Thank you for deciding on Iveco and at the same time, we would like to congratulate you on your choice: with your truck you have a vehicle at your disposal which distinguishes itself as a result of its excellent performance, low consumption, high reliability and comfort.

We request that you read the operating and maintenance instructions regarding your new vehicle with great care.
If you follow these instructions, you can ensure that your vehicle will operate perfectly and have a long service life.

We wish you a long and trouble-free partnership with your vehicle and we would like to remind you that the Iveco Service Organization is always at your disposal wherever you may be, to provide you with a high degree of efficiency and professional advice.

An Iveco vehicle resembles its driver: it is a well thought-out system, planned like an organism and designed so that every one of its thousands of spare parts has been integrated into a **"logic of the whole"** with the other parts.

Iveco engineers have determined the technical specifications with the highest degree of accuracy, in order to guarantee maximum safety and reliability.

Every part in the system must function in the manner according to which it was designed, in order to that Iveco remains the Iveco which you chose.

The best way of ensuring good results **is to consult the Iveco Service Organization** whenever problems arise.
Known as **Iveco Service Logo**, Iveco has more than 3,500 service centres throughout the world, and as a result is always easily accessible, wherever you may be.
More than 30,000 technicians and mechanics are employed in these service centres, every one of whom receives professional training and regular refresh courses so that he can skilfully cope with the constant technological development of the vehicles. The training is, of course, **indispensable** in order **to ensure a precise diagnosis of the service assistance, rapid intervention and high service quality**.

The **Service** also assures that exclusively **Iveco ORIGINAL SPARE PARTS are used, these original spare parts guaranteeing that vehicle original integrity is maintained.**
These are in fact the ONLY parts which can be integrated exactly into the "logic of the whole" with which the vehicle was designed and built.

To ensure that your vehicle is always in perfect working order, we recommend the use of the **programmed maintenance plan** which provides the best guarantee for perfect operation and satisfactory operating costs owing to the fixed periods on which maintenance is due.

DAILY

Use and maintenance

While reading this Instruction Book, you will encounter the symbols shown below. These symbols, which prefix the text to which they relate, provide a warning or caution. The instruction following the symbol should be adhered to in order to prevent the possibility of personal injury, or damage to the vehicle occurring.

Danger for persons: a missing or incomplete observance of these provisions can cause a serious danger to persons' safety.

Danger of a serious damage to vehicle: a partial or complete non-observance of these provisions can cause a danger of serious damages to vehicle and, sometimes, also the loss of the guarantee.

General danger: accumulates the dangers of both above described signs.

Environment protection: indicates correct behaviours in order that vehicle use is as environment-friendly as possible.

Strictly comply with IVECO fitting directions (the **«Bodybuilders Instructions»** manual is available at Authorized Dealer) when assembling accessories, additional components or changing your vehicle's body structure.
Any exception to assembly directions should be authorized by IVECO.
Non-compliance with above directions will result in the loss of the warranty period.

Vehicle interior

The interior of your vehicle has been designed to meet the latest ergonomic requirements and to provide you with the maximum degree of comfort in a spacious, safe and pleasant environment.

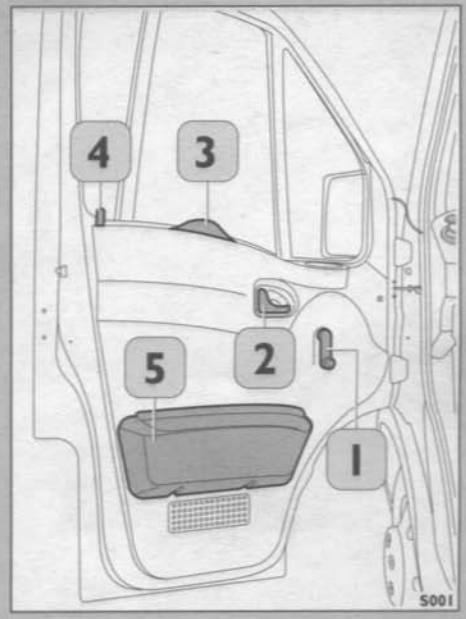
This chapter describes the following elements:

Warning!

Accident and personal damage risks: keep doors thoroughly closed while the vehicle is travelling.

Doors

1. Window regulator.
2. Door lever.
3. Door pull handle.
4. Safety latch button.
5. Glove box.



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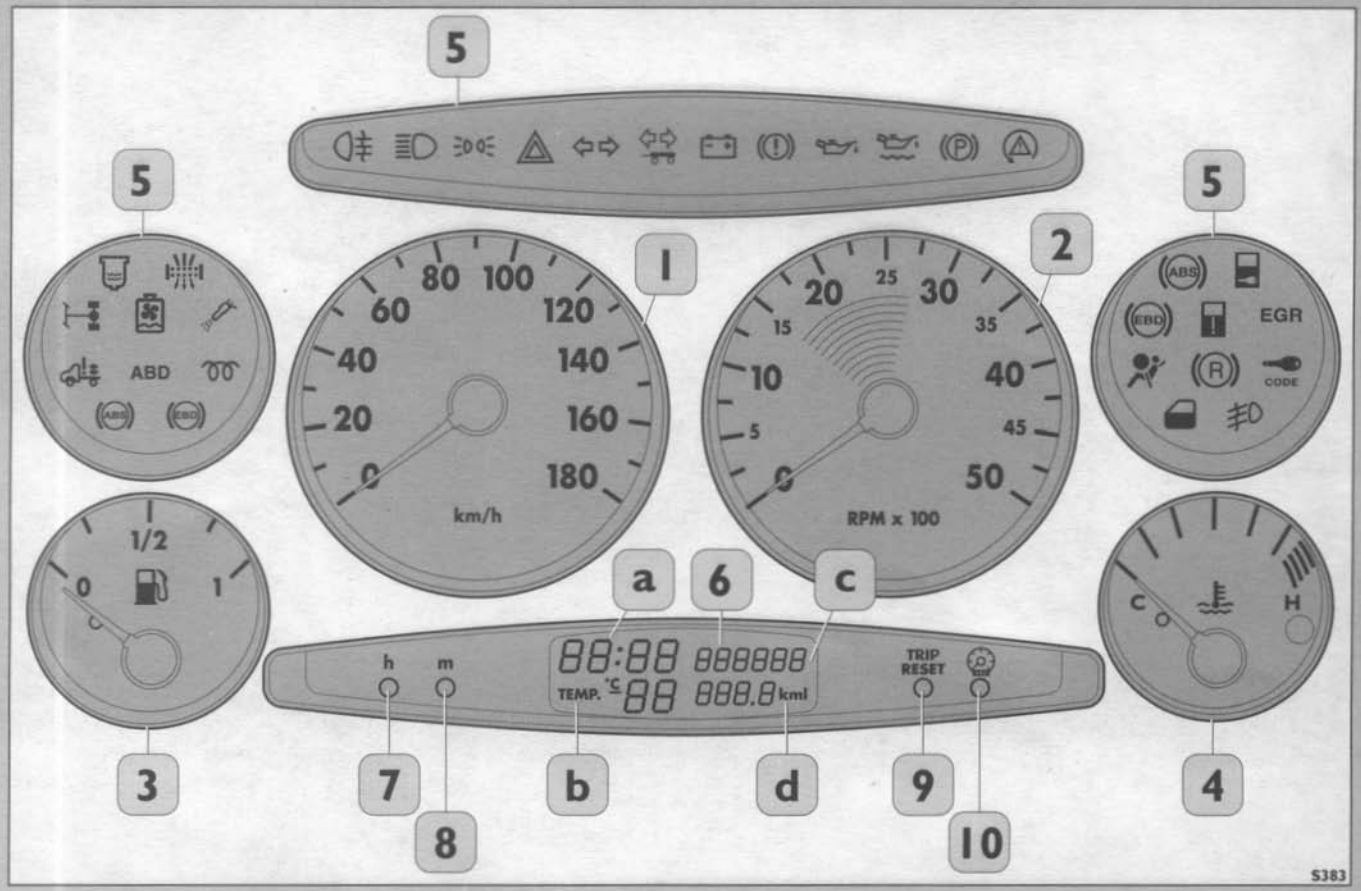
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ABD
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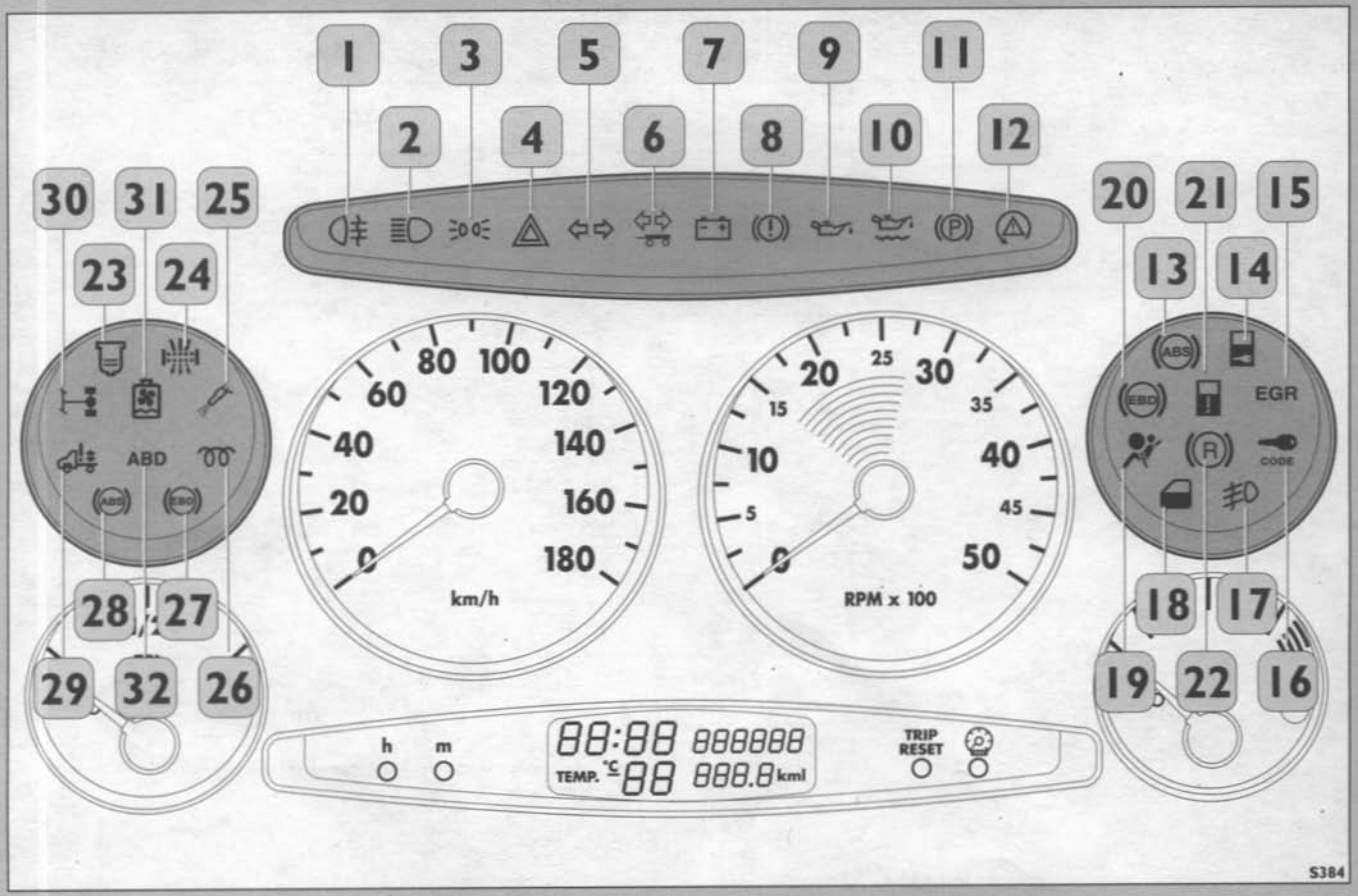
S383

* Correct functioning of the pilot warning lights indicated with an asterisk is automatically checked, and therefore lights up for a few seconds each time the engine is switched on.
There may also be some warning lights for devices that the vehicle does not possess, that correspond to specific models.

Reference	Meaning
1	Speedometer/Tachograph
2	Revolution indicator
3	*Fuel gauge with reserve warning lamp
4	*Water temperature gauge with high temperature warning lamp
5	Warning lamp cluster
6	Liquid-crystal digital display with the following elements: a. clock b. outside temperature (with air-conditioner only) c. total kilometers or miles odometer d. trip kilometers or miles odometer
7	Hours setting button (for vehicles without tachograph only)
8	Minutes setting button (for vehicles without tachograph only)
9	Trip kilometers or miles odometer reset button
10	Instrument light dimmer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ABD
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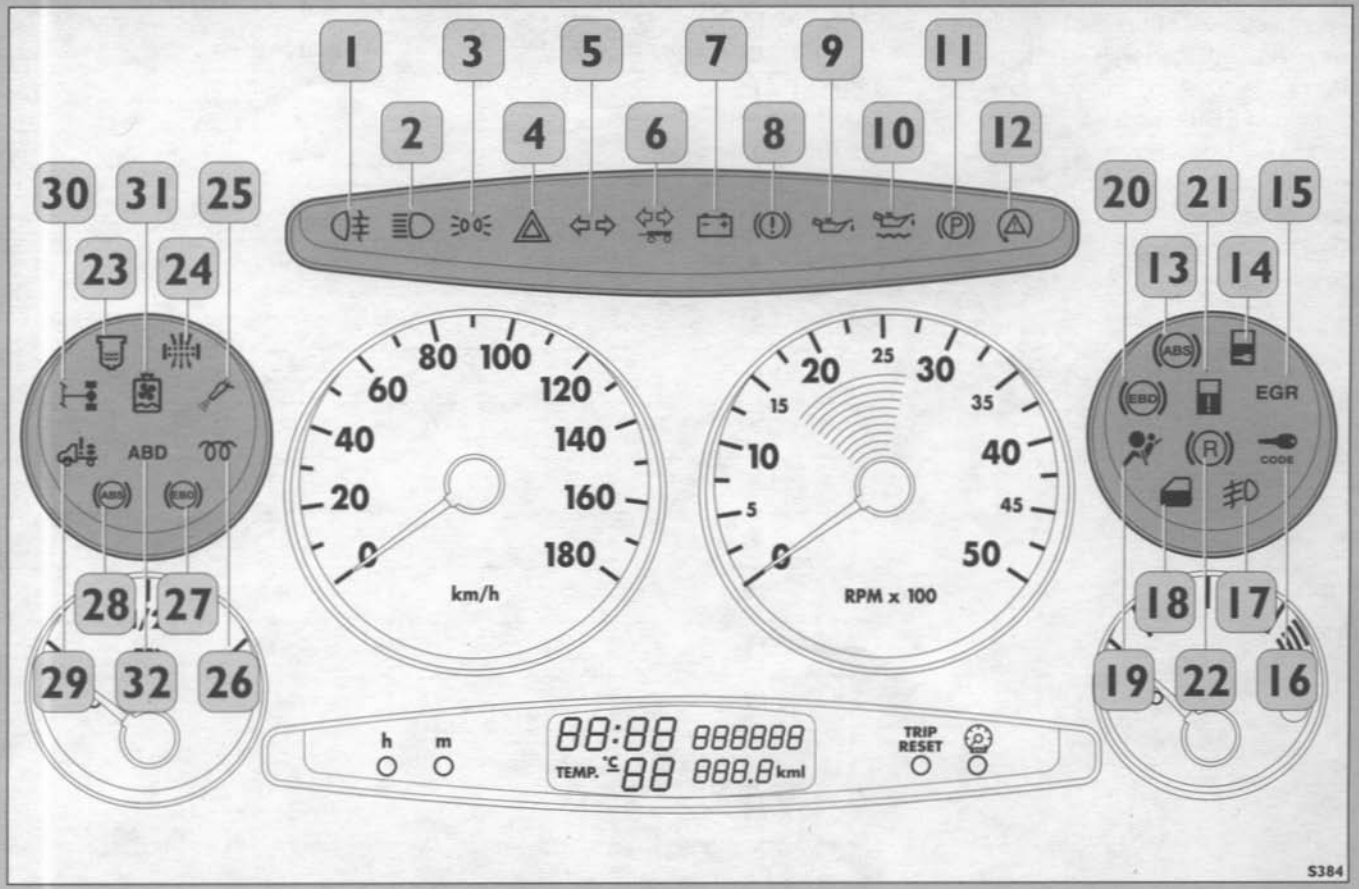
19
22
16
km/h
RPM x 100
h
m
TEMP.
TRIP
RESET
S384

* Correct functioning of the pilot warning lights indicated with an asterisk is automatically checked, and therefore lights up for a few seconds each time the engine is switched on.
There may also be some warning lights for devices that the vehicle does not possess, that correspond to specific models.

Reference	Meaning
1	Rear fog lights (yellow)
2	High beam lights (blue)
3	Parking lights (green)
4	Hazard lights (red)
5	Turn indicator lights (green)
6	Turn indicator lights of a trailer, if any (green)
7	Low battery charge (red)
8	*Brake system malfunction (red)
9	Low engine oil pressure (red)
10	*Low engine oil level (red)
11	*Parking brake ON (red)
12	*ESP (yellow)
13	*ABS8 malfunction (yellow)
14	*Emergency handle lock (yellow)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ABD
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TRIP
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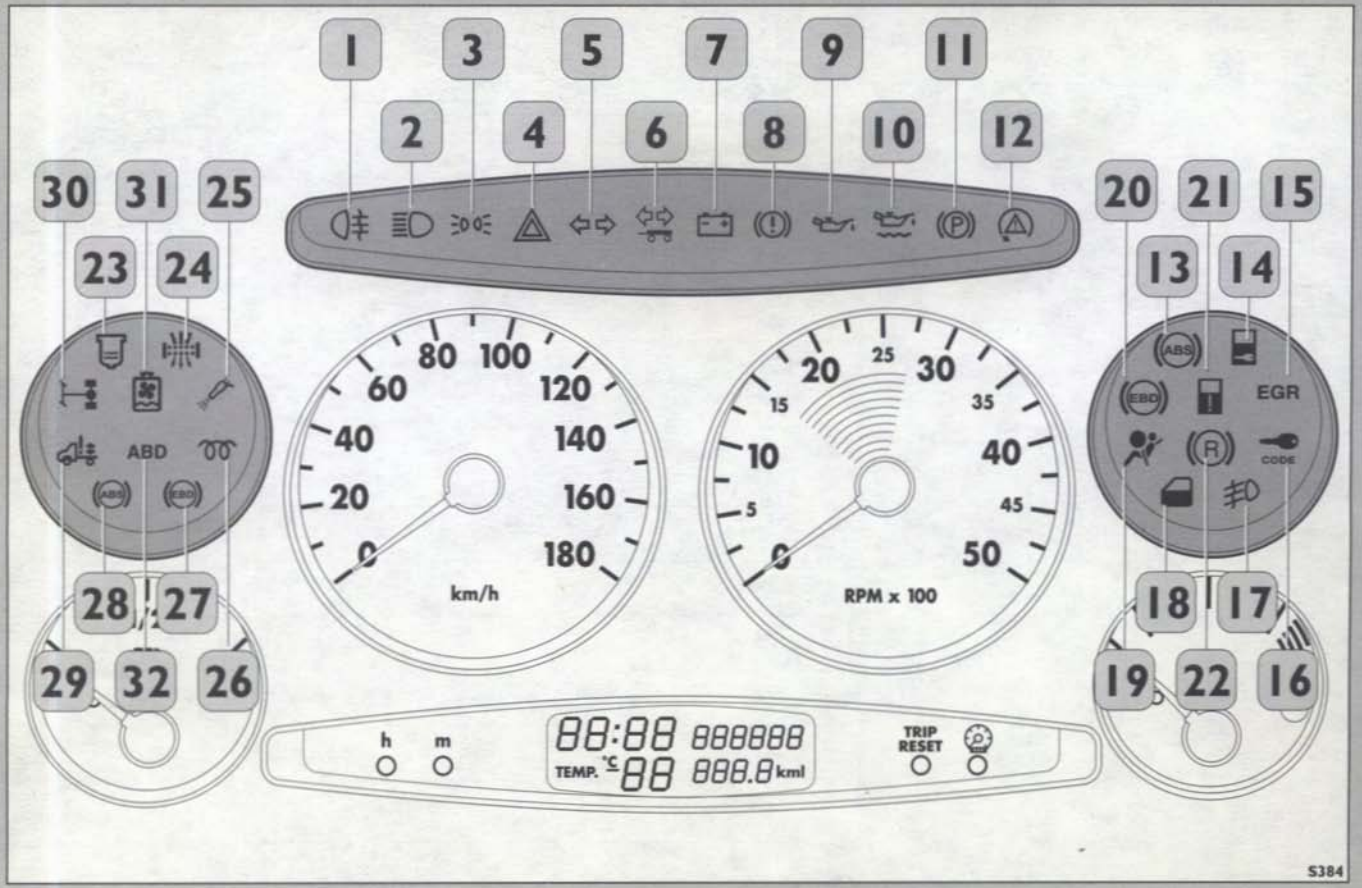
S384

* Correct functioning of the pilot warning lights indicated with an asterisk is automatically checked, and therefore lights up for a few seconds each time the engine is switched on.
There may also be some warning lights for devices that the vehicle does not possess, that correspond to specific models.

! Only Combi versions with engine.12 F1A and versions with engine F1C Euro.

Reference	Meaning
15	!EGR gas recirculation system failure (red)
16	Immobilizer (yellow)
17	Fog lights (green)
18	«Door open» warning light (red)
19	Air bag failure (red)
20	EBD 8 braking system failure (red)
21	*Side sliding door system failure (red)
22	Retarder ON (yellow)
23	*Water in fuel filter or filter clogged (yellow)
24	*Air filter clogged (yellow)
25	EDC injection system failure (red)
26	Engine preheating (yellow)
27	*EBD 5.3 braking system failure (red)
28	*ABS 5.3 braking system failure (yellow)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100
60
120
40
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TRIP
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S384

* Correct functioning of the pilot warning lights indicated with an asterisk is automatically checked, and therefore lights up for a few seconds each time the engine is switched on.
There may also be some warning lights for devices that the vehicle does not possess, that correspond to specific models.

Reference	Meaning
29	ECAS air suspension failure (yellow)
30	Rear differential lock (red)
31	*Low engine coolant fluid level (red)
32	*ABD traction control (yellow)

Meaning	Symbol
Hazard lights	
Fog lights	
Heated mirrors	
Heated rear window	
Rear differential locking	
Air suspensions (levelling)	
Air suspensions (lowering)	
Air suspensions (lifting)	

Control push-button panel

Meaning	Symbol
Electric trapdoor (opening)	
Electric trapdoor (closing)	
Additional heater	
Swing-sliding door	
Handle lock rear door	
Vehicle's speed limiter	
Battery disconnecting switch reset	
ASR disabling switch	
EOBD	

Use of controls

This chapter provides instructions on the use of:

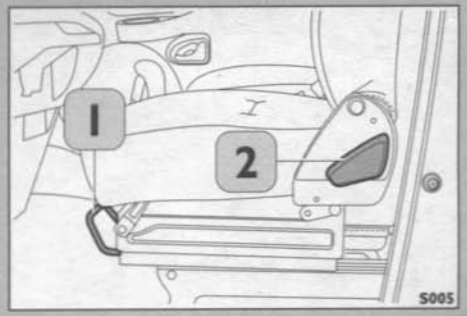
Driver's seat with two levels of adjustment

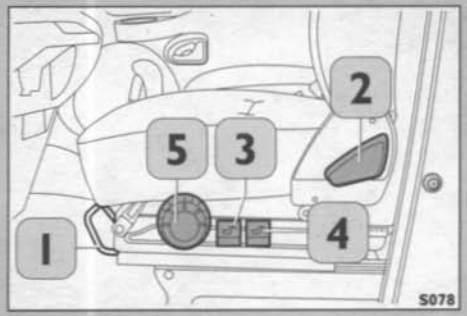
Adjustment for reach

Raise lever 1: the seat is free to slide forward or backward; release the handle to lock the seat in the desired position.

Adjustment for back rake

Rotate handle 2 forward to reduce the back rake.





Warning!

Personal damage risk: adjust your seat while the vehicle is stationary and ensure the seat has clicked into the correct position.

Driver's seat with three levels of adjustment

Adjustment for reach
Raise lever 1: the seat is free to slide forward or backward; release the handle to lock the seat in the desired position.

Adjustment for back rake
Rotate handle 2 forward to reduce the back rake.

Vertical adjustment and cushion trim
Raise handles 3 and 4: the seat is then free to move upwards (driver off the seat) or downwards (driver partially or totally on the seat). Release handles to lock the seat in the desired vertical position. Use either handle to adjust cushion rake.

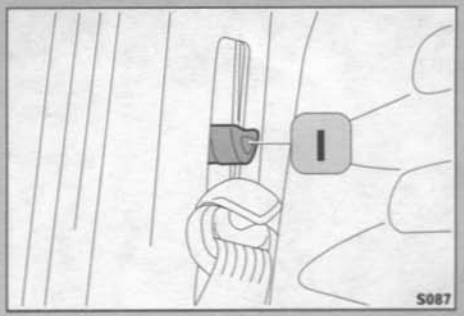
Seat suspension (where fitted).
Before entering the vehicle, the driver should preset the seat suspension, by turning handwheel 5 clockwise or anticlockwise until the indicator aligns with the driver's weight.
The optimum setting of the suspension should be carried out at the driver's discretion later on during operation. This is accomplished by precise adjustements using the handwheel.

Seat belts

To fasten the belt, insert the coupling tang in the buckle until it clicks. To unfasten the belt, press the appropriate button located on the top side of the buckle. The belt does not need to be adjusted by hand as it adjusts itself automatically to the optimum length for the driver allowing him freedom of movement provided his movements are not abrupt. The belt mechanism is affected by the vehicle's changes of attitude and it may lock in the following cases:
sudden braking or acceleration, vehicle driving on a slope, when cornering.

Warnings:

- Place the seat back in an almost upright position: avoid seat positions that prevent correct self-adjustment of the seat belt. People below 1,50m in height should install additional body retaining systems as in their case standard seat belts are not sufficient to meet the safety requirements.
- Use the cursor 1 to adjust height as required while the vehicle is stationary. The seat belt should rest between neck and shoulder.
  NOTE: the seats of your vehicle are not suited for carrying children: the belt has been designed to be used by occupants with the stature of an adult.
- The belt should not be twisted and should correctly adhere to the driver's hips but not to his abdomen to prevent him from slipping forward.
- Regularly ensure that bolts securing the anchorage points are fully tightened and that the belt is not cut or frayed.
- In the event of a serious accident, renew the seat belt even if it does not appear to be damaged.



Always fasten the seat belts. Travelling with unfastened seat belts increases the risk of injuries in case of collision.

- Do not make alterations to the belt as this could result in mechanism malfunction.
- To clean the belts, wash them by hand with water and mild soap, rinse them and let them dry in the shade. Do not use any strong detergents, bleach liquors, dyes or any other chemical substance that may weaken their fibres.
  Prevent the rolling devices from getting wet: their operation is ensured only if there are no water infiltrations.

Pretensioner devices

To guarantee air bag efficiency, the vehicle is fitted with seat belts with pyrotechnic-charge pretensioners. These devices are controlled by the air bag control unit. When the air bag control unit detects a preset vehicle deceleration it sends a signal that activates the pyrotechnic charge and makes the safety belt retract by few centimetres. In this way they ensure that the belts perfectly adhere to the occupants' bodies before the holding action is started.

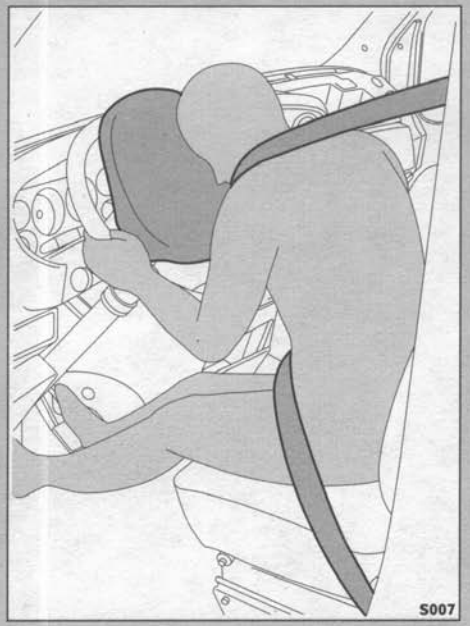
The belt lock indicates that the device has operated; there may be a light smoke emission. This smoke is not harmful and does not indicate a source of fire.

If, due to natural exceptional events (such as floods), the device has come into contact with water and slurry, it is absolutely necessary to replace it.

Pretensioners operation can be checked through the air bag warning light. Should the air bag warning light switch on, contact the Service Network immediately.

Warning:

- pretensioners can be used just once, and they are all operating although seat belts are unfastened.
  Contact therefore the Service Network to have pretensioners replaced after activation.
- Operations involving shocks, vibrations or heating localised in pretensioner area can provoke their damaging.
- The pretensioner devices require neither internal greasing nor maintenance.
  Do not alterate the pretensioner devices.
  These alterations may affect their operation.
  If required, contact the Service Network.



Air bag + seat belts (where fitted)

The vehicle can be equipped with air bag for both the driver and the passenger. The main purpose of the air bag consists of increasing considerably the effectiveness of the seat belts: it does not operate in the event of low-speed front crashes, side crashes, collisions or overturning.

Description and operation

The air bag is a safety device that inflates instantaneously in case of a front crash. It consists of an instantaneously-inflatable cushion that is located in a special compartment, in the middle of the steering wheel on the driver side and in the dashboard on the passenger side.

In the event of a violent crash, the deceleration sensor activates the instantaneous inflating device of the cushion(s) which act as a protection barrier between the occupants and the car structures that may cause injuries.

When the air bag operates, it produces heat and generates a small quantity of dust. This dust is not harmful and does not indicate any source of fire; furthermore the surface of the inflated cushion and the vehicle interior may be covered by a dusty product: this dust may irritate skin and eyes. In case of exposure, wash yourself with mild soap and water. Remember that, when the engine is operating, the air bag can inflate even in a vehicle that is not moving if another vehicle which is running quite fast crashes into it head-on.

Important!

The air bag cannot be used instead of the seat belts but is complementary to them. Inflating of the air bag without the holding action carried out by the seat belts may result in serious injuries.

