

TENAX OTOMOTİV SANAYİ VE TİCARET ANONİM ŞİRKETİ

**MOTOR VEHICLE**



**USER MANUAL**

© TENAX Automotive San. Ve Tic. A.Ş., 2023

Reprinting, reproduction or translation, in whole or in part, is not permitted without the written consent of TENAX Otomotiv San. Ve Tic. A.Ş.

## INTRODUCTION

Thank you for purchasing a TENAX vehicle!

Reliable and comfortable TENAX vehicles are designed to drive on paved roads in various climatic conditions.

The high performance of the vehicle, its reliability and minimum labor intensity of maintenance largely depend on compliance with the rules of its operation and care. Therefore, we recommend that you read the User Manual in full, remember and follow our recommendations for the operation and maintenance of the vehicles.



### **DANGER!**

This symbol indicates particularly important rules for operating the vehicle that affect your safety, the safety of your passengers and other road users. Strictly follow these rules.



### **ATTENTION!**

Information under this symbol includes warnings or relates to the operation of the vehicle, correct techniques and methods for performing certain maintenance and troubleshooting operations, and a number of other recommendations. Following them will help you avoid damage to your vehicle.

This User Manual describes the most complete vehicle configuration, therefore, individual devices and equipment items included in the User Manual may not be available on your vehicle as not envisaged for this modification or configuration.

As the design of your vehicle is constantly being improved, some of the information and illustrations contained in this publication may differ slightly from your vehicle and cannot be the basis for any claims.

Regular maintenance of your vehicle in accordance with this User Manual and the service book will ensure its reliable operation.

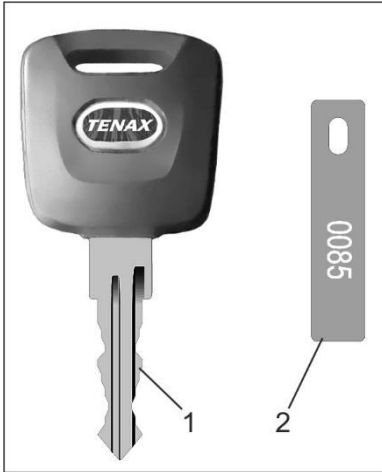
Have a safe drive!



## BEFORE OPERATION



## KEYS



The vehicle comes with a set of keys.

The kit includes two single keys 1 for locking the driver's door, the rear doors of the all-metal van, as well as the lock for the instrument and starter switch.

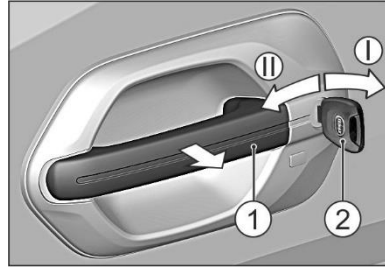
The number of the keys is indicated on tag 2.

## UNLOCKING AND LOCKING THE DOORS

The driver's door handle is equipped with a lock switch that allows locking/unlocking the lock from outside the vehicle.

### Unlocking:

- insert key 2 into the keyhole of the lock switch and turn it to the right as far as it will go (position I).
- return the key to its original position and remove it.
- open the door by pulling handle 1 towards you.

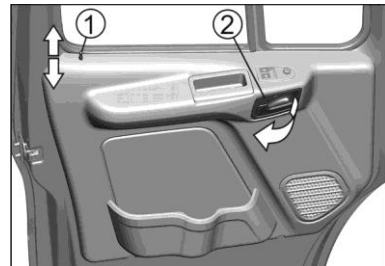


### Locking:

- close the door and, inserting the key into the keyhole of the lock switch, turn it to the left until it stops (position II).
- return the key to its original position and remove it.

From the inside, the door locks can be locked by pressing buttons 1. When buttons 1 are pressed, the doors cannot be opened from the outside.

To open a locked door from the inside, pull handle 2 twice: the first time to unlock the lock (button 1 will be depressed), the second time to open the door.



The locking mechanism of the driver's door lock eliminates the possibility of locking the lock when the door is open.



### ATTENTION!

While driving, it is recommended to keep the door lock buttons (except for the door/doors of the all-metal body cargo cab) in the depressed position in order to facilitate the evacuation of the driver and/or passengers in emergency cases.

## Before operation



### ATTENTION!

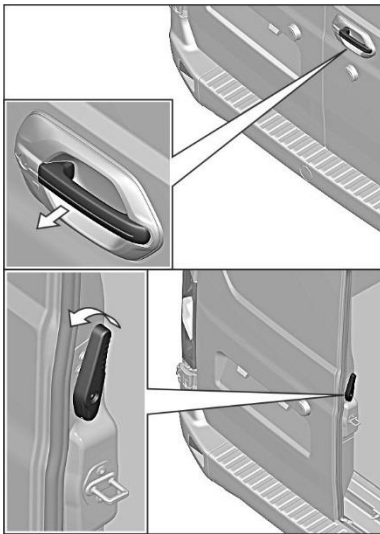
Application of significant force (more than 9 kgf) to the lock button and the switch key with the driver's door open can lead to the lock breaking. In this case, the function of protection against accidental closing of the door with a locked lock will be lost.

The all-metal body also has a side sliding door on the right side and a double rear door.

The use of the right rear door lock is similar to that indicated for the driver's door lock, with the exception that the lock is unlocked when the key is turned to the left, and locked when the key is turned to the right.

To open the sliding side door from the outside, pull the handle and slide the door back. To close the sliding side door from the outside, pull the handle in the direction of travel and slide the door.

To open the sliding side door from the inside, pull the handle in the opposite direction and slide the door back. Use the same handle when closing the door from the inside.




To open the rear right door from the outside/inside, pull the outer or inner handle of the right door, respectively. To open the left door, pull the handle on the end of the door counterclockwise and open the door. Close the left door first, then the right.



### ATTENTION!

Closing the left rear door while the right one is closed may damage the door panels.

In one of the configurations, the sliding side door and the rear cargo compartment door can be locked/unlocked with button 



on the dashboard. When the locks of the sliding side and rear doors are locked and when the devices are turned on, the indicator in the button lights up. Locking/unlocking using the button does not work when the sliding side and rear doors are open.



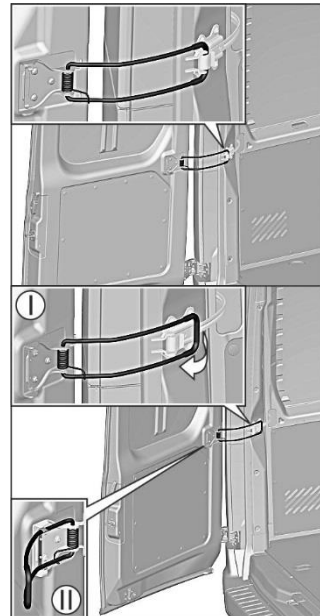
**ATTENTION!**

The locks of the sliding side and rear doors have the function of protecting the lock motors from overheating caused by excessively frequent locking / unlocking of the doors (more than 5 times in a row). In this case, the remote blocking of the locks (optionally) stops for a few minutes, after which the functionality is fully restored.

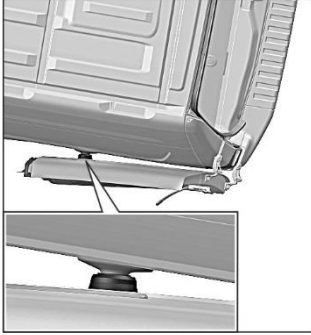
The rear doors open 270° while locking using stops after opening for 90°.

To lock the right or left rear door 90°, open the door and make sure the stop lever is engaged with the stopper as shown in the figure.

To secure the right or left rear door at 270°, open the door at an angle less than 90° and make sure that the limiter lever is not engaged with the stopper (position I), move the limiter lever in the direction of the arrow as shown in the figure and open the door. If necessary, the limiter can be turned off ( **not recommended!**), by locking the lever in the spring clip (position II). To activate the limiter, pull the lever towards you and engage it with the stopper.



## Before operation



Locking at maximum door opening ( $\sim 270^\circ$ ) is provided automatically using a magnetic lock. To unlock, pull the door towards the closing direction (towards you).

### **ATTENTION!**

To warn of the presence of a vehicle stopped on the road with the rear doors open to  $90^\circ$  on a vehicle with an all-metal body, it is necessary to place an emergency stop sign.

### **ATTENTION!**

To avoid deformation of body parts from impact loads, when opening the doors to the maximum angle, hold the door leaves until the magnetic latches actuate.

### **DANGER!**

It is strictly forbidden to operate the vehicle with open or loosely closed doors.

## CENTRAL DOOR LOCKING

The central locking works only when there is power supply (charged battery).

The central locking allows the simultaneous locking and unlocking of the driver's door and passenger doors.

**Locking.** From the outside: close the doors and turn the key in the driver's door lock to the left until stop. Return the key to its original position and remove it.

From the inside: with the doors closed, press down the lock button on the driver's door: the lock buttons will move down on the driver's door and passenger doors.

**Unlocking.** Outside: turn the key in the driver's door to the right until it stops. Return the key to its original position and remove it.

From the inside: pull the inside handle of the driver's door towards you once. The lock buttons on the driver's and passenger's doors will rise, and the locks on those doors will be unlocked. To open the door, pull the inside handle towards you again.



### ATTENTION!

The central lock has a function to protect the lock motors from overheating caused by locking / unlocking the doors more than 5 times in a row. In this case, the central lock stops working for a few minutes, after which its function is fully restored.

## Before operation

### SEATS

*We recommend adjusting the driver's seat as follows:*

- using the adjustments, set the seat so that you can fully press any pedal of the vehicle without any discomfort;*
- set the backrest in such a way that you can engage fifth gear without taking your back off the seatback.*



#### **DANGER!**

To avoid creating an accident, do not adjust the driver's seat while the vehicle is moving.

### **Driver's seat**

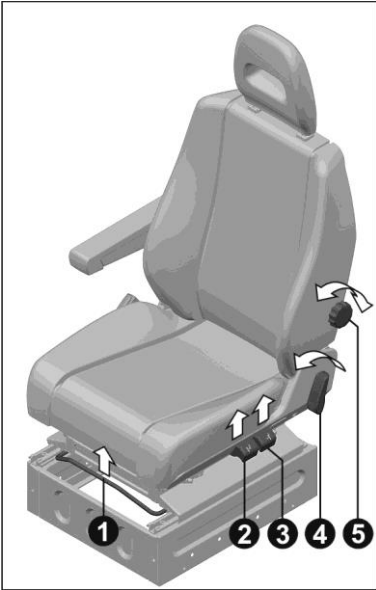
Depending on the vehicle equipment, the driver's seat can be equipped with an adjustable armrest, electrically heated cushion and backrest, lumbar support stiffness adjustment of the seatback and adjustment of the seat cushion in the longitudinal direction.

The armrest is angle-adjustable by turning the wheel located at the bottom front of the armrest.

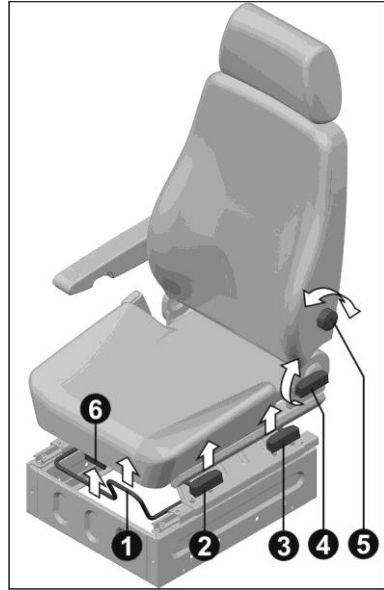
The seat has the following adjustments:

- longitudinal;
- height of the seat front;
- height of the seat back;
- backrest tilting angle;
- stiffness of the lumbar support;
- longitudinal movement of the cushion.

**To move the seat longitudinally**, pull longitudinal adjustment knob 1 up and select the desired seat position. After adjustment, make sure the seat is locked into place.



Design version 1



Design version 2

**To adjust the height of the front or rear of the seat,** lift up handle 2 or 3, respectively, and sequentially set the desired height of the front or rear of the seat.

**To adjust the backrest angle,** turn lever 4 as shown in the figure and select the desired backrest position.

**To adjust the stiffness of the lumbar support of the backrest,** turn knob 5 as shown in the figure and select the desired stiffness of the lumbar support.

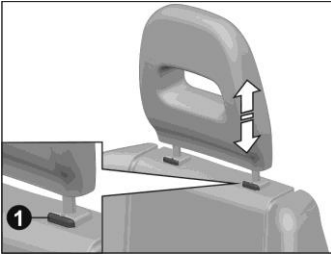
The driver's seat is mounted on a welded base, which additionally performs the function of a compartment for small items. To gain access to the compartment, tilt the seat back and move the seat as far forward as possible.

**To adjust the longitudinal movement of the cushion,** lift handle 6 up as shown in the figure, and without releasing, make the adjustment, then release the handle.

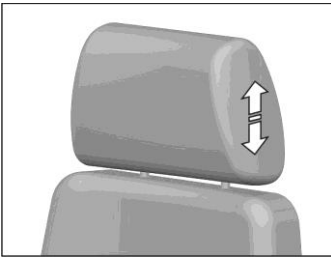
## Before operation

**The driver's seat headrest** is height adjustable.

To adjust the headrest, press lock 1 and, while holding it, move (up or down) the headrest so that the back of the head is at the level of its central part. Then release the latch and try moving the headrest to make sure it is secure.



Design version 1



Design version 2  
**Passenger seat**



To adjust the headrest, grasp the headrest with your hands and move (up or down) the headrest so that the back of your head is against the center of the headrest.

The passenger seat is double and unregulated.

There are welded brackets on the base of the passenger seat on the right side for installing a fire extinguisher.

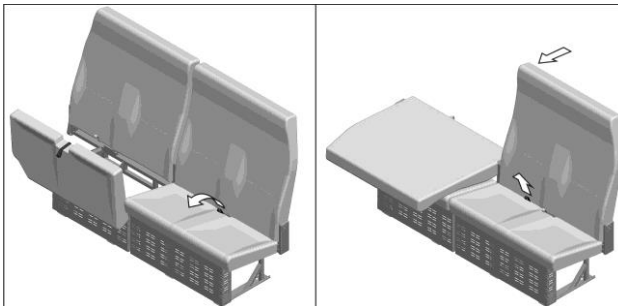
On the second row of vehicles with a platform and a two-row cabin, seats similar in design are installed.

On vehicles with a platform and a two-row cabin, the fire extinguisher is mounted on the welded brackets of the second row right seat.

Depending on equipment, vehicles can be equipped with a front passenger seat with an integrated diagonal lap belt for the middle passenger and a reclining cushion. The back of this seat is not adjustable. There are welded brackets on the base of the seat on the right side for installing a fire extinguisher.



Vehicles with an all-metal body and a two-row cabin are equipped (and vehicles with a platform and a two-row cabin can be equipped) with second-row passenger seats that can be converted into a sleeper. Additionally, the seats have the function of a glove box formed by external decorative panels.



To access the box, pull on the cushion strap and fold the cushion forward to a vertical position.

To convert the seats into a sleeper, with the cushion folded, pull the backrest lock drive strap and lower the seatback as shown in the figure, placing it on the seat cushion.

To return the backrest to its upright position, lift the backrest up and make sure it is securely locked.

## Before operation

In the case of installed second-row convertible passenger seats, the fire extinguisher is attached to the front passenger seat brackets.



### **DANGER!**

It is forbidden to drive the vehicle with the second row seats unfolded into a sleeper when people are on them as well as with the back of the second row seat not fixed in a vertical position.

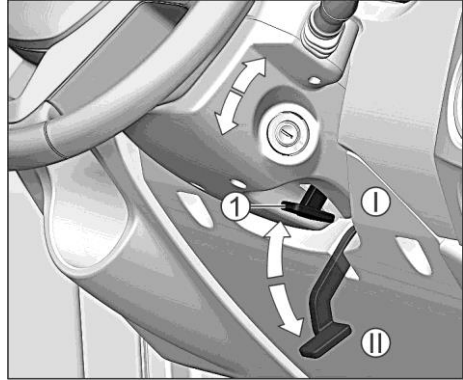
**Child restraints (CR) of the universal category** can be installed on the seat of the front right passenger (for a single-row and double-row cabin) and on the side seats of the second row of seats (for a double-row cabin), equipped with diagonal lap seat belts.



## STEERING COLUMN

The steering column is tilt adjustable.

To adjust the column, lower lever 1 of the steering column locking mechanism (position II), place the steering wheel in a comfortable position and fix the column by lifting the lever up to the stop (to the initial position I).



*Adjust the steering wheel position after adjusting the driver's seat.*

*Set the steering wheel so that you can easily reach the top of the steering wheel with a slightly bent hand.*

**!** **DANGER!**

To avoid an emergency, it is forbidden to adjust the steering column while the vehicle is moving.

## **PASSIVE SAFETY SYSTEM**

The vehicle can be equipped with a passive safety system (SPS). This system, depending on the vehicle configuration, may include:

- seat belts (SB) with a belt pretensioner;
- driver's airbag;
- front passenger airbag;
- warning system about the unfastened seat belt of the driver and passengers and the SPS failure;
- SPS control unit with a front impact sensor.

### **Safety belts**

Seat belts are an effective means of protecting the driver and passengers from the severe consequences of traffic accidents (TA).

Vehicles are equipped with two types of belts: three-point (diagonal-lap) with inertial coils and two-point (lap) static with manual adjustment of the strap length. Diagonal lap belts do not need to be adjusted. In the case of static lap belts, the length of the belt strap must be individually adjusted, whereas the lap strap must fit snugly against the hips. The length of the strap can be changed by a knob.

On vehicles equipped with airbags, three-point (diagonal-waist) SBs with inertial coils are used for the driver and front row passengers. The belt pre-tensioning and load limiting devices are built into the SB coils of the driver and front right passenger. The belt pretensioner is designed to control possible belt slack, and the load limiting device reduces restraint force for more effective crash protection. The pre-tensioner works regardless of whether a person is wearing a seat belt or not.

The seat belts for the driver and front right passenger are equipped with mechanisms that allow you to adjust the upper seat belt guide in height, thereby ensuring the convenience of using the belt for people of different height groups. The outer diagonal lap belts of the second row of seats are not equipped with these mechanisms.

To adjust the position of the top guide, pull button 1 towards you and at the same time move it either up or down as needed.

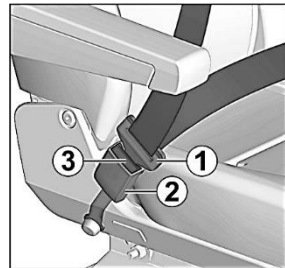
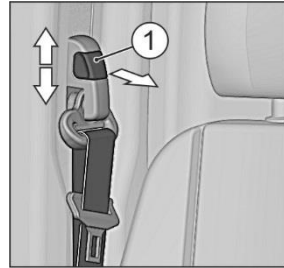
**To fasten the belt,** slowly (without jerks) pull the belt by tongue 1 so that its length along the chest and hips is approximately the same, and insert it into lock 2 corresponding to this seat until a characteristic click.

The top of the belt must pass through the middle of the shoulder, never over the neck or under the arm, and must fit snugly against the upper torso.

The lap part of the belt should lie as low as possible and always close to the hips. Otherwise, release the belt and pull it.

**To release the belts,** press red button 3 of the corresponding lock. The tab will be pushed out of its socket by the spring. Pull the belt back by the tab with your hand to make it easier for the mechanism to wind it.

Pregnant women must also wear seat belts. It must be remembered that the belt strap must be positioned in such a way as to avoid any pressure on the abdomen. The lap part of the belt should be located below the abdomen.



## Before operation

### **ATTENTION!**

Belts that have been heavily stressed in an accident, or that are frayed, torn or otherwise damaged, must always be replaced with appropriate new seat belts.

Any modifications to the design of the seat belts are not allowed.

It is impossible for two persons to fasten one belt together, it is especially unacceptable to fasten a child sitting on the passenger's lap with a belt.

## Airbags

Airbags are an additional means of protecting the driver and front passengers in an accident and serve to reduce the severity of the consequences of an accident.

Some vehicle configurations may be equipped with airbags for the driver and front passengers, or only the driver's airbag.

The driver's airbag module is located inside the steering wheel. The front passenger airbag module is located on the right side of the dashboard in front of the front passenger seat.

The presence of an appropriate airbag in the vehicle is indicated by the letters "AIRBAG":

- on the steering wheel horn button;
- on the cover of the passenger airbag module on the right side of the dashboard.




On vehicles equipped with a front passenger airbag, warning pictograms are located on both sides of the right sun visor.

**! DANGER!**



It is **FORBIDDEN** to install a universal category child restraint (CR) in which the child is located rearward on the front passenger seat if the vehicle is equipped with a frontal AIRBAG for front passengers. Failure to do so can result in **DEATH** or **SERIOUS INJURY TO THE CHILD!** At the same time, the installation of a CR of a universal category on the front passenger seat, in which the child is facing forward, does not eliminate this danger.

**Seat belt warning system for driver and passengers**


The driver's seat belt buckle can be equipped with a sensor that activates a warning light  when the instruments are turned on the instrument cluster when the driver's seat belt is not fastened. In the case of a vehicle moving with the driver's seat belt not fastened, when the speed reaches 20-25 km/h, in addition to the warning light, the beeper is activated.

On some vehicle configurations, the seat belt buckles of the driver, front and rear passengers are equipped with sensors that, when the devices are turned on, activate the warning lights on the instrument cluster and in the overhead console when the driver and passengers are not fastened. In the case of a vehicle moving with the driver's and passengers' seat belt not fastened, when the speed reaches 20-25 km/h, in addition to the warning light, the beeper is activated.

**SPS malfunction warning system**

When the instruments are turned on, the passive safety system starts the self-test procedure, whereas indicators  and  turn on in the instrument cluster for 2-3 seconds (see "Instrument cluster"). After the self-test is completed (for approximately 3 seconds), the indicators go into a true operating state.

## Before operation

If, after turning on the instruments, indicators  does not go out or turns on again, this means that a malfunction has been detected in the passive safety system and its operation in a collision is not guaranteed. In this case, contact a service company for troubleshooting.

### **Operation of passive safety systems**

The airbags are activated by the SPS control unit, which determines the accelerations that occur during a collision in an accident.

The airbag is activated by a pyrotechnic device that inflates a fabric bag, which makes the popping sound, as well as releases heat and smoke when they are deployed (which does not indicate the start of a fire).

When deployed, the airbags reduce the impact force of the driver's head and chest on the steering wheel and the front passengers' heads on the dashboard in case of a collision. When the airbag deploys, there is little to no visibility restriction for the driver, as it inflates and deflates in a short amount of time.

When the airbags deploy, a person may suffer skin damage or other injuries. If eyes are irritated, rinse them with clean water. If the problem persists, consult a doctor.

Airbags are deployed depending on the strength, direction of impact and other factors (vehicle speed, density and rigidity of the object that the vehicle collides with, etc.). With a certain combination of these factors, the sensor of the SPS unit first receives an electronic signal for the activation of the pretensioner of the SB for the driver and the right front passenger, and then a signal for the deployment of the airbags for the driver and front passengers.

Examples of situations when SPS actuates:

— collisions at low speed (up to 15 km/h), overturning, collision with a wheel on a low obstacle (curb, pit, etc.), vehicle falling from a low ledge: the seat belts are blocked by an inertial-type locking device, and airbags in such a situation may not open, since their operation does not lead to an increase in the level of safety provided by the seat belts and the signal for opening is not issued by the SPS unit;

— collision with a fixed, non-deformable obstacle: the airbag may deploy at low speeds;

— Collision with a movable deformable obstacle (for example, with another vehicle behind): the airbags in this situation may not deploy, since the deceleration recorded by the impact sensor is relatively small in such collisions;

— In the event of a severe frontal collision (when driving at speeds above 24 km/h), the driver and front right passenger seat belt pretensioners are activated and the driver and front passenger airbags inflate.

For safety reasons, after the vehicle gets into minor accidents (when the airbags did not deploy), check the SPS operability. In all cases requiring repair, replacement or diagnostics of SPS elements, it is necessary to contact the maintenance company.

 **DANGER!**

It is prohibited to:

- independently dismantle airbags, disassemble, repair, ignite, connect to voltage sources;
- independently replace or repair airbags, steering wheel, seat belts;
- make changes to the design of elements of the passive safety system (airbags, SB and their mounts).

All work on the passive safety systems must only be carried out in a service shop by specially trained personnel.

## Before operation



### **ATTENTION!**

The airbags and the pretensioners for the driver's and front right passenger's seat belts only deploy when the ignition is on, whether or not a person is in the seat.

Airbags, as well as seat belt pretensioners, may be deployed in the event of a rear impact, rollover, impact against the vehicle body, running over a curb, hitting a wheel in a pit, falling off a ledge, etc., if the vehicle experiences impacts similar to those to which it is subjected in a collision.

The passive safety system for the driver and front passenger is a stand-alone disposable device.

After deployment, the control unit, airbag modules and seat belts with pretensioners must be replaced in a workshop.

In all cases requiring repair, diagnostics or replacement of SPS components, as well as the steering wheel, dashboard and (or) seats, contact the technical service companies.



### **ATTENTION!**

Airbags are an additional means of protection for the driver and front passengers wearing a seat belt.

The airbags provide optimum protection when the seat, backrest and headrest are correctly positioned. The back should be supported by the back of the seat, and the driver's seat should be pushed back as far as is practically comfortable for the driver, so that in an upright sitting position, hands slightly bent at the elbows can hold the steering wheel.

Seat belts help to ensure that in an accident a person assumes the safest position in which the airbag can provide the most effective protection. In addition, the driver's and front right passenger's SBs have belt pre-tensioning devices that are activated before the airbags deploy and additionally bring the driver and passenger to the seatbacks.



### **DANGER!**

Immediately after the airbags have deployed, some parts of the system may have a high temperature. To avoid burns, do not touch hot parts.



 **DANGER!**

It is forbidden to place foreign objects (stickers, watches, holders for a phone or navigator, etc.) on the steering wheel and dashboard in the airbag installation areas, as well as foreign objects (umbrellas, bags, etc.) between the front passengers and dashboard, as the airbags may cause injury if they inflate. The same danger exists when a driver or passenger smokes a pipe or uses a mobile phone while driving.

Seat belts must be fastened and adjusted to the person's height. While driving, do not put your forearms/hands on the place where the airbag is mounted. Passengers in the front seat must not lean on the dashboard or hold any object that could cause injury when the SPS is triggered. Also, do not rest your knees on the dashboard or put your feet on the seat. Passengers are advised to buckle up and take a position in which all parts of their body (knees, hands, head, etc.) will be located at a sufficient distance from the dashboard. Incorrect sitting position and/or seat belt not fastened can result in serious injury if the airbags deploy because the driver or passengers can be hit by an inflated airbag if they are in the place provided for an inflated airbag.

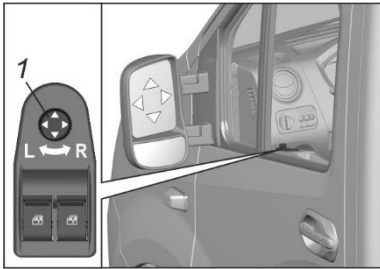
 **DANGER!**

It is **FORBIDDEN** to install a universal category child restraint (CR) in which the child is located rearward on the front passenger seat if the vehicle is equipped with a frontal AIRBAG for front passengers. Failure to do so can result in **DEATH** or **SERIOUS INJURY TO THE CHILD!** At the same time, the installation of a CR of a universal category on the front passenger seat, in which the child is facing forward, does not eliminate this danger.

