exhaust emission fluid level
- Check whether the external lights work appropriate to the safe driving
- Check the air suction hoses, exhaust pipes and belts
- Check whether there is a hydraulic leakage in brake system
- Drain the water accumulated in fuel water separator
- Check bus accident and original parts situation.
- Check corrosion chassis and parts of body

WEEKLY MAINTENANCE

- Check the wheel pressures
- Check the level of the steering wheel hydraulic tank
- Check the air suspension bellows (hole, damage etc) while the engine was running
- Check the pollution of the air filter
- Check the level of window washing water
- 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

TABLE OF PERIODIC MAINTENANCE

The main maintenance interval for the vehicle is 15000 km. The operations that shall be realized in every 15000 km are shown on the table of periodic maintenance.

Table of periodic maintenance is prepared for 195000 km. The maintenances after 195000 km are the same with the maintenance intervals starting from 15000 km and going on.

I : Inspect then clean, repair or replace as necessary

A : Adjust

R : Replace

L : Lubricate

Maintenance Interval (*1000km)	15	30	45	60	75	90	105	120	135	150	165	180	195
ENGINE													
Diagnostic control of engine Failures	I	I	I	I	I	I	I	I	I	I	I	I	I
Engine oil	I	R (or 1 year)	I	R (or 1 year)	I	R (or 1 year)	I	R (or 1 year)	I	R (or 1 year)	I	R (or 1 year)	I
Engine oil refill (Optional)	I	R (or 1 year)	I	R (or 1 year)	I	R (or 1 year)	I	R (or 1 year)	I	R (or 1 year)	I	R (or 1 year)	I
Valve gap setting						A			A			A	
Oil filter	I	R	I	R	I	R	I	R	I	R	I	R	I
Fuel filter	I	R	I	R	I	R	I	R	I	R	I	R	I
Fuel water separator filter	I	R	I	R	I	R	I	R	I	R	I	R	I
Fuel water separator filter water level	weekly												
Air filter element	I	R	I	R	I	R	I	R	I	R	I	R	I
Fuel pipes and hoses	I	I	I	I	I	I	I	I	I	I	I	I	I
Draining of condensation tank	I	I	I	I	I	I	I	I	I	I	I	I	I
Cooling system leak control	I	I	I	I	I	I	I	I	I	I	I	I	I
Replacement of hydrostatic fan driving oil filter (with the replacement of the oil)				R				R				R	
The oil level of hydrostatic fan drive, leakage and the control of functions	I	I	I	I	I	I	I	I	I	I	I	I	I
Urea tank filter						R						R	
DEF system leak control	I	I	I	I	I	I	I	I	I	I	I	I	I
Filter of urea dosing unit	R ; 300000 km												
The external cleaning of honeycomb radiators (air and oil)		I		I		I		I		I		I	
Belt tension and damage	I	I	I	I	I	R	I	I	I	I	I	R	I
Pulley and belt alignments	I	I	I	I	I	I	I	I	I	I	I	I	I

DRIVETRAIN													
Grease lubrication (when there is no automatic greasing)	I	I	I	I	L (or 1 year)	I	I	I	I	L (or 2 years)	I	I	I
Automatic greasing oil filling (OPTIONAL)					L					L			
Transmission oil and filter	I	I	I	I	I	I	I	I	I	I	I	R	I
Transmission ventilation valve cleaning		I		I		I		I		I		I	
Transmission oil leak control	I	I	I	I	I	I	I	I	I	I	I	I	I
Torque control of transmission determination bolts		I		I		I		I		I		I	
Front axle pins and bushings	I	I	I	I	I	I	I	I	I	I	I	I	I
Differential oil	I	I	I	I	I	I	I	R* (or2 years)	I	I	I	R (or 3 years)	I
Rear axle and brake calipers connection bolts	I	I	I	I	I	I	I	I	I	I	I	I	I
Rear axle breather tube	I	I	I	I	I	I	I	I	I	I	I	I	I
Hydraulic steering oil	I	I	I	I	I	I	I	R (or 2 years)	I	I	I	I	I
Leakages in hydraulic steering system	I	I	I	I	I	I	I	I	I	I	I	I	I
Hydraulic steering system connections	I	I	I	I	I	I	I	I	I	I	I	I	I
Hydraulic steering hose	I	I	I	I	I	I	I	I	I	I	I	I	I
Tire bolts	I	I	I	I	I	I	I	I	I	I	I	I	I
Wheel air Pressure	I	I	I	I	I	I	I	I	I	I	I	I	I
Wheel hub bearing	I	I	I	I	I	I	I	I	I	I	I	I	I