In case of crashing into very deformable or mobile objects (e.g. signage posts, gravel or snow heaps, parked vehicles, etc.), rear collisions (telescoping by another vehicle), or when impacting under other vehicles or protection barriers and guard-rails, the air bags are not activated since they do not offer additional protection with respect to seat belts and therefore their activation is unnecessary. Missing activation in these cases is not to be considered as a system malfunctioning. Front air bags can be activated when the vehicle is submitted to violent crashes or accidents involving the underbody area, e.g.: violent impacts against steps, sidewalks or fixed ground projecting parts or when the vehicle falls into big road potholes or depressions.
When turning the ignition key to MAR, warning light 19 on page 14, comes on but it shall go off after approx. four seconds. Should it not light up or stay on during driving, contact the Service Network immediately.

- Do not travel with objects on your lap, in front of your chest or keeping pipes, pencils, etc. between your lips since in the event of a crash they may cause injuries.
- The air bag system does not require any maintenance. However, the operation of the device must be periodically checked, according to the provisions of the current standard. Call the Service Network for these checks. Any operations concerned with air bag check, repair and replacement must exclusively be carried out by the Service Network.
- Should the warning light come on when driving (indication of a failure) contact immediately and exclusively the Service Network to have the failure repaired.
- It should be noticed that with ignition key on and turned to MAR, although with engine off and steady vehicle, air bags can be activated in case of impact with another running vehicle. Never place children on the front seat although the vehicle is stopped. With vehicle stopped and ignition key off, the air bags cannot be activated; missing activation in this case shall not be considered as a system malfunction.

- Do not apply any adhesives or other objects on the steering wheel or the air bag compartment on the passenger side.
- While driving, always keep your hands on the steering wheel so that, if needed, the air bag can inflate without any obstacles that may cause serious injuries. Do not bend your body forward while driving, keep the seat back in the upright position, leaning your shoulders against it.
- Air bag and pretensioners are activated at the same time.
- If the vehicle was subject to thefts, theft attempts, vandalic acts or floods, have the system operation checked by the Service Network.
- In the event of an accident that caused the air bag to be activated, call the Iveco Service Network to replace, in addition to the air bag, also the seat belts and their related pretensioner system.
- If the vehicle is to be wrecked, contact the Service Network to disable the system.
- If the property of the vehicle is to be transferred to another person, the new owner must be informed of the operating modes and instructions stated above and must have this booklet.

Passenger-side air bag: is not possible to transport newborn babies or children on this seat, if they are secured using the ECC standard restraint devices (rear child's seats or cradles); because when inflating, it may cause even fatal injuries, independently of the accident that caused it to activate.
Airbag life is normally limited to 10 years approximately. For safety's sake have the airbag replaced at an Authorized Workshop every 10 years max.

Rearview mirrors

Position rearview mirrors manually by forcing on the sides of reflecting surfaces: they can also be manually bent.

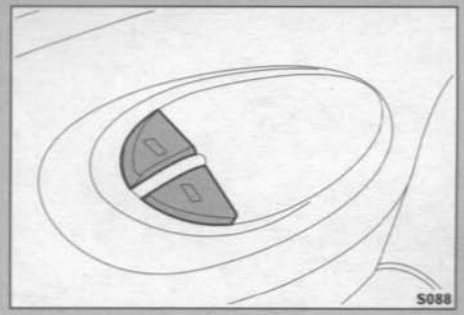
Warning!

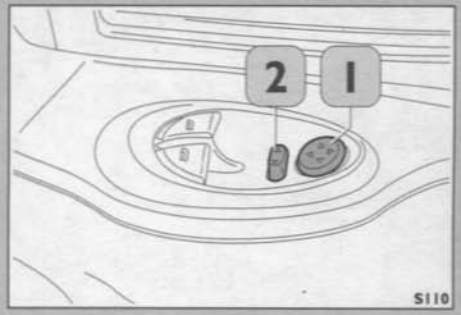
Danger of injuries: an improper use of electric window regulators can be dangerous. Before and during their operation, always make sure that persons, animals or objects are not exposed to a risk of injuries or damages caused either directly by moving windows or by personal objects being dragged or hit by the windows. On going out of the vehicle, always take the start up key off to prevent accidentally operated electric window regulators from causing a danger to the persons in the vehicle.

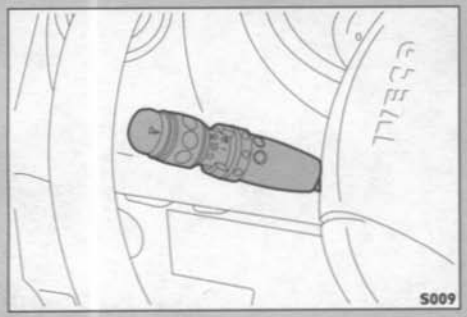
Power windows (where fitted)
Located on driver's sides (two) and on door on passenger's side (one).

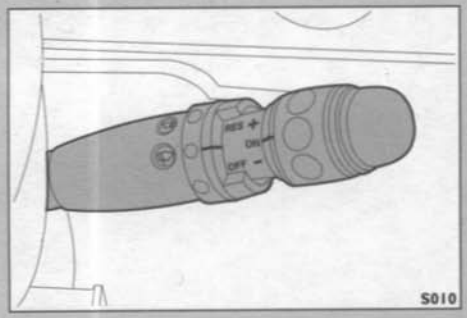
Electrical rearview mirror control (where fitted)
It is located on the driver's side.

1. Control knob to adjust the mirror horizontally or vertically in the arrow directions.
2. Switch for selecting adjustment of either right or left mirror.









Steering wheel multifunction levers

Left lever

It includes the following control switches: exterior lights, turn indicator lights, rear fog lights and horn:

Turn indicator lights

(lever up = right turn, lever down = left turn)

Parking lights and low beams

(two-position rotary switch)

High beams

(the lever is moved from the low beam position only -stable position)

Headlight flashing

(the lever is moved from the low beam position only -unstable position)

Horn

(button located at the end of the lever).

Rear fog lights

(rotary switch).

Right lever

It includes the following control switches: windscreen washer/wiper and, if any, the Cruise Control and headlight washer controls:

Windscreen wiper

three speeds, including intermittent operation (low lever): moving the lever up (unstable position) operates the windscreen wiper brushes once

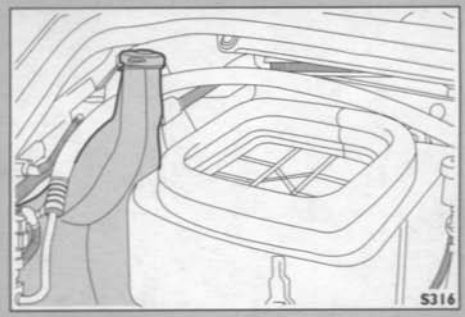
Windscreen washer

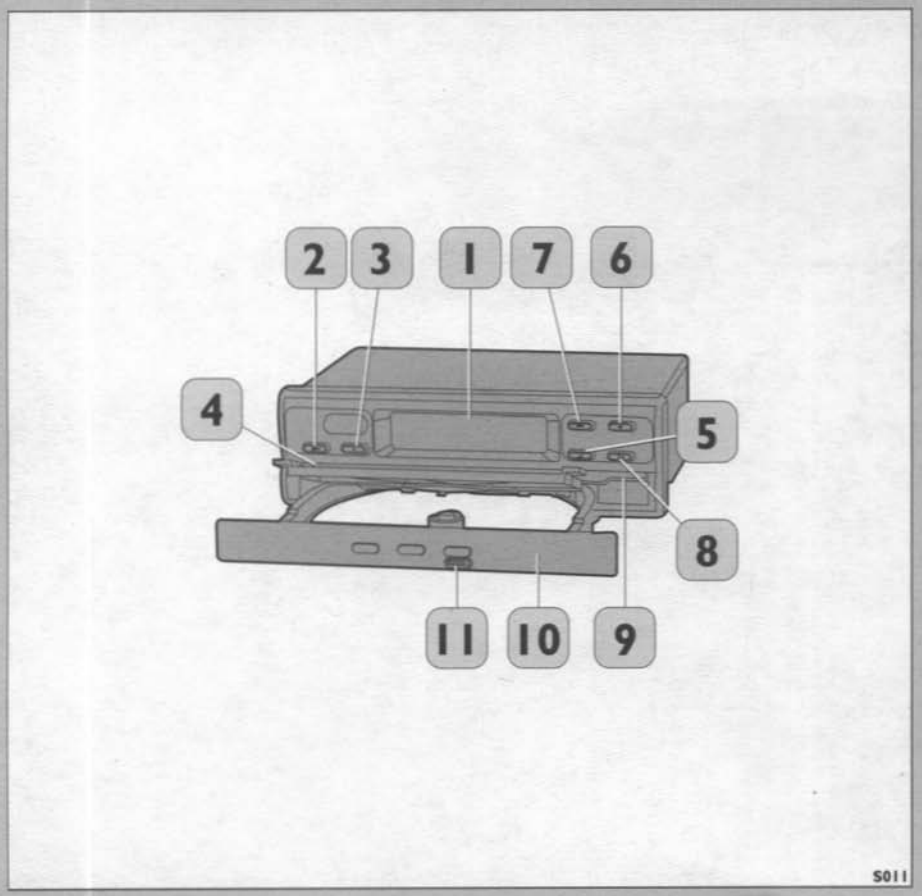
(lever towards the inside; if installed, the headlight washer is activated at the same time only if the exterior lights are ON).

Windscreen/headlight washer unit reservoir

This reservoir is located in the engine compartment. A mixture of water and detergent antifreeze product such as **Tutela Professional SC 35** should be used as follows:

Outdoor temperature	-35°C	-20°C	-10°C	0°C	summer
Tutela Professional SC 35 (parts)	1	1	1	1	1
Water (parts)	-	1	2	6	10





Tachograph (vehicles with G.V.W. over 3.5 t only - refer to the specific publication)

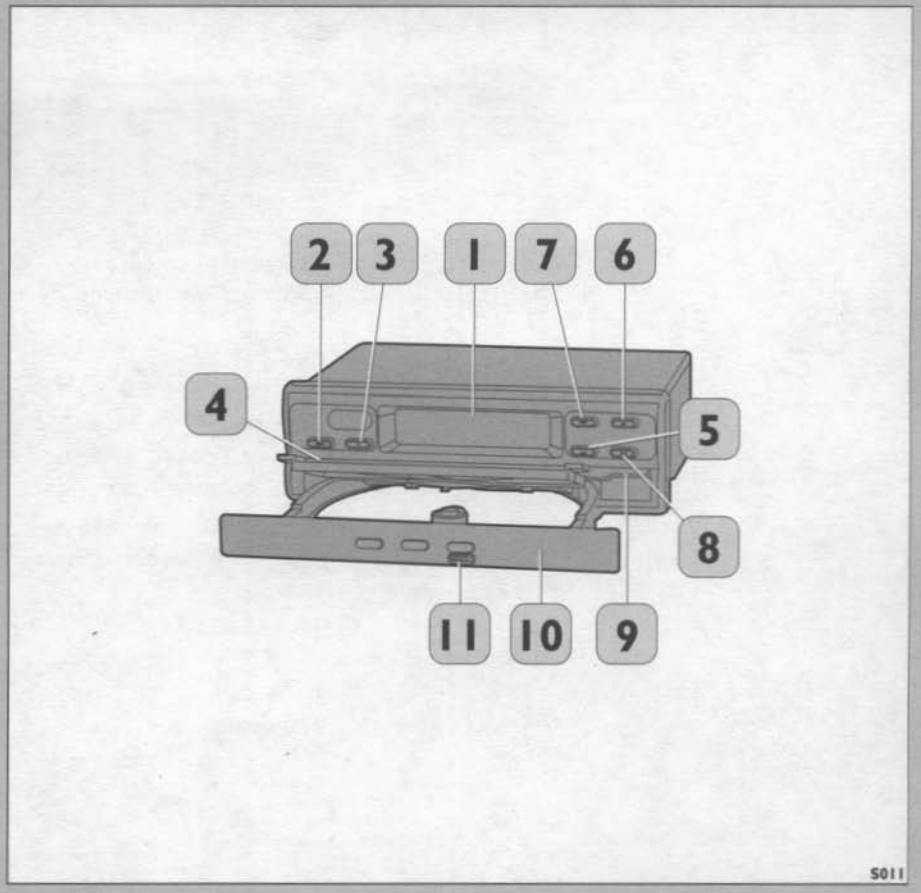
1. Display.

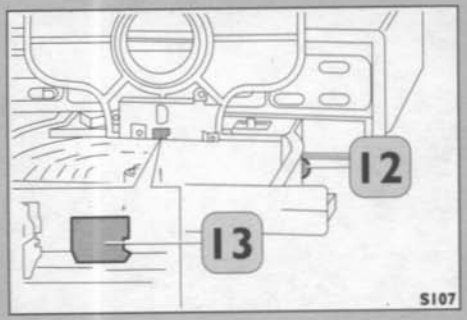
- The following data is always displayed:
  date, time, total number of kilometers and all the standard settings.
- The stored data can be displayed.
- Any signals indicating an alarm or a malfunction are automatically displayed.

2. Lock with key.
3. First driver's operating time setting key.

4. First driver's disk compartment.
5. Second driver's operating time setting key.
6. Data display forward movement.
7. Data display backward movement.
8. Menu parameter selection.
9. Second driver's disk compartment.
10. Box: can be opened only when the vehicle is not moving and the display indicates either the standard menu or data.
11. Time control. It indicates when the clock is operating.

Note for use with a single driver
For use with a single driver, put just the tachograph disc for the first driver on the separating plate.





If your vehicle is new or the batteries have been removed:

■ Turn the ignition key to position MAR. Lift up the disc dividing plate to open the drawer and the 2nd driver's disc section. Insert the disc. Press and turn adjusting wheel 12. Adjust the tachograph disc time scale so that the time figure shown by mark 13 matches that shown on display 1. When the operation is over insert discs in relevant sections, as required.
Close the drawer.

Calculated distances

An up or down movement corresponds to 5 km.

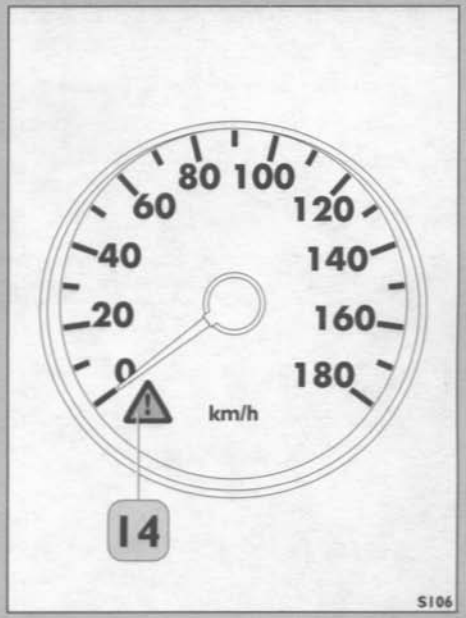
Note

The distance recording will be interrupted if:

- The switches of the units are in rest position "⊢¬" for both drivers.
- The dashboard has been switched off.
- The additional recording option is not on.

After switching the dashboard back on, the distances travelled will automatically start getting recorded correctly again in terms of time and position.

14. Tachograph failure warning lamp. If the lamp lights up refer to directions specified on relevant instruction booklet.



- Some error messages could appear on tachograph display 1; before calling the Assistance Network, (only for what concerns the error messages listed below), user can perform some simple operations to directly put things right.
- Do not perform any operations except those described.
- For what concerns any codes that are not mentioned in the following list, or if the anyhow the anomaly cannot be put right, apply to the Assistance Network.

Error code	Meaning	Action advised
900F	Error of a push button depressed for too long or push button(s) blocked.	Do not depress push button for too long / detect block push button and carefully try to unlock it. If unsuccessful, do not insist and go to the Assistance Network.
9051/2	Driver 1/2 tachograph disc missing: Due to the lack of disc (driver 1/2) the time work table unit was changed into another unit.	Enter the corresponding tachograph disc and set-up the corresponding work time table unit.
A050	Running without tachograph disc.	Check whether tachograph disc is entered, whether drawer is closed, and whether in case of vehicle halt, the work unit symbol is correctly changed over.

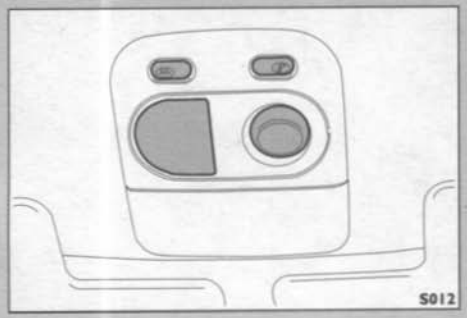
To minimise tachograph **stand-by current absorption** (ignition key OFF), set it as follows:

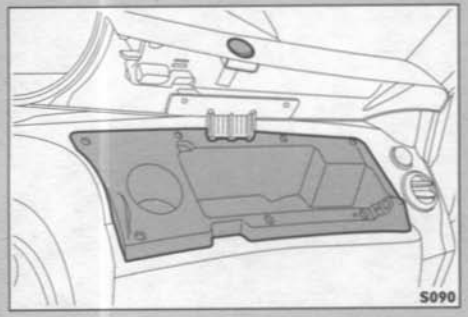
- Ignition key OFF.
- Remove the discs from the holder.
- Holder closed.
- Set both drivers' working times to «REST» (bed).
- No error shown on the LCD display.

After 27 hours with the above conditions selected, the tachograph will set in low absorption condition.

If, as well as the tachograph, the vehicle is also fitted with the SLIDING DOOR system and remains inactive for extended periods of time, take the following action to avoid running down the battery:

- temporarily remove tachograph power supply fuse
- temporarily remove the sliding door power supply.
- On vehicles fitted with this system, each time the battery is disconnected and reconnected, a complete door open/close cycle must be carried out.





Internal equipment

The dashboard on the passenger side contains a box where you can put papers, documents etc. (except for the vehicles with passenger-side air bag).

An object/bottle pocket is found in the doors; on the roof panel there is an assist strap for the central passenger.

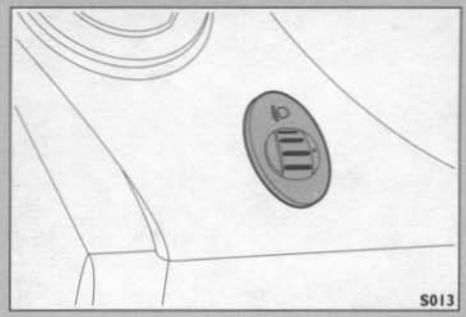
The sun visors are folding and swinging, complete with pockets and vanity mirror on the passenger side.

In the rear part of the driver's compartment there are two coat hooks and, only in cabs, a glove pocket.

A lamp for cab interior lighting and a tilting spotlight are located on the central front part of the roof panel.

Headlight aiming

A correct headlight aiming is fundamental not only for the driver's safety but to protect all the occupants; furthermore it is dealt with in a specific rule of the Highway Code. To ensure the best visibility conditions with the headlights on, to yourself and to the other people travelling on the road, the vehicle must have a correct headlight aiming. When the vehicle is loaded, it leans backward and the light beam is raised: in this case you must correctly aim it by operating the rotary handle shown in the figure, keeping into account that 0 corresponds to the unladen vehicle. The lighter the vehicle the higher the value shown on the handle. Check for the correct aiming of the light beam each time the weight of the transported load varies.
For headlight check and possible manual adjustment call the Service Network.



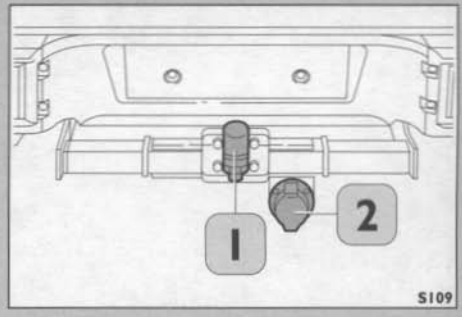
Trailer hook (where fitted)

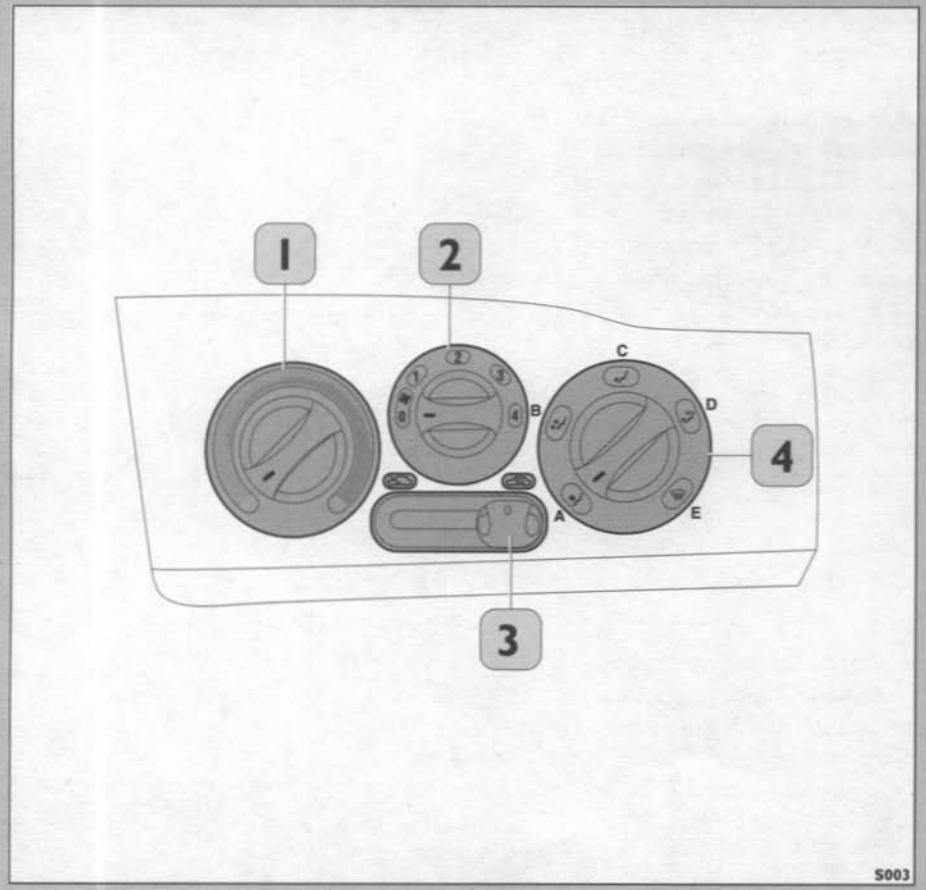
For trailers having inertial braking.

1. Spheric trailer hook.
2. 13-pin (12V) for lighting system.

When application is to performed outside the hitch, in addition to observe proper installation of structure and hitch (both of approved type), IVECO specifications concerning the electrical system (paragraph 2.14.7 Bodybuilders Instructions) shall be strictly complied with to prevent current overloads on the steering column stalk.

Observe any hook manufacturer's additional instructions.





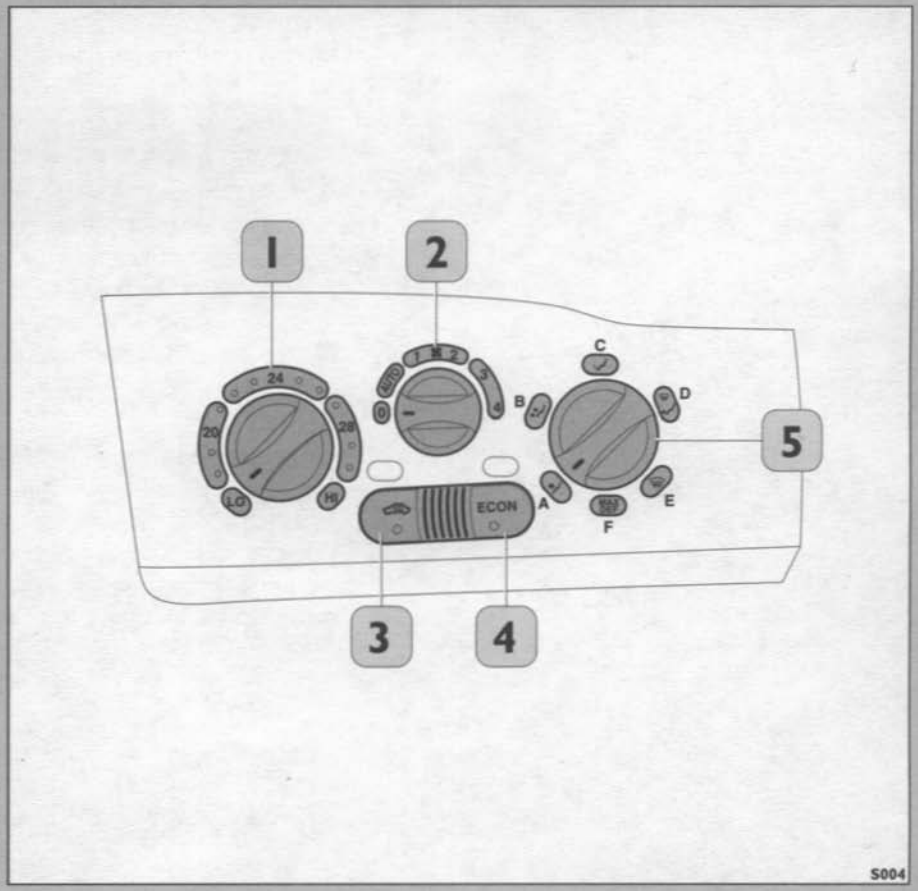
Heating and ventilation

Standard system

1. Air temperature regulation knob (warm/cold air mixing).
2. Electric fan knob with related operating speeds.
3. Slider to activate the recirculation function: it prevents the outside air from entering the cab
4. Air distribution knob which operates as follows:
   - A. Face area.
   - B. Face area and feet area.
   - C. Feet area.
   - D. Feet area and windscreen area.
   - E. Windscreen area.

Automatic air conditioning (where fitted)

1. Air temperature regulation knob with extreme positions to enable the HI and LO (max and min air temperature) functions.
2. Electric fan knob with related operating speeds and manual/automatic operation selection/OFF.
3. Air recirculation switch: prevents the outside air from entering the cab.
4. Air-conditioning disabling switch. The system is provided with a pollen filter to purify the incoming air: replace it after 20.000 kilometers or one year.
5. Air distribution knob:
   - A. face area.
   - B. face area and feet area.
   - C. feet area.
   - D. feet area and windscreen area
   - E. windscreen area
   - F. MAX/DEF position: the system is set for the defrosting/defogging operation.

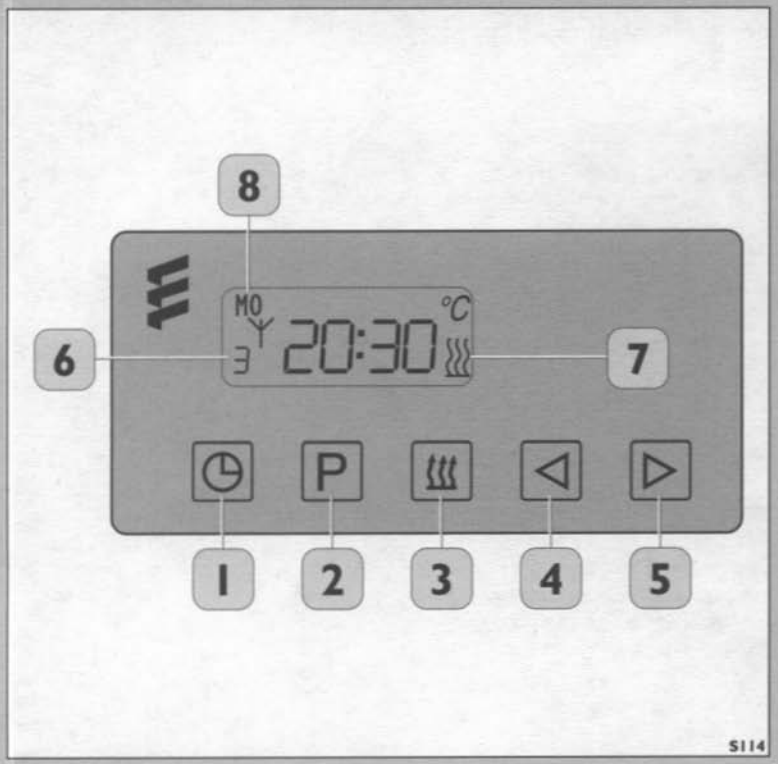


Should the version be fitted with unstable recirculation button (flashing led), the operating logics of the automatic recirculation is the following:

External temperature below 24°C
Recirculation button with LED off for external air intake.
If the button is pressed for less than two seconds, the LED flashes and manual recirculation is obtained (which can be disengaged by the user in a maximum time of 30 minutes; after this time the air recirculation will be disabled automatically). If the button is pressed for more than two seconds, the system is not affected. If the same button is pressed for less than two seconds, the external air intake is enabled again, otherwise, if the button is not pressed for a maximum time of 30 minutes, the manual recirculation will be disabled automatically and it will go back to the external air intake mode.

External temperature above 28°C
Starting from a maximum time of two minutes since reaching the above mentioned temperature, the recirculation button will be set with the LED on to show that the automatic recirculation is working (every 7 minutes of recirculation, 20-second cycle of external air intake).
If the button is pressed for less than two seconds, the LED flashes and manual recirculation is obtained. If the same button is pressed again it goes back to the automatic recirculation, otherwise, not pressing it after a maximum time of 30 minutes, the manual recirculation will be automatically disengaged and it will go back to the automatic mode.
If the button is pressed for more than two seconds, the LED will go off and the recirculation will be cut off and the system set in the external air intake mode.
Now two options are possible:

1. Press again the button for less than two seconds to obtain manual recirculation (if the button is pressed for more than two seconds, the system is not affected)
2. Do not press the button and after 60 minutes the system will go back to the automatic recirculation mode; a similar effect can be obtained by turning the ignition key to OFF and then back to ON.



Legend

1 = Clock.
2 = Pre-selection.
3 = Immediate heating.
4 = Backward key.
5 = Forward key.
6 = 1st/2nd/3rd pre-selected time call.
7 = Dial indicator.
8 = Week-day.

Auxiliary water heater (where fitted)
Directions for use

The function of this device is to warm both the passenger compartment and the engine, so that the driver and the passengers may be accommodated in a comfortable travelling environment even when the outer temperature is very low. As soon as the heater unit is connected to the vehicle's wiring system (new vehicle, battery replacement etc.) all displayed data start blinking. This means that the timer still needs to be programmed and that in this condition the heater cannot be started.