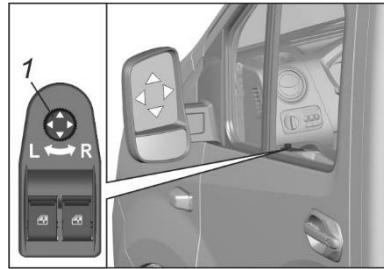
It is forbidden to hold a child on the lap while the vehicle is in motion.

It is recommended to transport children under the age of 12 in a vehicle with two rows of seats on the side seats of the second row using the universal category CR appropriate for the age and weight of the child.

## REAR VIEW MIRRORS



Design version 1



Design version 2

To adjust the electric exterior mirrors with the instruments and starter turned on, turn handle 1 on the control panel to select the right R mirror or left L mirror. Move the handle to the right or left to adjust it horizontally and up or down to adjust it vertically. When the side lights are on, the control panel is illuminated.

Exterior mirrors without electric drive are adjusted manually, by acting on the mirror itself.

In case of fogging/freezing of the exterior mirrors, turn on their heating using the switch installed in the switch block on the dashboard. The heated mirrors are switched off by pressing the switch again.

*Adjust the position of the rear-view mirrors after adjusting the driver's seat.*

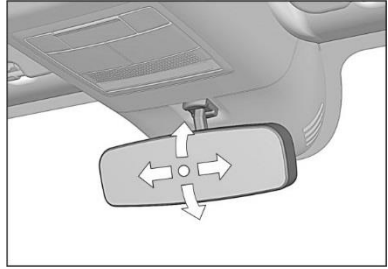
Mirrors have folding mechanisms, and in the event of a collision with an obstacle, they can deviate in the direction of impact, thereby eliminating damage to the mirrors.



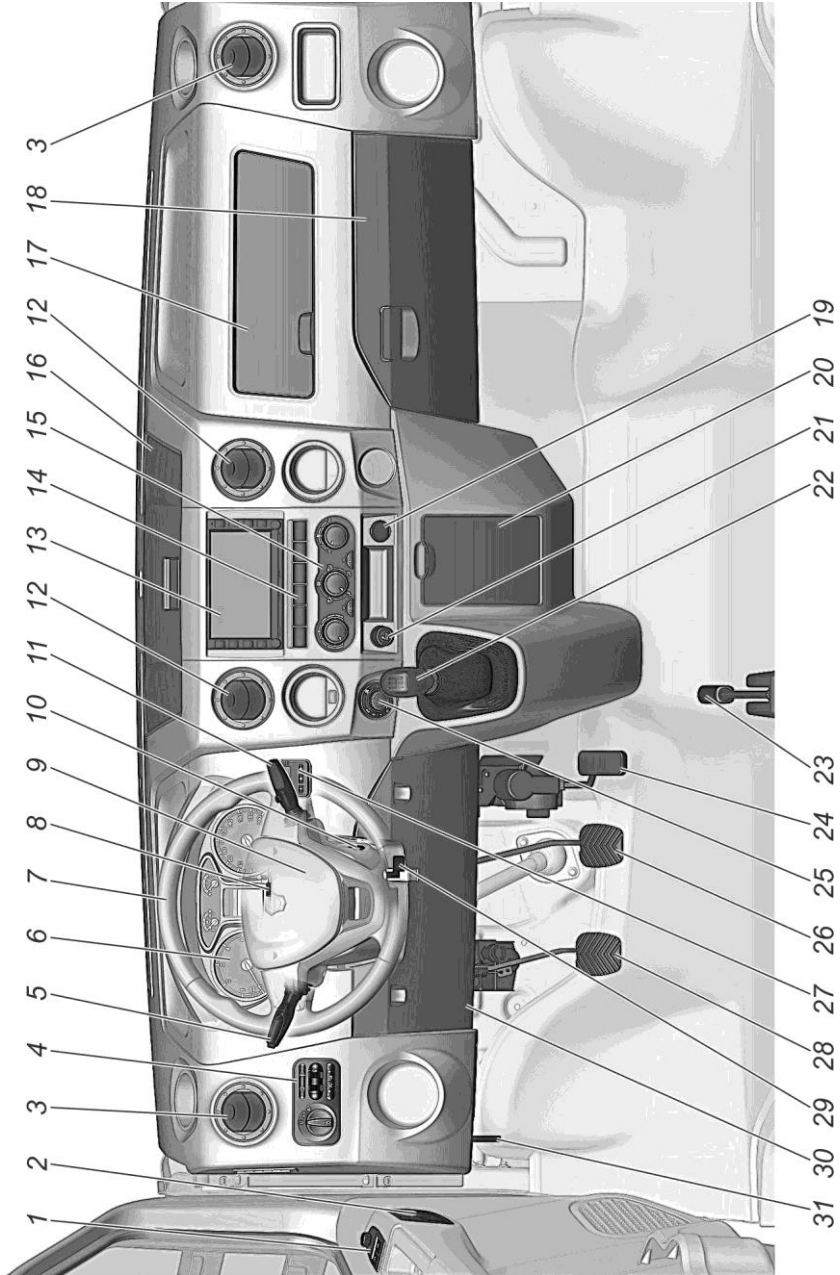
**DANGER!**

To avoid an emergency, it is forbidden to adjust the rear-view mirrors while the vehicle is moving.

Adjust the interior rear-view mirror (if equipped) by turning around the its attachment hinge.

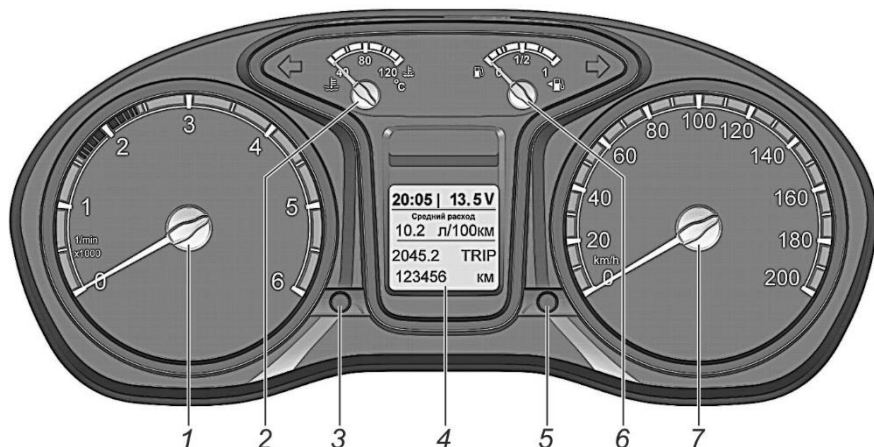


# DASHBOARD AND CONTROLS



	Page	Page	Page
1. Power window regulator and exterior mirror control unit	26,	17. Upper storage box or passenger airbag module	58,
2. Handle for opening the door from the inside	55	18. Lower storage box	20
3. Side ventilation deflectors	7	19. Receptacle	58
4. Light control module	61	20. Storage box/ashtray	57
5. Headlamp and direction indicators control stalk	50	21. Cigarette lighter	56
6. Instrument cluster	47	22. Shift lever	90
7. Steering wheel	30	23. Parking brake lever	91
8. Emergency brake light switch	54	24. Accelerator pedal	
9. Horn button	46	25. Auxiliary heater control knob	67
10. Instrument and starter switch	49	26. Service brake pedal	
11. Steering column wiper and washer stalk	46	27. Preheater control module	84
12. Central ventilation deflectors	61	28. Clutch pedal	
13. Audio master unit	71	29. Steering column lock lever	17
14. Switches on the dashboard	53	30. Fuse box cover	153
15. Dashboard air conditioning control panel	61	31. Hood release handle	112
16. Document pocket	58		

## INSTRUMENT CLUSTER



### 1. Tachometer.

Indicates the engine speed in rpm.



#### ATTENTION!

Do not run the diesel engine at over 3600 rpm for a long time.

### 2. Engine coolant temperature gauge.

When the pointer reaches the red zone of the scale and the indicator of an emergency high temperature of the coolant lights up, it is necessary to stop the engine and eliminate the cause of overheating.

### 3. Mode / trip computer control button.

To self-test the instrument cluster, press the Mode button and, while holding it, turn on the instruments (key position I). This turns on the test indicators, all segments of the multifunction display, the dial gauges go from minimum to maximum.

The self-test mode is interrupted: independently after the movement of the instrument arrows from the initial scale mark to the maximum one; when a signal of the engine crankshaft speed appears; when turning off appliances.

After the end of the self-test mode, the instrument cluster enters the operating mode.

To control the trip computer (menu selection in a circle), turn the button clockwise (MK-up) or counterclockwise (MK-down).

To reset (zero) individual indications of the trip computer, press the button when particular readings are indicated.

#### **4. Multifunction display.**

See next page for operating modes.

#### **5. Button for zeroing the readings of the daily mileage / conversion of hours and minutes.**

To reset the daily mileage readings, press the button and hold it down for at least 3 seconds.

To change the hours and minutes, turn the button: clockwise to change the hours, counterclockwise to change the minutes.

#### **6. Fuel gauge.**

When the remaining fuel is less than 8 liters, the arrow reaches the red zone of the scale and the indicator of the minimum fuel level in the tank lights up.



#### **ATTENTION!**

The position of the fuel gauge depends on the surface on which the vehicle is placed, and on the vehicle load.

#### **7. Speedometer.**

Indicates the vehicle speed in km/h.



#### **ATTENTION!**

In order to avoid malfunctions in the operation of the instrument cluster, it is forbidden to disconnect the battery (disconnect the wires from the "+" and "-" terminals) when the instruments are turned on.

## Before operation

*To eliminate the consequences of failures in the operation of the instrument cluster:*

*1. Turn off instruments.*

*2. When the battery is disconnected, reconnect the battery to the vehicle; when the battery is connected, disconnect the battery and after a few seconds connect it to the vehicle.*

*3. Press the Mode button and, holding it, turn on the instruments. In this case, the arrow indicators will return to their original position.*

### **Multifunction display**

In the instrument cluster it is possible to select the language for displaying trip computer information.

To display the language selection mode on the multifunction display:

- disconnect the battery and after a few seconds connect it to the vehicle ;

- turn on the instruments (key position I). The language selection mode will appear on the display. The selected language is in a frame.

- select the language using the Mode button of the instrument cluster (turn to change the language, press to select the language indicated by the frame).

The language selection mode is interrupted (the instrument cluster enters the trip computer display mode):

- by pressing the Mode button;

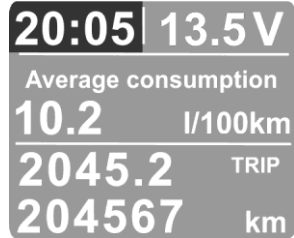
- when starting the engine ( key position II) ;

- after 10 seconds, if the language change mode was not activated by turning the Mode button.

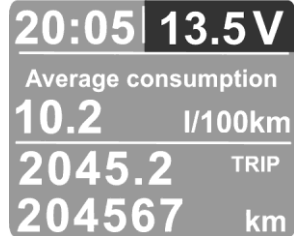


**Display indications in ENGLISH version :**

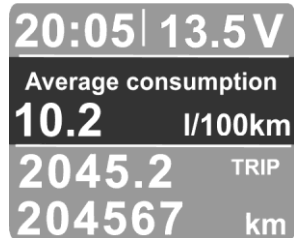
Mode of indications of the current time,  
h:min (from 00:00 to 23:59)



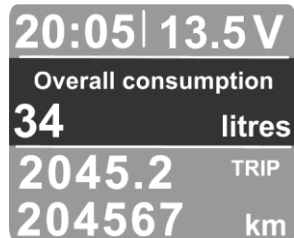
electrical system voltage indication mode,  
V (from 8.0 to 16.0)



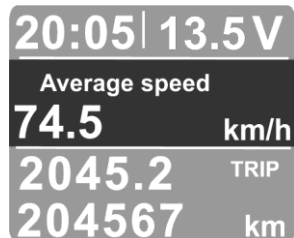
average fuel consumption indication  
mode, l/100 km (from 0.0 to 99.9)



total fuel consumption indication mode, l  
(from 0 to 999). Reset by the Mode button



Average speed indication mode, km/h  
(from 0 to 250). Reset by the Mode button



## Before operation

20:05 | 13.5 V  
Instant consumption  
**11.2** l/h  
2045.2 TRIP  
204567 km

Instantaneous fuel consumption indication mode, l/h (from 0.0 to 99.9)

20:05 | 13.5 V  
Mileage till fueling  
**350** km  
2045.2 TRIP  
204567 km

Mileage before refueling indication mode, km (from 30 to 999)

20:05 | 13.5 V  
Travel time  
**04:35**  
2045.2 TRIP  
204567 km

Travel time indication mode, h:min (from 00:00 to 99:59). Reset by the Mode button

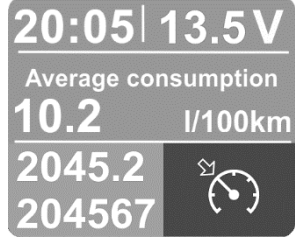
20:05 | 13.5 V  
Average consumption  
**10.2** l/100km  
2045.2 TRIP  
204567 km

Daily mileage meter indication mode, km (from 0.0 to 9999.9)

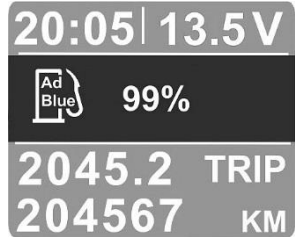
20:05 | 13.5 V  
Average consumption  
**10.2** l/100km  
2045.2 TRIP  
204567 km

Distance meter indication mode, km (from 0 to 999999)

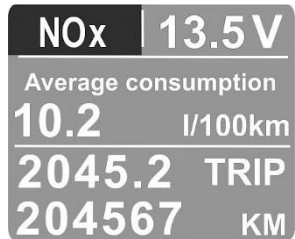
Cruise Control function activation indication mode



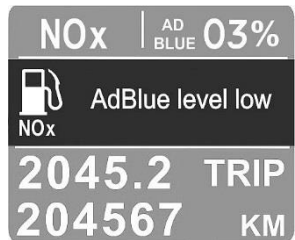
AdBlue level indication mode, % (from 0 to 99)



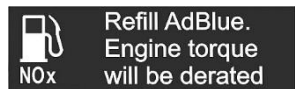
NOx Emission control system malfunction warning display mode



Low AdBlue warning display mode. If the vehicle is further operated without eliminating the causes of the warning, the warning will be gradually changed with the addition of possible restrictions:



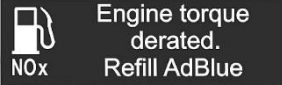
— necessary to top up the AdBlue level;



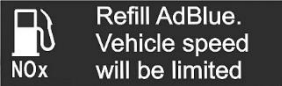
— necessary to top up the AdBlue level, the engine torque will be reduced;



## Before operation



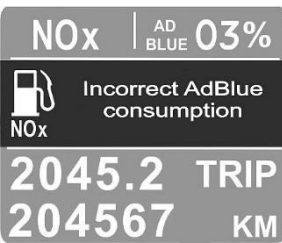
– the engine torque is reduced, it is necessary to top up the AdBlue level;



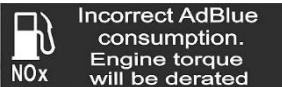
– it is necessary to top up the AdBlue level, the driving speed will be limited;



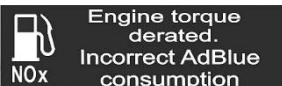
– the driving speed is limited, the AdBlue level needs to be topped up.



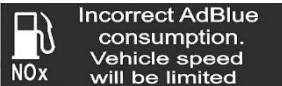
Warning display mode for incorrect AdBlue consumption. If the vehicle is further operated without eliminating the causes of the warning, the warning will be gradually changed with the addition of possible restrictions:



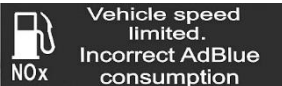
– wrong consumption of AdBlue, engine torque will be reduced;



– engine torque is reduced, incorrect AdBlue consumption;



– wrong consumption of AdBlue, driving speed will be limited;



– limited speed, incorrect AdBlue consumption.

Warning display mode for incorrect AdBlue dosing. If the vehicle is further operated without eliminating the causes of the warning, the warning will be gradually changed with the addition of possible restrictions:

- incorrect dosing of AdBlue, engine torque will be reduced;
- engine torque is reduced, AdBlue dosing is incorrect;
- incorrect dosing of AdBlue, driving speed will be limited;
- limited speed, incorrect AdBlue dosing.


Warning display mode for inappropriate AdBlue quality. If the vehicle is further operated without eliminating the causes of the warning, the warning will be gradually changed with the addition of possible restrictions:


- inadequate quality of AdBlue, engine torque will be reduced, it is necessary to replace AdBlue;
- engine torque is reduced, it is necessary to replace AdBlue of inadequate quality;


NOx | AD BLUE 03%


 AdBlue dosing malfunction  
NOx

2045.2 TRIP  
204567 KM

 AdBlue dosing malfunction.  
Engine torque will be derated  
NOx

 Engine torque derated.  
AdBlue dosing malfunction  
NOx


 AdBlue dosing malfunction.  
Vehicle speed will be limited  
NOx


 Vehicle speed limited.  
AdBlue dosing malfunction  
NOx

NOx | AD BLUE 03%

 Incorrect AdBlue detected  
NOx

2045.2 TRIP  
204567 KM

 Incorrect AdBlue.  
Engine torque will be derated.  
Replace AdBlue  
NOx

 Engine torque derated.  
Replace incorrect AdBlue  
NOx

## Before operation



Incorrect AdBlue.  
Vehicle speed  
will be limited.  
Replace AdBlue.



Vehicle speed  
limited.  
Replace  
incorrect AdBlue

NOx | AD  
BLUE 03%



Critical emission  
failure

2045.2 TRIP  
204567 KM



Critical emission  
failure.  
Engine torque  
will be derated



Engine torque  
derated.  
Critical emission  
failure



Critical emission  
failure.  
Vehicle speed  
will be limited



Vehicle speed  
limited.  
Critical emission  
failure

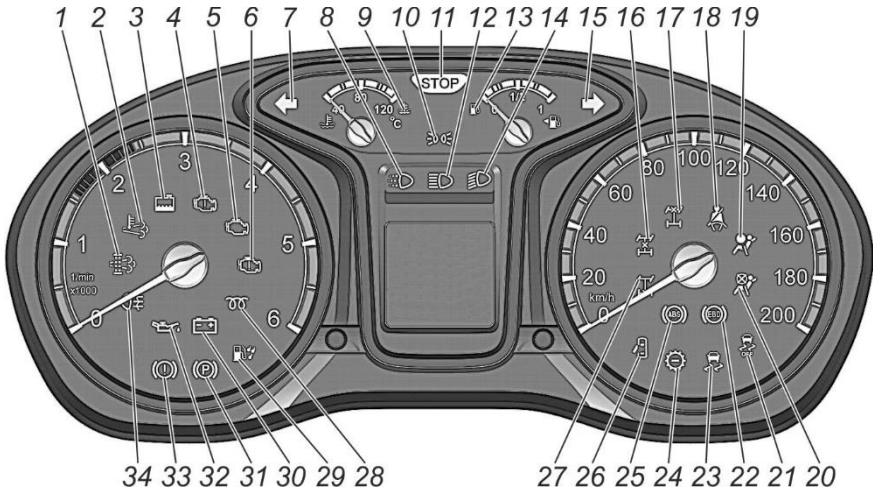
- AdBlue quality is inadequate, the driving speed will be limited, it is necessary to replace the AdBlue;
- speed is limited, AdBlue of inadequate quality must be replaced.

Critical warning indication mode for the NOx emission control system. If the vehicle is further operated without eliminating the causes of the warning, the warning will be gradually changed with the addition of possible restrictions:

- a critical fault in the NOx emission control system, the engine torque will be reduced;
- the engine torque is reduced, a critical malfunction in the NOx emission control system;
- a critical malfunction in the NOx emission control system, the driving speed will be limited;
- the driving speed is limited, a critical malfunction in the NOx emission control system.

The indications of the trip computer are given for information and reference.

## Instrument cluster indicators



1.  **Particulate filter clogging indicator (orange).**

Informs the driver about the condition of the particulate filter.

2.  **Exhaust system high temperature indicator (orange).**

When continuously lit, it informs the driver of an elevated exhaust gas temperature due to automatic regeneration of the particulate filter.

3.  **Low coolant level indicator (orange).**

When the indicator lights up, it is necessary to eliminate the cause of the coolant leakage and bring the level in the expansion tank of the engine cooling system to normal.

4.  **Critical engine failure indicator (red).**

## Before operation

Illuminates shortly when the instruments are turned on. In case of no malfunctions, it lights up when the instruments are turned on and is lit continuously for 2-5 seconds, then goes out.

When continuously lit, it informs the driver about a critical malfunction (engine overheating, oil pressure drop, accelerator pedal failure, critical malfunction of the electronic unit) which requires to immediately stop driving and stop the engine.

### 5. MIL indicator (orange).

Illuminates shortly when the instruments are turned on. Informs the driver about malfunctions recorded by the diagnostic system related to exhaust gas and particulate emissions.

When continuously lit, it is necessary to carry out diagnostics of the engine control system in a maintenance shop.

After the malfunction has been eliminated, the indicator is still lit for four cycles of starting the engine, then it goes out.

### 6. Engine management system Attention indicator (orange).

With an operative control system, the indicator lights up after the devices are turned on and lights continuously for 2-5 seconds, then goes out. This indicates that the system is ready to start the engine.

When continuously lit, it informs the driver about a non-critical malfunction in which the driver can continue driving. In this case, diagnostics of the vehicle in a maintenance shop is required.

### 7. Left turning light indicator (green)

### 8. Daytime running lights indicator (white)



9.  **Cooling liquid high-high temperature indicator (red).**

Illuminates shortly when the instruments are turned on. When continuously lit, it is necessary to immediately stop the engine (in accordance with the subsection “Stopping the engine”), determine and eliminate the cause of overheating.

10.  **Side lights indicator (green).**

11.  **STOP" indicator (red).**

Illuminates simultaneously with one of the red indicators. If these indicators light up, further operation of the vehicle is not allowed until the malfunction is eliminated.

12.  **High beam headlights indicator (blue).**

13.  **Minimum fuel level indicator (orange).**


It lights up when the fuel level float is in the area of 8 liters.


14.  **Dim-light indicator (green).**


15.  **Right turning light indicator (green)**


16.  **Interaxial differential blocking indicator (orange) or backup indicator.**


17.  **Front axle differential blocking indicator (orange) or backup indicator.**

18.  **Unfastened seat belts indicator (red).**

19.  **Airbag or seat belt failure indicator (red) or backup indicator.**

20.  **Passenger airbag deactivation indicator (orange) or backup indicator.**

21.  **Electronic stability control system deactivation indicator (orange) or backup indicator.**


22.  **Electronic brake force regulator malfunction indicator (red) or backup indicator.**

Lights up when the instruments are turned on and goes out after a few seconds.

Continuously lit indicator or its activation while driving indicates a malfunction of the brake force regulator.

The vehicle must be checked by at a technical service company.

The vehicle must not be driven until this problem is corrected.

23.  **Electronic stability control system failure indicator (orange) or backup indicator.**

Lights up when the instruments are turned on and goes out after a few seconds.

Continuously lit indicator or its activation while driving indicates a malfunction of the electronic stability control system.

The vehicle must be checked by at a technical service company.

24.  **Downshift indicator (orange) or backup indicator.**

25.  **Brake anti-blocking system malfunction indicator (orange) or backup indicator.**

Lights up when the instruments are turned on and goes out after a few seconds.

If the indicator stays on for a long time or comes on while driving, it indicates a malfunction of the anti-lock braking system. At the same time, the working brake system remains operational.

The vehicle must be checked by at a technical service company.

26.  **Open doors indicator (red).**

The warning lamp flashing duplicated by a periodic sound signal when driving indicates that the front and/or side doors are not closed.

27.  **Rear axle differential blocking indicator (orange) or backup indicator.**

28.  **Air heater activation indicator (orange).**

Illuminates when the instruments are turned on. Start the engine with a starter only after the indicator goes out.

29.  **Water in fuel indicator (orange).**

Illuminates shortly when the instruments are turned on. Continuously lit indicator shows the presence of water in the fuel filter. Stop the engine immediately, drain the water from the fuel filter, or contact a service company.

**30.  Battery discharge indicator (red).**

Lights up when the instruments are turned on and goes out after the engine is started.

If this indicator is lit with the engine running, there is a weak tension or breakage of the engine accessory drive belt or a malfunction in the battery charge circuit.

**31.  Parking brake engagement indicator (red).**

It flashes when the instruments are turned on, if the vehicle is braked by the parking brake (duplicated by a short sound signal when the vehicle is moving).

**32.  Low-low oil pressure indicator (red).**

It lights up when the instruments are turned on and goes out after the engine is started (duplicated by a short sound signal when the vehicle is moving).

If the indicator lights up when the engine is running, it indicates low oil pressure in the engine lubrication system, and it is necessary to immediately stop the engine and check the oil level in the crankcase, top up if necessary. If the oil level is within the normal range, contact a service company.

**33.  Brake master cylinder brake fluid emergency low level indicator (red).**

This indicator is lit if there is a malfunction of the brake system.

The vehicle must be immediately checked by a technical service company.

The vehicle must not be driven until this problem is corrected.

**34.  Rear fog light activation indicator (orange).**

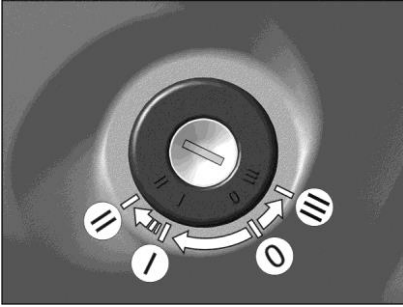


**ATTENTION!**

When an indicator lights up informing of a malfunction in the vehicle, with the exception of signaling devices that prohibit further movement, it is necessary to follow the instructions and recommendations given in the description of the indicator. Continued operation without identifying and eliminating the cause of the indicator may lead to a refusal to carry out warranty repairs.

Information about the individual parameters of the engine and the vehicle as a whole is recorded in the electronic devices of the vehicle and is used to determine the causes of malfunctions. Removal of this information is prohibited and may result in denial of warranty repairs.

## INSTRUMENT AND STARTER SWITCH



Switch positions:

0 - everything is off, the key cannot be removed, the anti-theft device is not turned on;

I - instruments are turned on, the key cannot be removed;

II - instruments and starter are on, the key cannot be removed;

III - the devices are turned off,

with the key removed, the anti-theft device is turned on. To lock the steering with the key removed, turn the steering wheel in either direction until it clicks.

To turn off the anti-theft device, insert the key into the instrument and starter switch and, while slightly shaking the steering wheel to the right and left, turn the key to position 0.

*Depending on the type of instrument switch and starter on some vehicles, the operation of the radio, power windows and sockets is possible only with the key inserted.*



### **DANGER!**

To avoid locking the steering shaft, it is forbidden to remove the key from the lock while the vehicle is moving, including when towing it.

## UNDERSTEERING SWITCHES

### Turn signal and headlight switch

Direction indicators operate only when the instruments and starter are on. To turn on the direction indicators: lever up for right indicator, lever down for left indicator.

Lever positions:

1. Position of short switching on of the direction indicators.

Move the lever up or down by the amount of its own free travel (until you feel a slight elastic resistance of the lever).

The alarm will turn on as long as you hold the lever.

In this case, the corresponding indicator on the instrument cluster should flash.

2. Fixed position of direction indicators.

When the turn is completed, the lever will automatically return to its original position.

Double flashing of the indicator on the instrument cluster indicates a malfunction of the direction indicator lamp.

3. Beam headlight.

Middle fixed position of the lever if the knob of the central light switch is in position II and the instrument and starter switch is in position I.