Maintenance Interval (* 1000 km)	15	30	45	60	75	90	105	120	135	150	165	180	195
Brake pipes and hoses, leaks	I	I	I	I	I	I	I	I	I	I	I	I	I
Brake pads and disc eye control	I	I	I	I	I	I	I	I	I	I	I	I	I
Calliper adjusting bolt	I	I	I	I	I	I	I	I	I	I	I	I	I
Measuring calliper gap	I	I	I	I	I	I	I	I	I	I	I	I	I
Calliper piston blowers	I	I	I	I	I	I	I	I	I	I	I	I	I
Measuring calliper control movement	I	I	I	I	I	I	I	I	I	I	I	I	I
Overheating of rims	I	I	I	I	I	I	I	I	I	I	I	I	I
Looseness in shock absorbers and connectors	I	I	I	I	I	I	I	I	I	I	I	I	I
ECAS settings	I	I	I	I	I	I	I	I	I	I	I	I	I
Air bellows	I	I	I	I	I	I	I	I	I	I	I	I	I

Function control of headlights, signals, parking lights, fog lights and brake lights	I	I	I	I	I	I	I	I	I	I	I	I	I
Internal illumination control	I	I	I	I	I	I	I	I	I	I	I	I	I
Function control of wipers and window washing system	I	I	I	I	I	I	I	I	I	I	I	I	I
General control of fuse panel, electric cables and sockets	I	I	I	I	I	I	I	I	I	I	I	I	I
Gas, brake and clutch pedal control	I	I	I	I	I	I	I	I	I	I	I	I	I
Battery connection control	I	I	I	I	I	I	I	I	I	I	I	I	I
Battery electrolyte density	I	I	I	I	I	I	I	I	I	I	I	I	I
Starter electric connections			I			I			I			I	

Pneumatic door adjustment	I	I	I	I	I	I	I	I	I	I	I	I	I
Function control of the safety gear of all doors	I	I	I	I	I	I	I	I	I	I	I	I	I
Air leakage, damage, tightness and door function control of door elements	I	I	I	I	I	I	I	I	I	I	I	I	I
Control of rearview connectors (including mirror heating system)	I	I	I	I	I	I	I	I	I	I	I	I	I
Corrosion control of chassis and parts of body			I			I			I			I	
Replacement of additional heater fuel filter (change earlier when needed) (OPTIONAL)		R		R		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 condition compressor oil	**I** ; every 5000 hours or 3 years												
Air condition gas and oil	**I** ; every 4000 hours or 2 years												

- Wheel air pressure must be inspected daily.
- The filters of the radiators must be cleaned in every 6 months. The air condition air suction filters must be cleaned in every 6 months. It must be replaced with a new filter in every year.
- The antifreeze must be replaced once a year.
- For fire extinguishing system; extinguishing fluid must be replaced every 5 years, tanks must be replaced every 10 years.
- R*: Hot country definition for axle oil replacement. The average temperature exceeds 25 °C during 2 months in a year; or the temperature exceeds 40°C during 7 days in a year.
- Check official ZF website for up to date oil catalogue.
- Hoses of closed crankcase ventilation must be controlled in every 60000 km. Filter of crankcase ventilation must be replaced every 120000 km.
- Real time clock battery must be replaced every 2 years.
- Wheel hub bearings must be greased, with grade 12H, every 500000 km or 4 years.
- Air dryer filter must be replaced every year or 30000 km.
- Suspension bushings (stabilizer and other) should be replaced if 15,000 km wear control is required.