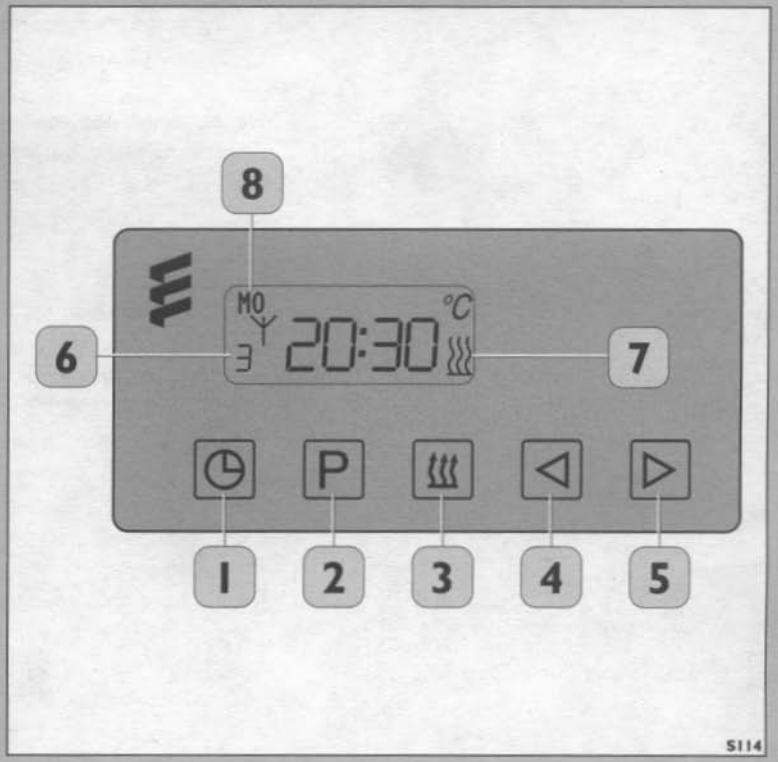
Time setting

If the displayed time is not correct, or the digits blink, operate key 1 and either key 4 (backward) or key 5 (forward) simultaneously, as required.

Day setting
Operate key 1 and key 2 simultaneously (several times, if necessary). With engine off, the light dial goes out after 10 seconds.

Day/time reading
Press key 1.

Heater operation with engine off and without pre-selection
On pressing key 3 dial indicator 7 is switched on. The manufacturer has set the duration of the heating period to 2 hours.
This datum can be changed either once or in a permanent way.
Proceed as follows to change the heating time once: start the unit through key 3, then press either key 4 to reduce the period or key 5 to increase it.
To change the heating period in a permanent way keep key 3 pressed down while at the same time pressing either key 4 to reduce the heating time or key 5 to increase it.



Legenda

1 = Clock.
2 = Pre-selection.
3 = Immediate heating.
4 = Backward key.
5 = Forward key.
6 = 1st/2nd/3rd pre-selected time call.
7 = Dial indicator.
8 = Week-day.

Having completed this operation, the old heating period is still displayed.
Switch the heater off and then on again to have the new figure visualized on the display.

Heater operation with engine on and without pre-selection

By pressing key 3, the heater continues to function as long as the engine is in operation. After the engine has been turned off the heater goes on working for 5 more minutes. This delay time can be extended to a maximum of 4 hours by pressing key 5.

Pre-selection

The heater will light up automatically on the preset day and time. By pressing key 2 for the first time, the first call number 6 - corresponding to the 1st pre-selection programme - will be displayed. You can now set the heater starting time by means of keys 4 or 5.
Proceed as follows to set the day of the week on which you wish the heater to be started:
Press the key 2 a second time to have the second call number 6 - corresponding to the 2nd pre-selection programme - displayed.
Preset heater starting day and time following the same procedure. By pressing key 2 for the third time, the third call number 6 - corresponding to the 3rd pre-selection time - will be displayed. Again preset day and time following the same procedure.
By pressing key 2 a fourth time no pre-selection data will be displayed but the system will store all data processed up this moment.

Useful hints

- At the end of the cold season, the heater must be operated once a month for at least 10 minutes to avoid starting problems at the onset of the following cold season.
- During the Summer the fuel contained in the pipes may evaporate. For this reason, when refilling the pipes, starting the heater may require several attempts. If starting is difficult, turn switch 3 of the digital timer on and off several times (every 6 minutes approximately) while ensuring that the engine is running.
- If the green telltale 7 does not light up when the heater is set in operation, check and renew the relevant fuses.
  Should the defect persist, turn to one Authorized Dealer.

ECAS-Electronic Control Air Suspension
(if fitted-models 29L/35S only)

Operate the following pushbuttons to raise/lower/level the vehicle before carrying out any loading or unloading operation:

1. vehicle raising.
2. Vehicle lowering.
3. Vehicle levelling.

The system can be used to facilitate loading/unloading operations, as an assistance while
driving with snow chains and over ramps or humps.

Note: when loading/unloading operations are finished, before starting the vehicle return suspensions to levelling position by operating pushbutton 3 even though the system is
designed to align them automatically when travelling at a speed of 15 km/h.

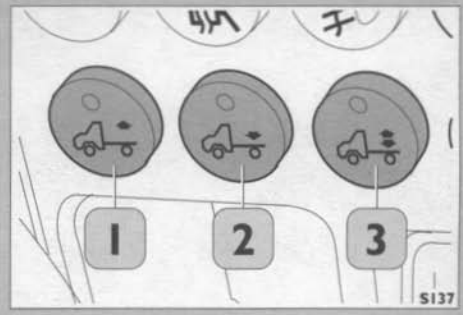
During the previous operations the indicator 4 will flash until the frame is levelled.

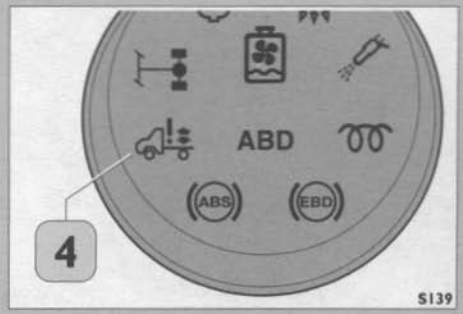
With the frame levelled, the turning on of the indicator may mean:

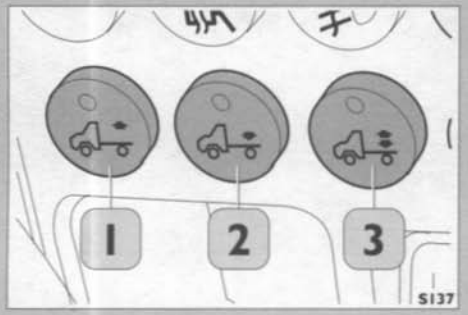
light flashing: overheating of the electrocompressor.

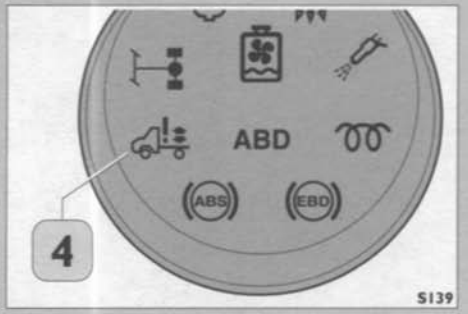
- Light glowing steadily:
- presence of a fault.

In this case, contact the Service Network.









Air Suspension (if fitted-models 35C/65C only)

1. Vehicle raising.
2. Vehicle lowering.
3. Vehicle levelling.

Suspension lifting and lowering can be performed only with stopped vehicle and parking brake on. During lifting and lowering operations, the warning light 4 will blink until chassis levelling is performed. When turning the ignition key to position I MAR, the warning light 4 will go on for five seconds: if it fails to switch on there is a failure in the power circuit. With level chassis, warning light on can indicate the following:

FIXED LIGHT:

- height sensor circuit failure.

FAST BLINKING LIGHT (compressor overheating):

- compressor operating for more than four minutes due to excessive load on rear axle.
- system used too frequently (charge, discharge and recharge).
- compressed air system leakage or poor compressor efficiency.

SLOW BLINKING LIGHT:

- If switch 1 is depressed for more than two minutes, warning light 4 will blink slowly: never operate switch 1 for so long period.
  If switches 1 and 2 are depressed at the same time or if there is a failure in switches or their cables, warning light 4 will change continuously its brightness: never use switches at the same time.

Contact the Service Network for the above cases when a failure persist although the system is used properly.

User-mounted accessories

The Iveco shop offers high-quality lines of product; you should observe the following recommendations:

- When drilling additional holes (e.g. for radio aerial in the cab panel), you should prime the concerned area so as to avoid premature oxidation of the outer and inner surfaces.
- Proceed with care when fitting the accessories (use of screwdrivers, interferences, etc...) to avoid permanent damage to the paint layer.

Strictly comply with IVECO fitting directions (the "Bodybuilders Instructions" manual is available at Authorised Service Workshops) when assembling accessories, additional components or changing your vehicle body structure.
Any exception to assembly directions should be authorised by IVECO. Non-compliance with above directions will result in the loss of the warranty period.

Warning: disconnect first positive battery pole, then negative battery pole before carrying out any operation on the vehicle.

Stickers (deco-strips)
Do not remove or apply decorative strips using cutting tools (e.g. blades, knives, etc.) as this might cause deep scoring in the paint layer and result in premature corrosion.

Radio transmitters and mobile telephones
Mobile telephones and other radio transmitters (such as CBs) cannot be used inside the vehicle unless a separate aerial, mounted outside the vehicle, is used.
The use of mobile telephones, CB transmitters or similar equipment inside the driver's cab (without an external aerial) generates radio-frequency electromagnetic fields which, being amplified by resonance effects within the cab, may cause not only potential health dangers but also malfunctions of any electronic systems built in the vehicle, such as the various engine control units, ABS, etc., that may affect the vehicle operation and, therefore, your safety.
In addition, the transmission efficiency of this type of equipment may be degraded by the shielding effect of the body.

Installing additional electrical equipment
The installation of additional electrical/electronic equipment not supplied by IVECO or not legally authorised is not advisable (i.e.: a C.B. device exceeding the permitted 5W, possibly causing magnetic noise or interference).

Starting and driving

To obtain the best possible combination of performance and reliability from a new vehicle and to ensure long trouble-free life, do not rev the engine for maximum power during the first 1500 km of operation.
This chapter provides information on how to carry out the following operations as well as information about their related devices:

Immobilizer

In order to provide additional protection from attempted theft, the vehicle is fitted with an electronic engine immobilizer system (ICU - Iveco Control Unit).
The ignition keys are fitted with an electronic device which transmits a coded signal to the ICU control unit.

Vehicle keys

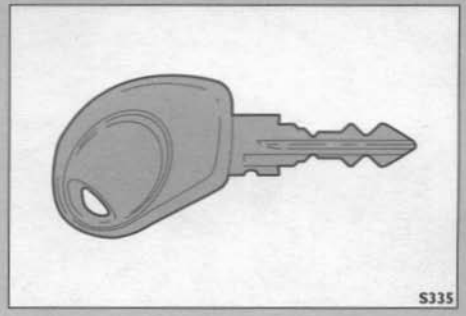
The supply set includes two duplicated keys (keys+ICU+EDC).

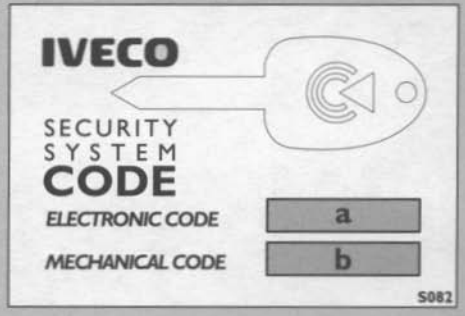
Code Card

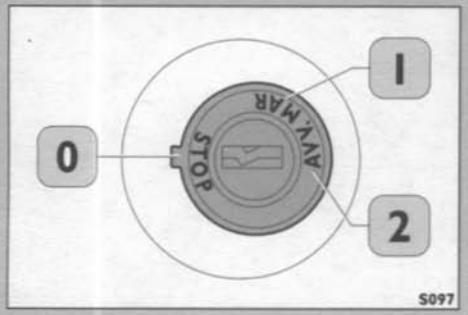
A Code Card is supplied with the keys, which shows:

a. the electronic code to be used in the event of emergency starting, for which you must call the Service Network.
b. the mechanical key code;

The user is advised to always keep the electronic code stated on the Code Card with him in case of the need for emergency starting.







Emergency starting

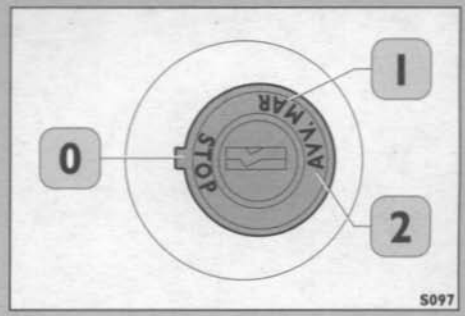
This device enables engine starting if either the ignition key is not recognized by the system or the immobilizer control unit is faulty. Proceed as follows to enter the electronic code through the accelerator pedal:

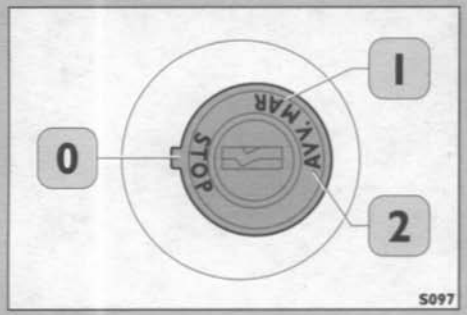
- set key to position I MAR.
- The EDC warning lamp (ref. no. 25 page 14) will start blinking after 2 secs.
- Thoroughly depress the accelerator pedal for a period ranging between 5 and 12 secs.
- The warning lamp will reduce its blinking frequency.
- When the number of flashes corresponds to the first figure of the electronic code, depress the accelerator pedal fully and release it (the lamp will remain off while the pedal is operated). Continue depressing and releasing the accelerator pedal in the same way to enter the remaining electronic code digits.
- If the electronic code you have just entered is correct the lamp will go off; otherwise you will have to repeat the entire procedure. However, we suggest that you turn to the Service Network at the soonest.

Warning
Each supplied key has a common mechanical code and a unique electronic code which must be stored in the memory by the system's control unit.
If additional keys are required it is important that the electronic codes of the additional keys, and also the existing keys, are stored in the memory of the Control Unit.
Contact the **Service Network**, taking all keys and the Code Card with you.
The codes of the keys that are not entered during the new storage procedure are erased from the memory: this is a security measure to ensure that any lost keys are unable to start the engine.

Warning

- The Code Card is indispensable and unique for each vehicle, you are therefore recommended to keep it in a safe place. It is advisable to note the codes and avoid leaving it in the vehicle and carrying it frequently to avoid the risk of losing it.
- If the vehicle changes ownership, it is essential that all the vehicle's keys and the Code Card are passed to the new owner.





Ignition Switch Positions

0.= Key insert/remove - engine stopping - steering lock on, ICU on.
1. = Engine pre-starting and auxiliary functions - ICU on.
2. = Engine starting.

Serious damage risk: if the keylock has been tampered with (attempted theft), have its operation checked at the Service Network: the steering wheel could lock while you are driving.

Activating the Iveco Control Unit

The ICU system is activated when the ignition key is in the STOP position: in this position, the engine is switched off and the key can be removed.

De-activating the Iveco Control Unit

When the ignition key is turned to the MAR position (1), the engine immobilizer is de-activated only if the Control Unit recognizes the electronic code transmitted by the key.

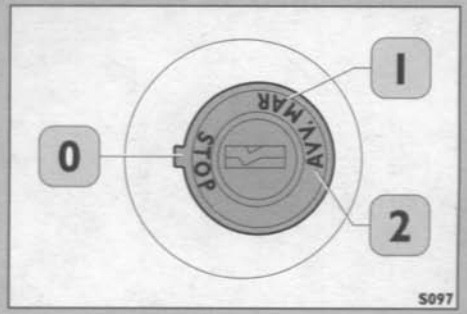
If the electronic code is recognized as valid code, the Control Unit sends its own coded signal to the electronic engine control unit enabling the engine to be started.

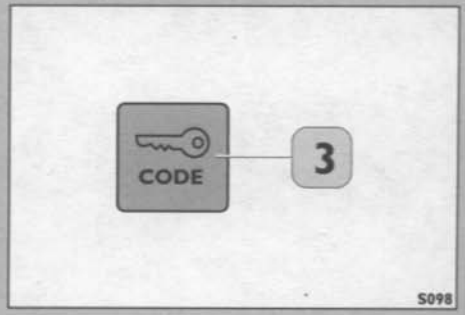
If the electronic code is recognized by the system, the Led 3 will illuminate for approximately **4 seconds**.

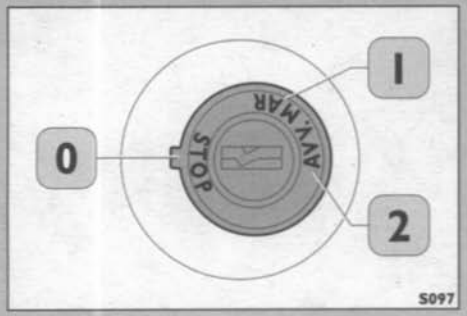
In all the other cases, the code is not recognized.

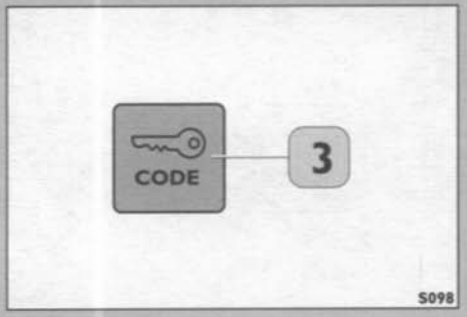
If the code was not recognized, return the key to the STOP position (0) and then turn it again to the MAR position (1); if the engine immobilizer remains activated, repeat the procedure using the other supplied key.

If you are still unable to start the engine, refer to the **Service Network**.









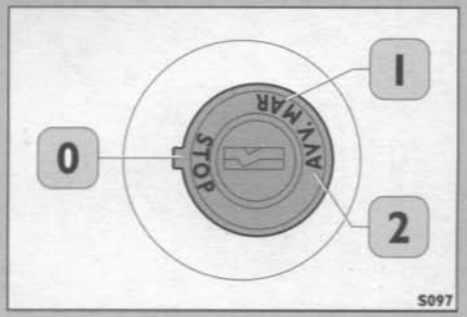
Warning
If the led 3 illuminates either briefly or permanently while driving or once the engine has started, it does not necessarily indicate a malfunction of the immobilizer system, but can sometimes indicate a condition that the system interprets as an attempt to interfere with the device (e.g. by a thief) or that the vehicle battery charge is low.

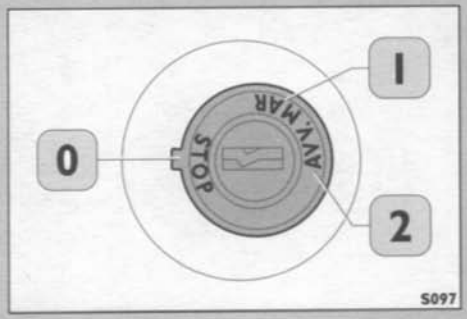
To test the vehicle in this instance, stop the vehicle, turn on the engine and turn the ignition key to the STOP position (0); then turn the key to the MAR position (1) again; the led 3 will illuminate for approximately 1 second and then extinguish.
If the led remains on after this procedure, repeat the operation having waited with the key in the STOP position (0) for more than 30 seconds. If after this procedure the led remains on with the key in the MAR position, refer to the Service Network immediately.

Before starting the engine in a garage or workshop, ensure that adequate ventilation is provided because exhaust gases are toxic.

Engine starting

- Insert the key in the ignition switch and turn it clockwise to position I (MAR).
- If the vehicle has a mechanical transmission, make sure that the transmission is on neutral or push the clutch pedal down to the bottom. If the vehicle has an automated transmission refer to the relevant paragraph.
- Turn the key to position 2 (AVV) and release it as soon as the engine starts, **without pressing the accelerator pedal**. (If the above instructions are not carefully followed, a puff of black smoke will be emitted on starting the vehicle).
- If starting does not occur immediately, do not operate the starter motor for longer than 30 seconds.
  After starting the engine, proceed slowly and keep the engine at an average speed until normal operating temperature is reached. By this method it is possible to obtain:
- Optimum oil flow throughout the lubrication circuit.
- Exhaust gases within the specified limits.
- Fuel economy.





Ignition switch positions

0. = Key in and out - engine stopping - steering lock.

1. = Engine pre-starting and various auxiliary functions.

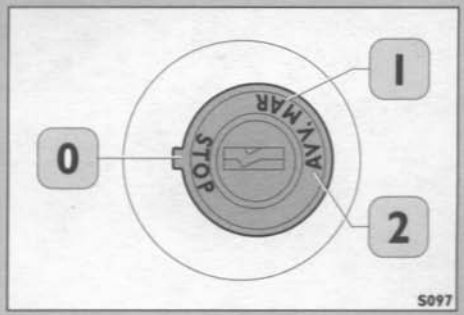
2. = Engine starting.

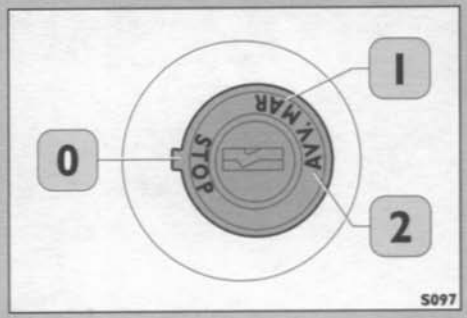
Warning!

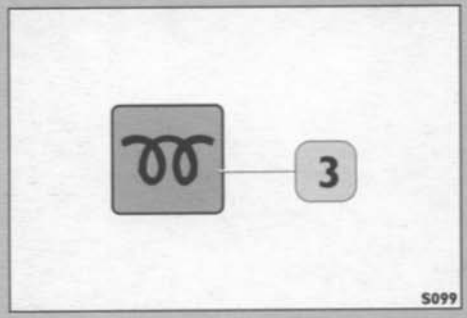
- The engine should be allowed to idle (either warm or cold) for quite a long time so as to obtain optimum performance and a reduced quantity of noxious emissions. To safeguard your natural environment and the engine of your vehicle, take immediate action if you notice that the exhaust is excessively smokey. In the first instance the fuel filter cartridge should be replaced. Should inspection of the fuel injection system be necessary, it should only be carried out by a skilled technician.
  For maximum benefit, use only original Iveco cartridges. Any operation of the fuel injection system should be carried out by the Service Network.
- The engine must never exceed 4500 r.p.m..

Engine stopping
To stop the engine turn the key to position 0.

- Serious damage risk: do not remove the key from the ignition switch unless the vehicle is at a complete standstill. Always engage the parking brake before leaving the vehicle.
- Warning: on vehicles, dedicated to people trasportation, that are equipped with a rotary and translatory door, only drive this door with parking brake in. Should it accidentally not occur in this way, the control central unit immediately puts off vehicle engine and prevents it from restarting up for a duration period of about 15 seconds. Where it is tried to start up the engine without waiting for this time period to have elapsed, the central unit calculates again integrally such time interval (15 seconds), after which a correct start up can be performed again.





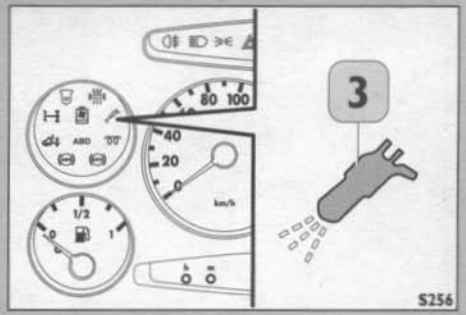


Engine starting in cold weather

- Insert the key in the ignition switch and turn it clockwise to position 1 (MAR).
- If the vehicle has a mechanical transmission, push the clutch pedal down to the bottom.
- Wait for the dashboard led 3 to go out which indicates that preheating plugs have been turned on.
- Turn the key to position 2 (AVV) and release it as soon as the engine starts, **without pressing the accelerator pedal.**

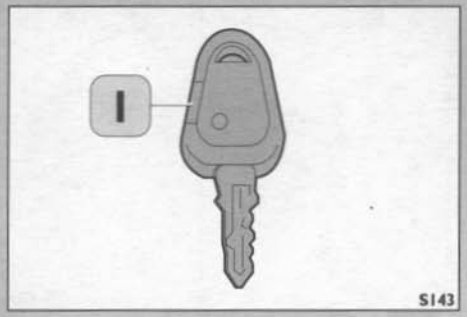
Self-diagnosis system

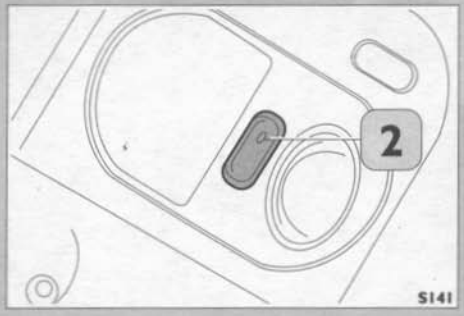
The EDC warning light 3 informs the driver on possible injection system faults. If the warning lamp comes on during normal operation of the vehicle, a fault has been detected.



Off light	Standard operation	
Continous light	**Serious defect** The system operates irregularly.	1. Continue your trip carefully. Refer to an Authorised Dealer as soon as possible.
Blinking light	**Very serious defect** The system operates irregularly. Failure of one or more of the safety functions. Possible engine STOP.	1. Park the vehicle on the road side. 2. Inform the dealer, or ringing the freephone number of the **Client Center** (24 hours service), 3. Refer the vehicle to the nearest Authorised Dealer.

Contemporarily with the EDC indicator, only for F1C engine Euro 4 version, it is possible to check if the EOBD indicator is lighted on the control pushbutton panel (page 19). This indicator is on when parts of the engine or of the exhaust system that affect the emissions are not working properly. This indicator has the same prescriptions/warnings already described for the EDC indicator.





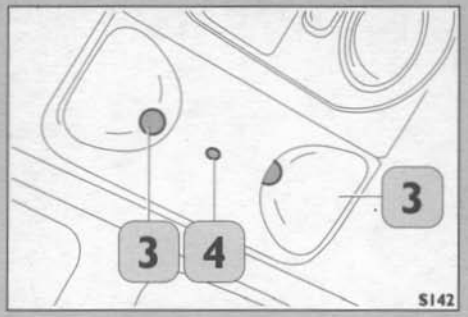
Centralised door locking system (where fitted)

Point the key towards the vehicle and briefly press button 1.
The direction indicators will flash twice to indicate that the doors have been locked.
Point the key towards the vehicle and press button 1 again to unlock.
The direction indicators will flash once to indicate that the doors have been unlocked.

- The centralised door locking system can only be operated by means of the remote control.
- The centralised door locking system will not be operated when a door is locked by means of the key.
- A button 2 is located on the central ceiling light in vans. Press this button after getting into the vehicle to simultaneously lock the rear and side doors. The button can only be used to lock the doors. To unlock the doors, either press the remote control again or turn the key in the respective locks.
- The system will be inhibited for 30 seconds if the remote control is worked in rapid succession (locking and unlocking the doors for six times in 30 seconds) to prevent overheating the system actuators.

Remote control battery replacement (vehicles without electronic alarm only)

- Insert a coin or screwdriver in the slot on the side of the key and carefully open the two parts of the casing. Replace the battery respecting the correct polarity. Close the two parts of the key. Mare sure they are correctly mated.



Centralised door locking system + electronic alarm (where fitted)

The vehicle may be equipped with an electronic alarm providing the following functions in combination with the centralised door locking system. The system has the following functions:

- remote locking/unlocking of doors (see paragraph above)
- peripheral surveillance, signalling the opening of a door, side door, rear door or bonnet
- volumetric surveillance, signalling intrusion in the cab.

The system will be triggered in the following cases:

1. If a door, the bonnet or rear door(s) is opened.
2. If the battery is disconnected or the alarm power wires are cut.
3. If someone or something moves in the cab.

The system consists of:

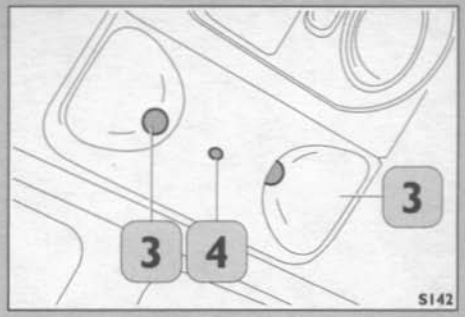
- One control unit (located under the dashboard in the heater control area).
- Two sensors 3 located in the central ceiling light for volumetric surveillance in the cab.
- One LED 4 located in the central ceiling light for system operation diagnostics and control.
- One switch located on each door of the vehicle and on the bonnet to signal opening.
- One fail-safe siren located in the engine compartment.

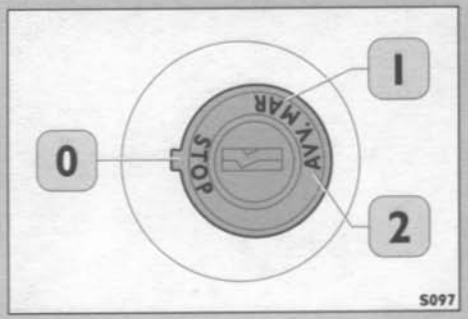
Point the key towards the vehicle and briefly press button 1. The direction indicators will flash twice to indicate that the doors have been locked and the alarm has been switched on. Point the key towards the vehicle and press button 1 again to unlock. The direction indicators will flash once to indicate that the doors have been unlocked and the alarm has been switched off.

■ LED 4 will come on fixed for approximately 20 seconds when the alarm is switched on. This will indicate that the control unit is running a system test (the system will be working during the test). After this time, the LED will start blinking regularly.

■ LED 4 will come on fixed when the alarm is off to indicate a minor error in the system despite which the system can continue to work. Go to a Dealer at the first opportunity.

■ LED 4 will blink when the alarm is off to indicate a severe error in the system which may prevent normal operation of the alarm and door locking system. Go to a Dealer as soon as possible.