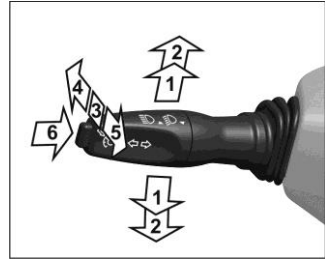
4. High beam headlights.

Move the lever from the steering wheel to the fixed position.

5. Short-term alarm high beam headlights.

Pull the lever towards the steering wheel. When released, the lever will return to the middle position.

6. Button for turning on the Cruise Control function. Pressing the button once along the axis activates the cruise control function. When the button is pressed again, the vehicle speed decreases slightly each time the button is pressed until the vehicle reaches a speed of approximately 50 km/h.



## Before operation

The cruise control function starts to work when the vehicle speed is over 48 km/h. To enable the function, briefly press the Cruise Control button and release the accelerator pedal. At the same time, the system remembers the current speed of the vehicle and maintains it until you press any of the vehicle control pedals (accelerator pedals, brakes, clutches). When you press the accelerator pedal and briefly increase the vehicle speed, for example, when overtaking, the Cruise Control function continues to work and after releasing the accelerator pedal, the vehicle speed automatically returns to the previously fixed value. Pressing the brake pedal or clutch pedal will deactivate the cruise control function.

When driving downhill with Cruise Control on, the remembered speed may be exceeded. If necessary, shift to a lower gear or reduce vehicle speed by depressing the brake pedal.



### **ATTENTION!**

The cruise control function should only be activated at low traffic on straight and dry sections of the road when driving at a constant speed and under the condition of complete safety.

Never use Cruise Control when driving in heavy traffic, poor road grip conditions, steep or winding sections, or any other traffic problem. Using the Cruise Control function in inappropriate conditions can cause accidents and serious injury.

## **Wiper and washer switch with pause control**

The windshield wiper and washer only operate when the instruments and starter are on.

In frosty weather, before turning on the wiper, make sure that the wipers are not frozen to the windshield.



Lever positions:

1. Intermittent wiper operation.

The wiper blades make one stroke in the range from 2s to 12s, depending on the position of the pause regulator 1, which is selected by turning the regulator in the direction of the arrow, as shown in the figure.

2. Low wiper speed.

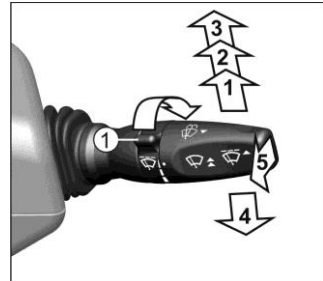
3. High wiper speed.

4. Cleaning the windshield with one stroke of the brushes. Move the lever down only by the amount of its free play (until you feel a slight elastic resistance of the lever).

The wiper will operate as long as you hold the lever. It is recommended to use in light rain or splashing on the windshield of an oncoming vehicle.

5. Switching on the windshield washer.

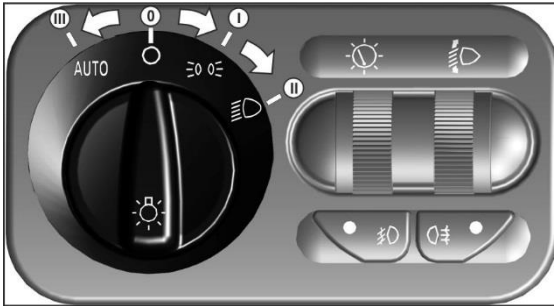
It is activated by moving the lever forward along the steering column from any position, the position is not fixed.



Before operation

## LIGHT CONTROL MODULE

### Central light switch



The switch has three fixed positions:

0 - outdoor lighting off;

I - marker lights, illumination of the instrument cluster, rear license plate and some electrical controls are

on;

II - additionally switched on dip or high beam headlights, depending on the position (respectively 3 or 4) of the lever of the steering column switch for direction indicators and headlights;

III - automatic mode (if available) of turning on and off the headlights depending on the level of illumination outside.

The daytime running lights turn on automatically when the instruments and starter are turned on, if the central light switch is in position 0. Turning the switch to position I or II turns off the daytime running lights.

On all-metal body vehicles, the daytime running lights turn off when the parking brake is applied.



#### **DANGER!**

It is not allowed to drive with daytime running lights in case of insufficient visibility and at night since rear marker lights do not light up.

### Instrument dimmer

By turning the knob up or down, the brightness of the lighting of devices, switches, and the heating control panel is selected.



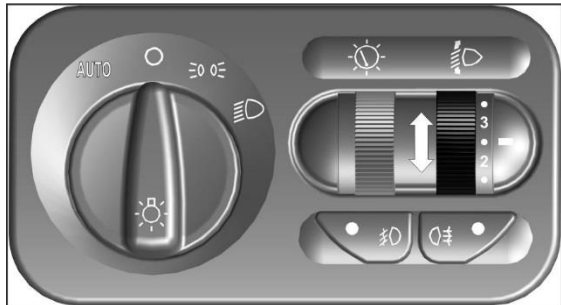
### Headlight range control

Used to adjust the angle of inclination of the beam of light when the low beam headlights are on, depending on the vehicle load:

**0** - driver only;

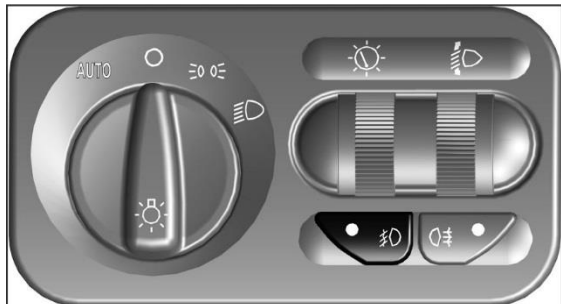
**1** - fully loaded vehicle;

**2 and 3** are not used.



### Front fog light switch

The front fog lights are turned on when the switch is pressed while the parking lights are on. At the same time, the control indicator of the front fog lights activation lights up in the button.

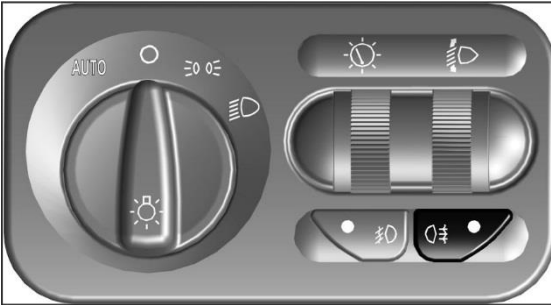


## Before operation

The lights go off when:

- pressing the switch button again;
- switching the key in the instrument and starter switch to position 0.
- switching the central light switch to position 0.

## Rear fog light switch



The rear fog lamps are turned on when the switch is pressed, if the low beam, high beam headlights or front fog lights are on. At the same time, the control indicator in the key lights up, and the rear

fog lights activation indicator lights up on the instrument cluster.








The rear fog lights turn off when:

- pressing the switch button again;
- switching the key in the instrument and starter switch to position 0;
- switching off the low/high beam headlights and front fog lamps.

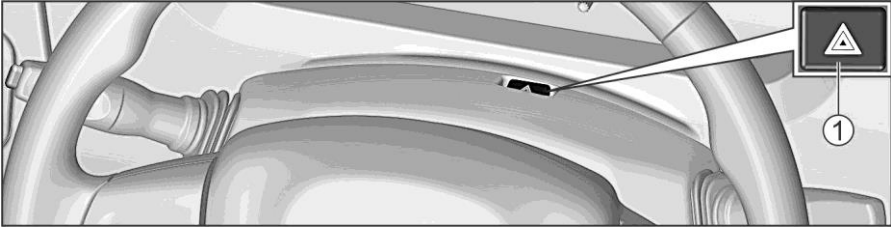
## SWITCHES ON THE DASHBOARD

Some switches have (+) and some don't (-) have on-state indicators.



1.  Switch of external rear-view mirrors heating (+).
2.  Coolant heater switch (+).
3.  Driver's seat heating switch (+).
4.  Diesel particulate filter regeneration switch (momentary button) (-).
5.  Switch for locking / unlocking the doors of the cargo compartment of motor vans (+).
6.  Rear axle differential lock switch (+) or  
 Electronic stability control shutdown switch (-).

## EMERGENCY LIGHT SWITCH



Switch 1 is located in the window of the upper casing of the steering column.

When you press the switch button, all direction indicators flash simultaneously.

Emergency lights must be turned on when the vehicle is forced to stop on the road and to alert other road users about the danger posed by the vehicle.

The alarm system operation both at activated and activated instruments and starter.

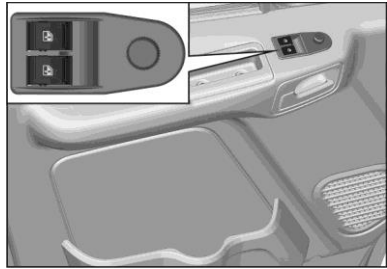
## POWER WINDOWS

The power windows are controlled by switches located on the handrail of the door armrests. The location of the switches on the driver's door (left/right) corresponds to the location of the vehicle's doors.

Power windows only operate when instruments are on.

To raise or lower the window, press the switch up or down, respectively, until the window is in the desired position.

*When the instruments are on, the symbols for the power window controls are illuminated.*



### **DANGER!**

When using power windows, be especially careful not to allow body parts, clothing, etc. to be pinched by the sliding door windows.

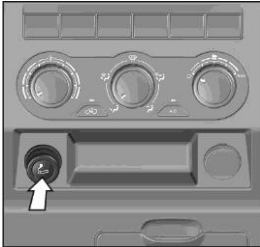
## Before operation

### LIGHTER AND ASHTRAY

#### Cigarette lighter

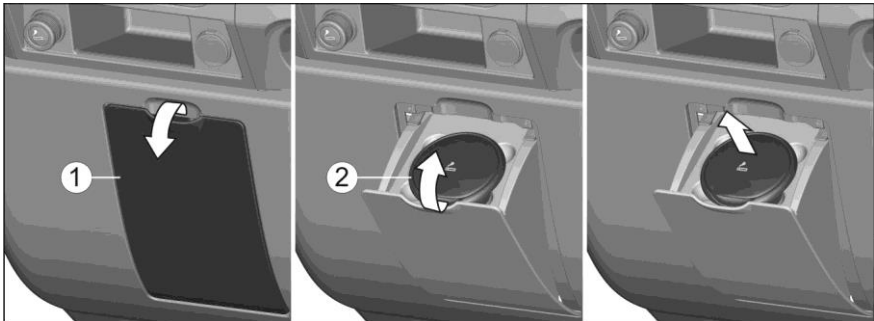
##### **DANGER!**

When the cigarette lighter is switched on, it gets very hot. When handling it, be especially careful, make sure that the cigarette lighter cannot be used by children: this may cause a fire and / or burns.



To use the cigarette lighter, push it down to the fixed position. After heating the coil, it will return to its original position ready for use.

#### Ashtray



The ashtray is located in the small items pocket on the dashboard. To use the ashtray, open pocket cover 1 and then ashtray cover 2 as shown in the figure.

To empty the ashtray container, pull it up on the outer edge of the ashtray body.

##### **ATTENTION!**

Do not place flammable objects in the ashtray.



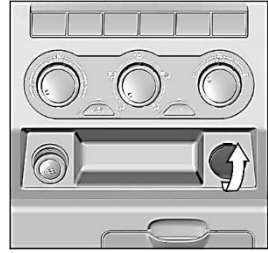
**RECEPTACLE**

A receptacle with a nominal voltage of 12V is intended to connect external consumers (portable lamp plug, charger, etc.).

To use the receptacle, open the cover covering the receptacle socket as shown in the illustration.

Prolonged use of electrical devices with the engine off may cause the battery to discharge and make it impossible to start the engine again.

On vehicles with two rows of seats, an additional socket is installed on the left side trim.

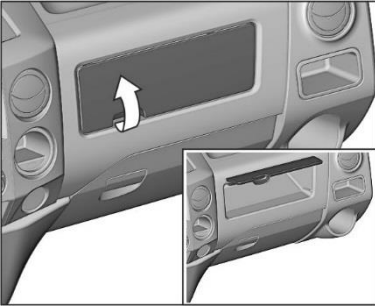
**ATTENTION!**

Do not use the outlet to connect external devices with a power exceeding 120W.

Before operation

## STORAGE BOXES

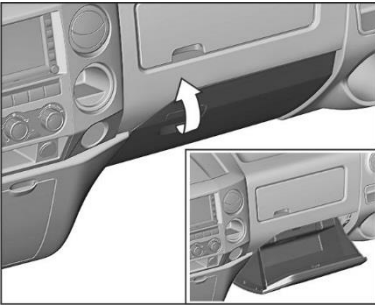
### Upper storage box



The storage box is opened with a handle, as shown by the arrow.

On some vehicle configurations, the storage box cover may not be installed, or the passenger airbag module may be installed instead of the storage box.

### Lower storage box

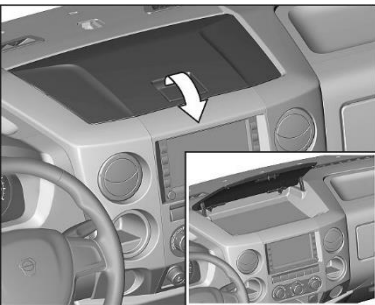


The storage box opens with a handle, as shown by the arrow.

**⚠ ATTENTION!**

To reduce the risk of injury to a passenger, the storage box lid must be closed when the vehicle is in motion.

### Document pocket

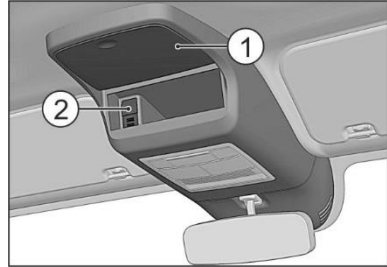


The document pocket cover is opened with a handle as shown by the arrow.

Do not apply pressure on the handle when closing the lid.

## Overhead console

The overhead console contains a case for glasses 1, as well as a USB charger 2 (5V) for two sockets. It is possible to install a radio equipment 1 DIN or a tachograph in the ceiling console.



## Luggage rack

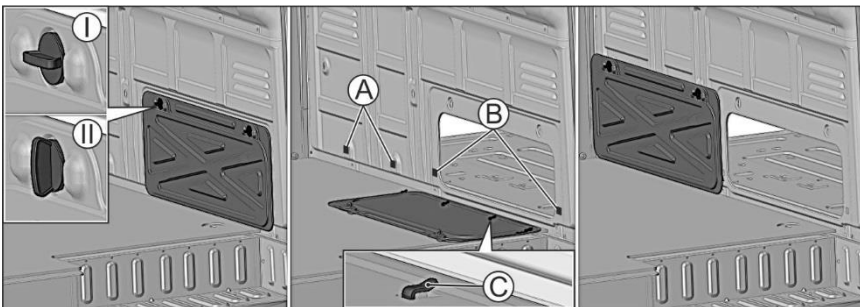
On vehicles with an all-metal body, a luggage rack is provided above the driver.



### ATTENTION!

To prevent breakage of the luggage rack, it is not allowed to load it more than 30 kg.

## Niche for transporting long items



On vehicles with an all-metal body and a single-row cabin, there is a hatch in the bulkhead of the cargo compartment for transporting long items, which is closed by a lid.

To open the hatch, turn the hatch cover locks from position I to position II and remove the cover.

## Before operation

In the lower part of the hatch cover there are hooks C, with the help of which the cover is held in the holes of the partition panel. Holes A for the open position of the hatch, holes B for the closed position.



### **ATTENTION!**

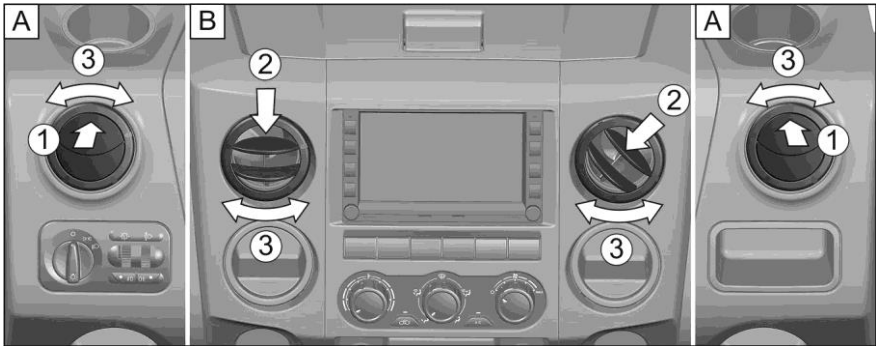
When transporting long loads with an open hatch, it is prohibited to carry passengers.

## **Pockets and containers for small items**

To accommodate small items in the cabin, there are pockets and containers on the instrument panel and in the door trim.

## HEATING, VENTILATION AND AIR CONDITIONING

### Cabin ventilation deflectors



A – Side deflectors are closed.

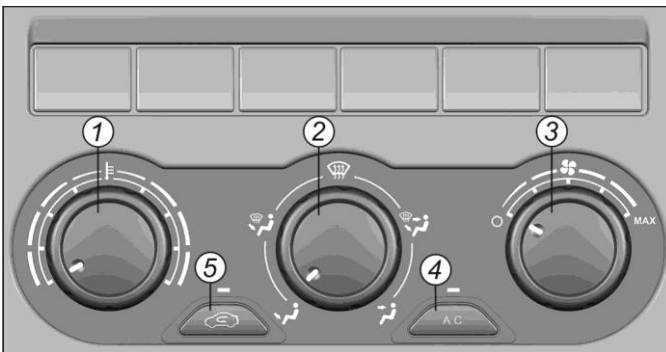
B – Central vents are open.

1 – Opening.

2 – Closing.

3 – Adjustment of the direction of air flows.

### Dashboard air conditioning control panel



1 - Air temperature control knob.

2 - Air distribution control knob.



Air enters the legs of the driver and passengers

## Before operation



Air is supplied to the windows and to the feet of the driver and passengers



Air is supplied to the windshield and door windows



Air is supplied to the windows, to the passenger compartment and to the feet of the driver and passengers



Air enters the cabin through the ventilation deflectors

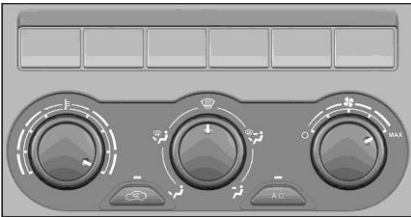
3 - Heater fan speed control knob (four speeds).


The first three fan speeds are intended to maintain comfortable conditions in the cabin while driving. It is recommended to use the maximum fourth fan speed (knob in the extreme right position) for a short time to quickly remove fogging from the windshield and side windows, as well as to quickly heat, ventilate or cool the cabin. The maximum fan speed is not intended for continuous use while driving.

4 - Air conditioner on/off button.

5 - Air recirculation mode on/off button.


## Removal of glass fogging



To quickly remove fogging of the windshield and door glasses, set knobs 1 and 3 on the control panel to the extreme right position, and knob 2 to position  shown in the figure.

When you turn on the air conditioner, the fogging of glasses is removed more intensively.

## Heating

To quickly heat the cabin, set knobs 1 and 3 on the control panel to the extreme right position, and knob 2 to position  shown in the figure.



To achieve maximum heating efficiency, as well as to isolate the cabin from unpleasant odors and smoke, turn on the recirculation mode by pressing button 5. The recirculation mode will automatically turn off after 10 minutes. Forced deactivation of the recirculation mode is carried out by pressing button 5 again. After stopping and then starting the engine, the recirculation damper automatically switches to the outside air intake mode.


*Do not use the recirculation mode for a long time, as in this case, the flow of fresh air into the cabin stops, which can lead to deterioration of health, as well as fogging of the windows.*

When the cabin is warm enough, we recommend setting the fan speed knob 3 to the middle position, the air distribution control to the position corresponding to comfortable air distribution and adjust the temperature by moving the temperature control knob 1 within the red zone.

## Before operation

### Ventilation



To maximize the intake of fresh air into the cabin, set knob 1 on the control panel to the extreme left position, knob 3 to the extreme right position, and knob 2 to position  shown in the figure.


Open the ventilation deflectors.

Adjust the direction of air flow with the ventilation deflectors.

*To prevent the penetration of unpleasant odors and exhaust gases of vehicles in front into the cabin, when driving in a tunnel, etc., we recommend that you turn on the recirculation mode using button 5.*

### Air conditioning



To quickly cool the cabin, turn on the air conditioner using button 4 and set knob 1 on the control panel to the extreme left position, knob 3 to the extreme right position, and knob 2 to position  shown in the figure.

To achieve maximum air conditioning efficiency, as well as to isolate the cabin from unpleasant odors and smoke, turn on the recirculation mode by pressing button 5. The recirculation mode will automatically turn off after 10 minutes. Forced deactivation of the recirculation mode is carried out by pressing button 5 again. After stopping and then starting the engine, the recirculation damper automatically switches to the outside air intake mode.



## Before operation

*Do not use the recirculation mode for a long time, as in this case, the flow of fresh air into the cabin stops, which can lead to deterioration of health, as well as fogging of the windows.*

When the cabin is sufficiently cooled, set the fan speed knob 3 to the middle position, the air distribution knob to a position corresponding to a comfortable air distribution, and adjust the temperature by moving the temperature control knob 1 within the blue zone.

After a long parking of a closed vehicle in sunny hot weather, it is recommended to open the doors or windows for a few minutes, ventilate the interior, and only then turn on the air conditioner.

The air conditioner is switched off by pressing button 4 again.

To ensure the normal operation of the air conditioner, it is recommended to turn it on at least once a month for 5-10 minutes. This is necessary to lubricate the air conditioner units with oil dissolved in the refrigerant. This procedure must be carried out in the winter season, but subject to a positive ambient temperature.



### **ATTENTION!**

The air conditioner is a sealed system under high pressure. Be careful during repair work in the cabin, do not allow any mechanical damage to the components and assemblies of the air conditioner. In case of depressurization or damage to the air conditioning system, contact a service company and never carry out repairs yourself.



### **ATTENTION!**

When the air conditioning system is on, do not open the windows and sunroof, as in this case its efficiency is reduced to zero.

## Before operation



### ATTENTION!

Avoid direct flow of chilled air on the body parts of the driver and passengers, as this can lead to local hypothermia and, as a result, to colds.

## Coolant heater

To achieve comfortable conditions in the cabin and to stabilize the temperature of the diesel engine in winter, the vehicle is equipped with a coolant heater.

The heater is installed in the engine compartment in front of the battery.

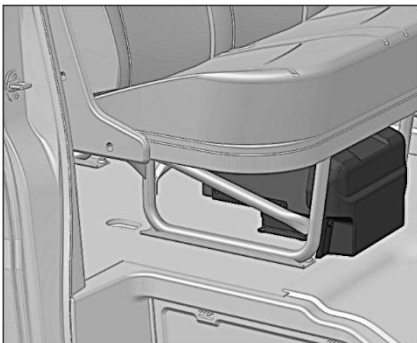


The heater is switched on with button 1 when the engine is running and the heater is switched on. Further, the heater operates in automatic mode, increasing the temperature of the coolant entering the heating system up to 80-85°C, thereby increasing the efficiency of its operation in winter.

The heater is recommended to be turned on when the outside air temperature is below + 5°C.

## Additional heater

To create comfortable conditions in the cabin of vehicles with two rows of seats, an additional interior heater is provided.



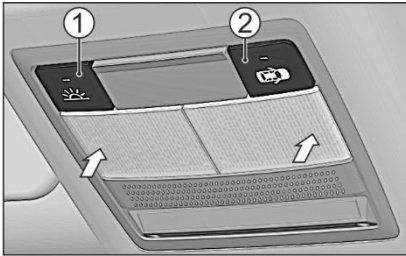
The heater is installed under the front passenger seat. The heater distribution grille is directed towards the second row of seats.

The heater operates in internal air mode. The repeated passage of internal air through the radiator of the additional heater provides a high intensity of heating the cabin.

The additional heater is controlled by a knob located on the dashboard, with which the fan speed is adjusted (from 1 to 3).



## INTERIOR LIGHTING



The cabin lighting unit is located on the overhead console.

To turn on the interior lighting of the cabin, press button 1 of the lighting unit. To turn off the lighting, press button 1 again.

The separate lighting is switched on and off by pressing

the desired lamp in the direction of the arrow. When holding the lamp pressed down, the brightness of the lamp light starts to change smoothly. The selected brightness level is fixed when the lamp is released.

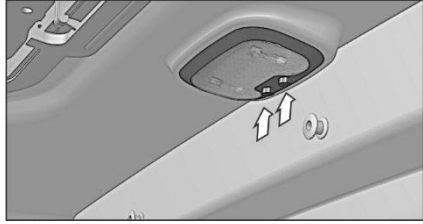
Button 2 locks general lighting activation when opening the doors of the cabin. When the lock is released, the cabin lighting, as well as the footboard lamp on vehicles with a double-row cab, operates as follows:

- when the driver's and/or passengers' door is opened, the cabin lighting and the footboard lamp will turn on and remain on for 10 minutes, after which the lamps will turn off forcibly to avoid battery discharge;

- when closing the doors of the driver and passengers, the cabin lighting and the footboard lamp will smoothly turn off after 10 seconds;

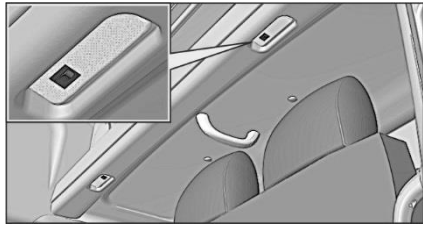
- when the instrument and starter switch is turned on to position I with the lamp on, the cabin lighting and the footboard lamp will smoothly turn off after 2 seconds without a 10 second delay.

On vehicles with a platform and a two-row cabin, the interior lamp of the second row of seats is located on the roof lining in the middle part. The lamp has two buttons and two lighting sections of the second row of seats.



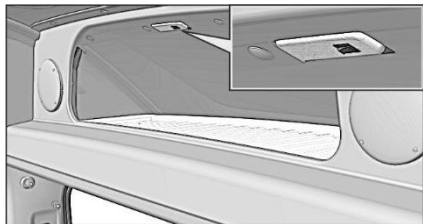
To turn on the interior lighting of the second row of seats on the right and / or left side, press the corresponding button for turning on the lamp. To turn off the lighting, press the lamp button again.

On vehicles with an all-metal body and a two-row cabin, the interior lamps of the second row of seats are located in the roof lining trim. The lamp has the button of switching off and on.

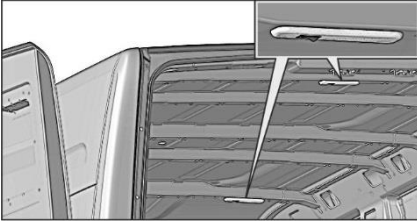


To turn on the interior lamp of the second row of seats on the right and / or left side, press the button for the corresponding lamp. To turn off the lighting, press the lamp button again.

To illuminate the interior space above the luggage rack in vehicles with a two-row cabin, a lamp is provided, which is turned on / off by a button. The lighting of the space above the rack in vehicles with a single-row cabin is provided by a lamp located near the side sliding door.



## Before operation



On vehicles with an all-metal body, the lighting of the cargo compartment is provided:

- on single-row vehicles using two lamps, which are located on the crossbars of the roof stiffener near the side sliding and rear

doors;

- on two-row vehicles with one lamp, which is located on the crossbar of the roof stiffener near the rear doors.

The lamps are tuned on/off by pressing the button on the corresponding lamp (the lamps operate only when the parking lights are on).