6. TECHNICAL INFORMATION

Dimensions (mm)	
Maximum length	12030
Maximum width	2550
Maximum height	3136 (including A/C unit)
Wheelbase	5850
Front overhang	2700
Rear overhang	3480
Front track width	2152
Rear track width	1872
Masses (kg)	
Gross Vehicle Mass	17900
Empty mass	Max. 11400 kg
Front axle capacity	6840
Rear axle capacity	11500
Engine	
Model	CUMMINS B6.7E6D300B
Type	Diesel EGR Turbocharged
Number of cylinders	6
Engine volume (cm3)	6700
Maximum power (KW/rpm)	220 / 2100
Maximum Torque (Nm/rpm)	1182 / 1150 -1400
Exhaust emission class	Euro VI
Gearbox	Automatic
Model	ZF ECOLIFE 6 AP 1200B
Number of gears, Type	6 forward, 1 reverse, overdrive 3 levels with manual and foot controled retarder function
Final gear ratio	5,73
Steering system	Hydraulic

Tyres	275/70 R22,5
Minimum turning radius (mm)	9110
Gradeablity (at GVM)	25,10%
Suspension	
Front	Air suspension - 2 bellows Independend Süspansiyon electronically controlled (ECAS)
Rear	Air suspension - 4 bellows electronically controlled (ECAS)
Brake system	
Front / Rear	Disc / Disc
Brief expalantion	Full air brake system with EBS (Automatic oil, water seperator system is optional)
Parking brake	Air actuated acted on rear axle
Auxiliary brake	Intarder
Fuel tank (lt)	300
Urea tank (lt)	47
Generator	2x120 A
Nominal voltage	24V
Battery	24V - 2x240 Ah

NOTE : Mentioned technical values are approximate values, they can vary depending on the type of the vehicle and options.

FLUID SPECIFICATIONS

DESCRIPT ION	CAPACITY	NORM	CLASS
Engine Oil	26 lt	SAE15W 40	CES-20086, API CK-4 or CES-20081, ACEA E-9
Complement of Engine Oil (Optional)	6 lt	SAE15W 40	CES-20086, API CK-4 or CES-20081, ACEA E-9
Transmission Oil and Filter	24 lt (38 litres in the first filling)	TE-ML20.110	20F according to TE-ML20.110
Differential Oil & Rear Axle	16,5 lt	SAE80W 90	ZFTE-ML12-EcofluidX,12M
Presuspension Greasing		Accordingto DIN51825; KP2K-20 According to ISO6743-9; ISO-L-XBCEB2	ZFTE-ML12G
Steering Wheel Hydraulic Oil	8 lt	GMDexron-III	AUTRANDXIII
Hydrostatic Fan Oil	9,5 lt	GMDexron-III	AUTRANDXIII
Air Condition Compressor Oil	2 lt	DIN 51 503 : KD,KE	FUCHS Reniso Triton SE 55
Antifreeze(50%) + Water(50%)	60 lt	ASTMD6210	CUMMINSFLEETGUARDCOMPLEAT
Air Condition Gas and Oil	11 kg	1,1,1,2 - Tetrafloretan (Cooling gas R134a)	Linde

PRESSURE VALUES		
Four Way Protector Valve	Static Closing Pressure	≥5,5 Bars
Air Dryer	Minimum Opening Pressure	8,1 Bars
Air Dryer	Maximum Closing Pressure	10,45 Bars
Wheels	Cold Mixed Inflation Pressure	9 bars / 131 psi

Genel / Public

7. THE 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

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