- The alarm system is connected to the vehicle Immobilizer system.
- You can either operate the remote control or turn the key to position I MAR to stop the siren if you start it off by mistake. Remember that the electronic code on the Code Card in your possession will be needed by the Dealer to solve alarm system related problems as well as problems related to the Immobilizer. See the Immobilizer paragraph for instructions and recommendations concerning the Code Card.
- The system will be inhibited for 30 seconds if the remote control is worked in rapid succession (locking and unlocking the doors for six times in 30 seconds) to prevent overheating the system actuators.
- Close the windows perfectly when the alarm is on.
  This will prevent the alarm from being triggered by gusts of wind, insects, etc.

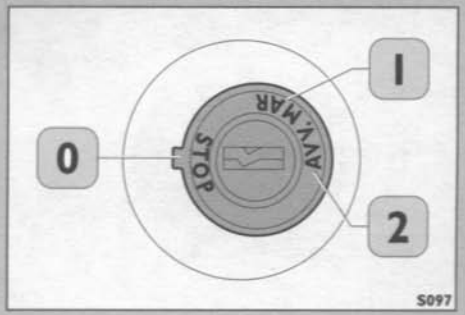
NOTE: The operating range of the remote control will decrease when the remote control battery is nearly flat.

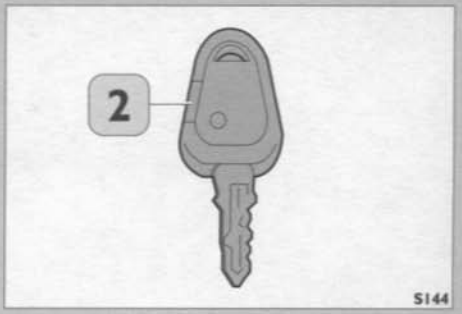
Partially flat remote control battery replacement (vehicles with electronic alarm only)

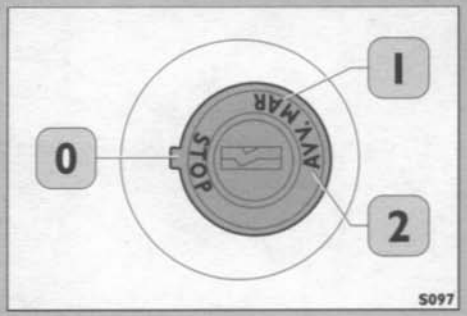
- Insert a coin or screwdriver in the slot on the side of the key and carefully open the two parts of the casing. Replace the battery respecting the correct polarity. Close the two parts of the key. Mare sure they are correctly mated.
- You have three minutes to replace the battery.
  After this time, you will need to carry out the completely flat battery procedure. The same will occur if you reverse the polarity by mistake.

Completely flat remote control battery replacement (vehicles with electronic alarm only)

- Insert a coin or screwdriver in the slot on the side of the key and carefully open the two parts of the casing.
- Replace the battery respecting the correct polarity.
  Close the two parts of the key. Mare sure they are correctly mated.
- Insert the key in the ignition switch and turn it from 0 STOP to I MAR.
  With the key in this position, press button 2 on the key and hold it pressed until the LED in the key comes on. The remote control is now ready for use.







Vehicle battery replacement (vehicles with electronic alarm only)

- Open the bonnet and arrange the positive battery cable to be disconnected. DO NOT DISCONNECT THE CABLE AT THIS TIME.
- Get into the cab. Turn the key in the ignition switch to 1 MAR and back to 0 STOP IMMEDIATELY.
- **You now have 15 seconds to disconnect the positive battery cable.**
- The fail-safe siren (powered by a built-in buffer battery) will be triggered if the battery is disconnected more than 15 seconds after the STOP-MAR-STOP operation.
  In this case, reconnect the positive battery cable and repeat the operation.

The battery built into the remote control is hazardous for the environment.
Dispose of the battery properly, as specified by law.
Alternatively, return it to a Dealer who will dispose of it correctly.
The remote control contains a 3 V CR 2032 lithium battery.

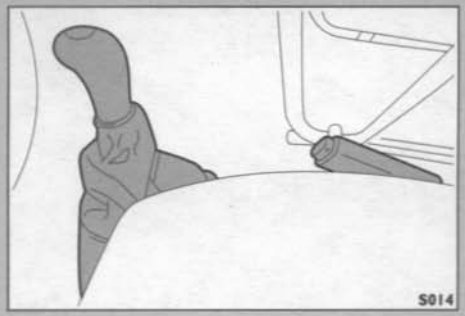
Braking system

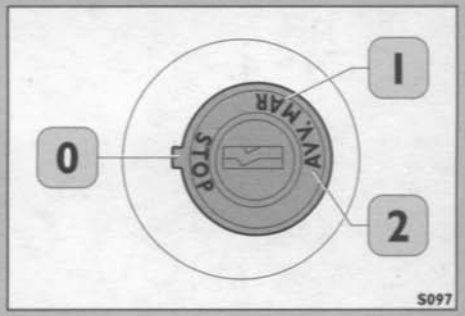
- With the engine OFF the brakes are not servo-powered and it is therefore necessary to push the brake pedal harder.
- If there is a brake circuit failure, the pedal stroke lenghtens and greater pressure is needed on the brake pedal:
  CAUTION: the time required to brake will increase, have the system checked immediately at a Service Network garage.
- Respect the vehicle maximum weight capacity and the weight capacities on the front and rear axles. This will prevent irregular stress with negative effects on the braking system.

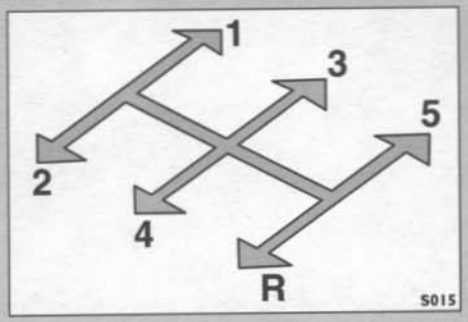
Parking brake

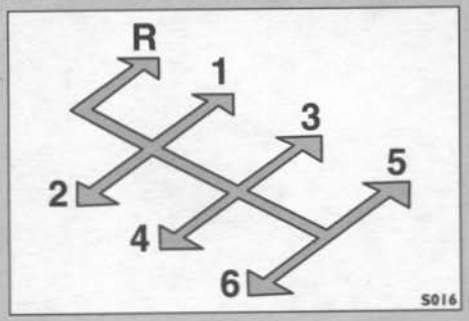
ONLY USE THE PARKING BRAKE WHEN THE VEHICLE IS STATIONARY

- To apply the parking brake pull the lever upwards, so that the brake can adapt to the parking position (e.g. on a slope) and vehicle load.
  (With the key in position I the relative light will illuminate on the dashboard).
- If the number of notches required to apply the handbrake increases, have the system checked immediately at a Service Network garage.
- To release the handbrake pull the lever slightly upwards, press the button and fully lower the lever to the rest position (the light on the dashboard will switch off).
- When parking on particularly steep slopes also place chocks either in front or behind the wheels which sustain the heaviest load (normally on the rear wheels when the vehicle is loaded and the front wheels when the vehicle is empty).









Warning !

Start the vehicle forward always in first gear. The use of the other gears remarkably reduces the last of the clutch disc and relevant components. Do not put the foot on the clutch while driving, besides when shifting gear.

Use of mechanical transmission

Starting the vehicle

- Fully depress the clutch pedal and move the gearshift lever to the fist gear position.
- Release the parking brake.
- Slowly release the clutch pedal and gradually increase engine speed.
- Engage remaining gears as necessary.

Never exceed the maximum engine rated speed, even when travelling downhill.

Stopping the vehicle

- Release the accelerator pedal and gradually depress the brake pedal.
- When the vehicle is about to stop, disengage the clutch.
- When the vehicle is at a standstill, engage the parking brake.

Warning: do not use the parking brake while the vehicle is moving.

Reverse gear engagement in vehicles equipped with five-speed transmission

To engage the reverse gear from the neutral position, move the lever to the right and then backward.

Reverse gear engagement in vehicles equipped with six-speed transmission

To engage the reverse gear from the neutral position, lift the ring located beneath the handle (using a finger of the hand that is operating the lever), move the lever to the left and then forward.

Version AGile (if included)

Automated transmission description

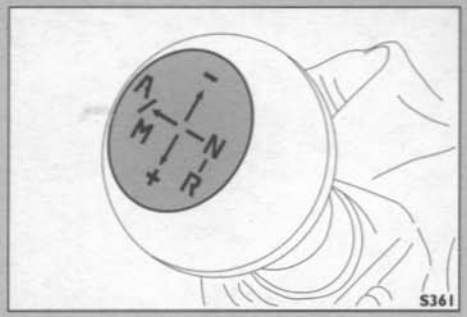
Vehicles in version AGile are equipped with mechanical gearbox 6AS300 (top gear) and 6AS380 (overdrive), both with 6 gears plus reverse gear, depending on engine type it is associated to (F1A 96-116-136 HP or F1C 136-166 HP).
Such gearboxes are equipped with electromechanical actuators for selecting and engaging the various gears and disengaging/engaging the clutch.

An electronic control unit assembled on the transmission and operates the system controlling the closure of the clutch during start up and changes the gears (with proper clutch opening/closing synchronization, and of the power given by the engine) automatically (on Automatic mode – A) or by means of the driver's command, given by means of the control lever located on the dashboard (Manual mode – M).

On Automatic mode the system recognizes the operating conditions of the vehicle (road gradient, load) and the driver's driving style in order to assure maximum driving conditions of the vehicle with less fuel consumption.

The system is provided of:

- acoustic indicator and display (located on the dashboard) which signals particular operating conditions and displays the status of the system.
- diagnosis device.
- checks that prevent dangerous conditions for the engine and the transmission (i.e. runaway speed rate and unexpected engine shut off).
- checks for the management of defects that guarantees maximum vehicle operation compatible with driver's and passenger's safety, vehicle, engine and transmission soundness.



Controls and devices

Clutch pedal

Being that engagement/disengagement of the clutch is carried out by the electro-mechanical actuator that is operated by the electronic unit of the transmission, the clutch pedal is no longer required and therefore it has been removed.

Control lever

The control lever positioned on the dashboard has 3 steady positions:

- The middle one that selects the forward gears
- N (on the right) that selects neutral
- R (on the lower right) that selects reverse.

The lever can be shifted from the middle position that corresponds to the forward gear:

- forward (position -), to command engagement of the lower gear (or rather shifting to the lower gear).
- reverse (position +), to command engagement of the higher gear.
- left (position A/M), to select alternately Automatic or Manual mode.

These three positions are un steady, in other words after driver's shifting it returns to the middle position. We recommend to "accompany" this movement.

Display

The automated transmission display is located in the dashboard (pushbuttons) and allows to see all system status information and indications required for proper vehicle use.

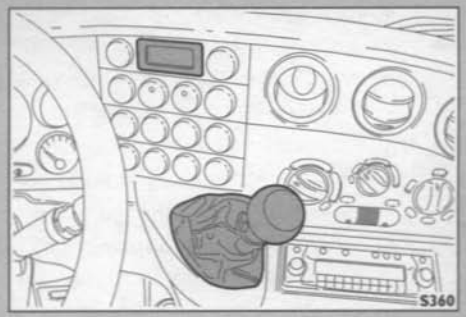
In particular the ones regarding system status are:

- gear engaged: from 1 to 6, N (neutral), R (reverse)
- with forward gears transmission operating mode: M (manual), A (automatic)
- Key symbol, with malfunctioning system.

If N is displayed in the flashing mode you must shift the lever to position N in order to recover full system functionality.

If the A1...A6 or M1 .... M6 signs are displayed in flashing mode indicates that the gear change lever must be shifted to a stable position on the left in order to restore full system functioning.

If R is displayed in the flashing mode, it means that the Reverse gear has been requested. Once engagement occurred R will be displayed in the steady mode.



Acoustic indicator

The acoustic indicator is used to warn the driver in the following cases:

- Reverse engaged (single beep)
- Doors open while the engine is on and the gear is engaged (flickering beep)
- Overheated clutch (flickering beep).

Specific fuses

The electrical supply of the system is assured by the fuses identified by the following numbers on the fuse carrier plate:

64 – 10 A	Unit supply
65 – 5 A	Automated transmission services
66 – 5 A	Starting inhibition.

Warning!

- In order to avoid overheating and clutch damage, do not keep the vehicle stopped on slopes making the clutch "skid" trying to avoid skidding for a long period in any case. Excessive clutch temperature is indicated by an intermittent beep.
- Insert the parking brake before getting out from the vehicle

Use of a vehicle with automated transmission

Engine and vehicle starting

- Insert the key in the switch and turn clockwise to position I (MAR); the word **BRAKE** will be running across the display.
- Keep the brake pedal pushed down; after approx. 3 seconds contemporarily the display will show the **OK** message (the system checks its operation and will disengage the clutch automatically), followed by (after approx. 3 seconds) the gear and the mode that has been previously selected (otherwise N, M1, A1 or R).
- With **OK** or gear displays, turn the key on position 2 (AVV) and release as soon as the engine starts, **without pushing the gas pedal.**
  If OK is shown on the display try to turn on the engine with the accelerator pedal depressed, the system allows start-up but the clutch does not engage, increasing the rpm until the accelerator pedal is released and depressed again.
- With the accelerator released, select the gear and the mode desired with the control lever (R, M1 or A1); wait until the display confirms that the gear is engaged (reverse engagement is indicated by a beep).
- Slowly and progressively push the accelerator pedal in order to start the vehicle; the vehicle starts (on a flat road) with an engine rotation of approx 1000 rpm.

NOTE: For a soft start just push the gas pedal slightly, instead for livelier ones or uphill push the pedal a bit more.

Engine stopping

When the vehicle is stopped, in order to shut off the engine put the key on position 0.

When the engine is off the transmission remains in the selected gear (1ª, N o R) and the clutch is closed.

Therefore it is possible to park with the gear engaged (of course if the first or reverse has been selected).

NOTE: In order to allow system rearrangement, while the engine has been turned off and the following start is necessary to let at least 4 seconds pass.

Starting the vehicle while in reverse

To select the reverse gear (if it is not already selected), shift the control lever on R. The system will indicate that the reverse gear is engaged on the display with an intermittent beep that will continue until the reverse gear is engaged.
If the vehicle should be left in the following condition for more than 10 seconds:

- engine on
- reverse engaged
- accelerator/brake pedal depressed for more than 10 seconds

With/without the driver's door open, the system forces the transmission into neutral and the "N" will be flashing on the display, not allowing the vehicle to take off in reverse.
If you wish to confirm this demand your must engage neutral with the gear shift and try to engage reverse again.
NOTE: The above mentioned condition of temporary inactivity does not apply for the first gear.

To start the vehicle, just push the gas pedal gradually and progressively.

NOTE: For quicker maneuvers with alternating stages of forward and reverse gear it is possible to select reverse (also the forward gear)while the vehicle moves slightly.

Forward gear on Manual: gear shift

To select the forward gear (if not already selected) shift the control lever on the middle position. A1 or M1 will be displayed.
In this position, to select the manual mode (if not already selected), shift the lever towards the left (or forwards or backwards) and then release right after. M1 will be displayed. To start the vehicle, just push the gas pedal gradually and progressively. To engage the higher gear you must (keeping the gas pedal in the same position) shift the lever backwards (on position +) and then release (accompany it) right after. The system changes the gear and the display will shot the new gear engaged. To engage a lower gear you must (keeping the gas pedal in the same position) shift the lever forwards (on position -) and then release (accompany it) right after. To skip the intermediate gears just shift and release two or more times the lever (quickly) forwards or backwards. However the system checks if the gear required is compatible with the range of revolutions for normal engine operation and if it is not (i.e. runaway speed rate risk) it will refuse to engage the gear.
NOTA: Automatic mode (A) can be enabled in any moment by shifting the lever towards the left (on position A/M) and then releasing it right after.

Warning !

Even keeping in mind practically all the parameters, the system cannot foresee the conditions of road that the vehicle is approaching or of the traffic! If necessary or advisable, the driver must decide whether it is better or not to take over the control of the transmission by selecting the manual mode.
This can be obtained by keeping the current gear (shifting the lever towards the left to A/M), forcing gear shifting (moving the lever forwards or backwards: positions – o +).

Forward gear in Automatic mode
To select the forward gear (if not already selected) shift the control lever on the middle position. A1 or M1 will be displayed.
In this position, to select the automatic (if not already selected), shift the lever towards the left and then release right after. A1 will be displayed.
On Automatic mode the system automatically engages the best gear according to the operating conditions of the vehicle (road gradient, load) and the driver's driving style (detected according to how and when the gas pedal is pushed) to assure maximum driving conditions of the vehicle with less fuel consumption, with maximum driving comfort.

Therefore for economical driving the gas pedal is to be pushed approx. for 50-60% of its stroke gradually and progressively, instead to exploit the performance the pedal is to be pushed to the bottom.
The gear transmission can be "forced" at all times by shifting the control lever forward (to engage the lower gear) or backwards (to engage the higher gear). In this way the manual mode will be automatically enabled (M).

Warning !

Power take off is specific for each version, for safety reasons the control system of the automated transmission must recognize the power take off conditions assembled.

Speed programmer use (Cruise Control)
The instructions for Cruise Control use are described in the relevant section of this "Use and maintenance" booklet.

With an automated gear the only difference is that Cruise disabling is not carried out by disengaging the clutch.

Therefore the programmed speed can be kept without using the gas pedal:

- Gear shifting (on manual), move the control lever forwards or backwards
- Assist gear shifting (on automatic mode), if the slant variations along the road require it.

Power take off use (if foreseen)
The instructions for power take off use are described in the relevant section of this "Use and maintenance".
Power take off (steady or not) can be enabled (by pushing the relevant pushbutton) only while the engine is on and the shift is on neutral (lever on position N).
With power take-off (no parking) enabled you can enable the gear (first and reverse) and start the vehicle.
NOTE: With power take off enabled and the vehicle in motion gear shifting is disabled.
Power take off can be disabled with the gear engaged or even on neutral.

Defect signaling

System defects are indicated on the display with the symbol of the "adjustable wrench" and in the worst cases even an intermittent beep will be enabled.

When a defect occurs, the control unit of the transmission controls (according to how severe the defect is)the detective operation of the system assuring maximum operation allowed of the vehicle compatible with:

- with driver's and passenger's safety
- vehicle and engine soundness
- transmission soundness.

If any defect occurs we recommend to:

- stop the vehicle in a safe position
- turn off the engine
- start the engine again. If the symbol of the "adjustable wrench" is still displays repeat the procedure and wait at least 40" before starting the engine again.

If the defect is still present but the vehicle works reach an authorized repair shop of the network driving carefully.

If the vehicle cannot be operated, get in touch with the dealer and if it is closed because of the hour call the free-call Client Center (24-hour service) so that the vehicle can be transported to the repair shop.

Warning !

This maneuver can be dangerous and therefore it is to be carried out only by specialized personnel that are acquainted with all the precautions that are to be taken in order to prevent damages and injuries!

Vehicle hitch
Refer to the instructions included in the relevant section of this "Use and maintenance" booklet.

It is not advisable to start the engine by **pushing the vehicle**, however, it is possible if the battery should have enough power to start the unit and the actuators of the transmission control (indicated by the display that lights up).

In order to start up the engine in these conditions you must:

- Insert the key in the switch and turn clockwise to position I (MAR); the word **BRAKE** will be running on the display
- Keep the brake pedal pushed down; after approx. 3 seconds contemporarily the display will show the **OK** message (the system checks its operation and will disengage the clutch automatically), followed by (after approx. 3 seconds) the gear and the mode that has been previously selected (otherwise N, M1, A1 or R)
- Select the 1st gear on manual (M1 on display)
- Now the vehicle can be moved. The system will automatically close the clutch 10 seconds after the movement started.
- With the vehicle in motion and within 10 seconds, select the 2nd or 3rd gear using the control lever (M2 or M3 on the display).

Retarder (if foreseen)
For better driving fluidity we suggest to disable the Cruise Control, before enabling the Retarder.

Rear Axle Differential Lock Engagement (where fitted)

Engage this lock by pressing the switch with built-in warning light located on the pushbutton control panel only when the vehicle is either stationary or at a very low speed.

As soon as the vehicle is normally running, turn the switch again to the idle position, thus causing the lock to be disabled and warning lamp to extinguish.

Important!

When the bad road conditions have been passed, proceed as follows:

- Pass on to the release position while keeping the speed of the vehicle.
- Briefly lift the throttle.
- Resume a safe speed.

If locking fails to disengage immediately, it is necessary to change the direction of travel in order to eliminate tension.

Warning!

Warning:

- The lock should be used only when driving on muddy and slippery roads.
- If the warning lamp blinks, you are running too fast: either turn off the differential lock or reduce the vehicle speed. If the lock is not immediately disabled, you should steer several times to remove any possible blocks.
- Take care when using the rear differential lock on a vehicle also fitted with an ABS antilock braking system as the efficiency of the ABS could be impaired (refer to following page).

- On muddy or slippery roads, do not idle the wheels when the rear axle differential lock is not engaged, because damage would occur (few seconds are enough).
- Do not operate the differential lock device while one of the wheels is idling. Turn the differential lock device off when travelling on cobblestone paved roads; otherwise gears could get seriously damaged.
  Serious damage risk: remember that a vehicle is not fully manoeuvrable when the differential lock device is on.

Serious damage risk: ABS-EBD failure may change vehicle behaviour and return it to normal braking condition.
Turn an authorized dealer as soon as possible.

ABS-Antilock braking device
EBD-Electronic load sensing valve
ABD-Traction control

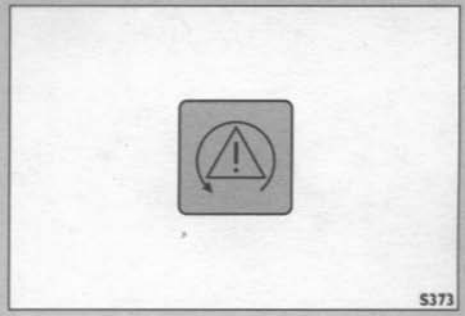
The following directions should be adhered to:

- Remember that while braking is performed the brake pedal can be subjected to slight pulses: this means that antilock system has been activated.
- Drive your vehicle carefully without taking useless risks even if maximum active safety is ensured by the system.
- Conform your driving behaviour to weather, road and traffic conditions.
- Remember that maximum desired deceleration depends in all cases on the grip between the tyre and the roadbed and that the grip is reduced to a minimum degree by snow and ice. Also remember that the braking distance remains high even if the vehicle is fitted with a perfectly efficient ABS system.
- Illumination of ABS+EBD pilot lamps indicates a system failure. Avoid harsh braking that could result in wheel locking and possible vehicle skidding. If the ABS lamp only lights up, the EBD system continues to function on its own whereas the ABS and ABD systems are cut off. In this case drive carefully avoiding harsh braking to the nearest service point to have the system checked.

- Flashing of the ABD pilot lamp indicates activation of the system (the lamp will remain on up to a maximum speed of 40 km/h).
  The ABD pilot lamp will come on with fixed light in the following cases:
  1. System failure.
  2. Temporary system cut off owing to overuse.
  Reactivation is automatic.

VEHICLES FITTED WITH REAR DIFFERENTIAL LOCK DEVICE:

- Under particular road conditions, simultaneous operation of the braking system and the differential lock device could lead to reduced vehicle stability; in this case it is advisable to operate the braking system only, also in case an ABS system is installed on the vehicle.

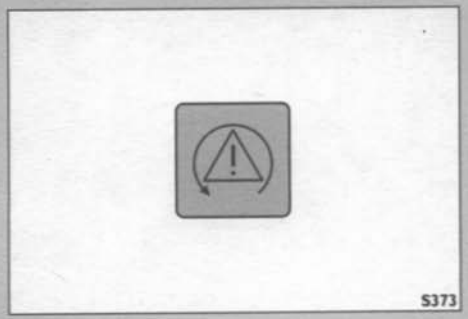


ESP8 – Electronic Stability Programme (if supplied)

The system analyses through the steer angle sensor signal the course programmed by the driver and compares it to the real path followed by the vehicle by means of the yaw-rate sensor and the wheel rotation sensors. If the vehicle becomes unstable, the system brakes each wheel and controls the engine by reducing the number of revolutions.

Summarising, the following functions are available:

- traction control
- stability control
- assisted uphill departure

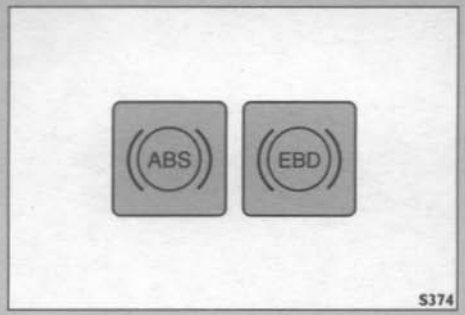


Warning !

- ESP system correct working is ensured by constant control on the vehicle's working data. In case of faults which may compromise ESP function availability (Hill Holder, Traction Control, ESP, Hydraulic Brake Assist) ABS and electronic brake control efficiency will not be affected anyway. In this case, however, the warning light signals the fault and it twill be necessary to apply to the nearest Service Centre as soon as possible.
- ESP system helps the driver in case the vehicle looses stability, but it will not ensure total control in all conditions. The efficiency of this auxiliary tool provided by the ESP system depends on the driving conditions, such as roadbed, tyres, braking system, suspensions' conditions and so on. ESP availability does not allow the driver to drive carefully and prudentially. The driver is the sole responsible of the vehicle's conduct.
- On vehicles equipped with ESP system, it is not allowed to make changes to the suspensions, vehicle's wheel base, gearbox, engine, steering system, ECU parameters, sensors and sensor position, ESP modulator connection ducts.
- Using tyres not complying with the specifications of the vehicle's documents is forbidden by the laws and regulations in force and may also affect the efficiency of the ESP and ABS system.
- For vehicles equipped with ESP system, it is recommended to use the same type of tyres on the front axle and rear axle: it is therefore unadvised to use winter type tractor tyres on the rear axle and summer type directional tyres on the front axle.
- For the configuration of vehicles equipped with ESP system, make sure being provided with the specific "Directives for vehicle transformation and configuration" relating to Iveco Daily vehicles provided with this device. Within the aforesaid manual, Iveco provides all information for the realization of the most common configurations. For any further concern, apply to the Iveco network.
- No kind of decelerator must be installed on vehicles equipped with the ESP system.

ASR – Traction control during acceleration (related to the 'ESP)
The system acts promptly on the engine and the brakes, preventing the driving wheels from skidding; it enables the vehicle to depart safely and rapidly, even on a slippery ground or if a driving wheel skids. In short, it reduces the risk of understeering when the vehicle is excessively accelerated in a curve. On the push-button panel placed in front of the driver is a push-button used to disable the system, which is however automatically activated every time the vehicle's speed exceeds 40 km/h. The ASR system should also be disabled when driving the vehicle with mounted tire chains, or when tires sink into the ground (sand, pebble gravel, etc.).

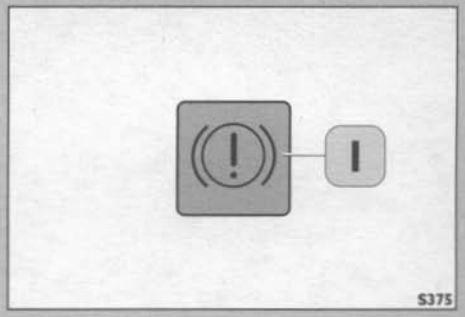
Activation of both systems is signalled by the yellow pilot light shown in the picture: it flashes during normal functioning and it is fixed in the case of ASR/ESP system failure.

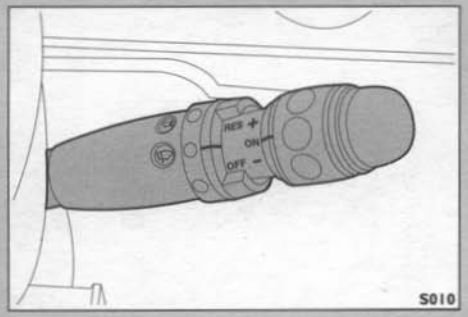


Hill Holder
The system holds the vehicle either during forward or reverse, uphill or downhill driving, for approximately 3 seconds after the brake is released, allowing a fast and comfortable departure.

ABS8 (if supplied - combined with the ESP or with the automated transmission)
Besides the regular ABS system functions, this system limits the possibility to move up a gears in a curve. There are two pilot lights managed by the ABS control unit:
- the ABS pilot light is yellow
- the EBD pilot light is red.

The fixed ABS pilot light indicates system failure, the EBD pilot light of the electronic brake-power regulator that turns on together with the I pilot light (when only this one is lit it indicates low level of brake fluid, parking brake engaged and worn brake pads) indicates that the EBD system is not operating.





Cruise control (where fitted)

This system automatically maintains the vehicle's running speed without the need of using the accelerator pedal.

WARNING: Cruise Control function is only active if the clutch pedal is pressed once after engine startup.

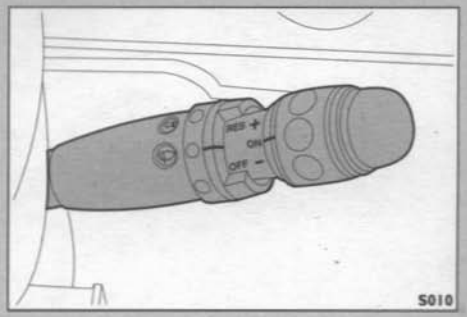
The Cruise Control cannot be used with peak traffic or on roads where speed should be continuously controlled (e.g. hills).

The Cruise Control can be enabled only if the following conditions are met:

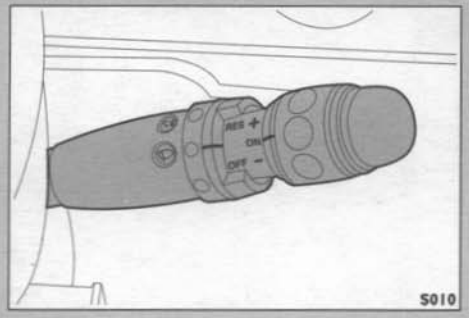
- running vehicle with gear engaged(1st gear not included);
- vehicle speed above 30 km/h;
- brake pedal not pressed;
- clutch pedal not pressed.

If the brake pedal or the clutch pedal is pressed, the Cruise Control is disabled.

This happens also when the minimum rated speed is not reached. The maximum speed limit is stored by the program in the electronic module and cannot be changed.