On vehicles with the option of locking / unlocking the doors of the cargo compartment, the lamps are tuned on/off by automatically when opening / closing the door(s). When the side sliding and/or rear door is open, the lamp(s) remain(s) on for 30 minutes, after which they will be turned off forcibly to avoid battery discharge. When closing the doors of the cargo compartment, the lamp(s) will turn off after 1 minute to avoid battery discharge.

If necessary, it is possible to forcibly turn on / off any lamp in the cargo compartment by pressing the on / off button on the required lamp.

When the side sliding door of vans with two rows of seats is opened, the footboard is illuminated by an LED lamp.



### **ATTENTION!**

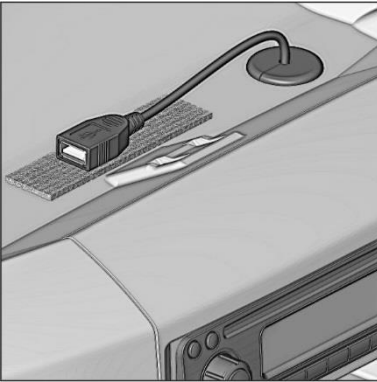
Do not leave the cabin and interior lights on for a long time when the engine is not running to avoid battery discharge.

## AUDIO EQUIPMENT

Depending on the configuration, the vehicle may be equipped with audio equipment as follows:

- 1DIN or 2DIN head unit integrated in the dashboard. The instruction manual for the 1DIN or 2DIN head unit is attached to the vehicle.

- USB connector of the 1DIN head unit is located in the document pocket, the 2DIN head unit is located in the central dashboard insert.



- Duplicating 1DIN or 2DIN head unit control buttons on the steering wheel.

- Loudspeakers: located in the doors.

- Whip antenna on the roof panel.





## OPERATION

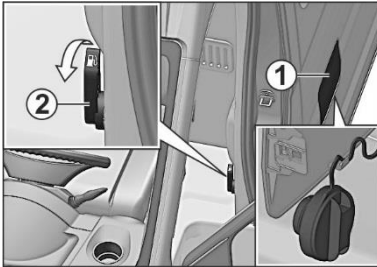


## FUELING

The fuel tank is located on the left side behind the cabin.

To refuel a platform vehicle, remove the fuel tank cap by turning it counterclockwise.

To close the fuel tank cap again, place it in the filler neck and screw it until stop by turning it clockwise until it clicks.



To refuel a vehicle with an all-metal body, unlock hatch 1 of the filler neck by turning handle 2 in the direction of the arrow until the hatch lock is unlocked. In this case, under the action of the spring, the hatch will open slightly by 10-12 mm. Rotate the hatch until fully open (90°). Remove the fuel tank cap by turning it counterclockwise and fix the cap in a suspended position on the hatch as shown in the figure.

In order to close the fuel tank cap again, install it in the neck, turn it until stop by turning it clockwise until it clicks and close the hatch by pressing in the center of the rear part with your hand until the flap lock engages.

**!** **DANGER!**

Do not allow an open flame or a lit cigarette near the fuel filler neck as this may cause a fire.

**!** **ATTENTION!**

The fuel tank of the vehicle communicates to the atmosphere through a valve system. It is not allowed to replace the fuel tank cap with a safety valve and a vacuum valve with a cap of a different design.

 **ATTENTION!**

A vehicle with a diesel engine must only be refueled with automotive diesel fuel. The use of other petroleum products or mixtures may cause serious engine damage and may void the manufacturer's warranty.

If you mistakenly fill the tank with a different type of fuel, do not start the engine and drain the fuel from the fuel tank. If the engine has already run on fuel that is not intended for the vehicle, then it is necessary to drain the fuel from the entire fuel supply system of the vehicle.

 **ATTENTION!**

An oxidizing converter is installed in the exhaust system of a diesel engine, so the use of fuel with a high sulfur content (more than 10 ppm) can lead to sulfur deposits on the internal cells of the converter and its failure.

 **ATTENTION!**

To avoid premature failure of the booster pump, do not allow the engine to run for a long time with a small amount of fuel in the fuel tank.

For the operation of a diesel engine, it is necessary to use diesel fuel according to EN 590:2009 class K5.

Depending on the ambient temperature, it is recommended to use fuel of the appropriate class or grade indicated in the table:

Fuel class	0	1	2	3	4
Application temperature °C, min.	-20	-26	-32	-38	-44

Fuel grade	A	B	C	D	E	F
Application temperature °C, min.	+5	0	-5	-10	-15	-20

## **RUNNING-IN**

The vehicle does not require special running-in, however, the durability of the vehicle components and assemblies largely depends on the driving style and operating conditions during the first 2000 km of run.

**It is not allowed to move the vehicle, including engine braking on the descent, with a crankshaft speed of more than 2800 rpm.**

Do not allow a cold engine to run at high engine speeds, neither parked, nor in motion.

Shift to a lower gear in time, in accordance with the road conditions, avoid engine overloads associated with excessively low engine crankshaft speeds.

**DRIVING**

Driving is recommended to start on a partially warmed-up engine. If this is not possible, and the engine is warmed up while the vehicle is moving, then at low ambient temperatures and after a long stop, it is recommended to move in lower gears for some time with a low engine speed. Shift up into higher gears as it warms up.

When overcoming a ford, make sure that its depth, taking into account the oncoming wave and the water bank in front of the vehicle, does not exceed the height of the lower edge of the front bumper above the road surface, while moving at the lowest possible speed, not exceeding 20 km/h, in order to avoid throwing water into the air intake air filter.

After overcoming a ford, after washing the vehicle, as well as when driving for a long time on a wet road, when water gets into the brake mechanisms of the wheels, it is necessary to make several smooth braking operations while driving to dry the discs and brake linings.

When driving through puddles, slow down to avoid hydroplaning, which can cause skidding or loss of control; with worn tires, this danger increases.

Avoid sudden accelerations and decelerations as much as possible, as this leads to increased tire wear and increased fuel consumption.

Driving a vehicle at 3rd, 4th, 5th and 6th gears at low engine speeds (up to 1500 rpm) leads to additional loads on the engine and transmission and may be accompanied by the appearance of resonance phenomena in the transmission. Driving in these conditions is not recommended. To eliminate such phenomena, switch to a lower gear.

In order to avoid cases of damage to the plastic housing of the clutch master cylinder, it is forbidden, when the rod is connected to the clutch pedal, to act on the clutch pedal in the direction opposite to its normal travel to disengage the clutch.

## Vehicle operation

To ensure the long-term operation of the gearbox during vehicle operation, be sure to observe the following rules, under which easy and noiseless gear shifting is achieved:

1. The clutch drive must ensure complete disengagement of the clutch. When the pedal is depressed, the clutch should not wobble.
2. All gear changes should be carried out by smooth movement of the lever only after the clutch is completely disengaged. Changing gears too quickly will cause premature wear or failure of the synchronizers. It is not allowed to shift gears with the clutch not fully disengaged, as well as the simultaneous operation of the pedal and lever.
3. It is not allowed to engage the clutch when the gear is not engaged.
4. Engage reverse gear only after the vehicle has come to a complete stop.

The drive axle of the vehicle is equipped with a bevel gear differential, which allows the wheels of the vehicle to rotate at different speeds, which is necessary to ensure stability and controllability when the vehicle is moving. Long-term (more than 5 minutes) slipping of one of the wheels of the drive axle can lead to overheating of the differential parts and its failure. In the event of a similar situation, use improvised means to improve traction of the wheels with the road or tow the vehicle from a dangerous area.



### **ATTENTION!**

During cold seasons and/or damp weather, moisture may condense inside the headlights, this physical phenomenon is not a defect. To free the internal surface of the diffuser from the condensate in the area where the light beam passes, it is necessary to turn on the high or low beam and start moving. Evaporation time depends on ambient temperature, vehicle speed (affects headlight ventilation) and relative humidity.



### **ATTENTION!**

If the Refill AdBlue warning appears, the AdBlue must be topped up as soon as possible. Further operation of the vehicle with an insufficient level of AdBlue may lead to a change in the engine operating conditions with a corresponding warning pop up on the display of the instrument cluster.



### **DANGER!**

When the low fuel level indicator lights up, it is necessary to refuel the tank as soon as possible. Driving with too little fuel in the tank can cause the vehicle to stop and cause an accident, as well as premature engine and converter failure.

## ECONOMICAL DRIVING

**Driving style** is the most important factor influencing fuel consumption.

- Maintain a sufficient distance from the vehicle in front to allow you to move more evenly in the traffic. Avoid sudden acceleration and frequent braking.

- With an increase in the speed of movement, the resistance to the movement of the vehicle increases, and, consequently, the fuel consumption increases. In addition, as the speed of the vehicle increases, the intensity of tire wear increases.

- For an economical driving mode, it is recommended to select a gear in the crankshaft speed range from 1600 to 2400  $\text{min}^{-1}$ , which corresponds to the green zone of the tachometer.

Driving under load in higher gears with low engine speeds leads to increased fuel consumption, increased noise in the transmission and more intensive wear of engine parts.

Incorrect use of low gears with an increased crankshaft speed, sharp accelerations and driving at high speeds also lead to an increased fuel consumption.

**The general condition of the vehicle** and the health of its systems largely determine fuel consumption.

- Keep your vehicle in good technical condition at all times. The adjustable parameters must comply with the manufacturer requirements.

- Check tire pressure regularly. Insufficient pressure increases rolling resistance. This leads to an increase in fuel consumption, increased tire wear and a negative effect on the behavior of the vehicle on the road.

Excessive tire pressure has a negative effect on the smoothness of the vehicle.



Activation of the Attention indicator of the engine control system in motion indicates the operation of the engine in standby mode accompanied by increased fuel consumption.

**Features and operating conditions of the vehicle** have a significant impact on fuel consumption.

- Insufficiently heated oil in the engine and transmission units leads to increased resistance and wear of rubbing surfaces. For faster warm-up, we recommend that you start driving at moderate engine speeds without sudden accelerations one or two minutes after starting a cold engine. At low ambient temperatures and after a long stop, it is recommended to move in lower gears for some time with a low engine speed.

Use only lubricants recommended by the manufacturer. The temperature range of the oil used in the engine lubrication system must correspond to the stable ambient temperature range.

- Avoid short trips where you have to stop the engine and then start it again. This prevents the engine from reaching normal operating temperature.
- Avoid unnecessarily running the engine in parking lots.
- Avoid carrying unnecessary items and cargo in the vehicle.

## Vehicle operation

### STARTING AND STOPPING THE ENGINE

 **DANGER!**

It is forbidden to warm up the engine in a closed room. Engine exhaust gases contain poisonous products of fuel combustion, which, if inhaled, cause severe poisoning and can even lead to death. It is also not recommended to turn on the interior ventilation in the parking lot with the engine running.

 **DANGER!**

The diesel engine is equipped with an electric heater in the intake pipe for easy starting. The use of ether or other flammable liquids to aid starting engines can result in an explosion and injury.

 **DANGER!**

The use of additional insulating covers for the engine can lead to ignition of the insulation and a fire, since individual parts of the engine are at high temperature. When operating a vehicle with a diesel engine at low temperatures, we recommend installing a preheater.

 **ATTENTION!**

It is not allowed to start a cold engine with oil of viscosity class 10W-40 at an ambient temperature below minus 20°C, oil of viscosity class 5W-40 below minus 25°C, oil of viscosity class 0W-40 or 0W-30 below minus 30°C. A diesel engine should be started at lower air temperatures only after its preheating.

 **ATTENTION!**

It is forbidden to heat the engine oil crankcase with an open flame.

 **ATTENTION!**

To avoid premature failure of the exhaust gas aftertreatment system, it is forbidden to start the engine by acceleration by pushing the vehicle, towing it, or moving along a slope.

 **ATTENTION!**

Do not leave the vehicle unattended with the engine running. If the driver is not present while the engine is running and the critical fault indicator lights up, the engine will not be stopped in time, which may lead to engine breakdown.



### **ATTENTION!**

The engine starter has protection against long cranking during engine start: when the starter is cranked for 15 seconds, the starter will automatically turn off and block for 30 seconds, and a fault code will be recorded in the control unit, which will not be displayed on the dashboard.



### **ATTENTION!**

It is forbidden to move the vehicle with the help of a starter, because this will lead to its failure even with a slight operating time.

The operating temperature range of the engine oil must match the ambient temperature at which the vehicle is operated. In cases where the ambient air temperature is below the operating temperature range of engine oil, it is necessary to start the engine after it has been preheated. When operating a vehicle with a diesel engine in regions with a low ambient temperature, it is recommended to install a preheater on the engine.

Before starting the engine, check the levels of coolant in the cooling system, oils in the crankcase and in the power steering reservoir.

## **Engine start**

Start the engine as follows:

1. Place the shift lever in neutral.
2. Fully press the clutch pedal.
3. Set the instrument and starter switch key to position I. At the same time, individual indicators should light up for a short time (up to 5 s) (see Indicators of the Instrument Cluster). Depending on the air temperature, the air heater activation indicator informs the driver

## Vehicle operation

about the possibility of turning on the starter (as soon as it goes out, the driver can turn on the starter). A continuously lit Attention indicator of the engine control system indicates a non-critical malfunction of the engine control system, in which case the driver can start the engine and continue driving to the service station. If the Critical Engine Malfunction indicator is on for a long time, the driver should not start the engine until the malfunction is eliminated.

4. Turn on the starter for no more than 10 seconds. Do not press the accelerator pedal! The low battery indicator should go out.

5. Once the engine starts, release the key and clutch pedal.

If necessary, it is allowed to make 2-3 attempts to start the engine with an interval between them of at least 1 minute, each time from position 0 of the instrument and starter switch.

After starting a cold engine, maintaining the crankshaft speed and warming up the engine are provided automatically.

### **Starting a diesel engine using a preheater**

To facilitate starting the engine and to stabilize the temperature of the engine in winter, a preheater is installed on some vehicle configurations.

The starting preheater is installed in the engine compartment in front of the battery. The preheater control module is installed on the dashboard.

To turn on the pre-heating of the engine, turn on the preheater or program its start in accordance with the instruction manual for the control module attached to the vehicle.

**Preheater operation**

If the interior heating was turned on before turning off the engine, when the engine preheater is turned on, the circulation pump of the preheater pumps the heated coolant through the heating system, thereby initially warming up the interior heater radiators, and then the engine. The heater fan does not work.

If the interior heating was turned off before the engine was turned off (the air temperature control knob is in the extreme left position), then when the engine preheating is turned on again, the circulation pump of the preheater pumps the heated coolant through the engine only. In this case, the engine warms up faster.

The starting preheater warms up the coolant to a temperature that makes it easier to start the engine in winter, after which it turns off.

To use the preheater in the heater mode, press the heater switch button while the engine is running and the heater is on (for a description of the heater operation, see the Heating, Ventilation and Air Conditioning subsection).

To ensure the normal operation of the starting preheater, it is recommended to turn it on, as well as during the warm season, approximately once a month for 10 minutes. Carry out a test run before starting permanent operation in the cold season. After a long period of inactivity, the air supply to the combustion chamber and the exhaust gas outlet must be checked and, if necessary, cleaned.

The fuel lines and the metering pump must be filled with new fuel after filling with winter diesel fuel by operating the heater for 15 minutes!

**Engine stop**

After running the engine with a heavy load, do not stop the engine immediately. It is necessary to let it run for 2-3 minutes at idle.

The engine is stopped by setting the instrument and starter switch key to position 0.

## PARTICULATE FILTER

During the operation of the vehicle, the particulate filter of the exhaust system becomes clogged and regenerated, which is indicated by the high temperature alarms of the exhaust system and clogging of the particulate filter.



### Exhaust system high temperature indicator.

The exhaust system high temperature indicator informs the driver of an elevated exhaust gas temperature due to automatic regeneration of the particulate filter. The automatic regeneration process can last up to 40 minutes, this is normal, it is recommended not to turn off the engine until the indicator goes out.



#### **DANGER!**

When continuously lit, the parts of the exhaust system are hot, so there should not be flammable and explosive objects under the bottom of the vehicle, the exhaust pipe should not be directed to any surface or material that can melt, catch fire or explode.

Exhaust fumes may be smelled when the exhaust system high temperature indicator comes on. This is normal. If there is a strong odor and white vapor is emitted, have the exhaust system checked for leaks at a workshop.



### Particulate filter clogging indicator.

The particulate filter indicator informs the driver about the condition of the particulate filter.

If the **indicator is continuously lit**, it indicates that soot has begun to build up and the particulate filter needs to be regenerated. To carry out regeneration, it is recommended to increase the driving speed (if road conditions permit) above 60 km/h or maintain the engine speed above 2000 min<sup>-1</sup> until the indicator goes out (regeneration can last up to 40 minutes).

## Vehicle operation

A **flashing indicator light** indicates a higher level of soot in the particulate filter. Additionally, engine power may be automatically reduced. It is recommended to carry out regeneration in forced mode in the parking lot.



### **Attention indicator of the engine management system + particulate filter clogging indicator.**

Continuously lit Attention indicator, together with a flashing particulate filter clogging indicator, informs the driver that the particulate filter needs to be regenerated immediately. Engine power will be automatically reduced. It is necessary to **immediately** perform a regeneration in the forced mode in the parking lot.



### **Engine critical failure indicator.**

If the critical engine failure indicator is continuously on, stop the vehicle, turn off the engine and do not start it until maintenance is carried out in the maintenance shop.

### **Performing a particulate filter regeneration in forced parking mode.**

The regeneration of the particulate filter is carried out using the START button on the dashboard.



### **Particulate filter regeneration switch.**

The switch (momentary button) is intended to force the regeneration of the particulate filter in the parking lot if the filter needs regeneration.



Regeneration of the particulate filter in the parking lot:

- stop the vehicle, apply the parking brake and set the gear lever to the neutral position;
- make sure there are no flammable objects around the exhaust system and in the direction of the exhaust outlet;
- Start the engine and press the particulate filter regeneration START button to start regeneration.



**ATTENTION!**

The engine speed will increase and the control unit will perform forced particulate filter regeneration. After the regeneration is completed, the engine will automatically return to normal idle speed and the **Attention indicators of the engine control system and particulate filter regeneration** will turn off.

- control the vehicle and the surrounding area during the regeneration. If safety conditions are breached, stop the engine immediately or press the clutch, brake or accelerator pedal to stop the regeneration.



**ATTENTION!**

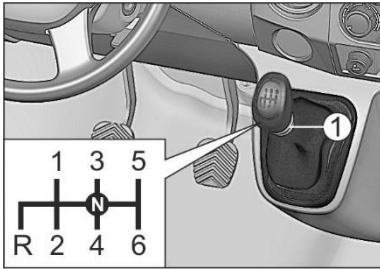
The forced regeneration process can take up to 40 minutes. If it is necessary to tow the vehicle, interrupt the regeneration: stop the engine or press the clutch, brake or accelerator pedal, continue driving, guided by the indicator readings. If necessary, repeat the forced regeneration in a convenient and safe place.



**DANGER!**

After the regeneration is completed, the temperature of the exhaust gases and parts of the exhaust system remains elevated for some time.

## GEAR SHIFT



For noiseless gear changes, depress the clutch pedal until stop. To avoid premature wear of the synchronizers, the lever should be moved smoothly, with a short delay in the neutral position, according to the diagram shown in the figure and on the gear lever handle.

To engage reverse gear R, lift the blocking ring 1 located under the gear lever handle and move the lever according to the gear shift diagram.

Reverse gear can be engaged after the vehicle has come to a complete stop.

Reverse gear is only engaged from the neutral position N. At the same time, if the instruments and the starter are turned on, the reverse light goes up in the rear lights.



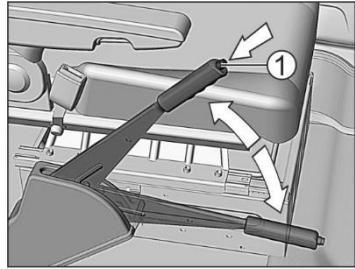
### **ATTENTION!**

Do not keep your foot on the clutch pedal while the vehicle is moving. This can damage the clutch.

To avoid damage to the clutch, do not engage first gear at vehicle speeds above 15 km/h.

## PARKING BRAKE

To brake the vehicle in a parking lot with the parking brake, firmly tighten the lever by pulling it up. To facilitate lever movement, depress the brake pedal at the same time. When parking on a slope, tighten the lever as necessary. It is also recommended to additionally engage the first gear of the gearbox.



When the vehicle is braked, if the instruments and the starter are turned on, indicator (P) on the instrument cluster flashes.

When releasing the brake, slightly pull the lever up, press button 1 of the latch on the end of the handle and completely lower the lever down, and the indicator will go out.



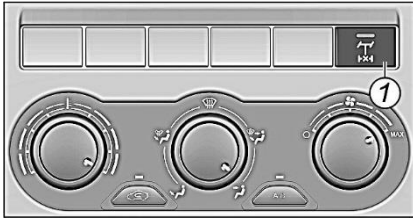
### ATTENTION!

It is forbidden to move the vehicle with the parking brake on, except for the case of emergency braking using the parking brake in case of failure of the main brake system.

In the event of emergency braking by the parking brake when driving a loaded vehicle on a dry hard surface, parts of the parking brake mechanisms (for vehicles with disc brakes) may be deformed, which can lead to a decrease in the efficiency of parking brake braking during subsequent braking, braking in motion, increased fuel consumption, overheating and failure of wheel assemblies.


If the specified braking was carried out, contact a service station with the necessary equipment to diagnose the condition of the parking brakes and, if necessary, replace deformed parts.

## LOCKING DIFFERENTIAL



In some vehicle configurations, a lockable rear axle differential is installed. In cases where it is necessary to overcome a difficult section of the road, the differential lock allows the driver to rigidly connect both rear wheels and

transfer all the torque to them. The differential lock is activated by switch 1 on the dashboard.

After pressing the switch in the instrument cluster, rear axle differential lock engagement indicator  lights up.

The lock does not turn on when the vehicle speed is more than 5 km/h. When a speed of 30 km/h is reached, the lock is automatically deactivated, and the indicator in the instrument cluster goes out. To re-engage the lock after it has been automatically disengaged, slow down the vehicle and press the lock switch again. The differential lock is disengaged by pressing the switch again. The differential lock can be disengaged while the vehicle is moving.



### **ATTENTION!**

Engage the differential lock before overcoming an obstacle.

Engage the differential lock when the vehicle is stationary or moving at speeds up to 5 km/h with minimal wheel slip.

Do not turn on the differential lock when one of the wheels is slipping, because this will damage the differential. To avoid this, a vehicle that is slipping in place or moving with one of the wheels slipping should be stopped (to stop the wheels completely, it is recommended to press the brake pedal), then press the differential lock switch and continue driving.

Do not engage differential lock on dry hard surfaces. Long-term driving with a locked differential on a paved road leads to constant stress on the transmission and premature failure.



### **ATTENTION!**

Do not engage the differential lock at high speeds, this will create an emergency. Engaging the differential lock at high speeds can create unpredictable vehicle behavior and loss of vehicle control.

Do not disengage the differential lock when turning or otherwise when the vehicle's transmission is under load. When the vehicle is driven under load or when turning, the differential may remain locked for some time after disengagement, which may adversely affect the vehicle's behavior. After completing the turn, it is recommended to drive the vehicle in a straight line for at least 3-5 meters, and then turn off the lock.

Do not drive with a locked differential at high speeds on slippery roads, as this may result in loss of vehicle control.

After overcoming a difficult section of the road, the differential lock should be turned off.

## **BRAKING**

The vehicle is equipped with an anti-lock braking system (ABS), which, during emergency braking on a road with various surfaces (for example, asphalt and ice), prevents the wheels from blocking in less favorable grip conditions (on ice), providing the minimum braking distance for the vehicle for this road surface while maintaining its stability and controllability. When the ABS is activated, pulsating vibrations are felt on the brake pedal. This ABS has the function of electronic brake force distribution (EBD), which prevents the rear axle from skidding during intensive braking of the vehicle with a partial load.



### **ATTENTION!**

For optimal performance when braking the vehicle in an emergency using ABS, depress the brake pedal with maximum force while depressing the clutch pedal.

The vehicle has a dual-circuit brake system. In case of failure of one of the circuits, the braking of the vehicle is provided by the second circuit. In this case, the brake pedal travel increases and the braking efficiency decreases, which at first can be perceived as a brake failure. However, the circuit of the brake system that retains its performance will provide effective braking. In this case, do not release the brake pedal, but continue to press it with the greatest possible effort to obtain the most effective braking. Repeated pressing will only increase the braking distance.

When driving through deep puddles, on wet roads, as well as when washing the vehicle, water may enter the brake mechanisms of the wheels. This may cause a reduction in the brake efficiency. In these cases, while the vehicle is moving, make several smooth braking operations to dry the brake mechanisms.

On long descents, it is advisable to shift to a lower gear and use the engine braking effect in conjunction with the braking system.

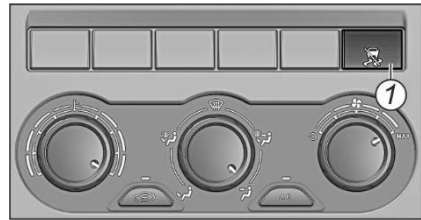
The vehicle is equipped with a vacuum brake booster, which reduces the effort on the pedals. After stopping the engine and then pressing the brake pedal one or two times, the brake booster stops. At the same time, the force that must be applied to the brake pedal to effectively brake the vehicle is greatly increased.

### **Vehicles with electronic stability control (ESP).**

This system includes anti-rollover and trajectory control functions to avoid rollover and maintain the desired trajectory during various driving maneuvers without braking.

In addition, vehicles equipped with ESP have the above-described ABS, traction control, which helps to take off on roads with low grip (packed snow or ice), as well as a hill start assist system. In the latter case, the vehicle does not roll back for two seconds after releasing the brake pedal.

If it is necessary to drive with possible wheel slip (for example, driving uphill with turns, in the presence of wet snow on the road surface), it is possible to deactivate the ESP by pressing switch 1 on the dashboard. After overcoming a difficult section, the inclusion of ESP occurs automatically when a speed of about 75 km/h is reached.



## WHEELS AND TIRES

### General

The vehicle is equipped with forged steel wheels 5<sup>1/2</sup>Jx16 H2.



**DANGER!**

To avoid deterioration of vehicle stability and handling parameters, it is necessary to use a set of wheels of the same type and a set of tires of the same size and model.

### Tire designation

The model and designation of the tire is given on its sidewall. Tire designation example: 185/75R16C 104/102Q.

The tire designation includes:

185 = conditional tire section width in millimeters;

75 = tires series, the ratio of the height of the section to its width expressed as a percentage;

R = radial tire;

16 = seat wheel rim diameter, inches;

C = tire for light commercial vehicle;

104 = bearing capacity index indicating the maximum allowable load on the tire (for single wheels), 900 kg in this case;

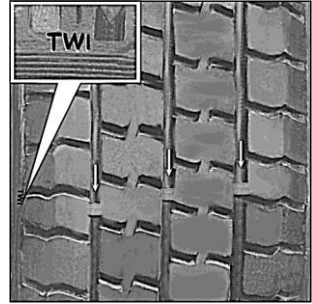
102 = bearing capacity index indicating the maximum allowable load on the tire (for dual wheels), 850 kg in this case;

Q = speed category index indicating the maximum tire speed, 160 km/h.



## Wear indicators

At the base of the tread, there are 1.6 mm high wear indicators of the tires located across the tread at the same distance along the circumference. The location of the wear indicators is indicated by marks on the sidewall of the tire (for example, the designation TWI or pictograms). Wear indicators appear as solid areas of rubber and correspond to the wear limit of the tire, with a pattern depth of 1.6 mm. In this case, the tire must be replaced.



It is recommended to replace worn tires with a whole set of new tires.