Switch functions	Vehicle's speed control
ON+	Increase speed
ON -	Reduce speed
RESUME	Select last stored speed value
OFF	Deselect function



1. Position ON + performs the following functions:
   a) when selected once, it activates the function and maintains the speed currently set with the accelerator pedal.
   From now on, you can release the accelerator pedal and the vehicle will keep the set cruising speed.
   b) when the function is already activated, it is used to increase the vehicle speed without using the accelerator pedal.
2. Position ON - performs the following function:
   when the function is enabled, it is used to decrease the vehicle speed.
3. Position RESUME performs the following function:
   it activates the function and automatically adjusts the vehicle speed to the last stored value after the engine has started (the last stored value before the system is disabled, in accordance with the selected speed).
4. Position OFF de-activates the function.
5. **Tip Function**
   Selecting position ON+ or ON- for a short time varies the vehicle speed by 1 km/h (e.g. with 60 km/h, selecting position ON+ three times sets the speed to 63 km/h; selecting position ON- three times sets the speed to 57 km/h).
   1st speed set must be reached before performing this operation.

Disabling the system

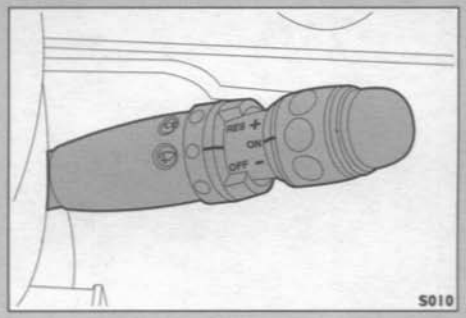
The system is disabled:

- **manually** and permanently by selecting the OFF position.
- **Automatically** and permanently by pressing the brake or clutch pedal.
- **Automatically** and permanently by pressing the accelerator pedal (requesting a higher speed than the set one) for more than 3 minutes.

After disabling the system, you can restore the previously set cruising speed by simply selecting the RESUME position.

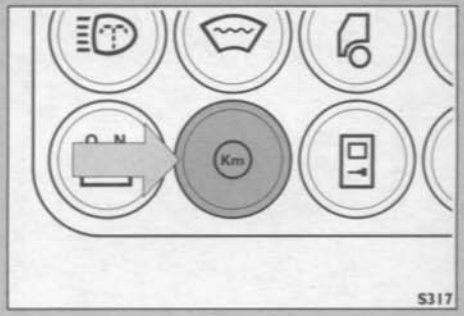
The system is temporarily disabled when a higher speed is requested by pressing the accelerator pedal (for less than 10 sec.).

As soon as the accelerator pedal is released, the function is automatically reset to the last stored value.



Speed limiter (if supplied)

Once the desired speed is reached, press the push-button shown in the picture for at least 0.2 seconds (only for a speed over 5km/h). The vehicle's top speed is limited by the pre-set speed value, and the configuration remains active even during gear changes (the speed limiter remains activated). It is deactivated if the push-button is pressed for a second time or if the ignition is turned off for at least 5 seconds. If the engine is restarted before this time interval, the speed limiter remains activated.



Power take-off (where fitted)

Proceed as follows to obtain maximum performance from the power take-off device:

- Run the engine at idle speed, depress the clutch pedal, wait 4 to 5 seconds, then operate the power take-off device through pushbutton 1. The lighting of the LED 3 indicates that engagement has been made.
- **Release the clutch pedal very slowly.**

  The engine running speed will be automatically set to a value of 1,100-1,200 r.p.m.

  Then make the engine reach the correct rpm for the use of the system by means of buttons ON+ and ON- of the speed programming device, in order to increase/decrease the engine revolutions, or use the RESUME button to recall the last memorised engine rpm.
- Proceed as follows to to disengage the power take-off device: **depress the clutch pedal**, wait 4 to 5 seconds and then press pushbutton 2. Led 3 goes out.

Warning! Actual enablement of control devices activated through pushbutton 1, 4 and 5 is delayed to garant the operator the possibility to cancel the command.

1. Pushbutton for power take-off engagement.
2. Pushbutton for power take-off disengagement.
3. Power take-off engagement warning lamp.
4. Pushbutton for body tipping (if fitted).
5. Pushbutton for body lowering (if fitted).
6. Body motion warning lamp (if fitted).

Warning!

Serious damage risk: always ensure all objects are securely fastened inside the cab to prevent them from hampering controls or hitting passengers in the event of an accident.

Safe driving

Before starting the vehicle

- Adjust your seat, the steering wheel and the rearview mirrors so as to drive in a correct position.
- Check that no obstacles affect the stroke of the pedals, especially the brake pedal.
- Check the operation of the horn.
- Check the operation of the exterior lights and, if necessary, clean the lighting units.
- Especially when driving at night, check for the correct aiming of the light beam.
- Check for any leakage of oil or other fluids below the vehicle.
- Check that any load is correctly stowed.
- Finally check that the parking brake is off and that the dashboard warning lights signal no malfunctions.
- To avoid accidental movements of the vehicle, disengage the parking brake with the foot brake pressed.
- Correctly fasten the safety belts.

While driving

- To take long journeys, you must be in excellent form.
- A light diet, based on foods that can be easily assimilated, helps to have quick reflexes and the necessary concentration for safe driving.
- The excessive use of alcohol, drug and some medicines is extremely dangerous. Dot not drive if you are drunk or if you have taken any drugs.
- Driving carefully also means being able to foresee an incorrect or imprudent behaviour of other drivers, respect the speed limits or drive in the running lane when travelling in highways.
- Use the turn signal lights when you change direction.
- Keep at a safety distance from the vehicle that precedes yours; this distance varies depending on speed, weather, traffic and road conditions.
- Do not drive with your hand on the gearshift lever; the effort that you unintentionally exert on the lever, even if slight, causes the internal elements of the gearbox to wear out.
- Do not drive with the gearshift lever in the neutral position.
- Do not lean your foot on the clutch pedal, if not required; this habit may cause the components of this device to early wear out.
- Do not drive for several hours, but stop on a periodical basis to take some exercise and be restored.

- Provide for constant air change making use of the numerous regulations of the heating and ventilation system or of the air-conditioner.
- Do not drive downhill with the engine off: under these conditions, you cannot use the servo brake and the exhaust brake, therefore the braking action would require a greater effort on the brake pedal: use the exhaust brake by engaging the low-speed gears in order not to overheat the brakes.
- If you need to stop because of a failure, park the vehicle out of the roadbed, switch on the hazard warning lights and use the red triangle to signal the presence of your vehicle.
- Do not apply any decals or other stickers on the windows since they may distract you and block the view.
- Throwing burning objects like cigarette ends out of the window during vehicle ride may be a serious risk for people, other vehicles, surrounding environment, as well as carried goods and the vehicle itself.

When the vehicle is parked

When you have to stop the vehicle, operate as follows:

- Turn the engine off.
- Insert the parking brake.
- Engage the 1st gear if the vehicle is parked on an ascent or the reverse gear if the vehicle is parked on a descent.
- When the engine is off, do not leave the ignition key in the MAR position, to avoid unnecessary current absorption that would discharge the battery.

Driving at night

- Drive very carefully; if required, decrease the speed, especially on roads without light.
- Keep at a greater safety distance than when driving in the daylight: it is actually harder to determine the speed of a vehicle when you can only see its lights.
- Stop and take a rest when you feel sleepy: it may be dangerous for yourself and for the other people if you continue to drive.
- Use the high beam lights only outside towns or villages and when you are sure that you cannot annoy the other drivers.
- Turn the high beams off and low beams on when you cross other vehicles.

Driving with rain, fog and snow

- If the road is wet, the adhesion between wheels and asphalt is considerably reduced, with resulting decreased braking distance and roadholding when cornering: decrease speed and keep at a greater distance from the vehicles preceding you.
- Heavy rain and fog reduce visibility; in accordance with the applicable local rules, turn the low beams on even in the daylight, especially to make yourself more visible.
- Do not drive at high speed in the presence of puddles or flooded roads. The aquaplaning effect may cause you to lose control of the vehicle: preferably use the braking effect of the engine and avoid sharp braking.
- If external visibility is reduced, position the ventilation controls as described in the relevant paragraph, to ensure effective window defogging.

- Before starting your vehicle, check the condition of the windscreen wiper blades; if the temperature falls below 0° C, or in the presence of snowfalls, check that the blades are not stuck to the windscreen.
- In the presence of fog drive very carefully, decreasing the speed and possibly avoid overtaking.
- Make sure that the detergent fluid found in the windscreen/headlight washer reservoir is antifreeze and antiscale.
- In the cold weather, it may happen to meet with frozen sections of apparently dry roads: these may be not much exposed to the sun, flanked with trees or rocks.

Tyres

The tyres installed on the vehicle are tubeless type.

To maximize comfort when driving, safety and to ensure long life to the tyres, it is recommended that you observe the following instructions:

- When the tyres are new, do not drive at maximum speed during the first 100 km.
- Before taking sharp bends, although the vehicle performance allows you to do it, decrease the speed.
- Avoid sharp braking or sudden acceleration.
- Do not drive for a long time at a high and steady speed especially on rugged roads.
- Check for the correct position of the wheels.
- Avoid strong impacts on the tyre sides (e.g. when parking).
- Do not absolutely tamper with the inflation valve.
- Do not insert any type of tool between the rim and the tyre.
- If the rim is deformed, replace it.
- In the event of an abnormal pressure drop, replace the tyre and check that it is correctly tightened.

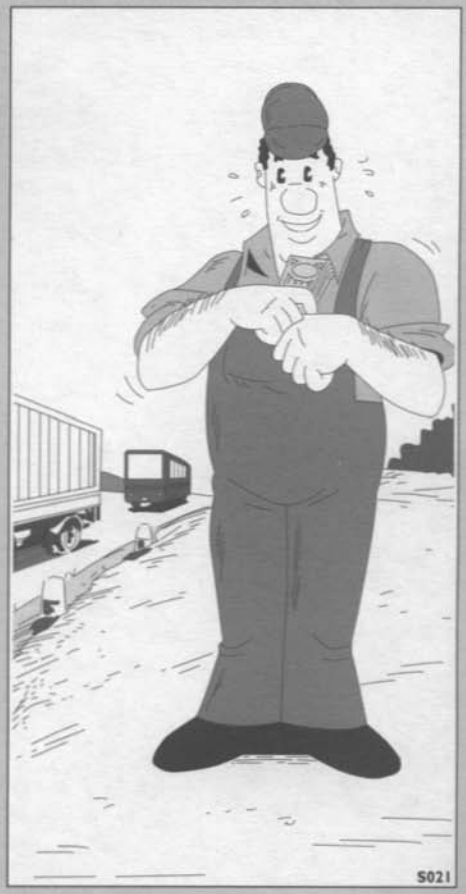
- The pressure of the tyres, including the spare tyre, should comply with the values stated in the relevant paragraph of this book.
- Do not use used tyres, tyres the origin of which is unknown or old (over 6 years) tyres.
- No inner tubes can be used with tubeless tyres.
- Do not leave the vehicle parked for a long time on the edge of a step or another irregular level of the roadbed.
- Periodically check the tread depth, observing the minimum value as per the applicable rules. Some types of tyres are provided with wear indicators; they must be replaced as soon as these indicators are visible on the tread. Tread wear increases the aquaplaning risk.
- Periodically check whether the tread is unevenly worn; if this is the case, call the Service Network.

Snow chains

- The use of snow chains is subject to the applicable rules of each country.
- The snow chains must be applied only to the tyres of the driving wheels.
- To prevent the tyres from becoming damaged, do not drive on roads that are not covered in snow with the chains applied.
  When the chains are applied, drive at moderate speed, avoid any holes, do not get up on steps or pavements.
- With some types of chains, it is necessary to check for tension after driving for a few tens of metres.
- Before purchasing or using snow chains, contact the Service Network which can advise you as to how to choose and use the anti-snow devices available on the market.

Driving under economical and ecological conditions

The operating conditions and the type of driving directly affect the fuel consumption and the environmental impact. By simply observing some rules and without abstaining from driving «brilliantly», the driver can avoid damages to the environment while reducing consumption.



- Do not demand the highest performances when the engine is cold.
- Do not accelerate without reason when the vehicle is parked.
- Drive avoiding sudden acceleration and repeated braking with subsequent acceleration and engaging the highest gear as soon as possible.
- If possible, do not drive with the side windows lowered; you should prefer to use the air-conditioner and ventilation system to obtain the desired environmental conditions within the vehicle.
- Engage a high gear when the traffic and road conditions allow you to do it.
- In case of slow urban traffic or when driving in columns at a slow speed, those devices that absorb a great quantity of energy (internal ventilation at maximum speed) should be used only if strictly necessary.
- Stepping on the gas pedal when shifting and before stopping the engine is useless and, for the vehicles provided with a multistage centrifugal blower, even dangerous.
- The best performance-consumption ratio will be obtained by keeping the engine speed within the green sector found on the speed indicator.

- Carry out the maintenance and setting operations prescribed by IVECO with the greatest care and on a regular basis; this is an essential condition to ensure the longest possible life of the mechanical parts as well as improved fuel economy.

Protection of low-emission devices

The correct operation of antipollution devices not only guarantees the environment protection but also improves the vehicle performance. Therefore checking the status of these devices is the primary rule to follow for driving under ecological and economical conditions.

Strictly observe the Programmed Maintenance Plan: regular maintenance interventions are the best guarantee for a safe operation and running cost containment at optimal levels. These interventions are to be considered mandatory during the guarantee period, lest the guarantee is lost if they are not made.

Models derived

Serious damage risk: always ensure doors are thoroughly closed while you are travelling.
Side sliding door: do not open doors unless the vehicle is at a complete standstill.
Ensure nobody (animal, object) is in the way while doors are being opened/closed.
Use only inside/outside handles to operate the door. Take extra care while opening or closing doors.
Take care doors are thoroughly locked in the open position if you park the vehicle on a donward slope.
Always ensure the door is thoroughly closed before string the vehicle.

Van - differences if compared to cabs:

Fuel filler

Located on the driver's cab rear post.

Tail lights

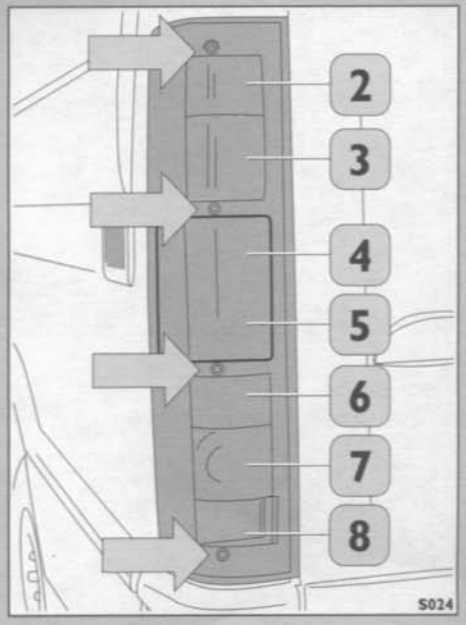
Proceed as follows to replace the bulbs of the rear tail unit:

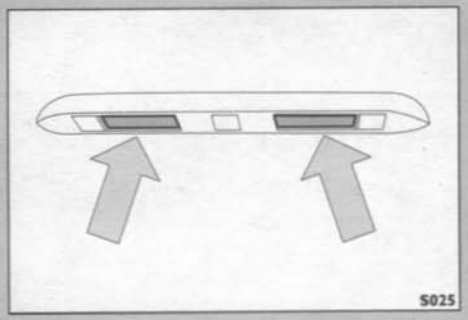
- Loosen the four lens fixing screws.
- Remove the lens.

The bulbs are arranged as follows:

2. Spherical bulb, parking lights.
3. Spherical bulb, stop lights.
4. Spherical bulb, turn indicator lights.
5. Spherical bulb, backup lights.
6. Spherical bulb, parking lights.
7. Spherical bulb, rear fog lights.
8. Retroreflector.

All bulbs can be removed through their bayonet-coupling system.

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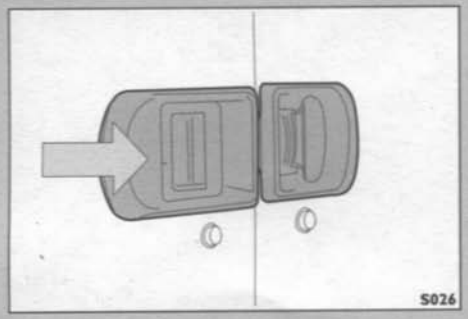
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Number plate lights

Proceed as follows to replace the bulbs of the number plate lighting unit.

- Loosen the lens fixing screws (two)
- Remove the lens.

All bulbs can be removed through their bayonet-coupling system.

Side sliding door

Opening from outside

The handle is provided with a key lock for locking from outside.
To open, pull the handle and push the door to the left.

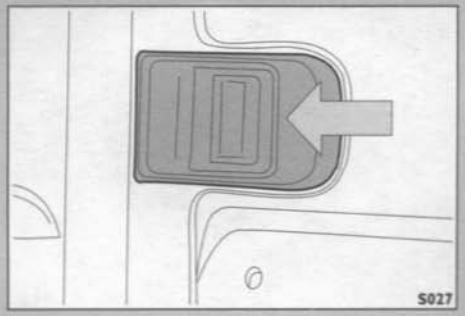
Opening from inside

To open, pull the special internal lever.

Double-leafed rear loading door

Opening from outside

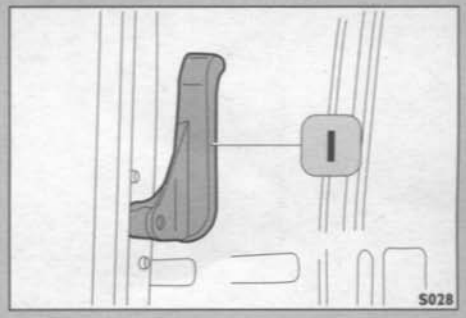
The handle is provided with a key lock for locking from outside.
To open, pull the handle.

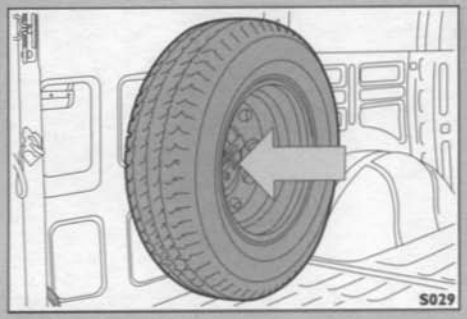


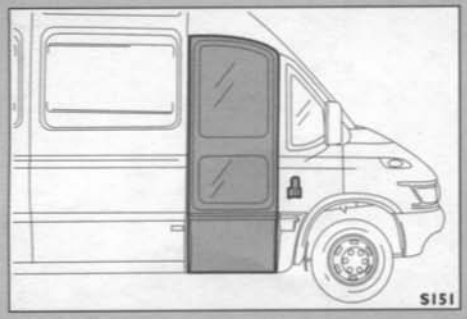
Opening from inside

To open from inside proceed as follows:

- Operate the safety latch button and open one of the two doors with the appropriate lever.
- To open the other door, rotate handle 1.







Spare tyre housing
The spare tyre is placed inside the vehicle; to extract it, loosen the central wing nut.

Vendor version - Differences with respect to van (without side sliding door)
Passenger door of the outswinging type: to open/close the door, press button 1 located on the push-button panel or, from the outside operate the centralised locking remote control described on page 70.
The door is fitted with an automatic system that stops immediately door closing as soon as an obstacle or a person come between door wing and edge.
The door will then open automatically thus preventing damages to objects or people set between.

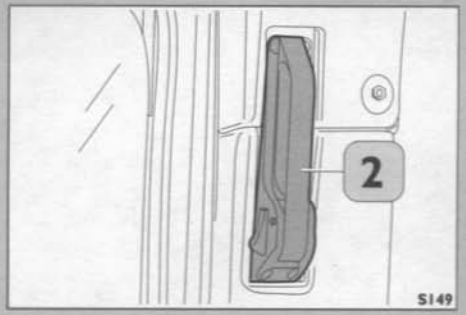
Manual opening/closing emergency device

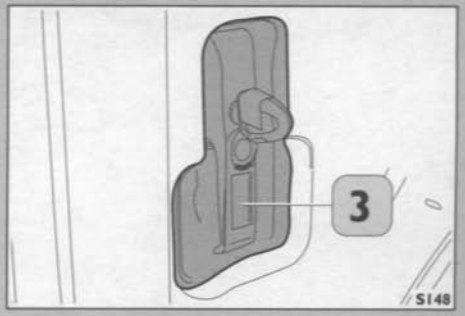
In case of emergency or lack of power, the outswinging door is provided with manual system to open the door from the inside of the vehicle: handle 2 in red plastic is located near the door opening.

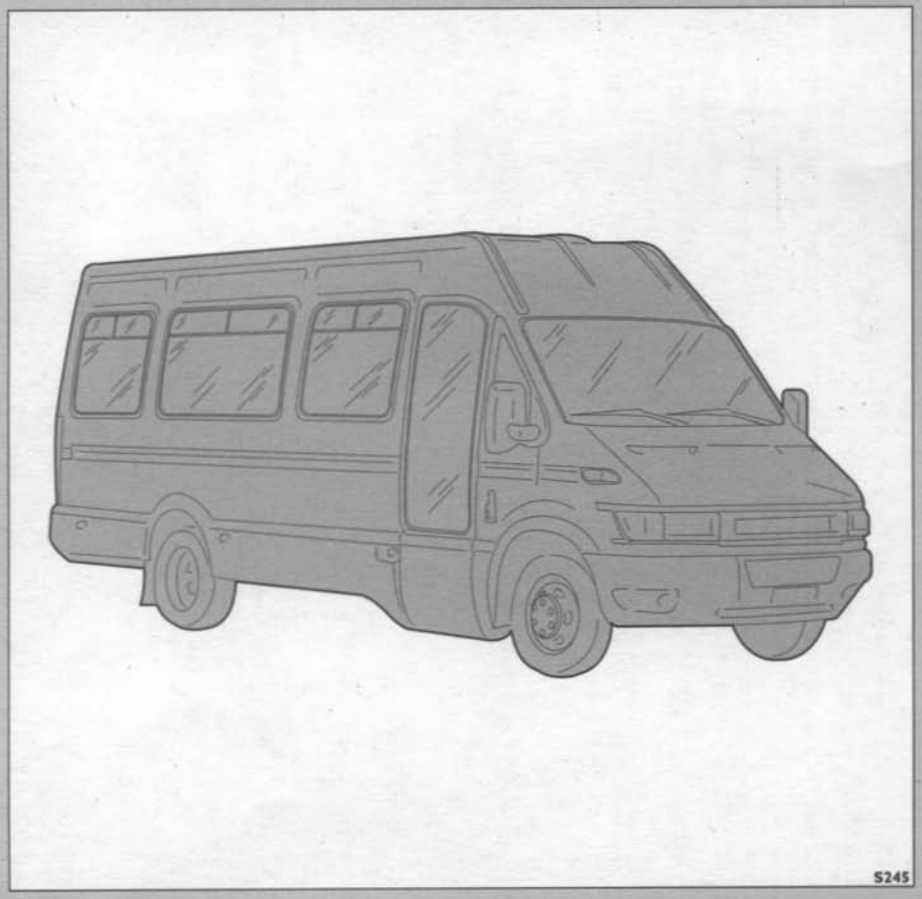
To open the door manually:

- Pull down the handle (a buzzer starts to sound).
- Open the door manually.
- To reset standard operation, reset handle 2 into its seat.

To open the door manually from the outside, remove handle 3 lock cover plug, turn the key in the lock and pull the handle (a buzzer starts to sound).







Models derived to carry passengers - Differences with respect to Vendor version

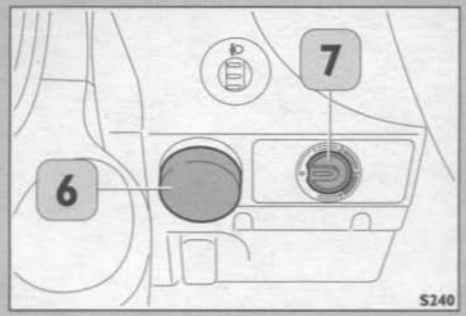
6. Emergency unit control.

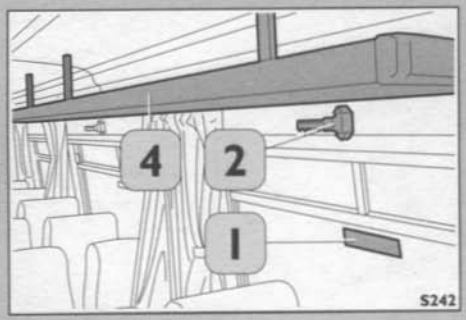
Additional air heater

7. Additional heater control.
   With this control, it is possible to adjust the temperature of the air coming into the vehicle as follows:

0 heater off;
1 air temperature ~ 5°;
2 air temperature ~ 15°;
3 air temperature ~ 20°;
4 air temperature ~ 30°.

At the end of the cold season, the heater must be operated once a month for at least 10 minutes to avoid starting problems at the onset of the following cold season.





Emergency exits
The vehicle has emergency exits consisting of the windows identified by plastic film transfers 1 on them.

Glass breakers
To use the glass breakers 2 you need to remove the lead seal.

Hatboxes (where applicable)
The vehicle can be equipped with the hatboxes 4.

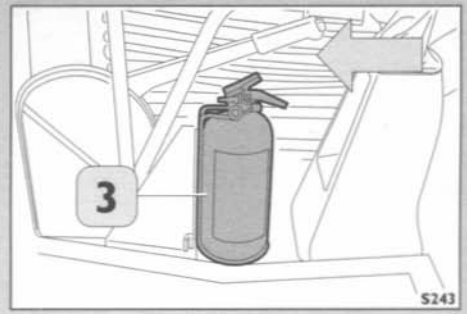
Warning!

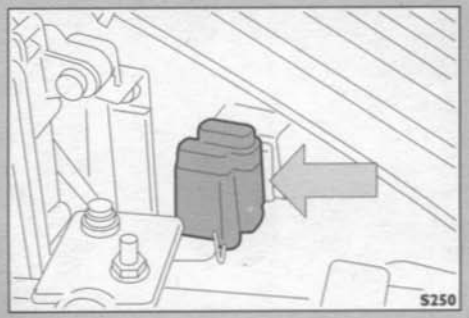
- In case of need, it is possible to break the windows designed for this purpose with the glass breaker 2 supplied.
- Put the luggage away suitably so it will neither move nor fall when the vehicle is moving.
- Before any service, check the glass breakers are in their seats.

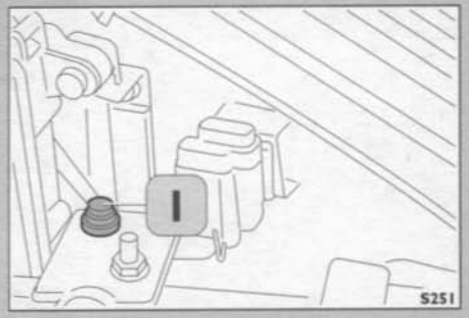
Extinguisher

The vehicle is provided with an extinguisher 3.

This extinguisher is located in the driving seat near the parking brake lever.







Fuses

Inside the engine bay, on the right-hand side of the control unit, there are the following fuses located in their boxes:

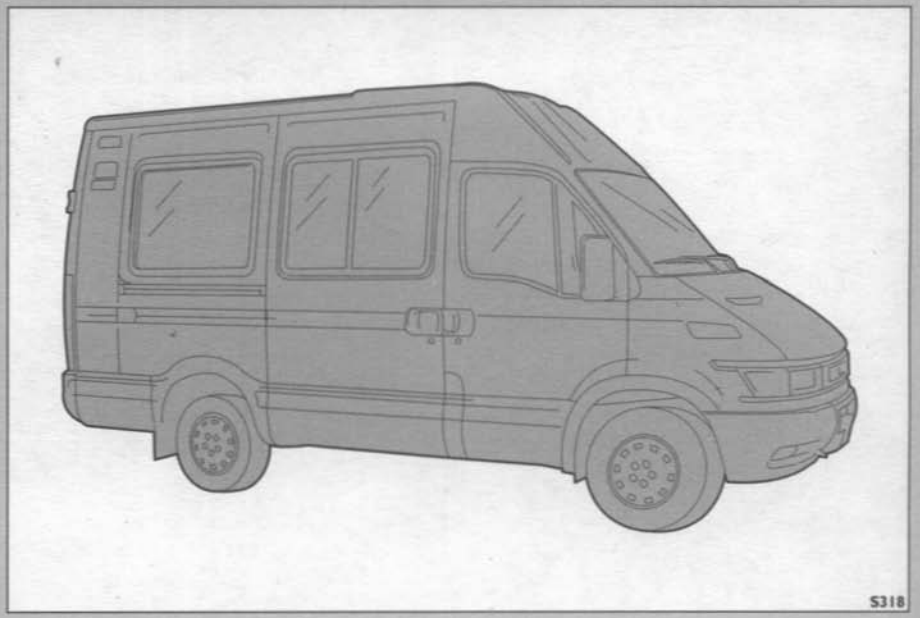
5A Additional heater;
20A Additional heater;
7,5A Courtesy lights;
7,5A Rear ventilator fan.

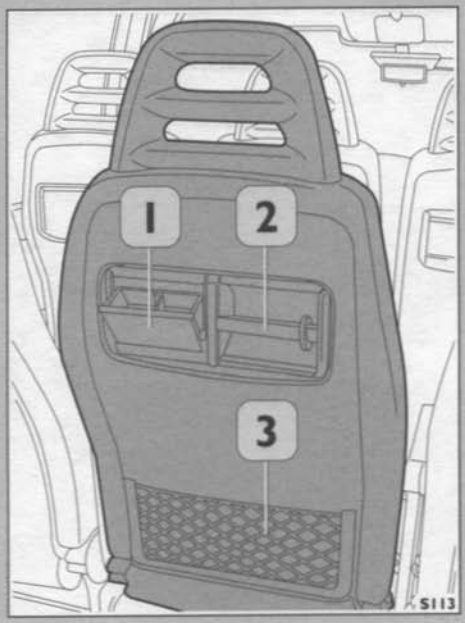
1. Battery disconnector.

Combi - differences if compared to van:

External body

- Rear door with built-in heated window panel.
- Oversized opening angle rear doors (on request).
- Large glass surface side windows.
- Side sliding windows.
- Nonslip material rear footboard.
- Third brake light set on rear upper cross member.





Passenger seats

Standard type

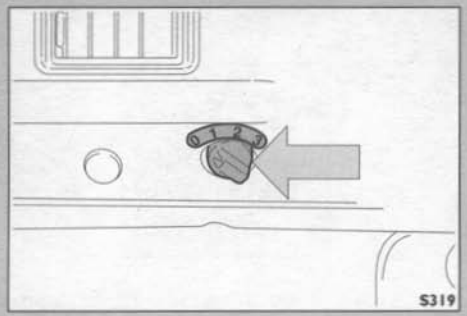
Two-seat bench-type front seat.
Three-seat bench-type centre seat.
Three-seat bench-type back seat.

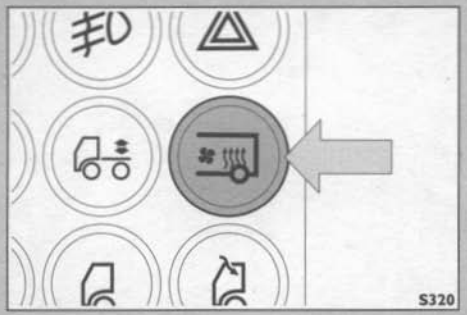
Optional extra type

Single passenger front seat.
The rear part of the second row central seat incorporates:
1. ashtray, 2. handle, 3. Map pocket.

Child restraint systems (approved child seats)
These systems shall only be installed on the second and third seat rows.

Child restraint systems shall never be installed on the first seat row.
Child restraint systems can be installed on whatever seat (left, central, right) of the authorised rows, in both running direction or reverse running direction.





Special fixtures

- Special passenger transport rear suspension system (only version wih long overhang).
- Nonslip material cab floor.
- Prearrangement for ventilation roof hatch.
- Clothes hanger hooks in load compartment.
- Spare wheel at underbody (at vehicle back).
- Auxiliary ceiling lights in passenger area.

Air conditioning system upgraded with air distribution to passenger compartment area

The air conditioning system upgraded with air distribution to passenger compartment area can be only activated when the cab air conditioner is on. To start air distribution to the passenger compartment, operate the speed selector set on the upper horizontal front part.

Additional air heater set in the passenger compartment area

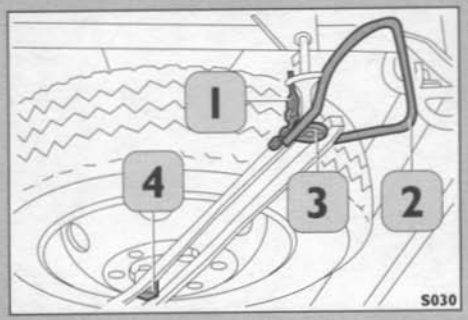
The additional air heater set under the last passenger seat row can be directly activated by pressing the dedicated dashboard button. For proper operation the additional heater shall be activated with engine on and cab heater working in "heating" mode.

This chapter provides some indications to correct some problems that may arise when using your vehicle:

On the spot maintenance

Warning!

On assembling the replaced wheel make sure that the locking device 3 on wheel carrier is fastened securely. For safety's sake check spare wheel fastening at regular intervals.

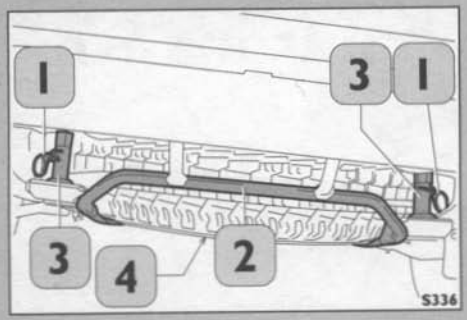


Spare wheel

Proceed as follows to remove the spare wheel:

- Remove clip 1.
- Hold slide 2 and unscrew locking device 3.
- Lower the wheel carrier slide 2 and loosen wheel fixing nut(s) 4.

Note: Raise the chassis to gain access to the spare wheel on vehicles fitted with air suspension.



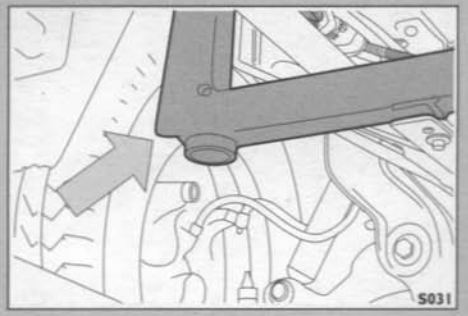
On the vehicles equipped with single rear wheels, the spare wheel can be taken out from the vehicle's rear part instead of the chassis right side. This wheel can be taken out by unscrewing the nuts that fasten the wheel to its respective holder. On a few van and combi versions, the spare wheel is placed inside the vehicle and can be taken out by loosening the central wing screw.

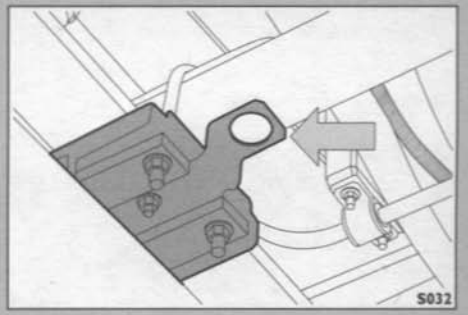
Warning!

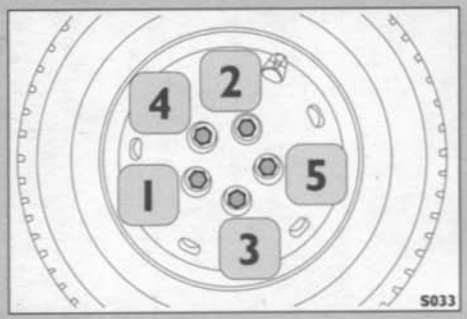
For a correct use of the jack, strictly abide by the labelled instructions.
Also remember that after applying parking brake and before jacking up the vehicle, the wheels remaining on the ground must be chocked securely.
The jack should be used exclusively for raising the vehicle briefly if a wheel needs to be replaced.
Absolutely avoid getting under a vehicle raised by means of a jack.
Turn to an authorized dealer, if necessary.

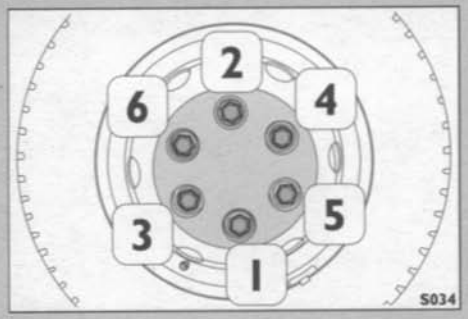
Wheel changing

We suggest that you carry out this operation on level ground.
Raise the wheel by applying the appropriate jack in the areas shown in the two figures, either under the rear axle or under the front suspension respectively.









Important!

It is forbidden to use tools not provided with the vehicle, because they are unsuitable to a correct tightening. Important: Tightening of the wheel nuts should be checked when the vehicle is new and at every wheel removal after the first 50 km and the subsequent 100 km. Remember: for your own safety, never use wheels or fixing elements other than supplied or available as original equipment.

Before fitting a new wheel, carefully clean studs, nuts and contact surfaces.

NOTE: follow this procedure to make it easier to screw out the nuts. Tighten wheel nuts in the sequence shown in the diagram following the steps described below, using the specially provided tool:

- Slightly tighten the nuts so that the wheel is properly positioned on the element to which it will be fixed.
- Tighten the nuts according to the sequence shown.
- Lower the wheel to the ground and tighten the nuts by loading the lever end with your body weight (about 70 kg). (The tightening torque approximately corresponds to the prescribed torque value).
- Always check tyre pressure.

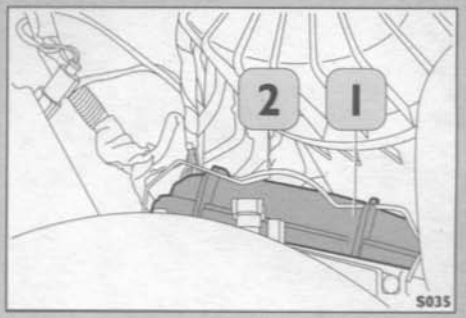
Wheel nuts tightening torque:

Front axle 5817 - Rear axle 450210	160 Nm (16,3 kgm)
Front axles 5818 - 5819 - 5823	290 ÷ 350 Nm (29,5 ÷ 35,7 kgm)
Rear axles 450311 - 450511 - 450517	290 ÷ 350 Nm (29,5 ÷ 35,7 kgm)

Bulbs and lamp socket may be very hot.

Bulbs changing (engine compartment opening procedure: see page 150)

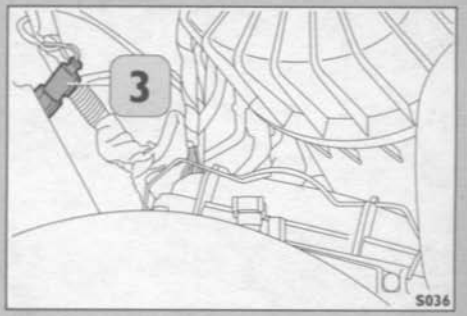
- Use a piece of tissue paper to handle halogen lamps and avoid touching them with your hands; if so, clean lamps with alcohol and let them dry.



Headlights

Proceed as follows to replace the bulbs of the front headlight unit:

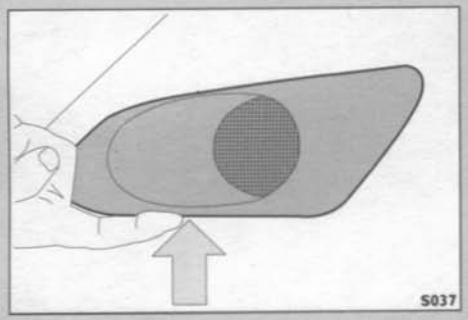
- Inside the engine hood, remove cover 1, extracting retaining spring 2.
- Replace the defective bulb.
- Re-install cover 1.
- Reassemble retaining spring 2.



Front indicator bulbs

Proceed as follows to replace the front indicator bulb:

- Inside the engine hood, extract fixing screw 3.
- Replace the defective bulb.
- Reassemble fixing screw 3.



Side indicator bulbs

Proceed as follows to replace the side indicator bulb:

- Operate the pressure coupling.
- Extract the underneath fixing screw.
- Replace the defective bulb.
- Reassemble the fixing screw.
- Refit the lens to its pressure coupling.

Tail lights

Proceed as follows to replace the bulbs of the rear lighting unit:

- Loosen the lens fixing screws 1.
- Remove the lens.

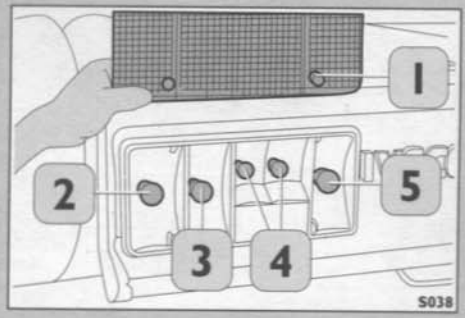
The bulbs are arranged as follows:

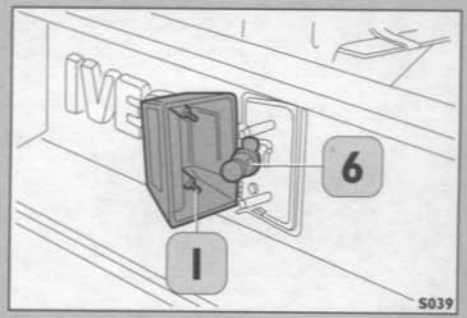
2. Spherical bulb, indicator lights.
3. Spherical bulb, stop lights.
4. Spherical bulbs, parking lights.
5. Spherical bulb, reversing or rear fog lights.
6. Spherical bulb, number plate lights.

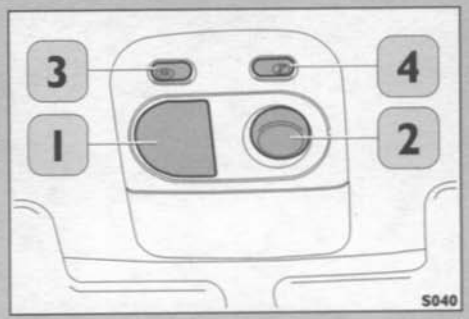
All bulbs can be removed through their bayonet-coupling system.

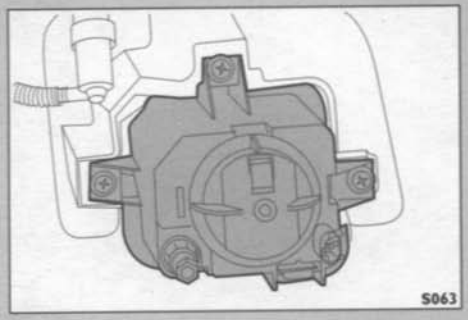
- Refit the lens.
- Retighten the lens fixing screws 1.

NOTE: the rear lighting unit and the number plate lights of the vans are described and illustrated in the specific chapter.









Interior lights

Proceed as follows to replace the bulbs:

- Prize the ceiling light unit from its mounting.

  Bulbs are arranged as follows:

  1. Two cylindrical bulbs.
  2. Tubular bulb (adjustable light beam).

- Refit the light unit.

  3. Fixed beam control switch.
  4. Adjustable beam control switch.

Fog lights (where fitted)

Proceed as follows to replace the bulb:

- From inside, loosen the protection cover to dismantle the lamp.
- Take out the lamp holder retaining springs.
- Replace the halogen lamp.
- On refetting the new bulb, avoid touching it as you might affect the efficiency of its operation.
- Refit the lamp holder retaining springs.
- Reassemble the protection cover.

Precautionary measures for electronic control units installed on the vehicle

In order to avoid improper operations which can result in permanent damage to the control units installed on the vehicle, it is advisable to observe the following instructions:

- Proceed as follows to carry out electric arc welding on the chassis: disconnect battery positive terminal and connect it to chassis earth; disconnect connector from control units.

  When welding close to an electric control unit, remove the latter from the chassis; use d.c. to carry out the welding operation; ensure the welding machine is carthed as close to the welding point as possible; ensure battery cables are not parallel to the vehicle's electrical cables.
- Never disconnect and/or connect connectors from control units with engine running or with control unit energized.
- After any servicing operation requiring battery disconnection make sure that, on reconnection, terminals are well secured to the poles.
- Do not disconnect the battery with the engine running.
- Do not use a battery charger to start the engine.
- Disconnect the battery from on-board mains when charging it.
- Remove the electronic control units if special operations require temperatures higher than 80°C.

Precautions to be strictly observed

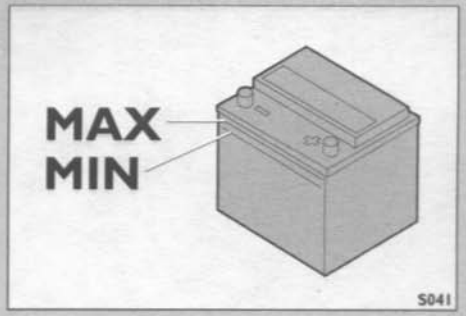
Before carrying out any servicing operation on the electrical system control unit and in particular before replacing the engine starting relay, it is absolutely necessary to take the following precautions to avoid the risks of short circuits:

- Before removing the relay from the control unit, it is of the utmost importance that you switch off the main switch or disconnect the battery terminals.
- A new relay is to be installed where the plastic casing has come off during relay removal or if the relay has been opened for any reason.
- Do not generate temperatures over 100°C (sparks, welding operations, etc...) in proximity of pretightening or airbag devices.

Battery

The used type of battery requires few maintenance operations, therefore, under normal operating conditions, it is not necessary to top up the electrolyte. However, periodical checks are required to verify that the electrolyte level is comprised between the MIN and MAX references shown on the battery.

NOTE: Follow these instructions in addition to those on page 76 for vehicles equipped with electronic alarm.



Safety precautions to be adhered to when handling batteries

1. Smoking, fires or free flames are strictly forbidden. Avoid generating sparks while connecting components or measurement instruments to batteries. Before disconnecting the batteries always disconnect permanently energized components (tachograph, interior lighting device, etc) by removing the relevant fuse from the control unit.
   Avoid reversing connecting wires and mishandling fixed wrenches: shortcircuit risk. Avoid removing terminal caps if not absolutely necessary. When performing wire connections install the earth wire last.
2. Wear protection goggles or mask!
3. Keep batteries and acids at a safe distance from children!
4. The battery contains acids. Wear gloves and protective clothes. Do not tilt or overturn the battery as acid may issue from its holes.
5. Strictly adhere to directions provided by the manufacturer.
6. Risk of explosion! Take particular care after the battery has been recharged or at the end of long journeys. During the charging phase explosive gas (hydrogen and oxygen mixture) is developed inside the battery! Air carefully.

Warning:

- Batteries contain very dangerous substances for the environment. To replace the battery, it is recommended to call the Iveco Service Organization, which has the necessary waste disposal equipment in compliance with the environmental protection applicable rules.
- Incorrect assembly of electrical components may cause serious damage to the vehicle. If, after purchasing the vehicle, you wish to install some accessories, call the Iveco Service Organization, which will suggest the most suitable devices and will advise you as to the need of using a higher-capacity battery.
- The liquid contained in the battery is poisonous and corrosive. Avoid contact with eyes or skin. Any operations must be carried out in a ventilated environment, far from naked flames or possible sparks (cigarettes, etc.): risk of explosion or fire.
- If the battery charge is kept below 50 %, the battery is damaged by sulphation, reduces its ability to start and is more subject to freezing (in this case, freezing may occur at -10°C).
- The starting procedure described above must be carried out by skillful personnel, since incorrect operations might cause high electric discharges.
- To avoid any damage to the vehicle's electrical system, strictly observe the cable manufacturer's instructions; cables must have an adequate section and must be long enough so that the two vehicles do not touch each other.
- It is absolutely prohibited to use a fast battery charger for emergency starting: you may damage the electronic systems and, in particular, the starting and feeding control units.
- Any operations concerned with the connection and disconnection of the battery terminals generate voltages that may cause problems to the electronic systems and vehicle control units. These operations must be carried out by skillful personnel.

Practical hints

To prevent the battery from running down and to preserve its operation, you should follow these recommendations:

- The battery terminals must be well tightened.
- The users (car radio, lights, etc.) should not be kept ON for a long time when the engine is not running.
- When the engine is stopped and the vehicle has been correctly parked, before leaving it make sure that no interior or exterior lights are still ON.
- Before carrying out any operation on the electrical system, disconnect the battery negative terminal.

Battery recharge

The battery recharging procedure is described for information only.
When this operation must be carried out, you should call the Service Network.
It is recommended that the battery is recharged slowly and at low amperage for approximately 24 hours. A longer or more violent recharge may damage the battery.
Recharge the battery following the procedure below:

- If the vehicle is fitted with an alarm system, switch it off.
- Disconnect the electrical system terminals from the battery poles.
- Connect the recharging unit cables to the battery poles.
- Switch on the recharging unit.
- Once the recharging operation is completed, switch the unit off before disconnecting it from the battery.
- Reconnect the terminals to the battery poles observing their polarity.

Engine starting by back-up battery

If the battery is down, the engine can be started by a back-up battery with electrical characteristics similar to those of the original battery.

Starting the engine by a back-up battery does not damage the Immobilizer system and must be carried out following the procedure described below:

- Switch off all the electrical devices that are not strictly required.
- Using an axiliary cable, connect the positive terminals of the two batteries (+ sign near the terminal).
- Connect another cable from the negative terminal of the battery up to the earth of the vehicle with battery down.
- Start the engine.
- Leave the cables connected for at least ten minutes after the engine starts.
- Remove the cables in reverse order with respect to the connection procedure.
- If, after some attempts, the engine does not start, do not insist on trying to start it but call the Service Network.

Serious damage risk: when the engine is off servoassistance by service brakes and steering wheel is not available and a greater effort is therefore needed to operate brakes and steering wheel.

Vehicle towing (use type-approved towing bars only and comply with specified directions)

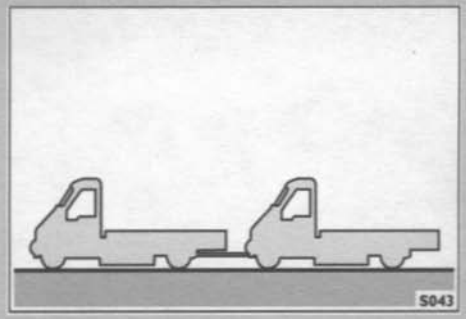
If the vehicle has to be towed over long distances, the propeller shaft must be disconnected from the axle end flange.

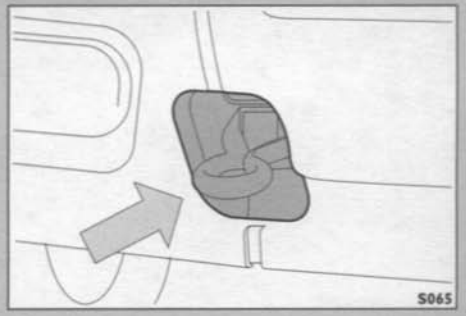
If the engine fails to start (e.g. dead battery or very cold climates), use a back-up battery with similar electrical specifications (see chapter dealing with batteries).

Push start is not advised.

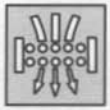
However, should tow or push start be needed, observe the following instructions:

- engage a high gear (e.g. 3rd, 4th)
- reduce speed (downhill also)
- release the clutch pedal gradually.





Warning lamp guide

Warning lamp on	Defect	Remedy
	Water in fuel filter	Drain the water. If lamp stays on, replace filter.
	Air filter blocked	Renew air filter element.
	Low engine oil pressure	With engine cold, check oil level and top up, if necessary. Should the problem persist, refer to an Authorised Dealer.

Warning lamp guide

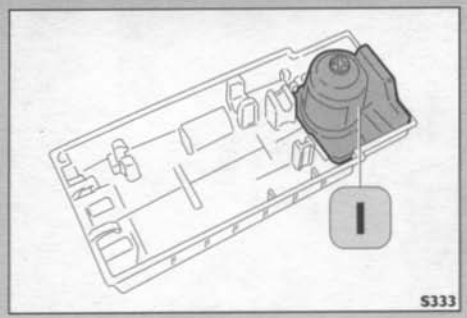
Warning lamp on	Defect	Remedy
	ABS system malfunction	Refer to an Authorised Dealer
	Brake system failure and front brake lining wear	Check brake fluid level. If it is low, refer to an Authorised Dealer to have the system checked and/or brake pads renewed.
	Low battery charge.	Refer to an Authorised Dealer
	Engine coolant level low	Check fluid level and top up, if necessary (operation to be carried out with cold engine). Should the problem persist, refer to an Authorised Dealer.

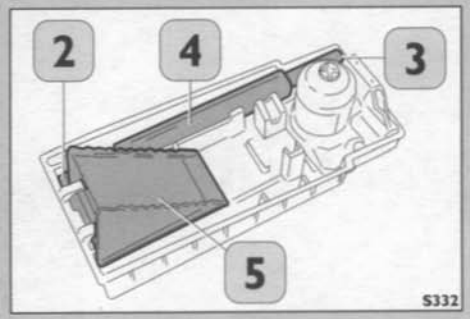
Tool kit

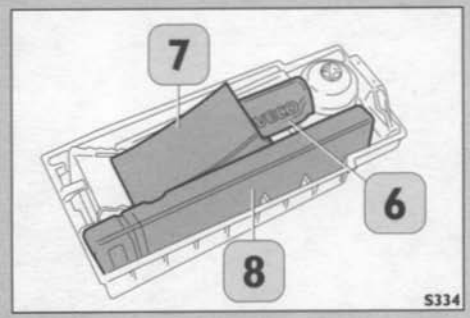
Each vehicle is provided with a tool kit designed to permit routine servicing on the road.

Warning!

Serious damage risk: always ensure all objects are securely fastened inside the cab to prevent them from hampering controls or hitting passengers in the event of an accident.







The tools and accessories placed in the container below the driver's seat must only be put away, after they have been used, by following the procedure below (some accessories may not be available on your vehicle):

1 - Jack (same position for all versions)

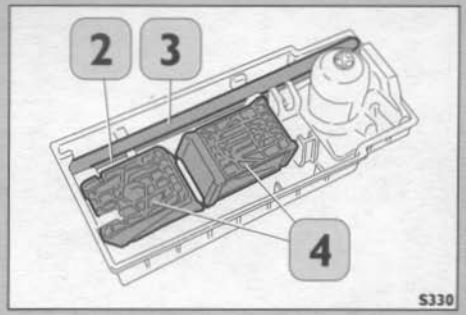
Vehicles with dual wheels

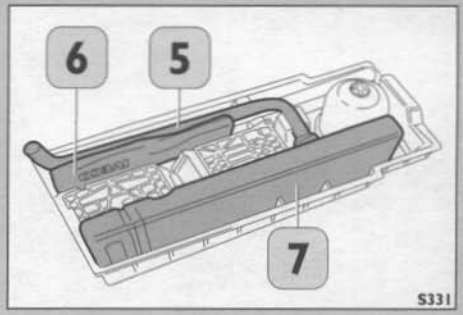
2 - Jack rod
3 - Extension rod
4 - 'T' wrench
5 - First wedge
6 - Tool kit
7 - Second wedge
8 - Warning triangle

Vehicles with single wheels

2 - Jack rod
3 - Extension rod
4 - Two wedges
5 - Stud key
6 - Tool kit
7 - Warning triangle

If your vehicle is equipped with a first-aid kit and/or an emergency lamp, these accessories will be placed in the container below the passenger's seat.





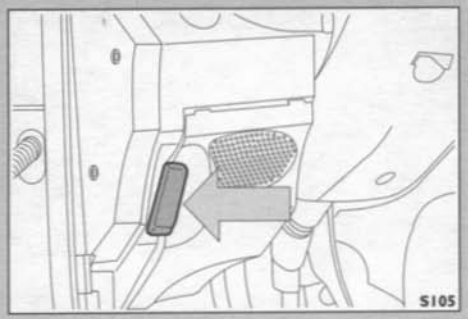
Tool bag contents may vary according to the different versions.

Note: the combi version is equipped with a coupling hook.

Driver check items

Familiarising yourself with some simple checks of your vehicle is extremely important. Preventively check the interventions which are required for correctly replacing wheels (for instance, positioning the jack for lifting, using the provided keys, etc...).
Do not regard these operations as boring routine checks since they largely affect the operation of your vehicle.
Your correct preventive maintenance operations allow the programmed maintenance provided by the Service Network to be supported, saving time and avoiding troubles.

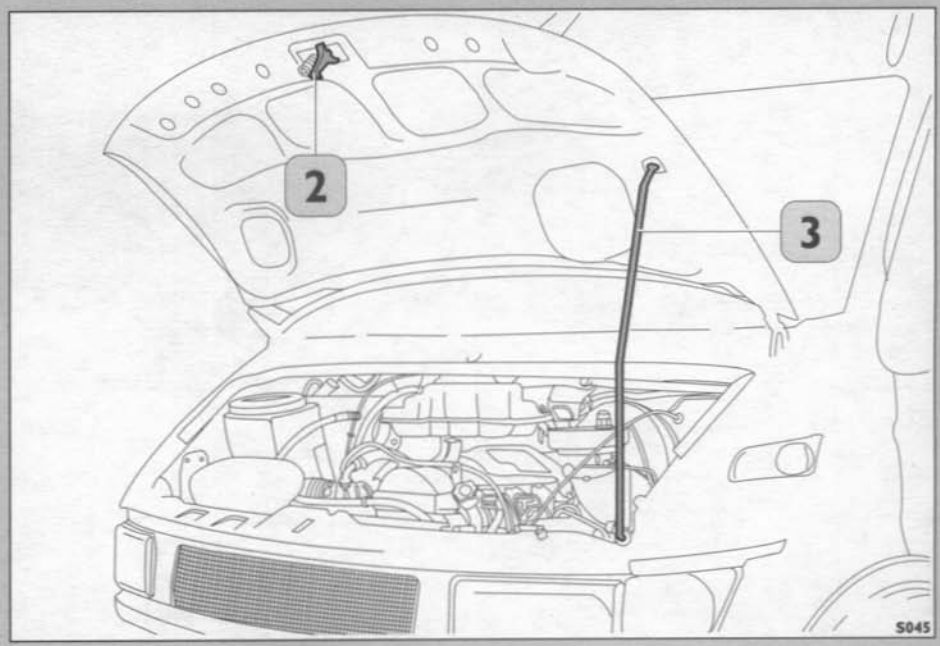
WARNING!
In case of abnormal exhaust smoke or irregular engine noise, go to an IVECO assistance point.

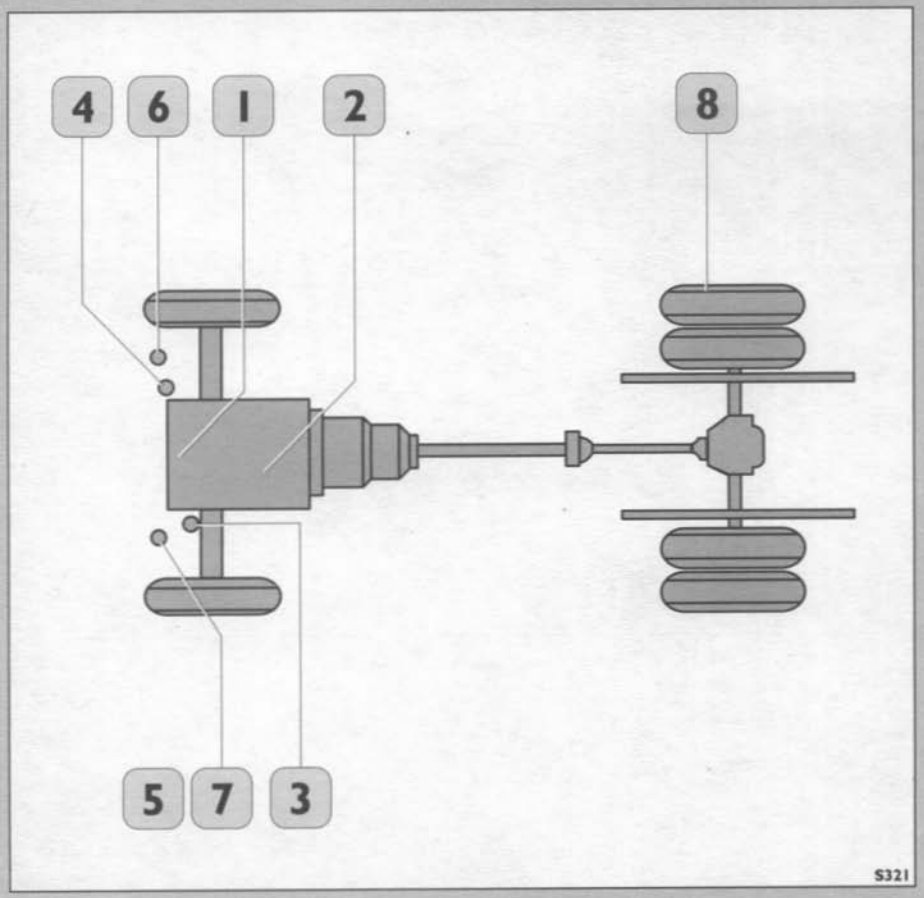


Opening the engine compartment

Pull knob 1 to unlock engine hood from inside the vehicle.
Release hook 2 and lift the hood.
Ensure dipstick 3 is properly fitted in its housing.