### ATTENTION!

The lower the residual tread height is, the worse is the stability and controllability of the vehicle, the grip of the tires with the road surface, especially on wet and snowy roads. Replace tires in a timely manner to avoid accidents. Tires must be replaced when the minimum allowable tire tread depth is reached (the tread is worn down to wear indicators).

## Tire air pressure

Deviation of air pressure in tires from the nominal values leads to rapid and uneven wear of the tread, negatively affects the vehicle's controllability, noise and vibrations in the cabin. The reduced pressure causes an increase in fuel consumption.

Regularly (once a week and additionally before long trips) check the air pressure in the tires. Tire pressures are given in the Specifications section of this User Manual. Check the pressure for cold tires.

Tires get hot while driving. This leads to an increase in air pressure in them. Do not adjust the pressure immediately after stopping the vehicle.

## Vehicle operation

Maintain air pressure in the spare tire as well.

To drive at an increased speed for more than 1 hour on suburban highways, we recommend increasing the air pressure in tires by 20-30 kPa (0.2-0.3 kgf/cm<sup>2</sup>).

If in motion you feel that the vehicle wobbles to the right or left, this may indicate a decrease in pressure in one of the tires or a violation of the angles of the front wheels.

In the event of a constant drop in tire pressure, check with a soapy solution for air leakage through the valve stem. If air leakage is detected, tighten the spool. If this does not help, replace the spool. If the air pressure in the tire drops with a good spool, the tire needs to be repaired.

We recommend, if possible, to carry it out at a maintenance company that has the necessary equipment for this.

## Wheel balancing

High vehicle speeds require good dynamic balancing of the wheel and tire assemblies. Increased imbalance is manifested by the appearance of vibration, which negatively affects the stability of the vehicle and causes accelerated wear of tires, parts of the front and rear suspensions, steering and bodywork. Vibrations caused by imbalance in the front wheels can be transmitted to the steering wheel, controls and body floor.

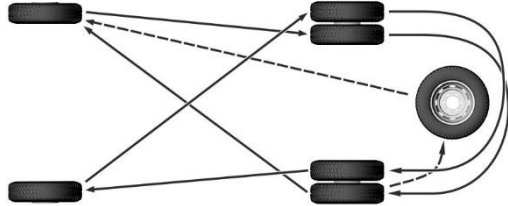
If you find signs of wheel imbalance, or the tires were dismantled for repair, you need to check and, if necessary, balance them. This operation must be carried out at a maintenance company that has the necessary equipment for this. Before balancing, tires and wheels must be washed and cleaned of dirt and foreign objects.

The permissible residual unbalance on each side of the wheel with the tire must not exceed 20 g on the wheel rim. If it is not possible to perform dynamic wheel balancing, static balancing can be

performed. In this case, the balancing weights should be installed on the edge of the rim, located closer to the mounting surface of the wheel disc.

### Wheel swap

It is recommended to swap the wheels every 10,000 km (if necessary) in accordance with the figure. Wheel rotation is necessary to obtain uniform wear of all tires, including the



spare one, as well as to ensure the correct selection of tires along the axles. Tires with the same tread wear should be installed on the axle, and more reliable tires should be installed on the front axle of the vehicle.

Rotate wheels without waiting for obvious signs of tire tread wear, such as side tread wear on the front tires and mid-tread wear on the rear tires.

After swapping the wheels, adjust the tire pressure.

During the operation of the vehicle, it is necessary to timely tighten the wheel nuts.

### Winter tires

The use of winter tires on icy and snowy roads will improve vehicle control, stability, dynamic and braking parameters. They must have the same dimensions and load rating and must be fitted to all wheels. However, it is necessary to consider the following:

- New tires must be run-in during a mileage of 500-1000 km.

## Vehicle operation

- Never exceed the maximum speed limit for winter tires (determined by the speed index on the tire label). If the maximum permissible speed is exceeded, the tire may be destroyed.
  - On dry or wet roads, the use of winter studded tires increases the stopping distance and requires slow down, especially before turning.
  - The performance of winter tires is greatly reduced if the remaining tread depth is less than 4 mm.
  - The use of winter tires contributes to some increase in the internal and external noise of the vehicle.
- Winter tires, especially studded tires, have poor grip characteristics when used after the winter season. Therefore, timely change winter tires for road or all-weather tires at an average daily ambient temperature above 7°C.

## Tire care

Periodically inspect tires, evaluating their condition, the degree and uniformity of wear of the tread pattern and promptly identify the presence of visible defects. Replace a tire if it has blisters, cracks, or significant cuts. If it is difficult to assess the possibility of further operation of the tire or its repair, contact a technical service company.

Hitting a wheel against an obstacle can cause hidden tire damage. Such a tire poses a threat to the safety of driving a vehicle at high speed. Therefore, if necessary, pass an obstacle, such as a curb, carefully, at low speed and, if possible, perpendicular to it.

Warped wheels and poor rim/tire seating surfaces can cause wheel imbalances and air pressure drops in tubeless tires. Be careful not to damage the tire beads during assembly and disassembly. Carrying out these operations at a maintenance facility will avoid such damage.

Store removed tires or wheels with tires in a dark, dry and cool place. If the tires have been used, then mark, for example, with chalk, the direction of rotation of the tires to maintain the same direction of rotation when reinstalled on the vehicle.

 **DANGER!**

Check your wheels and tires regularly. Their unsatisfactory condition can be the cause of a traffic accident.

### **How to slow down tire wear**

- Maintain proper air pressure in tires.
- Start slowly and slow down before sharp turns.
- Avoid hard braking.
- Remember that tire wear increases with vehicle speed.
- The radial tires of a vehicle must have one direction of rolling during their entire service life.
- The values of the adjustable parameters of the front suspension of the vehicle must comply with the requirements of the manufacturer.
- Avoid contact between the sidewalls of the tires and the curbs and avoid driving fast on broken roads.
- Unbalanced wheels accelerate tire wear and impair vehicle comfort.
- Do not overload the vehicle.
- Protect tires from oil, grease, fuel, chemicals, and other rubber-degrading substances.

## Vehicle operation

### Anti-skid chains

The use of anti-skid chains is governed by the applicable laws in the country in which the vehicle is operated.

Chains can only be installed on the tires of drive wheels. Follow the manufacturer's installation instructions.

We recommend using anti-skid chains 185/75R 16C SSL 6/6 version 1.

After driving approximately twenty to thirty meters, check the degree of chain tension.

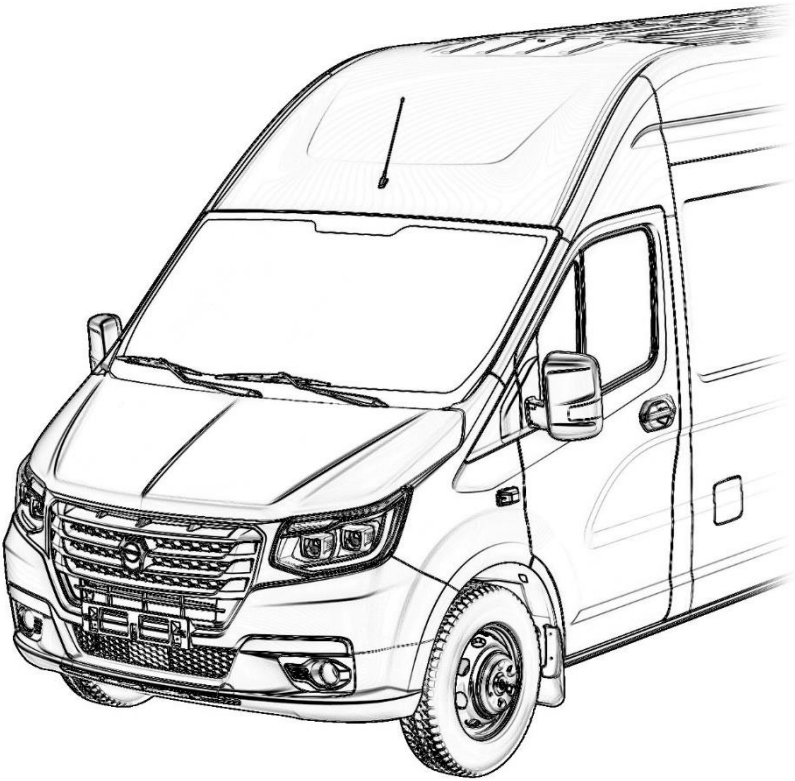


#### **ATTENTION!**

With anti-skid chains installed, the vehicle speed is reduced. The driving speed shall not exceed 50 km/h.

Avoid hitting wheels in potholes on the road, do not drive onto steps and curbs. Avoid driving long distances on roads not covered with snow.

## MAINTENANCE



### **SCHEDULED MAINTENANCE**

Regular maintenance is the key to the economical efficiency, reliability and safety of the vehicle. It must be remembered that the responsibility for maintaining the vehicle in a safe, roadworthy condition lies entirely with its owner.

The work performed during maintenance is indicated in the service book attached to the vehicle.

Maintenance of the vehicle during the warranty period is recommended to be carried out at the manufacturer's sales center using original spare parts. Original spare parts meet all the requirements for safety, reliability and durability of the vehicle.

If you use non-original spare parts and safety-relevant accessories, the operational safety of the vehicle may be compromised. The functionality of safety-relevant systems, such as the braking system, for example, may be affected. Use only original spare parts, even in the post-warranty period.

The warranty covers only original spare parts. The warranty may not cover damage to your vehicle due to the use of non-genuine parts.

### **Maintenance safety precautions:**

- It is necessary to turn off the instruments and the starter and remove the key, unless otherwise required during maintenance.
- Hands, tools and clothing should not be in the area of the drive belts or pulleys of a running engine.
- The cooling radiator fan may turn on at any time. Keep hands and clothing away from the fan blades.



- Take precautions when working on a hot engine.
- It is not allowed to touch the wires and components of electrical equipment when the instruments and the starter are turned on.
  - Do not leave the engine running in an unventilated area.
  - If possible, work in the engine compartment with the engine off and the negative battery terminal disconnected. If it is necessary to carry out work in the engine compartment with the engine running, it is necessary to install the vehicle on a firm and level horizontal platform, brake the vehicle with a parking brake.
    - Do not work under a vehicle supported only by a jack. For safety, put stops under the wheels.
    - Do not allow sparks and do not use open flames near the battery and fuel system parts. Do not smoke.
      - Many fluids used in vehicles are poisonous. It is unacceptable that they get on the skin or in the eyes. Wear protective gloves if necessary. Follow the instructions on the labels and on the containers. Protect your eyes when working under a vehicle.
      - Prolonged contact with engine oil may cause skin irritation. Wash hands thoroughly after contact.

### **Maintenance type**

The following types of maintenance have been established:

1. Daily maintenance (DM).
2. Periodic maintenance (PM).
3. Seasonal maintenance (SM).

## Maintenance

Seasonal maintenance is performed once a year, together with the scheduled maintenance.

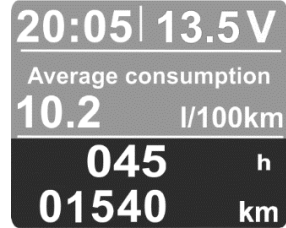
The frequency of maintenance is assigned depending on the operating conditions of the vehicle.

## MAINTENANCE INDICATOR

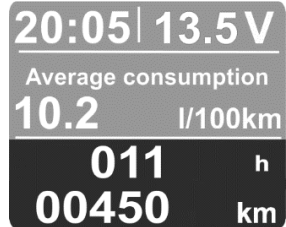
Information about the need for the next maintenance is displayed on the multifunction display of the instrument cluster.

**The indication of the remaining hours of engine operation until the next maintenance, as well as the remaining mileage until the next maintenance** is displayed in the following cases:

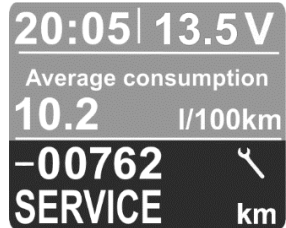
1. By turning the Mode button to the left and holding it until the value appears.



2. Each time the instruments and starter are turned on, if the value of the remaining time to maintenance is less than or equal to 10 hours, and also if the value of the remaining mileage to maintenance is less than or equal to 500 km.



3. Each time the instruments and the starter are turned on with an audible signal and the SERVICE inscription, if the value of the remaining time to maintenance is less than or equal to 0 hours, and also if the value of the remaining mileage to maintenance is less than or equal to 0 km (if the value is less than zero, then put a minus sign before it).

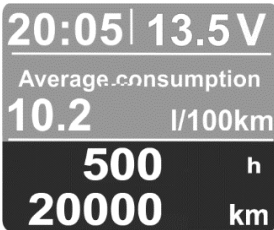


### ATTENTION!

If the service indicator is on, contact a service company for maintenance. In you untimely contact the maintenance company, the vehicle may be withdrawn from warranty service.

## Maintenance

**Indication of the frequency of maintenance (the value is entered at the enterprise of the manufacturer's service and distribution network)**



During the indication (5 seconds) of the value according to item 1, briefly press the reset button for the daily mileage readings.

**Setting the mileage to the next maintenance on the instrument cluster.**

After the maintenance, the mileage to the next maintenance is set on the instrument cluster. To do this, during the indication (5 seconds) of the value according to item 1, hold down the button for setting the daily mileage to zero for at least 3 seconds.

**Maintenance monitoring function in the engine control unit.**

The engine control unit has a maintenance check function activated every 500 hours of engine operation. When 490 engine hours are reached, the Engine Oil Change Interval fault is recorded in the memory of the engine control unit. Each time you turn on the instruments on the combination in intermittent mode, the Attention indicator of the engine management system lights up. If there are no other active faults, the indicator goes out in 15-18 seconds. Thus, the control unit reminds the driver of the need for maintenance. After maintenance, it is necessary to reset the maintenance control function to its original state, i.e. restore the time interval of 500 hours and turn off the indication in the dashboard. This can be done using the following procedure:

1. Switch on the instruments.
2. Press the accelerator pedal to the maximum position.
3. Quickly depress and release the brake pedal three times

4. Release the accelerator pedal to its original position.
5. Within 10 seconds: perform operations as per items 2-4 once again.

Changing the value of the frequency of maintenance in accordance with the operating conditions is possible only at the enterprise of the manufacturer's service and distribution network.

### **REQUIRED CHECKS**

The checks described below are simple but important. They must be done at regular intervals before driving.

#### **Daily checks:**

- Check the condition and operation of the lighting devices, sound signal, dashboard alarms, wiper blades and washer.
- Check the condition and operation of the seat belts.
- Perform a functional test of the service brake system. Checks are done at the idling engine and with the brake pedal pressed with the maximum effort. The brake pedal should not fall all the way to the floor and the brake fluid emergency low level indicator should not light.
- Check for water, coolant, oil, fuel or other leaks under the vehicle.
- For vehicles with all-metal body, inspect and, if necessary, clean the contact group of the sliding door and rear doors with a cloth coated with contact cleaner.

#### **Weekly checks (or before a long trip):**

Checking the level / topping up:

- Engine oil.
- Coolant.
- Fluid in the windshield washer tank.
- Oil in the power steering tank.
- Brake fluid in the brake master cylinder tank.
- Adblue reagent.
- Presence of water in the fuel filter. Drain water if necessary.
- Tire condition and air pressure (including spares). If necessary, increase the air pressure in the tires to the required level.

**Monthly checks:**

Check the operation of the air conditioner by running the engine for 10 minutes with the air conditioning system turned on.

Check the operation of the preheater-reheater by turning it on for 10 minutes.

Check and, if necessary, clean the drain holes in the inner corners of the front bumper.

Check the operation of the door lock switches. To prevent jamming of the door lock switch mechanisms when locking / unlocking the door locks without using a key, it is necessary to insert the key into the lock switch hole and lock and unlock the door lock. Repeat this procedure 3-5 times, preventing the lock gearmotor protection from overheating caused by locking/unlocking the door more than 5 times in a row.

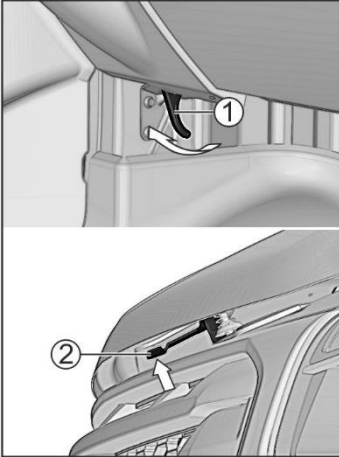
## OPENING AND CLOSING THE HOOD



### ATTENTION!

It is forbidden to drive the vehicle with the hood not fully closed.

### Opening



Pull handle 1 of the hood lock located on the left under the dashboard.

Slightly lift the front of the hood, slide safety latch 2 up and raise the hood.

Fold out the support column and insert the column into the hole in the hood.

### Closing

Raise the front of the hood, release, stow and secure the support leg.

Lower the hood to a distance of 100-150 mm to the engine compartment.

Release the hood to close it.

Make sure by trying to lift the hood that it is securely locked.



### ATTENTION!

Before closing the hood, make sure there are no foreign objects in the engine compartment.

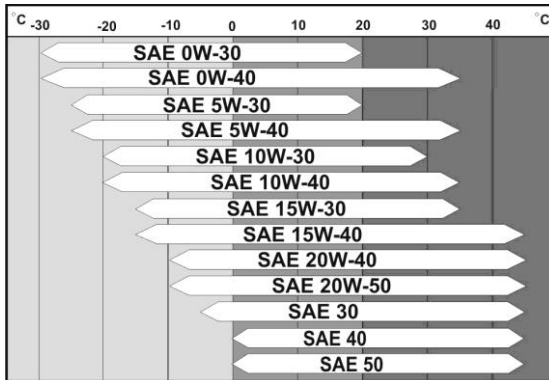


## ENGINE

**Engine oils** used in a diesel engine must meet an API quality class of at least CJ-4 and an SAE viscosity class according to the stable ambient temperature range of the region (see table) in which the vehicle is predominantly operated.

If the outside air temperature exceeds the oil application range, do not allow the engine to run at a high engine speed for a long time and do not subject it to a large load.

If the outside air temperature falls below the operating temperature range of the engine oil, it may be difficult to start the engine.



### ATTENTION!

The use of API CD, CC or CF engine oils may result in premature engine failure.



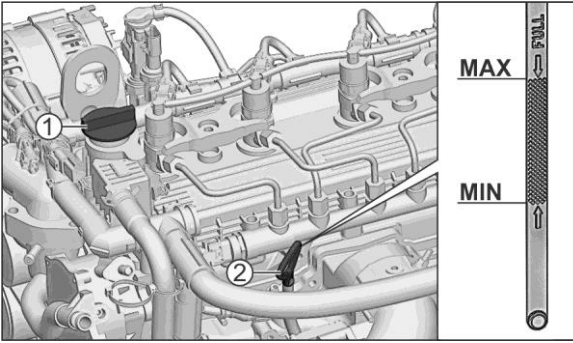
### ATTENTION!

When replacing engine oil with oil of another brand or another company, it is obligatory to flush the lubrication system with flushing oil.

It is forbidden to mix (top up) engine oils of different brands and different companies.

## Maintenance

**The oil level** must be checked with the engine cold, and the vehicle must be parked on a level surface.



The engine oil level must be between the MAX and MIN marks on dipstick 2. Add oil if necessary.

The volume of oil added to the crankcase from the low level mark to the upper level mark on

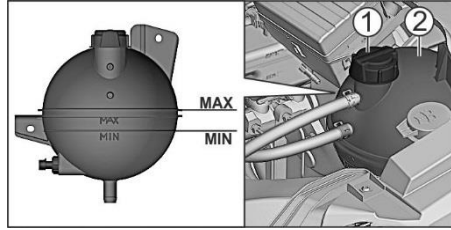
the dipstick is 1.0 liters.

Pour fresh oil through the oil filler neck closed with plug 1.

## COOLING SYSTEM

Check the coolant level in expansion tank 2 on a cold engine only.

The liquid level in the expansion tank must not be lower than the MIN mark and not higher than the upper welded flange (MAX mark).



Top up the coolant through the opening of the expansion tank closed with plug 1. When adding fluid frequently, check the cooling system for leaks.

If the drop in fluid level is caused by a leak in the system, repair the problem and bring the level to normal.

If the system is sealed, a decrease in level is possible as a result of the liquid boiling when the engine overheats. The reasons for overheating can be the following:

- Reducing the supply of outside air to the radiator due to its overlap with an insulating cover, severe clogging of the radiator plates (leaves, dust, insects), as well as the installation of additional headlights in front of the radiator lining.
- The fan is inoperative.

### DANGER!

The cooling system of a hot engine is under pressure. When the plug is removed quickly, hot liquid and steam can escape. Beware of the burn!

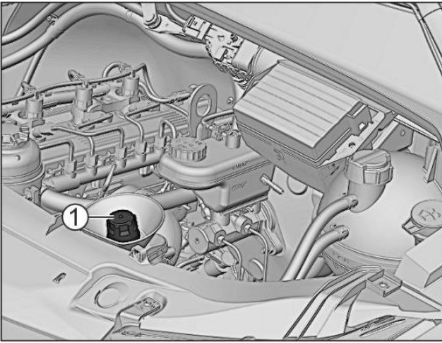
### ATTENTION!

Avoid topping up the engine cooling system with water, which increases the freezing point of the fluid and reduces its performance.

### ATTENTION!

Mixing (topping up) of coolants of different brands and different companies is prohibited.

## EXHAUST GAS CLEANING SYSTEM



Top up the AdBlue reagent through the filler neck of the tank closed by cap 1.

Information about the low level of AdBlue in the replenishment tank is shown on the display of the instrument cluster (see Multifunctional Display section).



### **ATTENTION!**

If the Refill AdBlue warning appears, the AdBlue must be topped up as soon as possible. Further operation of the vehicle with an insufficient level of AdBlue may lead to a change in the engine operating conditions with a corresponding warning pop up on the display of the instrument cluster.



### **ATTENTION!**

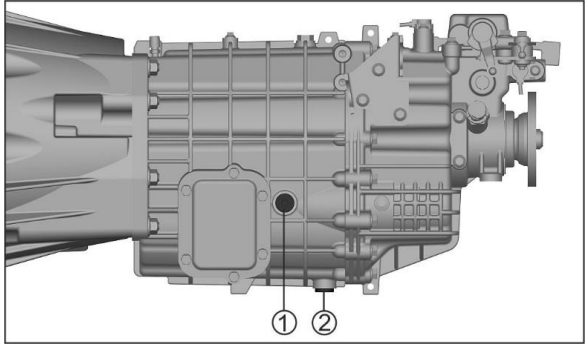
If AdBlue comes into contact with the painted surfaces of the vehicle, it will damage the paintwork. Therefore, if AdBlue comes into contact with painted surfaces, immediately wipe these areas with a damp cloth or sponge.

## GEARBOX

The oil level must be checked on a vehicle without load, installed on a flat horizontal platform, with all units cooled down.

The oil level in the gearbox should be at the lower edge of the filler port closed with plug 1. Check the oil level through the port located on the left side of the front crankcase.

Plug 2 for draining oil from the gearbox housing has a magnet that traps wear products of gearbox parts.

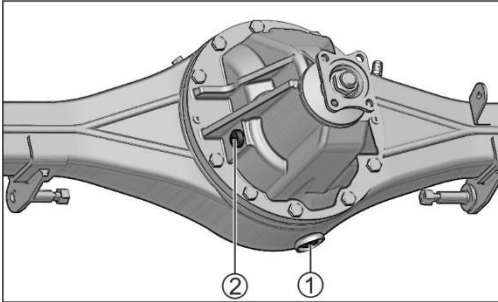


## Maintenance

### REAR AXLE

The oil level must be checked on a vehicle without load, installed on a flat horizontal platform, with all units cooled down.

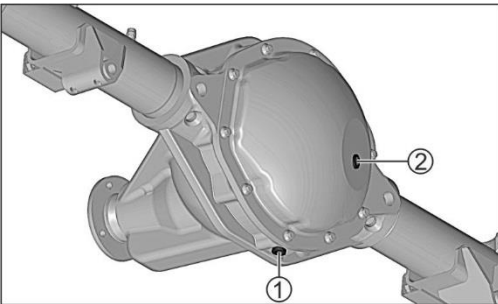
#### Design version 1



The oil level in the rear axle should be at the level of the lower edge of the filler port closed with plug 2.

The oil is drained through port hole closed by plug 1.

#### Design version 2



### **ATTENTION!**

The rear axle is factory-filled with gear oil intended for operation at ambient temperatures from  $-25^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$ .

It is not recommended to change the oil filled at the factory in the axle up to a mileage of 60 thousand km, except when the vehicle is operated at low ambient temperature.

Change the oil in the axle during the warranty period only at specialized maintenance enterprises that provide warranty service for vehicles.

## HYDRAULIC BRAKES

Check the brake fluid level in the translucent tank of the master brake cylinder visually using the marks on the tank body.

With new brake pads, the fluid level should be at the MAX mark. If the hydraulic brake drive is in good condition,

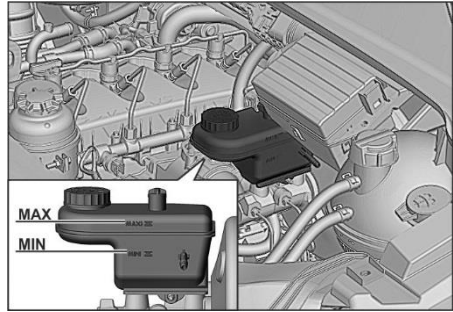
then a gradual decrease in the fluid level in the tank is associated with wear on the lining of the brake pads. A decrease in the liquid level to the MIN mark indirectly indicates the maximum wear of the linings. In this case, the brake pads must be replaced, and there is no need to add fluid to the tank, since when installing new pads, the fluid level in the tank will rise to normal.

The brake fluid level alarm indicator lights up when the fluid level in the tank drops below the MIN mark, which, with new or partially worn brake linings, indicates a loss of system tightness and fluid leakage. Topping up the fluid in this case should be done only after the tightness of the system is restored.

After topping up the brake fluid, it is necessary to tighten the cap with a torque of 2.0-2.6 N·m (0.2-0.26 kgf·m).

Brake fluid absorbs moisture from the air, the high content of which can lead to an emergency malfunction of the brake system.

To completely replace the brake fluid and prevent air from entering the brake hydraulic drive, we recommend that this operation be carried out at a maintenance company that has the necessary equipment for this.





### **DANGER!**

Brake fluid is toxic! Avoid contact with eyes and exposed skin. If this happens, immediately flush the affected area with plenty of water.



### **ATTENTION!**

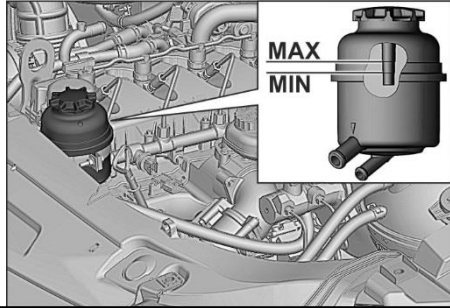
The liquid must be stored in a tightly sealed container of the manufacturer, out of the reach of children.

Contact with brake fluid on the painted surfaces of the vehicle will damage the paintwork. Therefore, if brake fluid gets on painted surfaces, immediately wipe these places with a damp cloth or sponge.



## POWER STEERING HYDRO SYSTEM

The oil level in the tank should be between the marks on the dipstick cap, indicating the maximum and minimum oil level, with the cap screwed up to the stop. Check the oil level in the tank when the engine is cold.



### ATTENTION!

When the engine is running, it is not allowed to hold the steering wheel in the position turned all the way for more than 15 seconds, since this may cause the power steering pump to fail due to overheating of the oil.

Do not start the engine if the oil level in the power steering tank is insufficient.



### ATTENTION!

Do not allow dirt, water and dust to enter the inner cavity of the tank.



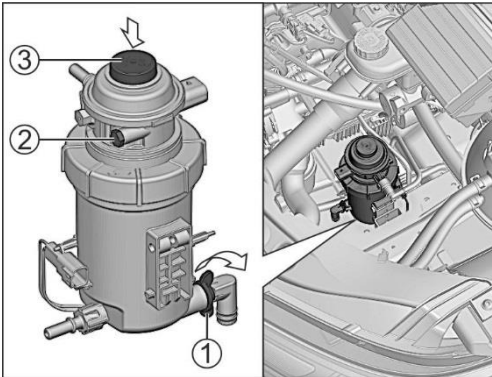
### ATTENTION!

Mixing (topping up) oils of the power steering system of different brands and different companies is prohibited.

## DIESEL FUEL FILTER

### Draining water from the fuel filter

If the water in the fuel filter indicator does not go out after starting the engine or lights up while driving, stop the engine immediately and drain the water from the fuel filter.



To drain water:

- place a suitable container under the fuel filter drain valve;

- loosen air bleed screw 2;

- unscrew wing nut 1 approximately two turns in the direction of the arrow, as shown in the figure, until water flows out. Do not loosen the nut completely!;

- drain water (about 250 ml) until clean diesel fuel appears;

- turn the wing nut in the opposite direction;

- bleed the vehicle's fuel system by pressing button 3 of the manual fuel pump several times until fuel starts to flow out of the air outlet closed by screw 2. If there is a noticeable resistance, pumping must be stopped;

- tighten the bleeder screw 2 with a torque of 1.5 Nm;

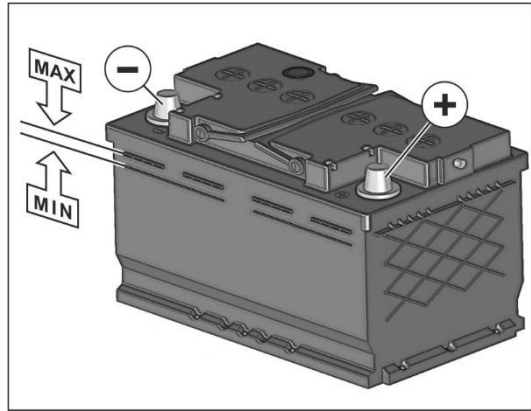
- start the engine, the water in fuel indicator should go out after about 2 seconds.

## BATTERY

### Electrolyte level check

Under normal operating conditions, the battery is almost maintenance-free.

However, when the outdoor temperature is high, it is recommended to check the electrolyte level regularly. In all sections, it must always be between the MAX and MIN marks on the battery case.



If the electrolyte level is low, bring it to normal by adding distilled water.

Remove the electrolyte on the surface of the battery with a clean rag soaked in a 10% solution of ammonia or soda ash, then wipe the surface dry.

### **! DANGER!**

The electrolyte is corrosive, therefore it is necessary to prevent its contact with eyes, skin and clothing. If this happens, immediately flush the affected area with water and, if necessary, seek medical attention.

Explosive gas is released during battery charging. Therefore, do not bring burning matches, lit cigarettes or other burning objects close to the battery. Never short-circuit the battery, otherwise the battery will become very hot and may explode. Sparks arising from this can also cause an explosion of gases.

### Battery operation in winter

In winter, the load on the battery increases. Moreover, at low temperatures, its ability to start the engine with a starter is significantly reduced compared to normal temperatures. Therefore, we recommend having the battery checked by a service company before the onset of cold weather and, if necessary, recharge it. As a

## Maintenance

result, this ensures not only a reliable engine start: a well-charged battery has a longer service life.

### **ATTENTION!**

To avoid damage to electronic equipment, do not remove the wire lugs from the battery terminals while the engine is running.

It is not allowed to connect or disconnect the battery, as well as the connectors of any electronic devices when the devices and the starter are turned on.

When servicing a battery, always disconnect the negative cable first and reconnect it last.

Batteries contain sulfuric acid and lead. Take used batteries to industrial waste collection points.

### **ATTENTION!**

To prevent malfunction of the AdBlue supply system, it is not allowed to disconnect the negative terminal of the battery less than two minutes after the ignition has been switched off.

### **ATTENTION!**

When the vehicle is stored for a long time (more than 1 month), it is necessary to carry out maintenance (recharging) of the battery in accordance with the operating instructions for the battery attached to the vehicle.

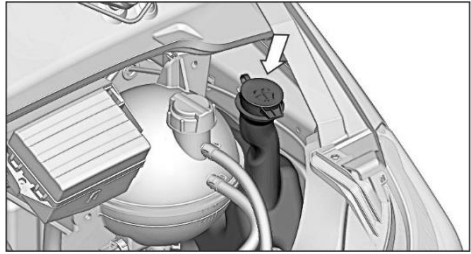
## WINDSHIELD WASHER

### **ATTENTION!**

Prolonged (more than 5 seconds) and multiple (more than 5 times in a row) activation of the washer is prohibited in case of no visible supply of washer fluid to the windshield in order to avoid failure of the washer electric pump.

### **Windshield washer tank**

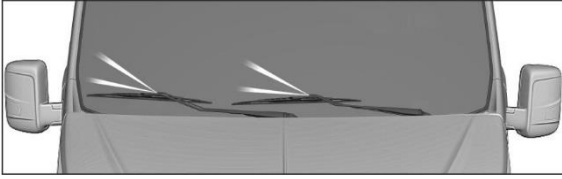
The vehicle is equipped with an electric windshield wiper and washer. Windshield wiper and washer control is combined. The windshield wiper mechanism and the windshield washer tank with the pump are installed in the engine compartment.



Do not turn on the wiper when the glass is dry and dirty, as this will cause scratches and rubbing on the glass, as well as damage the rubber band of the brushes. To clean the glass from dirt, turn on the washer. When the windshield washer is turned on, a special relay ensures that the wiper is turned on and a delay in turning it off after the washer is turned off.

In the cold season, fill the tank with a special glass washer fluid with a low freezing point.

## Windshield washer jets



If the pressure of the water jet (windshield washer fluid) is insufficient, first check for the presence of washer fluid in the washer fluid tank. Clogged washer jet holes can also cause insufficient water jet pressure, clean the jet holes if necessary.

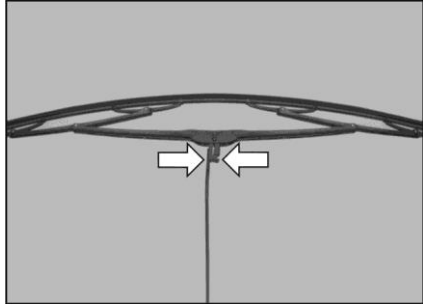
## WIPER BLADES

The vehicle can be fitted with blades of the following lengths:

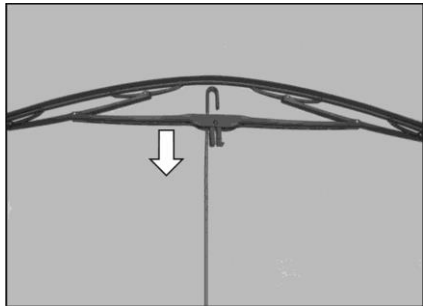
- driver's side 550-650 mm;
- passenger side 550 mm.

To replace blades:

- move the wiper arm away from the windshield and hold the blade at a right angle to the arm.
- press the ends of the plastic clip according to the arrows shown.



- slide the blade along the lever in the direction of the arrow to release it.



- install the new blade in the reverse order of its removal, making sure it is correctly attached to the wiper arm.



*Clean the blades with warm water and a few drops of dishwashing liquid.*

*If after cleaning they leave marks on the glass, install new blades.*



### **ATTENTION!**

To avoid damage to the paintwork of the hood, do not operate the wiper with the hood open.



## VEHICLE CARE

### WASHING

Regular washing is a necessary means of protecting your vehicle from harmful effects of the environment.

The longer salt, road and industrial dust, adhering insects, bird droppings, etc., remain on the vehicle, the faster the process of paintwork destruction and corrosion formation develops.

It is better to wash the vehicle before the dirt dries, pouring it abundantly with a low-pressure water jet using a soft sponge.

Never remove dust and dirt with a dry cloth. Washing in the open air in the summer should be done in the shade. Washing in the sun or after driving while the hood is still warm may cause the paintwork to fade.

When washing the vehicle, do not allow a direct jet to hit the electrical equipment and detachable connections in the engine compartment, as well as the door lock switch.

In winter, after washing the blade in a warm room, wipe the body dry before leaving, as when the wet surface of the body freezes, cracks can form on the paintwork. Blow out the door switch cylinder with compressed air and lubricate with the grease recommended below.

When washing, it is not always possible to remove bitumen stains from the road surface, traces of oil, stuck insects, etc. But since over time these contaminants (especially bird droppings) damage the color, they must be removed as soon as possible with the help of special automotive cosmetics.

It is recommended to wash the onboard platform at the same time as washing the cabin. Considering that the platform surface is most susceptible to damage during the transportation of goods, special attention must be paid to the timely elimination of damage.

### **Paint care**

To preserve the paintwork, it is useful from time to time, especially before winter, to polish it using wax compounds. The protective film created by the wax composition prevents the penetration of iron-containing particles from the industrial atmosphere into the paintwork, which form inclusions of a red color on the coating.

Minor damage to the paint, chips, scratches should be repaired without delay until rust has formed.

If rust appears, carefully remove it, then apply a layer of anti-corrosion primer and touch up. These works are recommended to be carried out by specialized maintenance companies.

### **Protection of the bottom, sills, wheel arches**

The bottom of the vehicle is protected from chemicals and mechanical damage.

However, during the operation of the vehicle, the protective layer can be damaged, so its condition must be checked periodically, preferably before winter and spring, and, if necessary, restored.

Specialized maintenance companies have the necessary protective coatings, equipment and experience in performing these activities.

### **Cleaning the exterior mirrors**

To clean the mirrors, use only a soft cloth dampened with any glass cleaner. Do not polish the mirror or remove frost with a scraper.

### **Cleaning exterior lights**

Lenses for headlights, direction indicators, rear lights and decorative rims are made of plastic. Therefore, it is unacceptable to clean them from dust and dirt using various fuels, other active substances and liquids, as well as dry wiping with brushes and rags.

Remove dirt only with abundant watering of these products with a jet of water.

### **Maintenance of rubber seals**

Rubber seals for doors and windows must always be flexible and in good condition. From time to time, it is recommended to lubricate them with a rubber care product so that the seals retain their elasticity in winter.

### **Maintenance of fabric upholstery**

To clean fabric upholstery, use special cleaning products, a dry sponge, a soft brush, a vacuum cleaner.

### **Maintenance of upholstery**

The interior upholstery should be washed with a damp cloth or sponge using detergents.

### **Maintenance of steering wheel**

Keep the steering wheel away from corrosive liquids such as mineral oils, cosmetic oils, solvents. This may damage the steering wheel. If such compounds come into contact with the steering wheel, wipe them off immediately.

Do not use glossing agents. Such compounds lead to discoloration, wrinkling, cracking and flaking of the material.

To clean, wipe the surface of the steering wheel with a clean soft cloth dampened with clean water or a neutral soap solution.

### Maintenance of airbag modules

Protect decorative surfaces (covers) of airbag modules (especially the driver's airbag module cover) from contact with caustic liquids such as mineral oils, cosmetic oils, solvents. This may damage them. If such compounds come into contact with the module covers, wipe them off immediately.

Do not use glossing agents. Such compounds lead to discoloration, wrinkling, cracking and flaking of the material.

To clean, wipe the surfaces of the airbag modules with a clean, soft cloth dampened with clean water or a neutral soap solution.

 **DANGER!**

It is strictly forbidden to clean the surfaces of the airbag modules with products containing solvents. Solvents cause airbag module surfaces to become porous. When the airbags are deployed, the flaking plastic can cause serious injury.

### Maintenance of seat belts

When seat belts become dirty, the following factors must be considered:

- it is forbidden to remove seat belts for cleaning;
- adhering dirt must be removed with a soft brush, and the contamination of the belt tape should be cleaned with a mild soapy solution;
- it is forbidden to iron the straps;
- for belts with inertial coils, the cleaned belt must be completely dry before winding, otherwise the inertial coil may break;
- chemical cleaning of seat belts is prohibited, it is necessary to protect the tapes and other parts of the belts from caustic chemicals, solvents and sharp objects since they can damage the fabric and make it less durable;

— Seat belt buckles and their openings must be protected from foreign objects and liquids getting inside, otherwise the performance of the belts and their locks may be impaired.

## FILLING VOLUME, FUEL AND LUBRICANTS AND OPERATING MATERIALS



### ATTENTION!

It is forbidden to use other types and grades of fuel, oils, lubricants and liquids, except for those specified in this User Manual.

### Fuel tank

The fuel tank capacity is 80 L	Diesel fuel EURO according to EN 590:2009, see the Fueling section
--------------------------------	--

### Engine lubrication system

The engine lubrication system capacity is 5.5 L	Engine oil Viscosity class according to SAE: 0W-30 (minus 30 to plus 20°C) 0W-40 (minus 30 to plus 35°C) 5W-40 (minus 25 to plus 35°C) 10W-40 (minus 20 to plus 40°C) 15W-40 (minus 15 to plus 45°C) API quality class: not lower than CJ-4
---	--

### Gearbox housing

The capacity of the gearbox housing is 4 L.	Oil Lukoil TM-4 SAE 75W-90, API GL-4
---	--------------------------------------

### Rear axle housing

Rear axle housing capacity is 3.0 L	At temperatures from minus 25°C to plus 40°C, use Lukoil TM-5 oil SAE 85W-90, API GL-5. Equivalent oils: Super T-3 (TM-5) SAE 85W-90, API GL-5 or Devon Super T SAE 85W-90, API GL-5. At temperatures from minus 40 °C to plus 25 °C, use Lukoil TM5 oil SAE 75W-90
-------------------------------------	--

**Steering hydraulic system**

<p>Hydraulic capacity 1.2 L</p>	<p><b>At temperatures from minus 30°C to plus 40°C:</b></p> <ul style="list-style-type: none"> <li>- automatic transmission oil Lukoil ATF (manufacturer: LLC Lukoil), or,</li> <li>- Rosneft Kinetic ATF IID fluid (manufacturer: LLC RN-Lubricants), or,</li> <li>- DEXRON III automatic transmission oil (manufacturer: Mobil, Texaco, Castrol, ESSO), or,</li> <li>- automatic transmission fluid Shell Spirax S4 ATF HDX, GM Dexron III G (manufacturer: Shell), or,</li> <li>- ATF+4 automatic transmission oil (manufacturer: Mobil, Texaco, Castrol, ESSO), or,</li> <li>- hydraulic oil Shell Spirax S2 ATF AX (manufacturer: Shell), or,</li> <li>- hydraulic oil Fuchs Titan ATF 4000 (manufacturer: Fuchs), or,</li> <li>- hydraulic oil Fuchs Titan ATF 3000 (manufacturer: Fuchs), or,</li> <li>- hydraulic oil Total FLUIDE ATX (manufacturer: Total), or,</li> <li>- hydraulic oil Mobil ATF 220 (manufacturer: Mobil).</li> </ul> <p><b>At temperatures from minus 40°C to plus 40°C</b></p> <ul style="list-style-type: none"> <li>- hydraulic fluid Pentosin CHF 11S (manufacturer: Pentosin).</li> </ul>
-------------------------------------	--

## Maintenance

### Engine cooling system

Cooling capacity: - 12.0 L (for vehicles with one heater) - 13.0 L (for vehicles with two heaters)	Cool Stream Premium or ASTM D 4985 coolants
--	---

### Brake system and hydraulic clutch release system

System capacity 845 cm <sup>3</sup>	Brake fluid ROSDOT, Lukoil DOT 4 or brake fluids that comply with SAE J 1703
--	--

### AdBlue tank

Tank capacity, 15 L	Fluid AUS 32 (AdBlue) ISO 22241 or DIN 70070
---------------------	--

### Washer tank

Washer tank capacity is 4.8 L	At a positive ambient temperature, clean drinking water is used. At negative ambient temperatures, special liquids for windshield washers are used
-------------------------------	---



**Cabin elements and mechanisms**

Hood lock	Grease Litol-24, Lita or Ciatim 201 Duplicate lubricants: Mil-G-18709A, Mil-G-10924C or SM-1C-4515A (Ford)
Door lock switch (cylinder key, cylinder return spring lubricate only if necessary)	VMGZ-60 oil, aerosol white or colorless moisture-displacing lubricant for door locks (for example, LIQUI MOLY Turschloss- Pflege 7623).

**ATTENTION!**

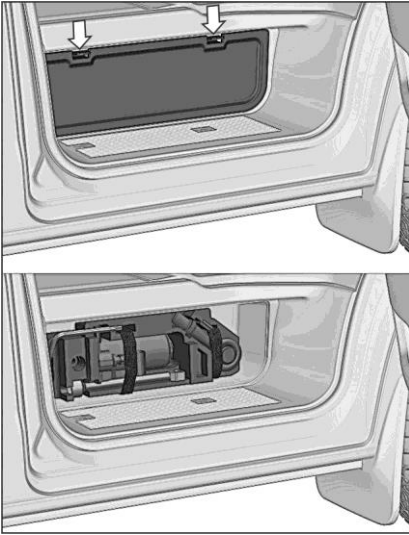
Deliver used fuels and lubricants, technical fluids and containers from under them to oil product collection points.



## PRACTICAL ADVICE



## TOOLS AND ACCESSORIES



The tool kit and the jack are packed in a special insert and placed in the compartment of the footboard on the passenger side, which is closed by a lid.

A tools and accessories kit is supplied with the vehicle, which includes: a balloon wrench S 27, a wrench for dismantling wheel caps S 14, a wrench, a hydraulic jack and an eyebolt.

Vehicles with an all-metal body are additionally equipped with a special key S 10 for the spare wheel holder.

At customer's order the vehicle may be equipped with a fire extinguisher.

## SPARE WHEEL



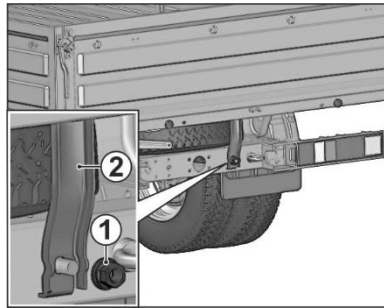
### ATTENTION!

The vehicle must not be driven with an unsecured or incompletely secured spare wheel.

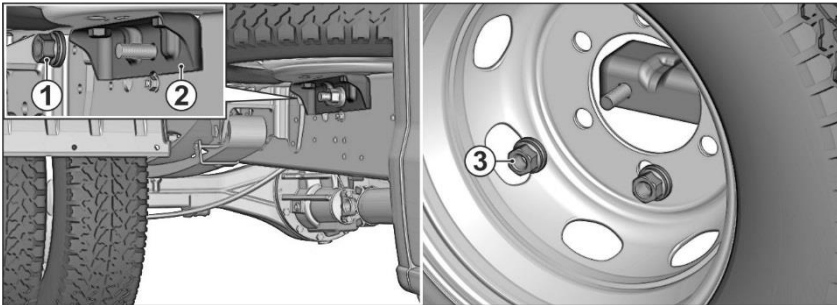
### Platform vehicles

On vehicles with a platform (depending on configuration), the spare wheel is located on the frame at the rear of the platform or behind the cabin on the right side.

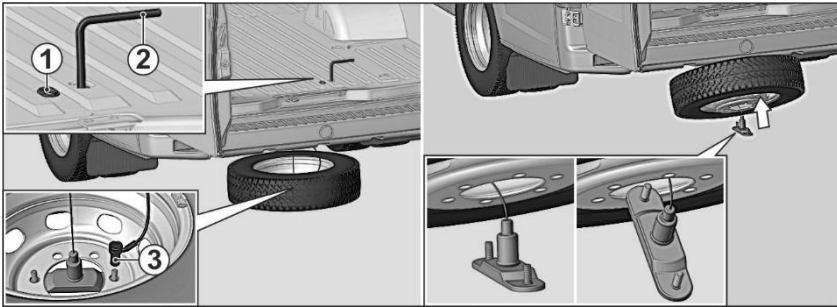
The spare wheel located at the rear of the platform abuts against the brackets mounted on the frame side members, and is fixed with a bracket on the rear cross member of the frame. To remove the spare wheel, unscrew nut 1 securing the wheel to bracket 2 and remove the wheel.



The spare wheel located behind the cabin is mounted on a holder. To remove the spare wheel, unscrew nut 1 fastening holder 2 to the frame side member, lower the wheel with the holder and unscrew the two nuts 3 fastening the wheel to holder 2.



## Vehicles with all-metal body



The spare wheel is located in the rear overhang and is pressed against the vehicle frame with the help of a winch cable.

To remove the spare wheel, special wrench 2 is provided, located in the insert of the tool kit.

To remove the spare wheel, remove plug 1 from the floor panel or flooring (if any), insert special key 2 into the winch mechanism spindle as shown in the figure and turn it counterclockwise. The key is rotated manually, without the use of additional tools and devices.

After lowering the wheel, continue turning the key until it stops, while simultaneously pulling the wheel out from under the vehicle and ensuring a constant tension on the winch cable with a load of at least 2.5 kg.

To disconnect the spare wheel, manually unscrew nut-sleeve 3 of the safety cable from the stud of the spare wheel bracket and, lifting the edge of the wheel, remove the bracket through the central hole of the wheel disk as shown in the figure.

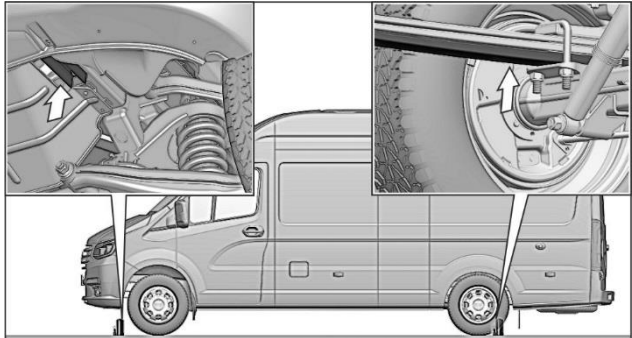
Install the spare wheel in the reverse order, while ensuring a constant tension of the winch cable with a load of at least 2.5 kg, keep the wheel in a horizontal position and do not exceed the tightening torque of 37 Nm (29 kg force to the edge of the key).

**WHEEL REPLACEMENT****DANGER!**

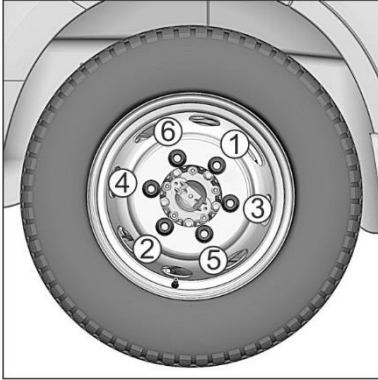
Doing any work under the vehicle lifted on the jack is forbidden.

Replace the wheel in the following order:

- position the vehicle on a steady even horizontal surface;
- apply the vehicle parking brake;
- place stopping blocks under wheels on the side opposite to where the wheel is going to be replaced;
- remove the cap of the removed wheel (if any);
- loosen the tightening of nuts on the wheel to be removed;
- place a jack under the frame near the front wheel (to replace the front wheel) or under the lower sheet of the spring near the ladder near the wheel to be removed (to replace the rear wheel). When lifting the vehicle on the ground, put a beam or board under the jack base;
- rock the jack handle to lift the vehicle so that the wheel to be replaced is raised above the road surface.
- undo wheel nuts, replace the wheel and screw the nuts back;
- lower the vehicle;



## Practical advice



– tighten wheel nuts with an effort of 30-38 kgf\*m and remove the wheel stops. Do not tighten the nuts one after another in succession, tighten opposing nuts alternately, for example, in the order shown in the figure;

– bring the tire pressure to the normal value.

Rules of using the jack are specified in the instruction manual

for the jack.



### **ATTENTION!**

Upon running the first 100 km after wheel replacement (removal and installation), 50 km after that and before a long trip, check tightening of wheel nuts and, if necessary, tighten them with an effort of 30-38 kgf\*m.



### **DANGER!**

Wrong tightening of wheel nuts may cause a road accident.



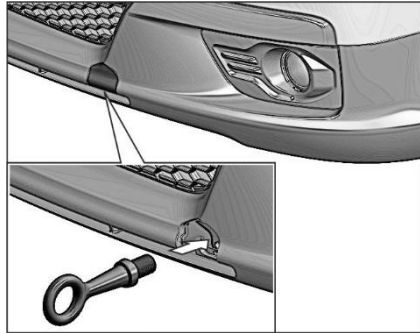
### **ATTENTION!**

When transporting vehicle chassis, check the spare wheel tire pressure prior to starting the trip and tighten the attachment of the spare wheel.



## VEHICLE TOWING

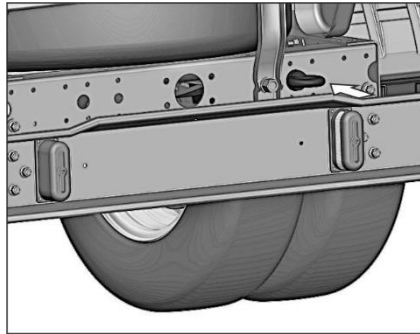
In front of the frame, stamped-welded brackets are attached to the spars. The left bracket has a welded sleeve, into which, when towing or pulling out a stuck vehicle, it is necessary to screw an eyebolt to install a cable or chain (the eyebolt is attached to the vehicle).



On vehicles with a platform, an eyebolt is installed on the rear cross member of the frame to pull out a stuck vehicle.

To tow the vehicle:

- fix the towing cable on both vehicles reliably;
- switch on the emergency flashing lights on the vehicle towed;



- unlock the steering wheel so that the vehicle could be steered;

When towing a vehicle the driver of the towing truck shall start motion and drive smoothly, avoiding jerks and not exceeding the speed limit, the driver of the towed vehicle must see that the towing cable is tightened at all times.

It should be borne in mind that when the engine is not running, the brake and steering boosters do not work, and therefore, the efforts applied to the brake pedal and steering wheel increase.

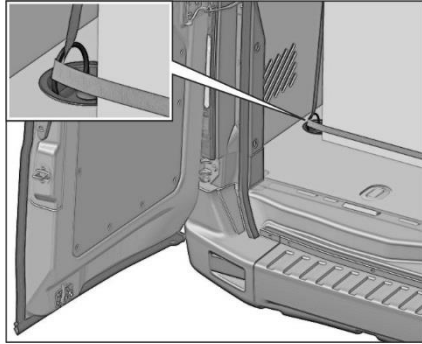
## Practical advice

To avoid damage to the gearbox when towing the vehicle by partial loading, disconnect the driveshaft flange from the final drive and securely fix the disconnected end of the driveshaft through a wooden spacer to the cross member of the parking brake cable mounting bracket.

## CARRIAGE OF CARGO

To exclude the movement of cargo on vehicles with an all-metal body in the cargo compartment, it is possible to secure the cargo using rigging loops.

Depending on the size of the cargo compartment, from 6 to 10 lifting loops are installed on the vehicles.



The load is secured by lifting loops located opposite each other along the axis of the vehicle.

The manufacturer sets the maximum allowable load for each rigging loop when securing a load of 300 kgf (3 kN). The driver is responsible for exceeding the load on the lashing eyes when securing the load.

The load must be distributed evenly between the axles.



### **ATTENTION!**

It is unacceptable to overload the front and/or rear axle, so heavy loads must be placed with extreme care.