Personal danger, precautions to be taken when the engine hood is open:
- avoid touching hot engine components that could burn your hands.
- Avoid wearing loose scarves or clothes that could remain entangled in revolving parts when the engine is running.





■ Before each journey

1. Engine oil.
2. Engine water.
3. Brake fluid.
4. Windscreen washer fluid.
5. Air filter warning lamp.

■ Weekly

6. Power steering fluid.
7. Fuel filter.
8. Tyres.

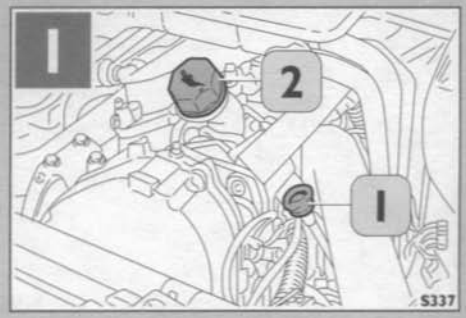
Fire risk: always remember to close filler 2 when topping up is completed to avoid dangerous oil losses while the vehicle is travelling.

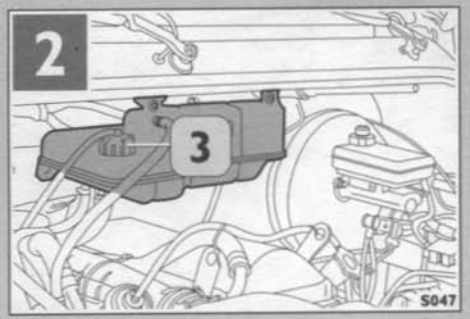
Before each journey

1 Use dipstick 1 to check the level of engine oil.
Top up, if necessary, through adjustable filler 2.

Notes:

- it is essential to wait at least 15 minutes after the engine has been switched off before checking the engine oil level.
- for Euro 4 version F1C engines (with particulate trap) the oil is to be replaced only by authorised garages.





2 Check coolant level.
It may never fall below the MIN level.
Top up, if necessary, through filler 3.

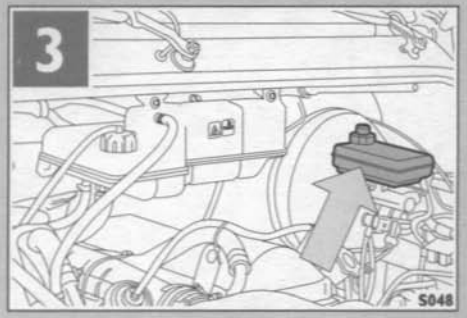
Warning!

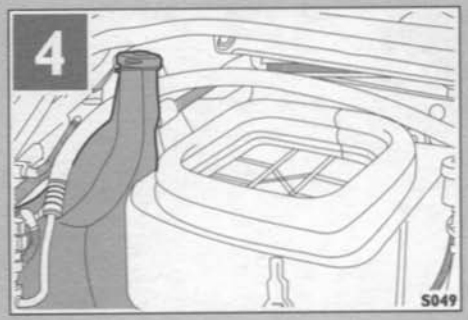
turn off the engine and wait until it cools down before removing the plug or you could be hit by the hot fluid ejected from the tank

Warning:

avoid spilling the brake fluid on your hands as it contains poisonous and corrosive additives; if so, wash your hands immediately with water and mild soap.

3 Check the brake fluid level. If it is too low, refer to an authorised dealer.





4 Check the level of the windscreen wiper fluid. Use a mixture of water and **Tutela Professional SC 35** additive for topping up.

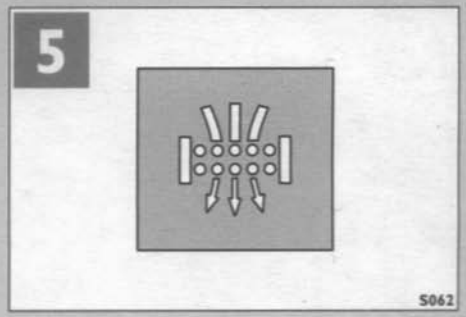
Warning!

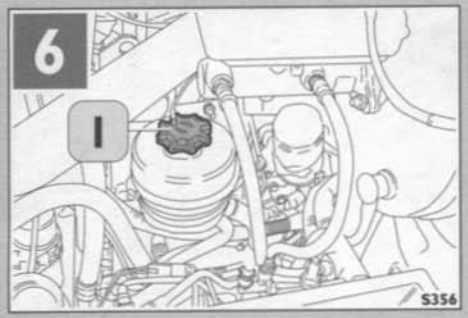
avoid spilling the windscreen washer fluid on the engine when it is hot as some of the fluid additives are flammable.

5 Visually check the efficiency of the «air filter clogged» signalling system.

Also check:

- Conditions of battery terminal connection cables.
- Efficiency of service and parking brakes.
- Efficiency of lights, warning lamps, horn and windscreen wiper.

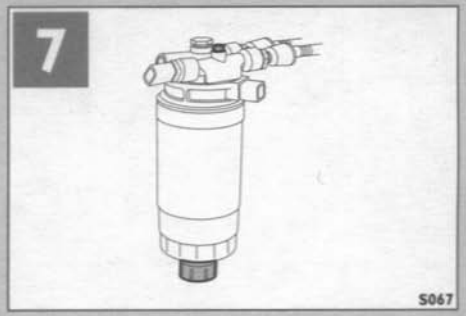


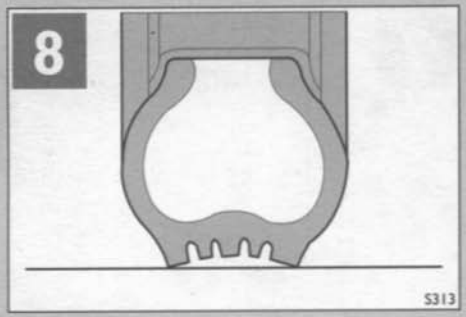


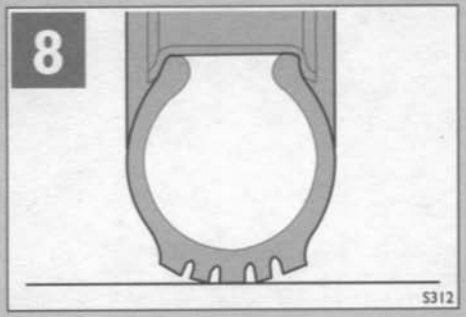
Weekly

6 Remove cover 1 and check oil level.
To top up if required.

7 Should indicator (if fitted on the version) on dashboard light up, drain condensate water turning the tap located on the lower end of the fuel filter.







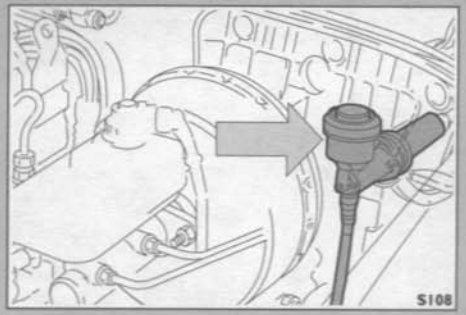
8 Check tyre wear and pressure (don't forget the spare wheel!) If necessary, inflate to the specified pressure. If pressure is low, tyres tend to wear on the outer part of the tread. If pressure is high, tyres tend to wear in the centre part of the tread. If abnormal wear of front tyres (either on the inside or on the outside of the tread), is noticed, have front wheel toe-in checked. Never exceed maximum permissible load on each axle (This however should not affect total vehicle weight). It is advisable to change the tyre pair fitted to one axle when bands - due to block wear - are visible over the entire tread width. Tyres also show wear indicators: replacing tyres is mandatory if tread reached these indicators.

Caution:

- On vehicles equipped with a hydraulic clutch, the cover of tank must not be removed: the unit does not require maintenance.
- The particulate trap in certain conditions may generate high exhaust gas temperatures. Therefore do not park the vehicle near flammable materials such as grass, dead leaves, pine needles, etc...fire hazard.

Also check:

- Efficiency of the exhaust system. The devices that can be used to reduce the exhaust of the diesel fuel engines are particulate traps and the exhaust gas recycling system (E.G.R.)



Vehicle maintenance and cleaning

Bodywork maintenance

Wash the vehicle regularly with neutral agents and water.

The washing intervals depend on the following factors:

- Very polluted environments.
- Driving on roads spread with anti-ice salt.
- Parking under trees producing resinous substances.
- Do not use brushes, hard fibres or dirty cloths to avoid deep scoring and lacklustre of the paint).
- Dry carefully in order to completely eliminate any patches of water.
- Do not wash the vehicle after it has been exposed to the sun for a long time, otherwise the paint lustre may be altered.
- Do not immediately take the vehicle to a closed environment but leave it outdoor so that water can evaporate.

Warning

Detergents pollute waters. Therefore the vehicle must be washed in special equipped areas for the collection and treatment of the washing fluids.

Cleaning of plastic components

External plastic components should be cleaned using the same procedure as for washing the vehicle. Should any dirt persist, it is recommended to make use of specific products and follow instructions provided by the manufacturer. Such products should also be used to clean the cab internal plastic components (dashboard, doors, etc.). Do not use paint cleaning products or any products containing aromatic solvents, methanol or hydrocarbons.

Cleaning of windows

Use specific products; use clean cloths to avoid scoring the glasses or alter their transparency.

Cleaning interiors and fabric parts

The seats and cloth upholstery can be cleaned by means of a soft brush.
Thourough cleaning can be carried out using dry foams and solvents.
Use these products with care as they are inflammable and emit fumes. Therefore aerate the cab until they are perflectly dry. Chlorinated solvents such as trichloroethylene or hyperchloride should be definitely avoided. Never use water jets for cleaning the interiors since they can damage the electronic components set under the dashboard and/or under the seats. Adopt any required precaution to safeguard the proper operation of these parts.

Engine washing

For this operation you should refer to specialized workshops; in any case engine washing should be carried out when the engine is cold; for vehicles equipped with EGR system, it is to be carried out with extreme care to avoid possible damages to the components.

Windscreen wiper, windscreen washer and headlight washer

Periodically check the windscreen wiper arms; if they are worn or dirty, they might considerably reduce visibility. Clean the windows on a regular basis, removing any grease, dirt and tar. Before turning on the windscreen wiper, remove any snow or ice: if outside temperature is below 0°C, before starting the windscreen wiper, make sure that ice has not caused the rubber part to stick to the window, otherwise use a deicing product.

Do not start the windscreen wiper on a dry window; if the rubber wiping parts are deformed or worn, replace the arms.

Make sure that the sprayers of both the windscreen wiper and the headlight wiper (where fitted) deliver an adequate and correctly oriented spray of fluid. If the sprayers do not operate, check that the feeding circuits are not clogged; if required, use a pin to free the outlet holes.

Regular maintenance will ensure that your vehicle gives long life and optimum performance.

Programmed maintenance

Programmed maintenance philosophy

To make sure that your vehicle will always operate under optimum service conditions, carefully follow the instructions given on the following pages covering the checks, inspections and adjustments to be carried out at the recommended intervals. Regular maintenance will always be the best guarantee for safe operation and low cost of ownership. Maintenance operations must be carried out by the Iveco Service Organization at the specified mileage intervals.
Such operations are to be considered as mandatory during the warranty period: failure to comply will invalidate the warranty.
Maintenance operations must be performed exclusively by the Iveco Service Organization who will affix the date, stamp and signature in the specially provided spaces of the Overall Maintenance Plan as validation.

Recommendations

Mileage intervals for engine lubrication are based on a less than 0.5% sulphur percentage in fuel. (According to EN590)
Use only diesel fuel in compliance with standard EN 590 for Euro 4 version F1C engines with the particulate trap.
NOTE: If sulphur content is over 0.5%, distance intervals for engine oil change should be halved.

Maintenance service table

The following specifications should be adhered to regarding the driving performance.

Km interval		Hours intervals	
M1	**M2**	**M1**	**M2**
40.000 km	120.000 km	800	2400

M Services

Including all maintenance operations to be carried out at the specified intervals (km/hours). We hypothesizes an average speed of 50 km/h.

IMPORTANT:

- If using oils according to ACEA E2, API CF-4 specification, the frequency for changing the engine oil and the associated filter has to be reduced to 30,000 km. These oils are **forbidden** for Euro 4 version F1C engines with particulate trap.
- If the distance covered in one year is 40.000 km or less, the engine oil and filter must be changed every 12 months.
- On Euro 4 version F1C engines with the particulate trap, the engine oil is to be changed every 40.000 Km; in special use conditions the engine unit may need to be replaced sooner
- If the distance covered in one year is 40.000 km or less, the transmission oil must be changed every 3 years at least.
- If the distance covered in one year is 40.000 km or less, the rear axle oil must be changed every 2 years at least.
- Vehicles fitted with twin rear wheels and air suspension system: replace the air filter only in case of poor performance by the electro-compressor device.

Service interval plan (km interval)

km x1000							Services
40	160	280	400	520	640	760	M1
80	200	320	440	560	680	800	M1
120	240	360	480	600	720	840	M2

Service interval plan (hours interval)

hours							Services
800	3200	5600	8000	10400	12800	15200	M1
1600	4000	6400	8800	11200	13600	16000	M1
2400	4800	7200	9600	12000	14400	16800	M2

PROGRAMMED MAINTENANCE OPERATIONS		
	M1	M2
Hood opening/closing and engine guards dismantling/refitting operations	●	●
Handling operations	●	●
On-road functional test	●	●
Change engine oil	●	●
Change engine oil filter	●	●
Change fuel filter*	●	●
Check oil level in brake hydraulic system	●	●
Inspecting fuel pre-filter clogging	●	
Change fuel prefilter		●
Change transmission oil		●
Check condition of various drive belts	●	
Check of steering rack boots	●	●
Check brake disks and pads for wear	●	●

* In the event that the clog indicator warning light illuminates on the instrument board, the filter must in any case be replaced prior to the scheduled replacement time.

PROGRAMMED MAINTENANCE OPERATIONS		
	M1	M2
Check fastening of steering box		●
Check steering linkage, joints and steering column		●
Check fastening of universal joints and transmission flanges		●
Check parking brake stroke	●	●
Check headlamp alignment		●
Check-up of engine EDC unit using the MODUS -IT 2000 - EASY systems		●
Replacing the alternator and water pumps belt(s) (engines F1C .14/.17)		●
Replacing the air-conditioner and compressor drive belts (engines F1C .14/.17)		●

NON STANDARD MAINTENANCE (in connection with a maintenance service, if possible)

EVERY YEAR-at beginning spring season in particular

- Check condition of pollen filters.

EVERY YEAR-before the cold season

- Check antifreeze percentage in engine coolant by means of a suitable densimeter.
- Replace the auxiliary heater fuel filter.

EVERY TWO YEARS

- Replace brake fluid and bleed brake hydraulic system.

EVERY THREE YEARS-even if the air filter restriction warning lamp fails to illuminate

- Change cartridge and clean air filter container(1).
- Change cooling fluid(2).

Every 80.000 km (Only Combi versions with engine.12)

- Change air carrying capacity meter (debimeter).

(1) Premature fouling of the air filter is generally due to environmental conditions. The filter must therefore be replaced when the relative sensor is activated regardless of the recommended interval, which however must be complied with in the absence of specific warning signs.

(2) The antifreeze Paraflu must be diluted in water to an amount of 50%, whereas antifreeze FE is already diluted in water in the same percentage.

EVERY 80,000 km

- Change rear axle oil - Clean rear axle oil vapour breather.

EVERY 120,000 km/4 years (engines F1A .10/.12/.14)

- Replacing alternator, hydraulic guide pump control belt POLY-V and air-conditioner compressor control belt

EVERY 240,000 km/5 years (engines F1A .10/.12/.14)

- Replacing timing control belt.
- Replacing timing control belt automatic tensioner.
- Replacing alternator and hydraulic guide pump control belt automatic tensioner.
- Replacing preheating glow plugs.

EVERY 240,000 km/5 years (engines F1C .14/.17)

- Replacing the alternator and water pump belt(s).
- Replacing preheating glow plugs.

VERY DUSTY OR HOT COUNTRIES

EVERY 60,000 km

- Replacing alternator and hydraulic guide pump control belt (engines F1A .10/.12/.14)
- Replacing the alternator and water pump belt(s) (engines F1C .14/.17)

EVERY 120,000 km

- Replacing timing control belt (engines F1A .10/.12/.14).
- Replacing air-conditioner compressor control belt (engines F1C .14/.17)

Overall maintenance and lubrication plan	
Model	Chassis Registration
Surname	Registration date
First name	
Nome	
Address	
City	Telephone

The Programmed Maintenance summary schemes provided on the following pages include the necessary spaces for affixing dealer stamps confirming that the service has been carried out, as required, at the specified mileage intervals.

Overall maintenance and lubrication plan

Km x 1000		Actual mileage at which service was performed	Date day month year	Affix stamp here
40	M1	....		
80	M1	....		
120	M2	....		
160	M1	....		
200	M1	....		
240	M2	....		

Km x 1000		Actual mileage at which service was performed	Date day month year	Affix stamp here
280	M1	....		
320	M1	....		
360	M2	....		
400	M1	....		
440	M1	....		
480	M2	....		

Km x 1000		Actual mileage at which service was performed	Date day month year	Affix stamp here
520	M1	....		
560	M1	....		
600	M2	....		
640	M1	....		
680	M1	....		
720	M2	....		

Km x 1000		Actual mileage at which service was performed	Date day month year	Affix stamp here
760	M1	....		
800	M1	....		
840	M2	....		

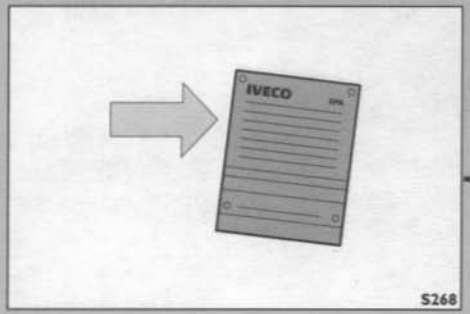
Specifications and data

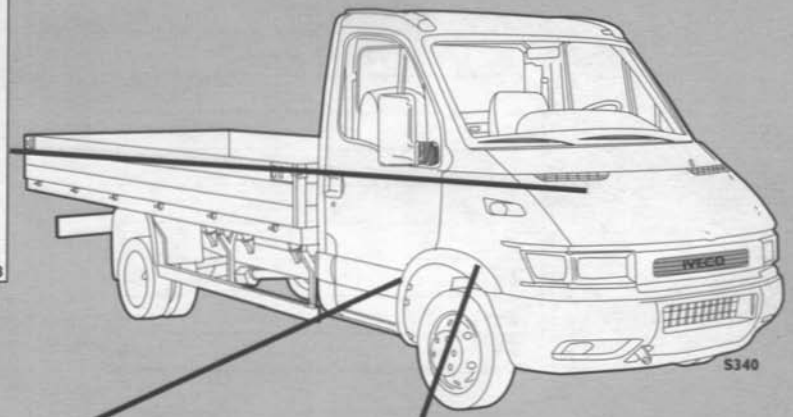
Vehicle identification data

Details of engine type and number, chassis type and number and manufacturer's plate for identification of your vehicle, are provided in the locations shown.

Manufacturer's plate

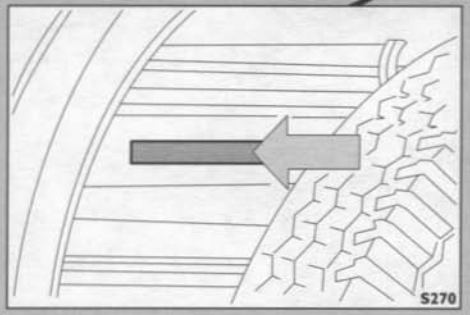
Data for vehicle identification according to E.E.C. standards (inside the engine hood).





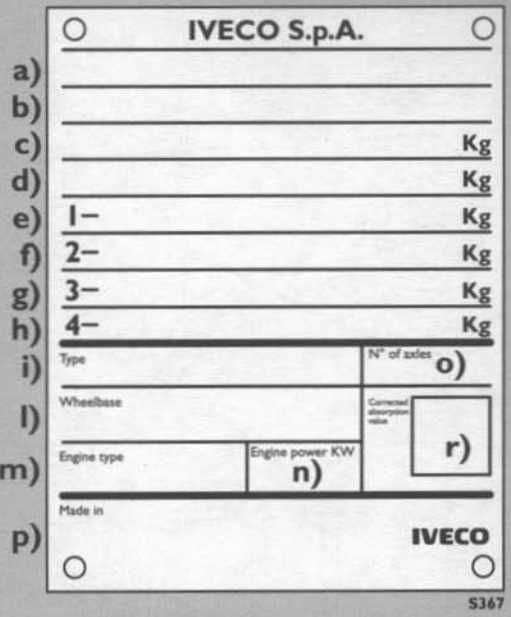
Chassis

Punch marked at front end of frame right hand side member.



Engine

Punch marked on engine block



Vehicle identification plate

a) Type approval number.
b) manufacturer's vehicle specification code.
c) Total weight of tractor unit.
d) Total weight of tractor unit + trailer (where fitted).
e) Max permitted load on front axle.
f) Max permitted load on intermediate axle (where fitted).
g) Max permitted load on rear axle.
h) Max permitted load on 4th axle (where fitted).
i) Specific type identification.
l) Wheelbase (mm).
m) Engine type.
n) Engine power.
o) Number of axles.
p) Production plant.
r) Admissible smoke value.

MODEL	ENGINE	TRANSMISSION	FRONT AXLE	REAR AXLE
29 L 10	FIA 96 HP	5S-300/6AS 300	5817	450210
29 L 12	FIA 116 HP	5S-300/6AS 300	5817	450210
35 S 10	FIA 96 HP	5S-300/6AS 300	5817	450210
35 S 12	FIA 116 HP	5S-300/6AS 300	5817	450210
35 C 10	FIA 96 HP	5S-300/6AS 300	5818/5819	450311
35 C 12	FIA 116 HP	5S-300/6AS 300	5818/5819	450311
40 C 10	FIA 96 HP	5S-300/6AS 300	5819	450311
40 C 12	FIA 116 HP	5S-300/6AS 300	5819	450311
29 L 14	FIA 136 HP	5S-300/6AS 300	5817	450210
35 S 14	FIA 136 HP	5S-300/6AS 300	5817	450210
35 C 14	FIA 136 HP	5S-300/6AS 300	5818/5819	450311

MODEL	ENGINE	TRANSMISSION	FRONT AXLE	REAR AXLE
35 S 17	FIC 166 HP	6S-380 OD/6AS 380	5817	450210
***35 C 14**	FIC 136 HP	6S-380 OD/6AS 380	5818/5819	450311
35 C 17	FIC 166 HP	6S-380 OD/6AS 380	5818/5819	450311
***40 C 14**	FIC 136 HP	6S-380 OD/6AS 380	5819	450311
40 C 17	FIC 166 HP	6S-380 OD/6AS 380	5819	450311
***45 C 14**	FIC 136 HP	6S-380 OD/6AS 380	5819	450511
45 C 17	FIC 166 HP	6S-380 OD/6AS 380	5819	450511
***50 C 14**	FIC 136 HP	6S-380 OD/6AS 380	5819	450511
50 C 17	FIC 166 HP	6S-380 OD/6AS 380	5819	450511
***60 C 14**	FIC 136 HP	6S-380 OD/6AS 380	5823	450517
60 C 17	FIC 166 HP	6S-380 OD/6AS 380	5823	450517
***65 C 14**	FIC 136 HP	6S-380 OD/6AS 380	5823	450517
65 C 17	FIC 166 HP	6S-380 OD/6AS 380	5823	450517

*Model available also in Euro 4 versions (with particulate trap)

Engine

Engine type		FIA	FIA
No. of cylinders		4	4
Bore	mm	88	88
Stroke	mm	94	94
Total displacement	cm^3	2300	2300
Max. power rating	kW(HP)	71 (96)	85 (116)
Rated power speed	r.p.m.	3000 ÷ 3700	3000 ÷ 3900
Max. torque rating	Nm (kgm)	240 (24,4)	270 (27,5)

Engine type		FIA
No. of cylinders		4
Bore	mm	88
Stroke	mm	94
Total displacement	cm^3	2300
Max. power rating	kW(CV)	100 (136)
Rated power speed	giri/min	3600 ÷ 3900
Max. torque rating	Nm (kgm)	320 (32,5)

Engine

Engine type		*FIC	FIC
No. of cylinders		4	4
Bore	mm	95,8	95,8
Stroke	mm	104	104
Total displacement	cm^3	2998	2998
Max. power rating	kW (HP)	100 (136)	122 (166)
Rated power speed	r.p.m.	3500	3500
Max. torque rating	Nm (kgm)	340 (34,6)	380 (38,7)

*Engine available in Euro 4 versions (with particulate trap)

Transmission
Mechanical type with forward gear synchronizers.
5S-300 type with 5 forward gears and 1 reverse gear, in the models with F1A engine.
Type 6S-380 OD with 6 forward gears (6th overdrive) and 1 reverse in the models with F1C engines.
Available upon request, 6AS-300/6AS-380 type with automatic command and electronic management.

Front axle
Independent wheels, with wheel centering on the hub.

Rear axle
Single-reduction type.

Steering system
Hydraulic on all models.

Front suspension

Transverse spring type on models 29 L/35 S/35 C.
With torsion bars on models 40 C/45 C/50 C/60C/65C.
Optional torsion bars on models 35 C.
Telescopic hydraulic double-acting shock absorbers.
Depending on model, optional standard front stabilizer bar.

Rear suspension

Mechanical

Depending on model:

- with parabolic springs.
- with semi-elliptic springs.
- with strengthened semi-elliptic springs.

Leaf springs with spring bushings.
Telescopic hydraulic double-acting shock absorbers.

Air

Supercharger-controlled.
Electronic pressure-regulating valves with dashboard controls.
Depending on version, optional/standard/not available front stabilizer bar.

Braking system
Dual hydraulic circuit with vacuum brake.
Disk brakes with floating calipers on the front and rear wheels.
Low brake fluid level and front and rear brake pad wear indicator.
ABS, ABD and EBD system optional/standard, according to the model.
The handbrake acts on the rear wheels.

Electrical system
Battery: 90/110 Ah maintenance-free (depending on version).
Starting motor: 2.2 kW.–2.3 kW
Alternator: 90A standard production, 120 A standard production on vehicles with air conditioner, optional extra on the other models (F1A models).
110A standard, 140A optional (F1C models).

Lamps	Type	Wattage
High/Low beams	Double filament, halogen	60-55
Fog lamps (optional)	halogen	55
Front parking lights	tubular	4
Front indicators	spherical	21
Side repeater indicators	spherical	21
Rear parking lights	spherical	5
Rear indicators	spherical	21
Rear stop lights	spherical	21
Number plate lights	spherical	5
Reversing lights	spherical	21
Rear fog lights	spherical	21
Internal lights	tubular	4
	cylindrical	10
Marker lights	spherical (front)	10
rear (body only)	cylindrical	5
Side lights (where fitted)	cylindrical	5

Tyre pressures

On the basis of data tabulated on this page it is possible to determine the correct tyre working pressure, with the vehicle in running order, depending on the type of tyre and the load applied to front and rear axles.

Specified tyre pressures are measured with cold tyres and 20 °C outdoor temperature.

Tyre pressures (bar)

AXLE TOTAL LOAD (kg)

		3,0	3,25	3,5	3,75	4,0	4,5	–	–	–	–
205/70 R15 106/104R	single	1360	–	–	–	1740	1900	–	–	–	–
215/70 R15 109/107R	single	1460	–	1660	–	1880	2060	–	–	–	–
225/70 R15 112/110R	single	1540	–	1800	–	–	2240	–	–	–	–

Tyre pressures (bar)

		AXLE TOTAL LOAD (kg)									
		3,0	3,25	3,5	3,75	4,0	4,25	4,5	4,75	–	–
195/65 R16 104/102R	single	–	–	–	–	–	–	–	1800	–	–
	twin	–	–	–	–	–	–	–	3400	–	–
185/75 R16 104/102R	single	1300	–	1440	–	1590	–	–	1800	–	–
	twin	2440	–	2710	–	2990	–	–	3400	–	–
195/75 R16 107/105R	single	1350	–	1520	–	–	–	–	1950	–	–
	twin	2560	–	2890	–	–	–	–	3700	–	–

Tyre pressures (bar)

AXLE TOTAL LOAD (kg)

		3,0	3,5	3,75	4,0	4,25	4,5	4,75	5,0	5,25	6,0
225/75 R16 118/116R	single	–	2100	–	–	–	–	–	–	2640	–
	twin	–	3930	–	–	–	–	–	–	5000	–
+6.50 R16 108/107L	single	–	–	–	1680	–	1840	1940	2000	–	–
	twin	–	–	–	3240	–	3560	3720	3900	–	–

\+ These tyres can also be supplied in the «Tube type» version upon request.
Never mount air tubes inside Tubeless tyres or on specific rims for Tubeless tyres.
Tubeless tyres can only be mounted on their specific rims.

NOTE: versions with twin wheels have an extension to make it easier to inflate the outer rear tyres with sizes 195/65 R16 - 185/75 R16 - 195/75 R16 and 225/75 R16.

Refuelling

Use standard type diesel fuel only (EN 590 standard).

Fuel additives **are not recommended**. The use of fuel additives could restrict the warranty conditions provided for by the vehicle's manufacturer.

Refuelling from barrels or cans can lead to fuel pollution resulting in irregular operation of the fuel feed system. If so, either filter the fuel by means of the suitable equipment or let possible impurities settle, as required.

Low temperature fuel

At low temperatures the fuel fluidity rate can be lower than specified owing to the separation of the paraffin wax. This process may result in filter restriction.

The EN 590 standard provides for several fuel classes to be adhered to at low ambient temperatures.

Complying with the regulations in force depending on climate conditions (yearly seasons and different countries geographical position) is the fuel companies' full responsibility.

Capacities

The use of lube oil additives is not required.

- The use of lube oil additives could restrict your right to the warranty period.
- Expandable materials are detrimental to your health. Should any of these products be ingested by mistake, turn to a doctor immediately.
- Keep children at a safe distance from expandable materials. Dispose of expandable materials and parts in contact (e.g.: filters) according to the regulations in force.
- Iveco Service Network is suitably equipped for disposing of waste oils and filters.