### **ATTENTION!**

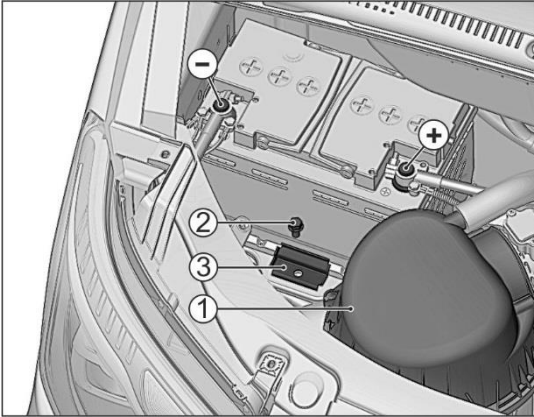
To avoid breakage of rigging loops and deformation of the body, a load on one loop of more than 300 kgf is not allowed. When securing the load with slings with tensioning mechanisms, do not allow the loops to deform.

## Practical advice

### REMOVING/INSTALLING THE BATTERY

The order of disconnecting the cables from the battery is: negative cable first, then positive cable.

Battery removal procedure:



- remove cover 1 of the air filter and take it aside;

- unscrew bolt 2 and remove bar 3 for fastening the battery;

- remove the battery from the seat.

If replacing the battery, see that the new battery is of the same type and capacity as the old one.

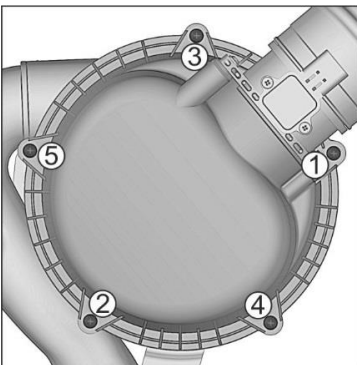
Reverse the removal procedure to install the battery.



#### ATTENTION!

Cables must be connected to the battery terminals correctly. Wrong polarity is not allowed.

When installing the battery, first connect the positive cable to the positive terminal and then the negative cable to the negative terminal. Lubricate the terminals with the gun grease or solid oil.



Install the air filter cover to the housing and tighten the fixing screws in the sequence shown in the figure. The tightening torque is 2.8-3.5 N m.

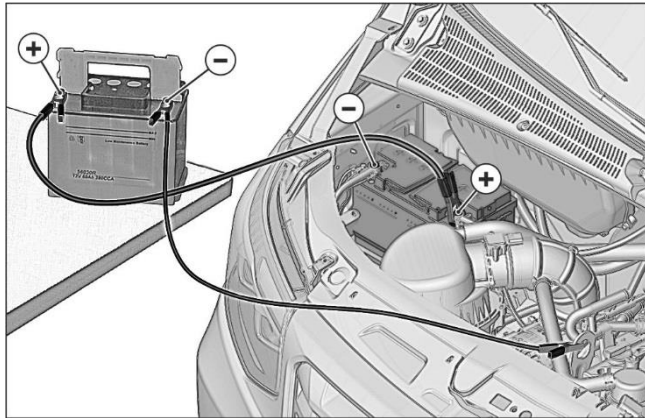


#### ATTENTION!

Do not overtighten the air filter cover fixing screws.

## ENGINE JUMP STARTING

Should the batteries of your vehicle become discharged, the engine can be started from the battery of another vehicle. In this case, both batteries must have similar nominal voltage



(12 V) and approximately the same capacity (A\*h). Jumper cables must have sufficient cross-section.

Strictly follow the instructions below - wrongly handled batteries are dangerous as they emit explosive gas, contain sulfuric acid of a rather high concentration and may become a source of electric shock in case of short circuiting. Short circuiting may also damage the electrical equipment of both vehicles.

When working with the battery:

- protect open parts of your body and eyes from electrolyte, use goggles;
  - do not lean over the battery during engine starting;
  - do not disconnect any cables from the terminals of discharged battery;
  - switch off all unnecessary power consumers;
  - see that the clamps of jumper cables do not touch each other.
- Connect the clamps of jumper cables in the following order:

## Practical advice

- Fix one clamp of the first jumper cable to the positive terminal (+) of the charged battery.
- Fix another clamp of the same cable to the positive terminal (+) of the discharged battery.
- Fix one clamp of the second jumper cable to the negative terminal (-) of the charged battery.
- Fix the other clamp of the same cable to the engine lifting eye as shown in the figure.



### **ATTENTION!**

Do not fix the clamp directly to the negative terminal of the discharged battery! Sparkles may ignite explosive gases emitted by the battery.

Position the jumper cables away from rotating parts of the engine.

- Start the engine of your vehicle as described in section “Engine starting”. At this time the engine of the vehicle with the charged battery must be stopped.

Carefully disconnect the clamps of jumper cables strictly in reverse order.

## FUSES AND RELAYS

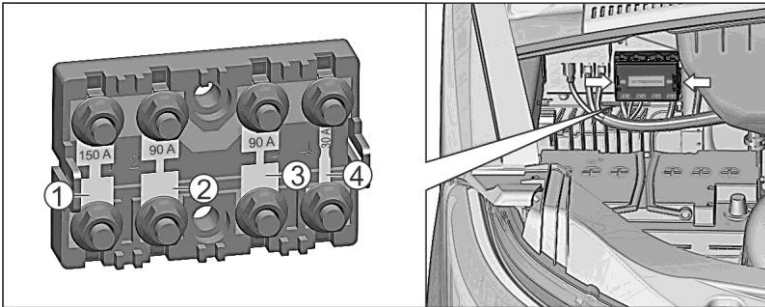
### Fuse block in the engine compartment

The block is located under the hood, on the right side of the front panel.

To access the fuses, press two plastic snaps on both sides of the lid and remove the lid.

Remove the burnt fuse, check the protected circuit and install a new fuse with the same rating (spare fuses are located in the fuse block lid).

After replacing the blade fuse, tighten the fixing nut with 5.5-7.8 N·m torque.



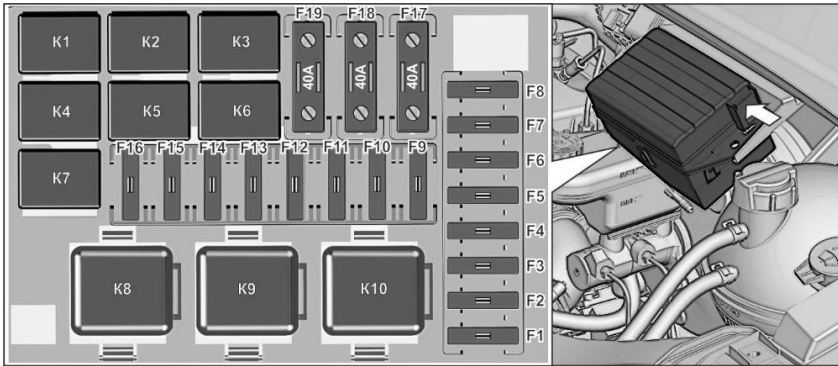
Protected circuits:

1	150A	Air preheater
2	90A	Common positive circuit of the vehicle
3	90A	Reserve
4	30A	Engine control system

## Practical advice

### Fuse and relay block in the engine compartment

The block is located under the hood on the left side panel extension of the front bodywork.



To access the fuses and relay:

- press in the plastic snap on the left face of the lid and remove the lid;
- use a fuse puller to remove the burnt fuse;
- repair the protected circuit;
- install a new fuse;
- close the lid till the snap clicks.

Protected circuits:

Fuses

F1	15A	Fog lights relay
F2	7.5A	Brake lights
F3	-	Reserve
F4	25A	Fuel heater relay
F5	25A	Coolant heater
F6	25A	Instrument and starter switch
F7	25A	Anti-lock braking system
F8	25A	Air conditioner fan
F9	-	Reserve
F10	10A	Beam headlight
F11	5A	High beam (left headlight)
F12	5A	High beam (right headlight)



F13	7.5A	Marker lights (left side)
F14	5A	Marker lights (right side)
F15	7.5A	Reversing light
F16	10A	Air conditioner compressor
F17	40A	Heater
F18	40A	Anti-lock braking system
F19	40A	Air conditioner fan

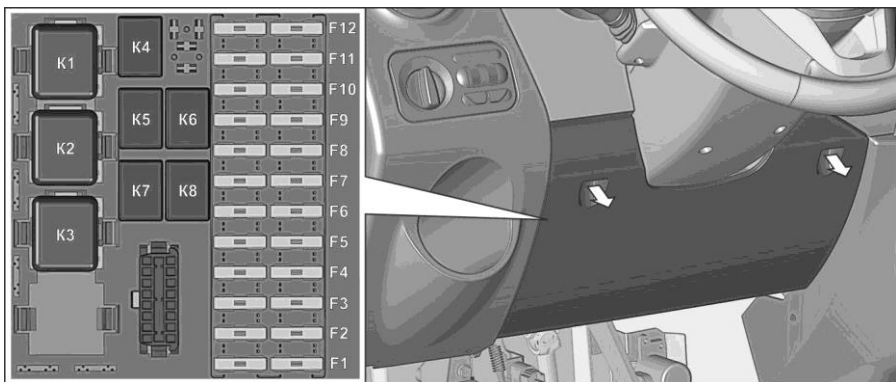
### Relay

K1	Air conditioner compressor relay
K2	Starter Interlock relay
K3	Reserve
K4	Fog lights relay
K5	High beam relay
K6	Low beam relay
K7	A/C fan relay
K8	Wiper blades positioning relay
K9	Fuel heater relay
K10	Starter relay

### Fuse and relay block in the dashboard

The block is located below the dashboard under the steering column.

To access fuses, pull the block cover to open.



## Practical advice

### Protected circuits:

#### Left row fuses

F1	7.5A	Daytime running lights
F2	5A	Rear fog lights
F3	7.5A	Direction indicators
F4	7.5A	Instrument cluster, speed sensor, heater control, central locking
F5	5A	Engine control system
F6	5A	Anti-lock braking system
F7	20A	Cigarette lighter, second row receptacle
F8	15A	Central locking, radio
F9	15A	Lighting control module, backlight
F10	10A	Interior lighting
F11	10A	Emergency warning lights
F12	7.5A	Instrument cluster, diagnostic block, preheater control panel

#### Right row fuses

F1	20A	Windshield wipers, windshield washer
F2	10A	Lighting control module
F3	5A	Power mirrors
F4	30A	Power windows
F5	10A	Rearview mirrors heating
F6	10A	Driver's seat heating
F7	15A	Additional heater
F8	10A	Passive safety system
F9	10A	Locking differential
F10	20A	Sound signals.
F11	-	Reserve
F12	10A	Receptacle

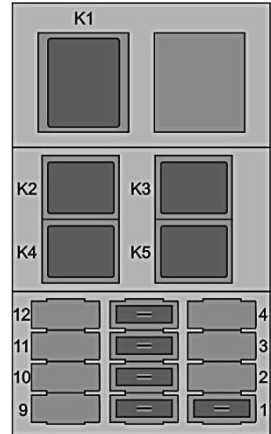
#### Relay

K1	Windshield wiper relay
K2	Heater relay
K3	Lock unloading relay
K4	Reheater relay

- K5 Differential lock relay
- K6 Parking light relay (AUTO)
- K7 Horns relay
- K8 Lock unloading relay

### Additional fuses and relays

In the cabin, under the dashboard on the left sidewall, there is a block of additional relays and fuses.



#### Fuses

- |    |     |                               |
|----|-----|-------------------------------|
| 1  | 20A | SCR system                    |
| 2  | -   | Reserve                       |
| 3  | -   | Reserve                       |
| 4  | -   | Reserve                       |
| 5  | 5A  | Carbamide outlet pipe heating |
| 6  | 5A  | Carbamide dosing pipe heating |
| 7  | 5A  | Carbamide feed pipe heating   |
| 8  | 10A | Carbamide feed module         |
| 9  | -   | Reserve                       |
| 10 | -   | Reserve                       |
| 11 | -   | Reserve                       |
| 12 | -   | Reserve                       |

#### Relay

- K1 Selective catalysis relay (SCR)
- K2 Outlet pipe heating relay

## Practical advice

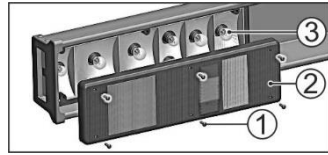
- K3 Dosing pipe heating relay
- K4 Feed pipe heating relay
- K5 Carbamide supply module relay

**BULB REPLACEMENT****Rear light lamp replacement**

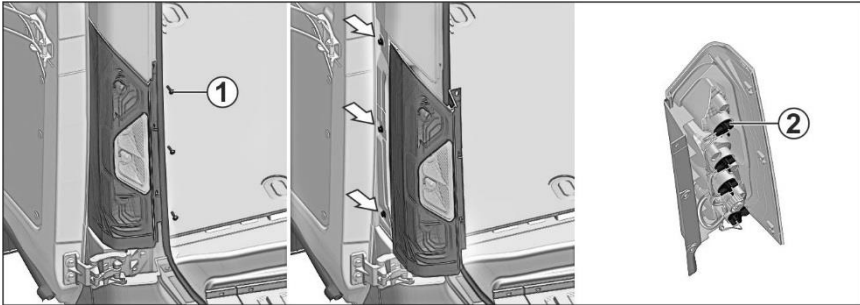
Platform vehicles

To replace the bulb:

- undo six screws 1 of light glass 2 and remove the glass;
- remove bulb 3.



Vehicles with all-metal body



To replace the bulb:

- unscrew three screws 1 fastening the lamp to the body;
- disengage the lamp from the three caps by pulling it towards you;
- turn socket 2 and remove the bulb socket.

**BULBS USED IN THE VEHICLE**

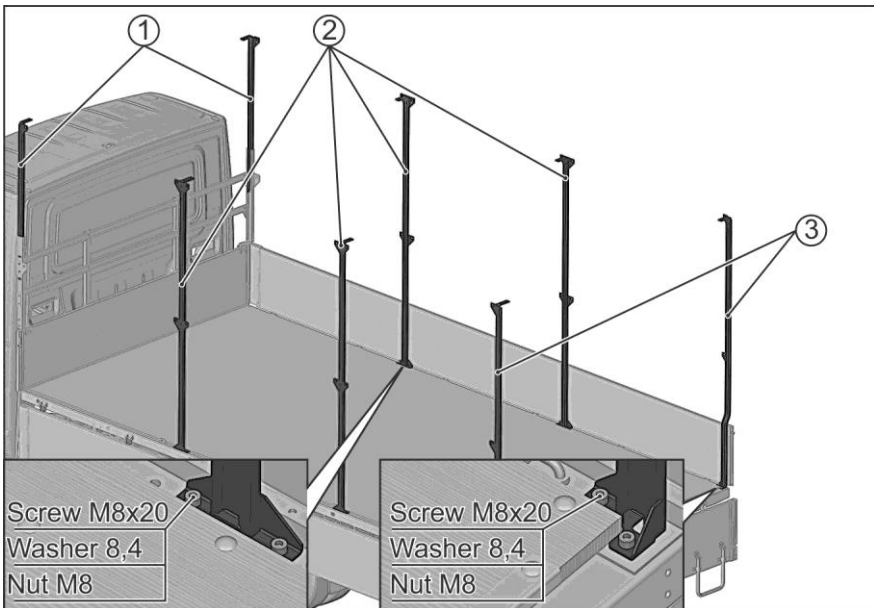
Purpose and location	Type	Power, W
Headlights	LEDs	
Fog lights	LEDs	
Side turn indicators	LEDs	
Rear lights (for platform vehicles):		
turn indicator	P21W	21
exterior marker light	R10W	10
brake light	P21W	21
reversing light	P21W	21
rear fog light	P21W	21
Rear lights (for all-metal body vehicles):		
parking light/brake signal	P21/5W	21/5
turn indicator	PY21W	21
reversing light	P21W	21
rear fog light	P21W	21
License plate lights	LEDs	
Cigarette lighter lighting	A12-1.2	1.2
Emergency lights switch pilot lamp	A12-1.2 or LEDs	1.2
Cargo compartment lighting	LEDs	
Additional brake light	LEDs	

## INSTALLATION OF CANOPY FRAME AND CANOPY ON PLATFORM

The set of parts for installing the canopy frame (using the example of a vehicle with a single-row cabin):

Canopy bow, front	2 pcs.
Canopy bow, middle	2 pcs.
Canopy post, front right	1 pc.
Canopy post, front left	1 pc.
Canopy post, middle	4 pcs.
Canopy post, rear right	1 pc.
Canopy post, rear left	1 pc.
Upper rail of canopy arches	4 pcs.
Canopy bow planks	4 pcs.
Canopy bow planks	2 pcs.
Brace	4 pcs.

### Canopy frame parts installation procedure

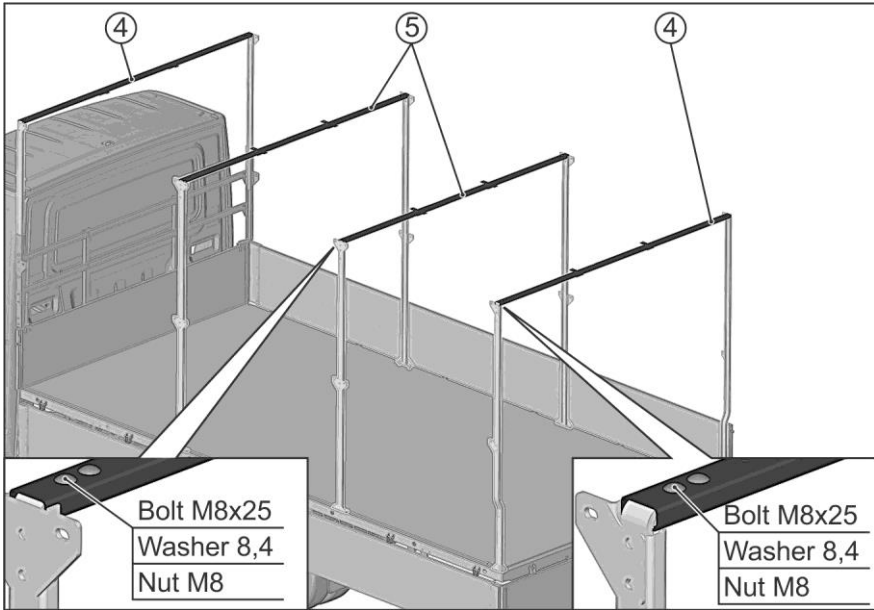


## Practical advice

Install front canopy posts 1 in the front platform side extension.

Install the middle canopy posts 2 and fasten them to the base frame with screws.

Install rear canopy posts 3 and fasten them to the base frame with screws.

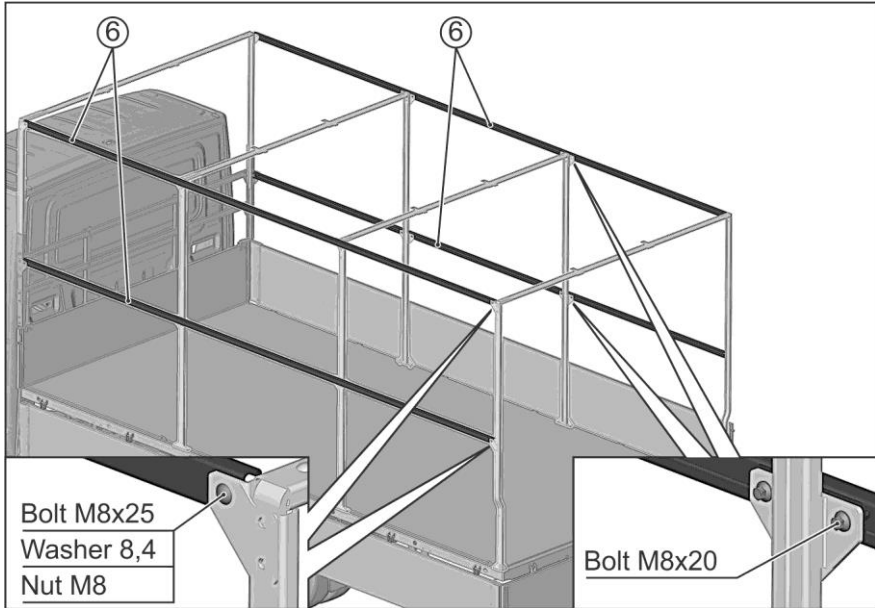


Connect the front canopy arch 4 with the front canopy posts, fixing them with bolts.

Connect the middle canopy arch 5 with the middle canopy posts, fixing them with bolts.

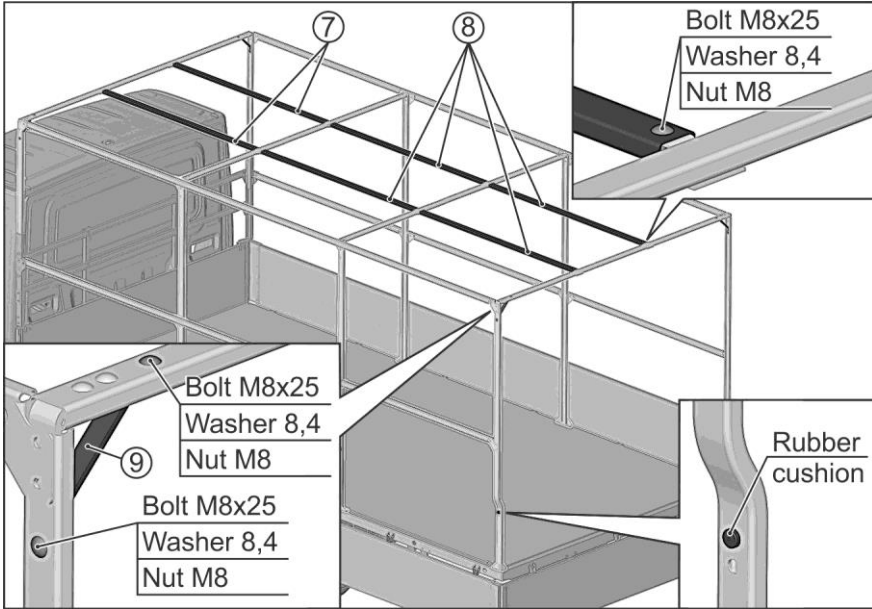
Connect the front canopy arch 4 with the rear canopy posts, securing them with bolts.





Install the top rails of the canopy arches 6 by bolting them to the front, middle and rear canopy posts.

## Practical advice



Install canopy rails 7 and 8, securing them with bolts.

Install the braces 9 on the front and rear posts of the canopy frame, connecting them with the canopy arches and fixing them with bolts.

Install the rubber buffer into the rear and middle canopy posts.

### Canopy set:

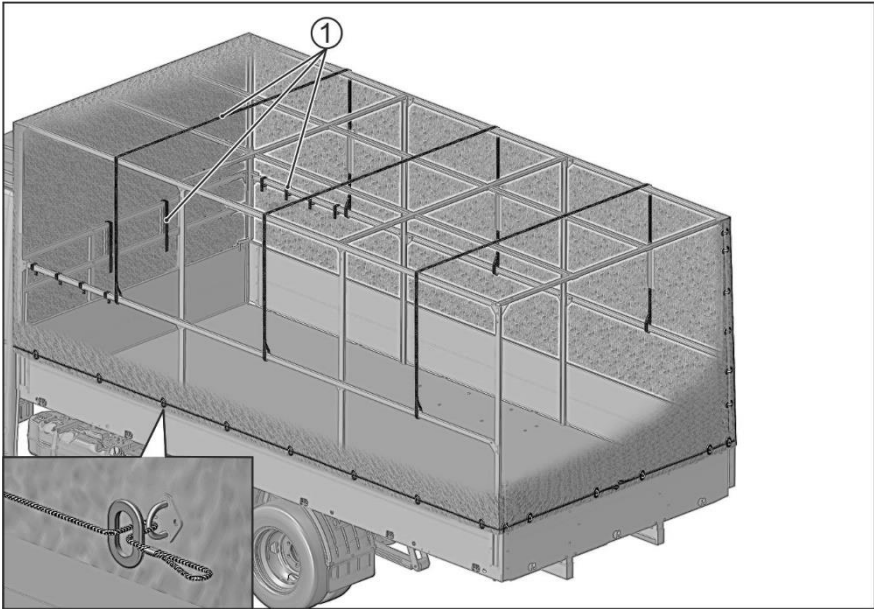
Canopy	1 pc.
Canopy rope	1 pc.
Fastening belt	3 pcs.
Canopy front attachment belt	2 pcs.
Canopy side attachment belt	8 pcs.

### Canopy installation procedure

The canopy is attached to platform sides with the help of the canopy rope.

Install the canopy on the frame.

Start fixing the canopy rope from middle tie-down loops of the front sideboard. Run the rope through the loops from inside the platform.



Lead the canopy rope through the canopy hole from the outside, run the rope through the loop on the front side and return the rope through the canopy hole.

To prevent blowing and clapping of the canopy, fix it by belts 1 from inside the platform to the canopy frame elements.

**⚠ DANGER!**

In order to ensure road safety and prevent damage to the canopy frame parts, it is necessary to clean the canopy installed on the vehicle from snow, ice and other foreign objects.

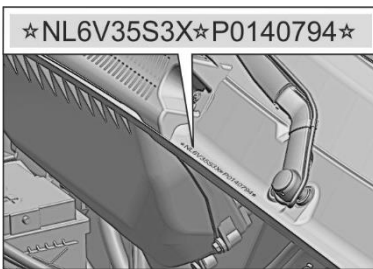
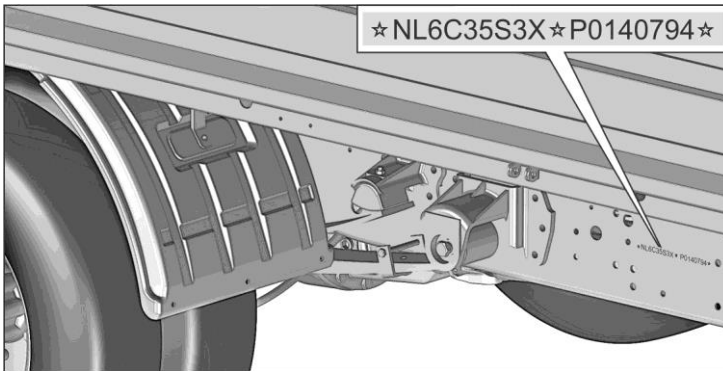
**⚠ ATTENTION!**

In order to prevent damage to plywood covering of the platform floor caused by ambient temperature changes, do not allow snow to accumulate inside the vehicle's platform.

## IDENTIFICATION NUMBERS

Certification data of vehicles and vehicle chassis supplied to other companies for production of special vehicles include the vehicle identification number (VIN), cabin identification number, engine identification number and factory data plate.

**The vehicle identification number (VIN) on vehicles with a platform and their chassis** is applied on the right side member of the frame in one place: in front of the front rear spring bracket or between the rear spring brackets.



**The vehicle identification number (VIN) on vehicles with an all-metal body and their chassis** is applied under the hood on the outer front panel of the front end on the right side in the direction of travel.

An example of the VIN of a vehicle and vehicle chassis:

★NL6C35S3X★ P0140794★, where

NL6 is the international identification code of the manufacturer;

C35S3X is the model or modification of the vehicle, where C35S3 is the descriptive part: the first five characters of the model or modification of the vehicle, X is the check digit (from 0 to 9) calculated mathematically using a special method (if the result of calculations in the remainder is 10, then in the vehicle number is marked with the letter X as the check digit);

P is the model year code (P - 2023, R - 2024, S - 2025);

0140794 is the serial number of the vehicle.

**The model year** is the period on the average equal to a calendar year, during which vehicles with the same construction features are produced.

**The identification number of the cabin or all-metal body** is applied under the hood on the outer front panel of the front end on the left side in the direction of travel.

An example of applying the cabin (body) number:

★C35S3XP0100125★, where:

C35S3X is the model or modification of the cabin (body);

P is the model year code;

0100125 is the serial number of the cabin (body).



**Engine identification number F2.8** is stamped on the cylinder block on the left side.

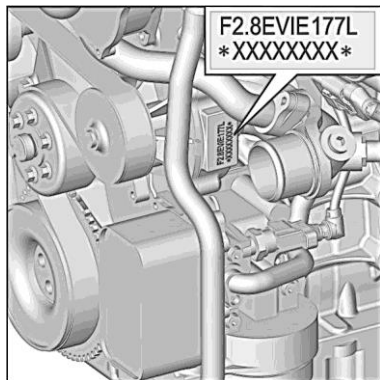
An example of an engine identification number:

F2.8EVIE177L

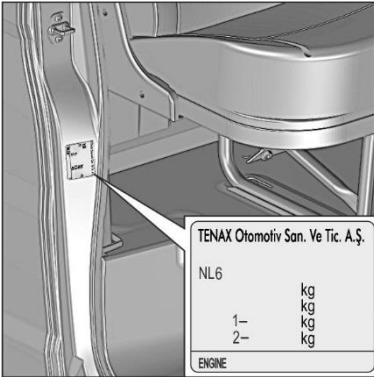
XXXXXXXXX where:

F2.8EVIE177L is the engine model;

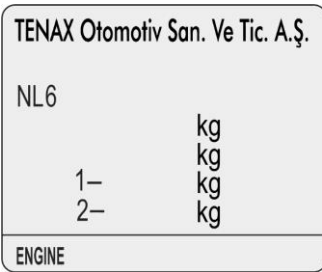
XXXXXXXXX is the serial number of the engine.



## Practical advice



**The nameplate** is located on the rear pillar of the right cabin door opening.



Designation of the nameplate fields:

- ← a a - identification number of the vehicle or vehicle chassis (VIN);
- ← b b - gross vehicle weight rating;
- ← c c - gross road-train weight rating;
- ← d d - gross front axle weight rating;
- ← e e - gross rear axle weight rating;

g - engine model.

The identification number on the nameplate must match the identification number on the frame, and the engine model on the nameplate must match the model on the engine.

A special plate is installed next to the nameplate, which contains information about international certificates (approvals) that apply to each specific vehicle.

**DISPOSAL**

The vehicle does not contain any substances posing a hazard to life, health and environment.

In case of disposal, it is necessary to dismantle the components of the passive safety system (if any) at the manufacturer's sales center.

In case of disposal after the end of its service life (operation), it is necessary to:

- drain the oil from the engine crankcase, transmission units, power steering hydraulic system and deliver it in the prescribed manner for recycling;

- drain the cooling liquid from the cooling system and place it in containers intended for storage;

- make a complete disassembly of the vehicle into parts, sorting them into steel, cast iron, aluminum, non-ferrous and precious metals, rubber and plastic and deliver them for recycling in the prescribed manner.

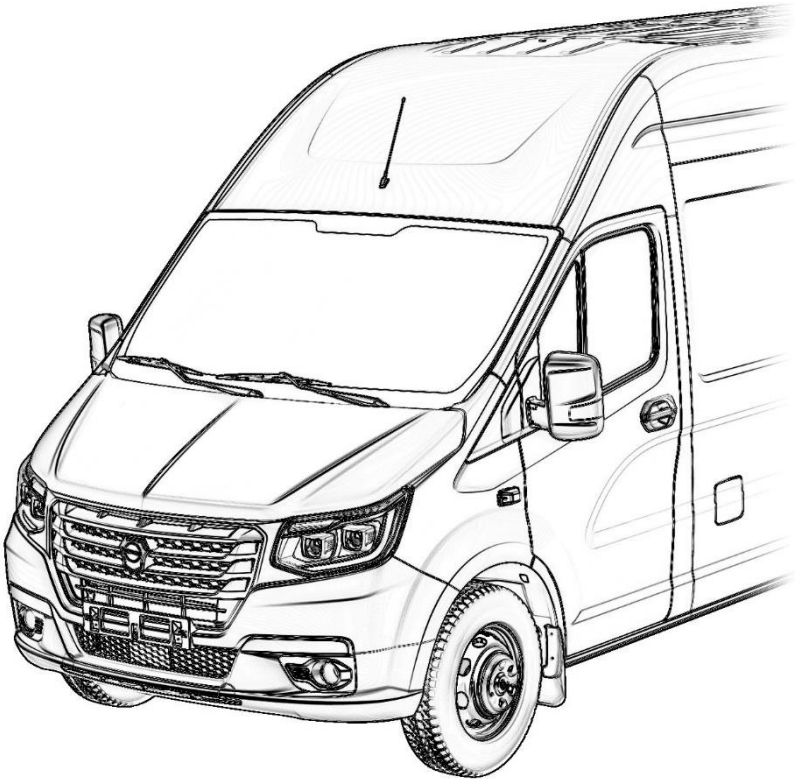
When carrying out maintenance and minor repairs of the vehicle, send the parts and assembly units to be replaced (if necessary) for recycling, while disassembling the assembly units into parts and sorting them by materials.

Take batteries, oil filters to specialized collection points.





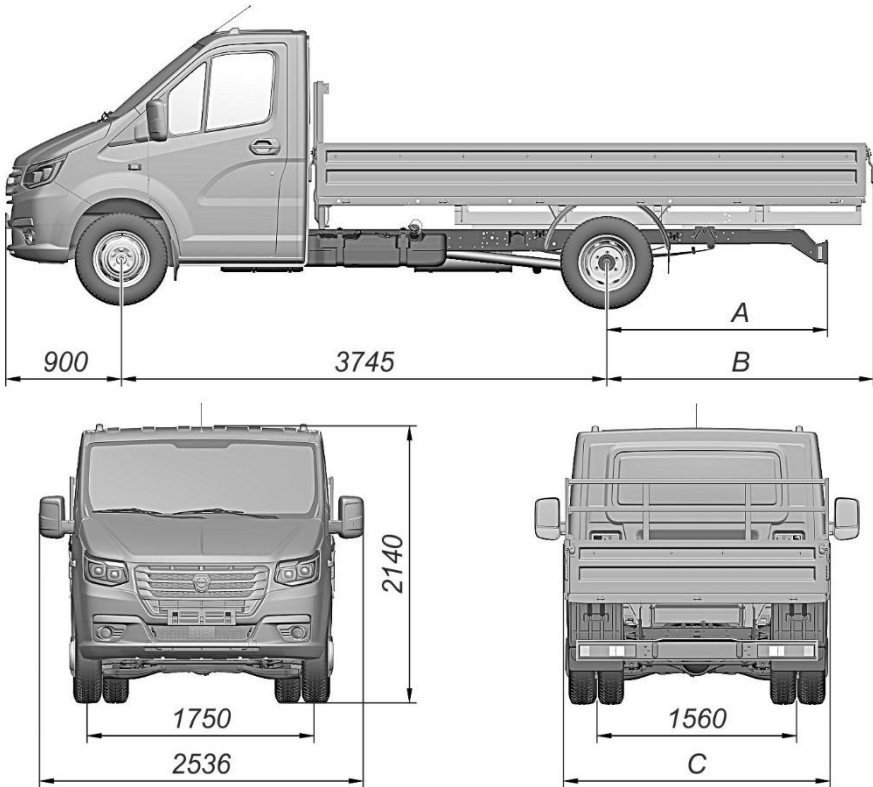
## TECHNICAL SPECIFICATION



## Technical characteristics

### BASIC DIMENSIONS

Vehicle Ct35S3, Ch35S3



A=1720 (1980<sup>1)</sup>) - mm (for Ch35S3);

B=2089 mm (for a vehicle with a steel platform);

B=2024 mm (for a vehicle with an aluminum platform);

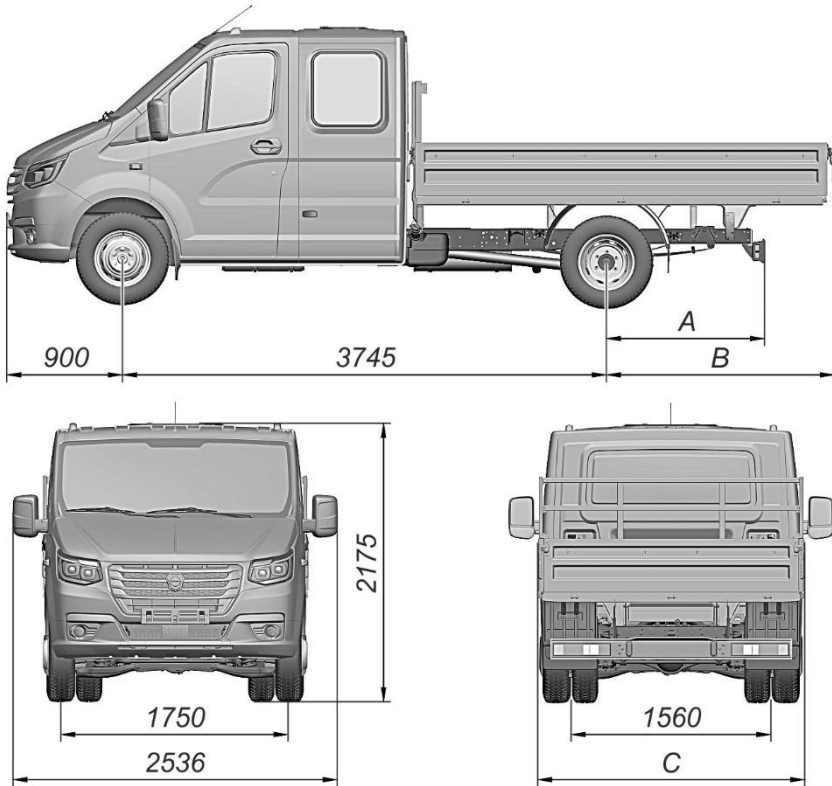
C=2060 mm (for a vehicle with a steel platform);

C=2160 mm (for a vehicle with an oversized steel platform);

C=2053 mm (for a vehicle with an aluminum platform).

<sup>1)</sup> For vehicles with underrun protection using extended brackets.

Vehicle Ct35D3, Ch35D3



A=1225 mm (for Ch35D3);

B=1753 mm (for a vehicle with a steel platform);

B=1688 mm (for a vehicle with an aluminum platform);

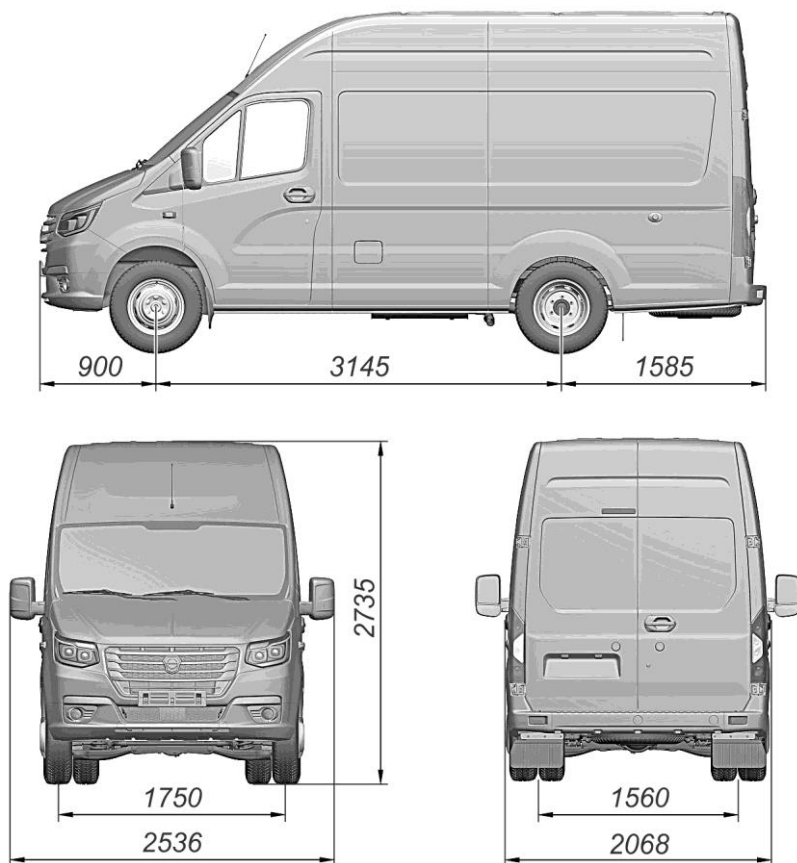
C=2060 mm (for a vehicle with a steel platform);

C=2160 mm (for a vehicle with an oversized steel platform);

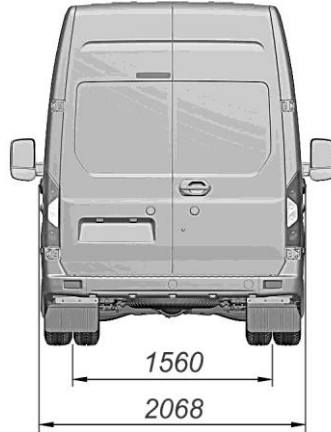
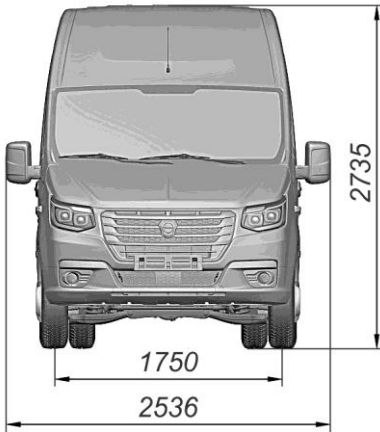
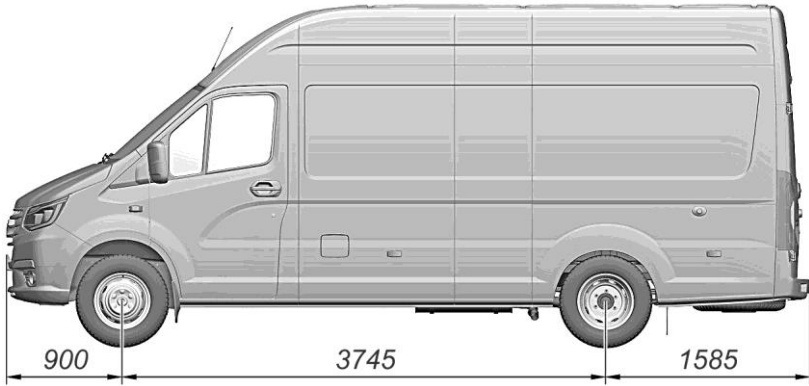
C=2160 mm (for a vehicle with an aluminum platform).

## Technical characteristics

### Vehicle V35S2

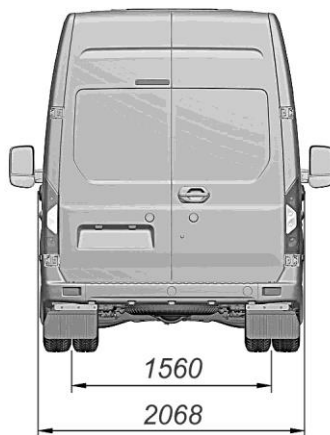
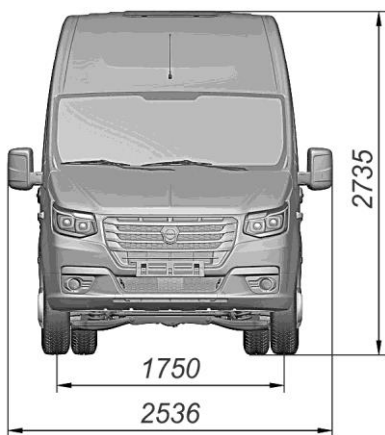
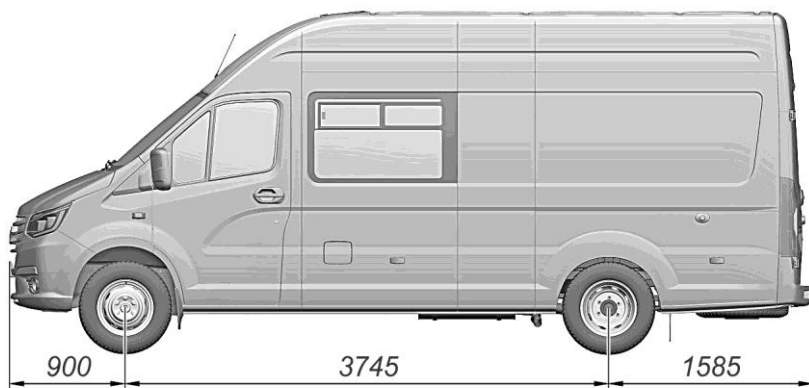


Vehicle V35S3



## Technical characteristics

### Vehicle V35C3



**GENERAL**

Parameters	Automobile model
	Ct35S3/Ch35S3
Number of seats (including the driver)	3
Gross vehicle weight rating, kg	3500
Weight of equipped vehicle, kg	2420-2445 <sup>1)</sup> /2055
Gross weight rating for each axle, kg:	
front	1550
rear	2600
Ground clearance (under the rear axle housing at full weight), mm	170
Minimum turning radius along the track of the outer front wheel, m	6.5
Reference fuel consumption (measured according to a special method) when driving at a constant speed, l/100 km:	
60 km/h	8.5
80 km/h	10.3
Maximum vehicle speed on a horizontal section of a flat highway, km/h	130
Overhang angles (with load), degrees:	
front	22
rear	11/11 (9 <sup>2)</sup> )
Maximum uphill angle at a full load, %	26
Loading height, mm	975

<sup>1)</sup> Depending on vehicle equipment.

<sup>2)</sup> For vehicles with extended underride protection.

## Technical characteristics

Parameters	Automobile model
	Ct35D3/Ch35D3
Number of seats (including the driver)	7
Gross vehicle weight rating, kg	3500
Weight of equipped vehicle, kg	2575-2590 <sup>1)</sup> /2335
Gross weight rating for each axle, kg:	
front	1650
rear	2600
Ground clearance (under the rear axle housing at full weight), mm	170
Minimum turning radius along the track of the outer front wheel, m	6.5
Reference fuel consumption (measured according to a special method) when driving at a constant speed, l/100 km:	
60 km/h	8.5
80 km/h	10.3
Maximum vehicle speed on a horizontal section of a flat highway, km/h	130
Overhang angles (with load), degrees:	
front	22
rear	15
Maximum uphill angle at a full load, %	26
Loading height, mm	975

<sup>1)</sup> Depending on vehicle equipment.



## Technical characteristics

Parameters	Automobile model
	V35S2
Number of seats (including the driver)	3
Gross vehicle weight rating, kg	3500
Weight of equipped vehicle, kg	2645
Gross weight rating for each axle, kg:	
front	1550
rear	2600
Ground clearance (under the rear axle housing at full weight), mm	170
Minimum turning radius along the track of the outer front wheel, m	5.7
Reference fuel consumption (measured according to a special method) when driving at a constant speed, l/100 km:	
60 km/h	8.5
80 km/h	10.3
Maximum vehicle speed on a horizontal section of a flat highway, km/h	130
Overhang angles (with load), degrees:	
front	22
rear	14
Maximum uphill angle at a full load, %	26
Loading height, mm	730

## Technical characteristics

Parameters	Automobile model
	V35S3
Number of seats (including the driver)	3
Gross vehicle weight rating, kg	3500
Weight of equipped vehicle, kg	2740
Gross weight rating for each axle, kg:	
front	1650
rear	2600
Ground clearance (under the rear axle housing at full weight), mm	170
Minimum turning radius along the track of the outer front wheel, m	6.5
Reference fuel consumption (measured according to a special method) when driving at a constant speed, l/100 km:	
60 km/h	8.5
80 km/h	10.3
Maximum vehicle speed on a horizontal section of a flat highway, km/h	130
Overhang angles (with load), degrees:	
front	22
rear	14
Maximum uphill angle at a full load, %	26
Loading height, mm	730

Parameters	Automobile model
	V35C3
Number of seats (including the driver)	7
Gross vehicle weight rating, kg	3500
Weight of equipped vehicle, kg	2855
Gross weight rating for each axle, kg:	
front	1650
rear	2600
Ground clearance (under the rear axle housing at full weight), mm	170
Minimum turning radius along the track of the outer front wheel, m	6.5
Reference fuel consumption (measured according to a special method) when driving at a constant speed, l/100 km:	
60 km/h	8.5
80 km/h	10.3
Maximum vehicle speed on a horizontal section of a flat highway, km/h	130
Overhang angles (with load), degrees:	
front	22
rear	14
Maximum uphill angle at a full load, %	26
Loading height, mm	730

## Technical characteristics

### ENGINE

Model	F2.8
Environmental class	6
Type	Diesel, turbocharged and boost air cooler
Number of cylinder and their location	4, inline
Cylinder diameter and piston stroke, mm	94x100
Displacement, L	2.776
Compression ratio	17.2
Maximum power, kW (hp) at crankshaft speed, rpm	126 (171.4) 3500
Maximum torque, net, N·m (kgf·m) at crankshaft speed, rpm	360 (36.7) 1400
Firing order	1-3-4-2
Crankshaft rotation frequency in idle mode, rpm:	
minimum ( $n_{\text{min. xx}}$ )	750-1200
increased ( $n_{\text{in. xx}}$ )	3800
Direction of crankshaft rotation (viewed from the fan side)	Right-hand

**TRANSMISSION**

Clutch	Single disc, dry, hydraulically driven
Gearbox	Mechanical, 6-speed Gear ratios: 1 gear – 5.065 2 gear – 2.780 3 gear – 1.591 4 gear – 1.0 5 gear – 0.807 6 gear – 0.643 Reverse – 4.383
Cardan drive	Two shafts with three cardan joints and an intermediate support
Rear axle:	
Main gear differential	Hypoid, gear ratio - 4.3 or 4.556 Conical, gear

## Technical characteristics

### CHASSIS

Wheels

Disc, fixed rim 5½ Jx16H2

Tires

Pneumatic, radial, tubeless, size 185/75R16C

Suspension

Front

Independent, wishbone with coil springs, with anti-roll bar

rear

Two longitudinal, semi-elliptic springs with additional springs, with anti-roll bar

Shock absorbers

Four gas-filled, telescopic, double-acting shock absorbers

**STEERING**

Steering gear	Integral (with power steering), rack type
Steering booster pump	Plate, double action
Steering column	Angle adjustable

**BRAKING CONTROL**

Working brake system

Double-circuit with hydraulic drive, vacuum booster and ABS

Braking mechanisms:

front wheels

Disk type

rear wheels

Drum or disc type

Spare brake system

Each circuit of the main brake system

Parking brake system

With mechanical cable drive to the rear wheel brakes



**ELECTRICAL EQUIPMENT**

Type of electrical equipment	DC, single wire. Negative terminals of power supplies and consumers are connected to the case
Rated voltage, V	12
Generator	5318121
Starter	5473872
Battery	6ST-75VL or 6ST-85VL

## Technical characteristics

### CABIN AND PLATFORM

Cabin	Metal, two-door, three seats (for Ct35S3/Ch35S3)
	Metal, three-door, seven seats (for Ct35D3/Ch35D3)
Platform	Metal, with folding back and side boards
Platform overall dimensions (internal), mm:	
with steel platform:	
length	4168 (for Ct35S3) 3090 (for Ct35D3)
width	1978/2078*
height	400
with aluminum platform:	
length	4170 (for Ct35S3) 3113 (for Ct35D3)
width	1999 (for Ct35S3)
height	2105 (for Ct35D3) 388

\* For vehicles with extra-size platform.

**BODY**

Body	All-metal, half-bonnet, has five doors, two hinged cabin doors, a side sliding and two hinged rear cabin doors		
Cabin	Triple or seven-seater		
Overall dimensions (internal) of the cargo compartment of the van, mm:	V35S2	V35S3	V35C3
length	3031	3631	3000
width	1860	1860	1860
height	1927	1927	1927
Volume of the cargo compartment, m <sup>3</sup>	11.5	13.5	9.5

## Technical characteristics

### MAIN CONTROL PARAMETERS

Tire pressure, kPa (kgf/cm<sup>2</sup>):

Ct35S3

front wheels

(370+10...3.8+0.1)

rear wheels

(290+10...3.0+0.1)

spare wheel

(370+10...3.8+0.1)

Ct35D3, V35C3

front wheels

(420+10...4.3+0.1)

rear wheels

(270+10...2.8+0.1)

spare wheel

(420+10...4.3+0.1)

V35S2

front wheels

(350+10...3.6+0.1)

rear wheels

(290+10...3.0+0.1)

spare wheel

(350+10...3.6+0.1)

V35S3

front wheels

(390+10...4.0+0.1)

rear wheels

(290+10...3.0+0.1)

spare wheel

(390+10...4.0+0.1)

Minimum recommended operating coolant temperature, °C:

71

Maximum allowable coolant temperature, °C

110

Clutch pedal free travel, mm

6.0-8.5

Minimum allowable friction layer thickness, mm:

for front disc brake pads

2.0

for rear disc brake pads (for vehicles with disc brakes)

2.0

for rear drum brake pads (for vehicles with drum brakes)

1.0

Minimal slope on which the vehicle with a full load must be kept by the parking brake system, %

16

## Technical characteristics

Installing the front wheels (for an equipped vehicle):	
caster angle	$+3^{\circ} \pm 1^{\circ}$
angle difference between left and right wheels	max 30
camber angle of each wheel	$-0^{\circ}22' \dots +0^{\circ}3'$ $(-0^{\circ}12' \dots -0^{\circ}7')^*$
convergence of each wheel	$-0^{\circ}4' \dots +0^{\circ}1'$ $(-0^{\circ}4' \dots -0^{\circ}1')^*$
Max. total backlash in steering	$25^{\circ}$

\* Angle values to be set by the service plant operator.

# CONTENT

	Page		Page
Introduction	3		
<hr/>			
<b>Before operation</b>			
Keys	6	Paddle switches	47
Unlocking and locking locks module	7	Door light control	50
		Switches on the dashboard	53
Central door locking system	11	Emergency alarm switch	54
Seats	12	Power windows	55
Steering column	17	Cigarette lighter and ashtray	56
Passive safety system	18	Receptacle	57
Rear view mirrors	26	Storage boxes	58
Dashboard and controls	28	Heating, ventilation and air conditioning	61
Instrument cluster	30	Interior lighting	68
Instrument and starter switch	46	Audio equipment	71
<hr/>			
<b>Vehicle operation</b>			
Refueling	74	Gear shift	90
Running-in	76	Parking brake	91
Driving	77	Locking differential	92
Economical driving	80	Braking	94
Starting and stopping the engine	82	Wheels and tires	96
Particulate filter	87	Anti-skid chains	102
<hr/>			
<b>Maintenance</b>			
Scheduled maintenance	104	Power steering hydro system	121
Maintenance indicator	107	Diesel engine fuel filter	122
Required checks	110	Battery	123
Opening and closing the hood	112	Windshield washer	125
Engine	113	Wiper blades	127
Cooling system	115	Vehicle care	129
Exhaust gas cleaning system	116	Filling volumes, fuel, lubricants and	134
Gearbox	117		
Rear axle	118		

---

**Practical advice**


---

Tools and accessories	140	Fuses and relays	151
Spare wheel	141	Bulb replacement	157
Wheel replacement	143	Bulbs used in the	158
Vehicle towing	145	vehicle	
Carriage of cargo	147	Installing the canopy frame and canopy	159
Removing/installing the	148	on the platform	
battery		Identification numbers	164
Engine jump	149	Disposal	167
starting			

---

**Technical characteristics**


---

Basic dimensions	170	Brake control	184
General	175	Electric system equipment	185
Engine	180	Cabin and platform	186
Transmission	181	Body	187
Chassis	182	Basic control	188
Steering	183	parameters	