		Lubricants recommended by Iveco	lt	kg
Engine sump*	(MIN)	**Urania Daily** Urana LD 5	3	2,7
F1A version	(MAX)		4,3	3,87
Engine sump*	(MIN)		4,2	3,78
F1C version	(MAX)		6,6	5,94
Oil filter			1	0,9
Transmission 5S-300		**Tutela Truck Gearlite**	2	1,8
Transmission 6S-380 OD-6AS 380			2,2	1,98
Transmission 6 AS 300			2,7	2,43
Rear axle 450210		**Tutela W140/M-DA**	~1,8	~1,5
Rear axle 450311-450511			~1,9	~1,65
Rear axle 450517			3	2,7

(*) The engine oil must be changed at least once a year, even if the number of kilometers travelled is less than that specified.
IVECO recommends use of URANIA Daily to achieve optimal fuel economy. The new vehicle is already equipped by IVECO with this lubricant. Also suited for cold temperatures (up to –30°C)

	Lubricants recommended by Iveco	lt	kg
Power steering	Tutela GI/A	1,4	1,3
Brake system	Tutela TRUCK DOT SPECIAL	1,1	1
Windscreen washer unit	Tutela Professional SC 35	5	4,5
Fuel tank	Diesel fuel	70/100/120	–
Cooling system			
Protective antifreeze 50% concentration	*Paraflu[11]	9	8,1
Freezing point - 35°C		4,5	4

*Note: due to anti-corrosion reasons always use 50% concentration.

International lubricant designation		FL products
Engine oil: conforms to specifications Iveco Standard 18-1811 (ACEA B5) ACEA E5/E3 mineral oil	SAE 5W 30 SAE 15W 40	**Urania Daily** Urania LD5
Oil for differentials and rear wheel hubs to API GL 5 specifications	SAE 80W 90 SAE 85W 140	**Tutela W90/M - DA** (cold climates) **Tutela W 140/M - DA**
Oil for mechanical transmissions containing non EP anti-wear additives Conforms to API GL 4	SAE 75W80	**Tutela Truck Gearlite**
Oil for power steering and hydrostatic transmissions A.T.F. DEXRON II D		**Tutela GI/A**
Lithium soap based grease for general lubrication consistency N.L.G.I. n. 2		**Tutela MR 2**
Lithium soap based special grease for bearings and wheel hubs consistency N.L.G.I. n. 3		**Tutela MR 3**

International lubricant designation	FL products
Hydraulic brake and clutch control fluid Conforming with specifications N.H.T.S.A. n. 116 ISO 4925 SAE J1703 CUNA NC 956-01 Iveco Standard 18-1820	Tutela TRUCK DOT SPECIAL
Liquid for windscreen wipers-mix of alcohol, water and surfactants CUNA NC 956-11	Tutela PROFESSIONAL SC 35
Concentrated protective fluid for radiators with glycol ethylene base containing corrosion inhibitors. Compliant with Iveco Standard 18-1830-CUNA NC 956-16	PARAFLU[11]

Coloured decals containing safety precautions for a number of your vehicle's components have been applied on or near the component concerned.

Decals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S103

Personal danger symbols

1. Battery-Corrosive fluid
2. Battery-Bursting risk
3. Expansion tank-Avoid removing the tank plug when the coolant is hot.
4. Belts and pulleys-Moving parts: avoid touching these components with your body or clothes.
5. Air conditioning system pipes- High pressure gas. Do not open.

Forbidden actions symbols

6. Battery-Keep flames at a safe distance.
7. Battery-Ensure children are kept at a safe distance.
8. Heat shields/belts/pulleys/fan - Avoid resting your hands on these components.
9. Passenger side air bag - Do not install children seats on the front passenger seat.

Caution symbols

10. Power steering system-Do not exceed the specified fluid level. Use fluid of the specified quality.
11. Brake system circuit-Do not exceed the specified fluid level. Use fluid of the specified quality.
12. Windscreen wiper unit-Use fluid of the specified quality.
13. Engine-Use fluid of the specified quality.
14. Expansion tank-Use fluid of the specified quality.

Mandatory symbols

15. Battery-Protect your eyes.
16. Battery/Jack-Adhere to instructions specified in the Use and Maintenance book.

Warning!

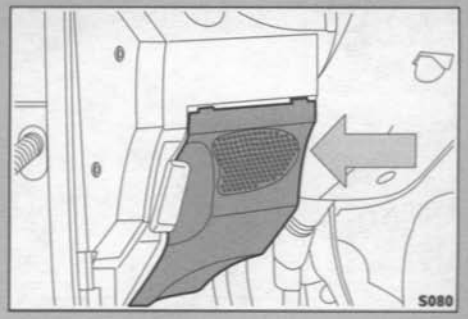
Always disconnect battery cables before proceeding with any service or repair operation on the electrical system.
Avoid tampering with the electrical system.
Turn an authorized dealer in case of need. Never use fuses whose amperage is other than specified: risk of fire.
Trace the cause of the fault and repair it before replacing any fuse.
Always study specifications and data of the electrical system concerned before proceeding with any service or repair operation or the installation of new components. Incorrect repair/assembly procedures may lead to system failure or risk of fire.

Fuses

Relay and fuse box

It is located on the driver's left hand side. Access is gained by opening the door. There is an adhesive tag inside, showing for each fuse, the protected function and the relevant amperage.

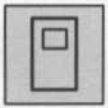
The meaning of each ideogram is described in the following pages.

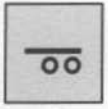
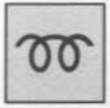


Symbol	Symbol Description		Symbol	Symbol Description
	Immobilizer			Stop lights
	Side/Tail lights			Airbag
	Air conditioner			Power window
	Heated mirrors			Reversing light

Symbol	Symbol Description		Symbol	Symbol Description
	Instrument panel			Headlight washer
	Steering column stalk (rear fog light)			Steering column stalk (main beam headlights)
	Steering column stalk (warning horn)			Steering column stalk (side/tail lights)
	Cigar lighter			Steering column stalk (hazard lights)

Symbol	Symbol Description		Symbol	Symbol Description
	Steering column stalk (dipped beam headlights)			Interior lighting
	Windscreen wiper			Diesel fuel pump
	EDC			Dipped beam headlights
	Main beam headlights			Heater

Symbol	Symbol Description		Symbol	Symbol Description
	Air suspensions			Power take off
	Central door locking system			Additional heater
	Rear differential locking			Sliding door
	ABS			Electric trapdoor

Symbol	Symbol Description		Symbol	Symbol Description
	Unit heater			Diesel fuel filter heater
	Trailer outlet			Fog lights
	Diagnosis			Heat starter[1]
	Heated rear window/heated windscreen			Heat starter solenoid valve[1]

Symbol	Symbol Description		Symbol	Symbol Description
	Engine stop[1]			CNG control unit[1]

[1] Ideogram available on some motorizations only.

DAILY CNG
Differences from the basic version

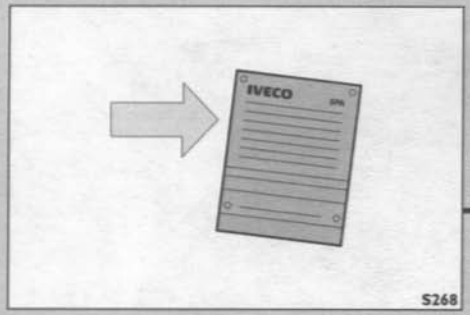
Vehicle outfit

The following items are not available on the CNG version:

- Immobilizer
- Auxiliary heater
- Cruise Control
- Speed controller
- Automatic air-conditioning unit
- Towing hook
- Electronic alarm
- Spare wheel without its own holder (chassis-cab trucks and chassis)
- Fuel filter
- EDC
- Fuel pump
- Air heater
- Fuel filter heater
- Thermal starter and its respective solenoid valve
- Engine stop

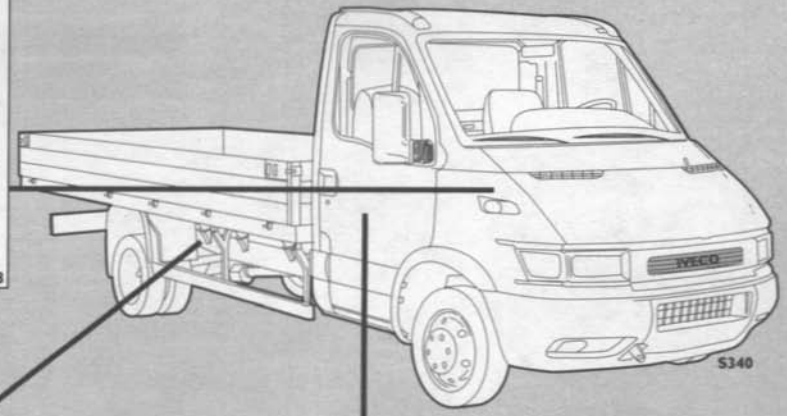
Vehicle identification data

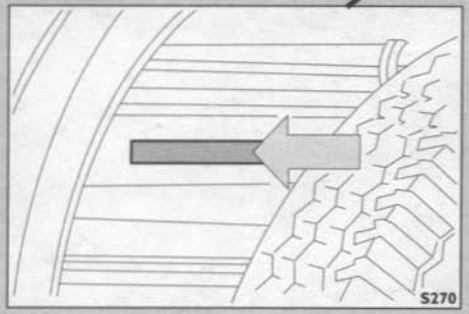
Details of engine type and number, chassis type and number and manufacturer's plate for identification of your vehicle, are provided in the locations shown.



Manufacturer's plate

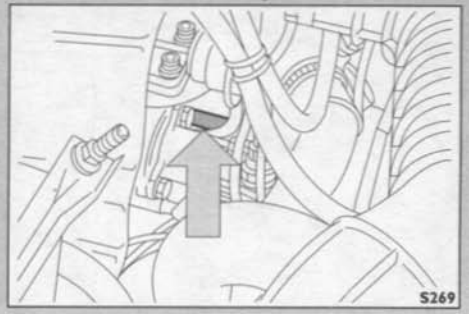
Data for vehicle identification according to E.E.C. standards (inside the engine hood).





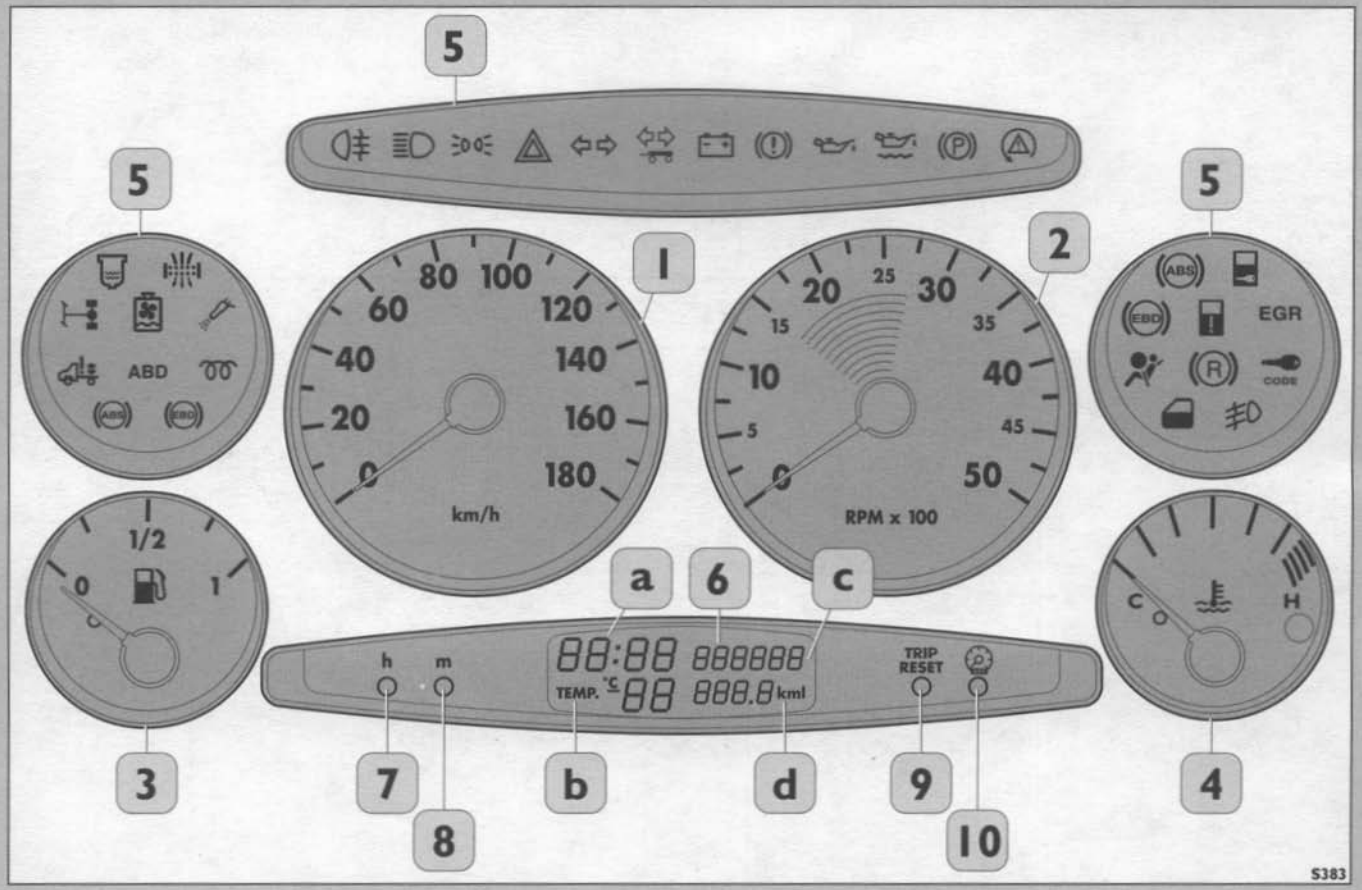
Chassis

Punch marked at front end of frame right hand side member.



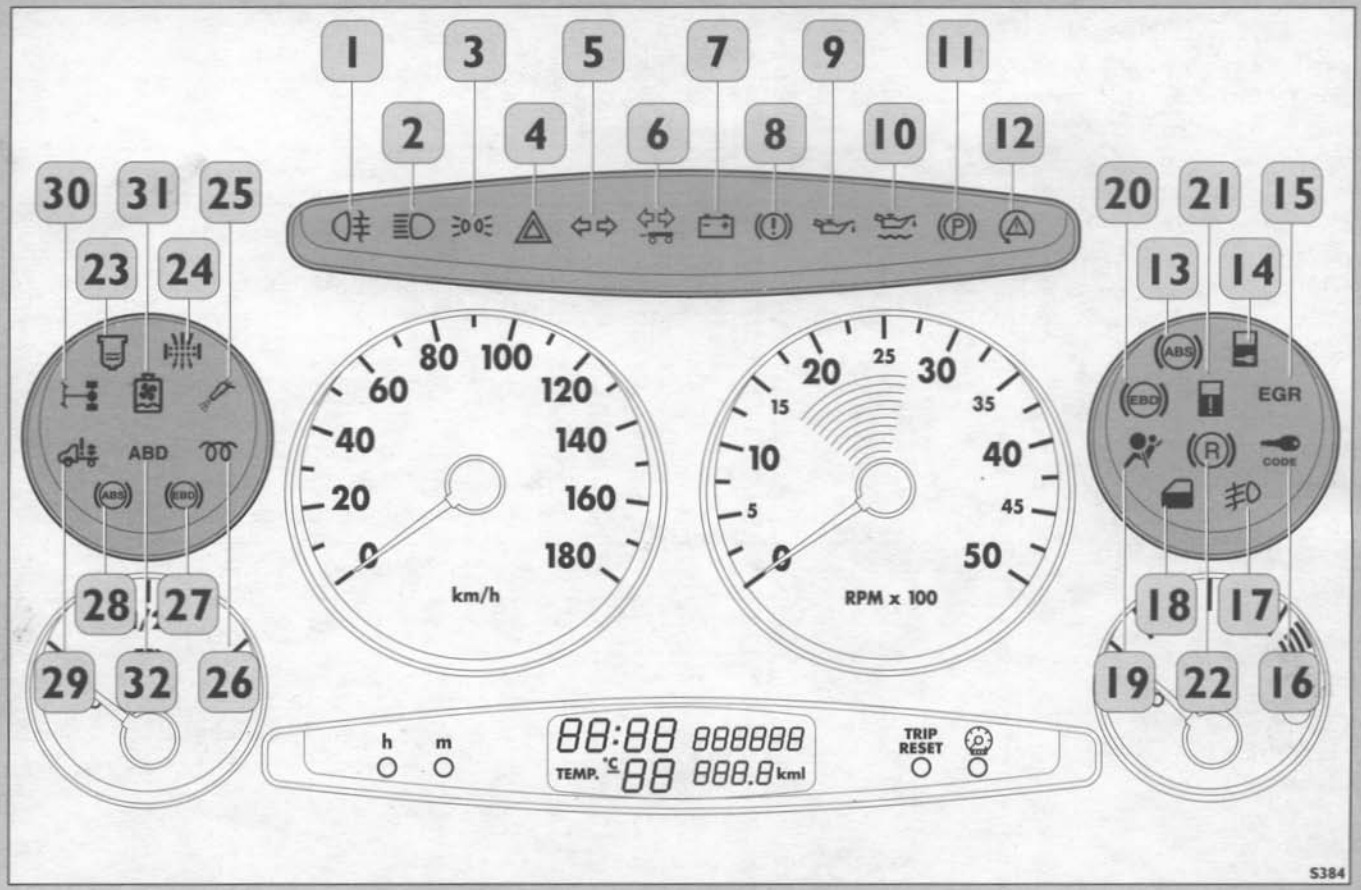
Engine

Punch marked on engine block.


5
5
5
1
2
ABD
EGR
CODE
km/h
RPM x 100
1/2
0
1
C
H
a
6
c
h
m
TEMP. °C
kml
TRIP
RESET
3
7
8
b
d
9
10
4
S383

* Correct functioning of the pilot warning lights indicated with an asterisk is automatically checked, and therefore lights up for a few seconds each time the engine is switched on.
There may also be some warning lights for devices that the vehicle does not possess, that correspond to specific models.

Reference	Meaning
1	Speedometer/Tachograph
2	Revolution indicator
3	*CNG pressure gauge on gas cylinders
4	*Water temperature gauge with high temperature warning lamp
5	Warning lamp cluster
6	Liquid-crystal digital display with the following elements: a. clock b. outside temperature (with air-conditioner only) c. total kilometers or miles odometer d. trip kilometers or miles odometer
7	Hours setting button (for vehicles without tachograph only)
8	Minutes setting button (for vehicles without tachograph only)
9	Trip kilometers or miles odometer reset button
10	Instrument light dimmer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13
14
ABD
EGR
CODE
km/h
RPM x 100
28
27
18
17
29
32
26
19
22
16
h
m
TEMP.
TRIP
RESET
S384

* Correct functioning of the pilot warning lights indicated with an asterisk is automatically checked, and therefore lights up for a few seconds each time the engine is switched on.
There may also be some warning lights for devices that the vehicle does not possess, that correspond to specific models.

Reference	Meaning
15	Not available
16	Not available
17	Fog lights (green)
18	«Door open» warning light (red)
19	Air bag failure (red)
20	EBD 8 braking system failure (red)
21	*Side sliding door system failure (red)
22	Retarder ON (yellow)
23	Not available
24	*Air filter clogged (yellow)
25	Self diagnosis system (red)
26	Not available
27	*EBD 5.3 braking system failure (red)
28	*ABS 5.3 braking system failure (yellow)

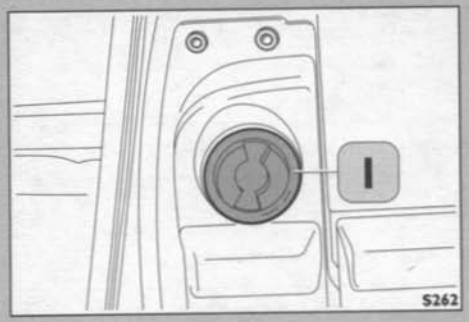
Warning!

During the refilling operation, the gas may cause freezing of the piping outer face. So, do no touch the pipes or you might scald yourself.

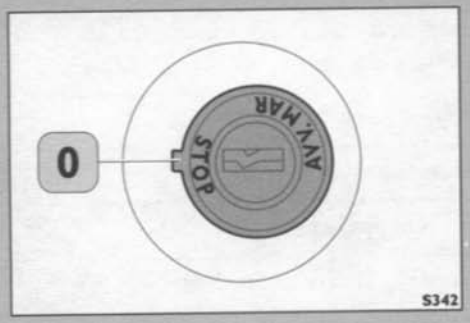
Refilling gas cylinders

Refill the system with gas through filler 1 inside the engine hood (see figure).

Proceed as follows:



- Turn the engine off (set key to position 0 = STOP).
- Undo filler plug 1 (fitted with non return valve).
- Couple the feed pipe.
- Carry out the refilling operation.
- When refilling is over bleed the feed pipe.
- Screw plug 1 onto filler.



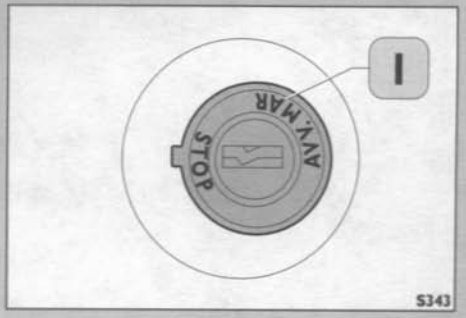
Gas cylinders

The vehicle is equipped with 5-6 cylinders with overall capacity ranging between 220 and 302 litres, depending on the different versions. The cylinders are secured to the chassis by means of suitable brackets. The latter and their respective valves can be inspected by means of two lids placed lengthwise on the fairing of the bottles themselves.

Warning!

When the key is set to position I MAR, solenoid valves on gas cylinders and solenoid valve on pressure reducer are energized for two seconds. As soon as the engine speed exceeds 50 rpm, solenoid valves are again energized and the gas allowed to flow.

Caution! Gas cylinders must be inspected every three years. The expiry date is stated on the cylinders and the vehicle licence. In the case of accidental impact and visible damage, the gas cylinders must be removed and demolished.



Gas quality

As regards system safety, the natural gas used fully complies with the requirements as stated in standard ISO/TC-58/SC3.
The engine has been designed and certified in accordance with EEC directive 1999/96 for universal gas (GN-HL); however the natural gas used must also meet the following requirements:

- Number of natural gas >75 CNG GN-HL (GR/G25)- (EEC directive 1999/96)
- Minimum % of natural gas (CH4) 80%
- Minimum % of oil in gas: 70 p.p.m.

Different gas compositions are acceptable, provided they remain within the limits stated above.

Warning!

Caution: procedure requires that during servicing the following prescriptions be respected:

- maximum charging temperature: 50° C;
- maximum charging pressure 200 bar;
- for cylinder temperature below 50° C, follow the maximum filling pressure values on the scheme on page 227.

Important! Ensure total lack (or minimum permitted quantity) of impurity or foreign matter to avoid impairing the efficiency of catalyst and/or cylinders. If in doubt regarding the compatibility of the gas used, contact the *Service Network* to arrange for a chemical analysis.

Maximum filling pressure

The system's nominal working temperature is 200 bar.

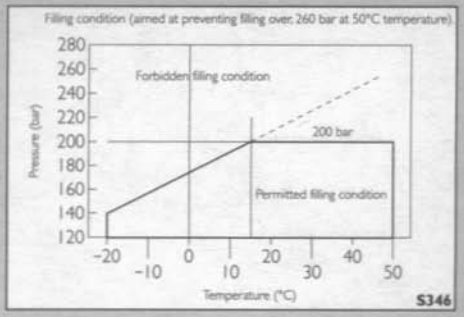
Hydraulic testing pressure is 300 bar.

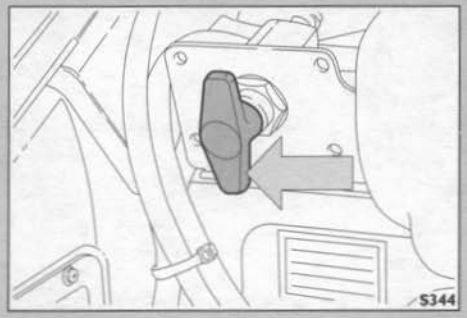
The maximum cylinder external temperature allowed is = 50° C (measured on the external surface).

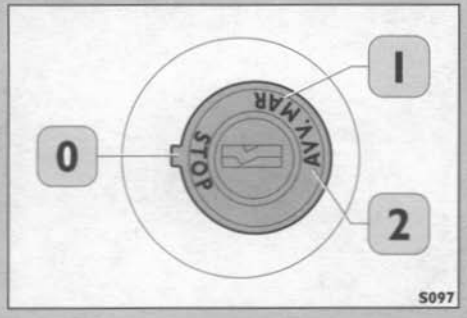
Remember that during the dischrging/recharging cycles, the cylinders are subjected to stress. Therefore ensure all of three following rules are complied with during the refilling operation:

1. Max filling temperature: 50° C.
2. Maximum filling pressure 200 bar (with a 50° C cylinder external temperature).
3. If the cylinder temperature is below 50° C, follow the maximum filling pressures indicated on the scheme on the side.

Attention: if while filling the quantity of gas filled should be lower than the quantity foreseen or however expected, check proper operation of the solenoid valve on each cylinder.







Warning!

If it is required to start the vehicle in a garage or workshop, ensure that adequate ventilation is provided.

The engine should be allowed to idle (either warm or cold) for quite a long time so as to obtain optimum performance and a reduced quantity of noxious emissions.

Engine starting

- Turn battery isolation switch (where fitted), inside the engine hood.
- Engage the parking brake lever.
- Set the gearshift lever to neutral position.
- Insert the key in the ignition switch and turn clockwise to position 1 MAR.
- Ensure the gas pressure is correct.
- Don't rev up the engine.
- Ensure the diagnosis lamp goes off after two seconds approximately.
- If not, perform a diagnostic test using either the IVECO TESTER or the MODUS system.
- When the diagnosis lamp goes off, turn the key to position 2 AVV and release it as soon as the engine is set in operation.
- If the engine does not start, don't insist but release the key, wait a few seconds and then try once more.
- Let the engine idle for 15 seconds (without revving up).

Ignition switch positions

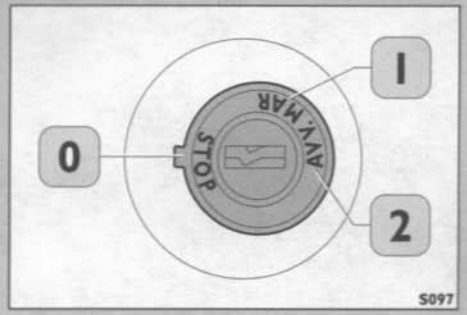
0. = Key in and out-engine stopping-steering lock.
1. = Engine pre-starting and various auxiliary functions.
2. = Engine starting.

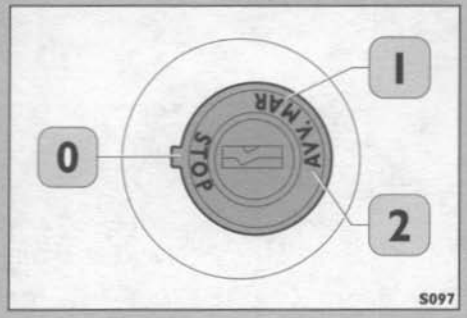
Engine starting (cold)

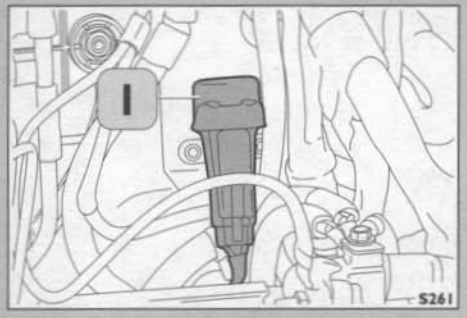
- With the engine cold, depress the accelerator pedal to 50% of its stroke while turning the key to position 2 AVV. Release the pedal as soon as the engine is turned on.
- If the engine does not start immediately, return the key to position 0 STOP before repeating the starting operation.

Directions for heating up the engine after starting

- Start the vehicle slowly, run the engine at an average speed, avoid sudden revups.
- Avoid requesting maximum performance from your vehicle immediately after starting, but wait for the engine coolant to reach 50° C to 60° C.







Warning!

after a minor collision, never actuate switch (1) again if you smell gas (owing to leaks from the fuel system); instead, have your vehicle towed to the nearest service workshop by means of suitable transportation. Otherwise, if the vehicle can be started off again, press the button to actuate all the solenoid valves again.

Engine stopping

To stop the engine turn the key to position 0 STOP.

While the ignition key is set to position MAR the gas system is energized and solenoid valves are alive and therefore open.

With the ignition key in position MAR the pressure reducer solenoid valve is energized for two seconds. It is then energized again during the starter motor cranking phase (if 50 rpm are exceeded).

In case of large inactivity, follow this procedure;

- close every manual on-off valve on the bombs.
- Switch on the engine and wait it to switch off.
- Put the key in 0 position STOP.

When switching on the engine again, only open the manual on-off valves on the bombs.

Inertial safety switch

It is located inside the engine compartment. In case of major bumps, this switch will cut off power supply to all the solenoid valves, both of the bottles and the pressure reducer, by stopping the natural gas flow and causing the engine to be switched off.

While the vehicle is travelling

Low gas pressure

- As long as the pressure inside the cylinders is over 20 bar the engine works correctly.
- With lower pressures combustion defects may damage the catalyst.
- Low gas pressure reveals itself through reduced power and failed response to acceleration.
- In this case, don't force the engine but reduce the pressure on the accelerator pedal and the vehicle speed.
- You should then plan your vehicle's daily service according to safety requirements.

Warnings:

- All the natural gas fuelled systems must strictly comply with the law regulations in force (ECE R110), which establishes that bottles must be overhauled every 3 years only at authorized service centres.
- Each natural gas bottle is identified by means of a punched mark made on the pointed portion of the opening. The punched mark specified: bottle manufacturer; part number; type of gas for which the bottle is intended (natural gas); rated working pressure (200 bar) and hydraulic test pressure (300 bar); bottle capacity (litres); bottle weight (kg); approval details; date of bottle test (month/year). The vehicle documentation is accompanied by a list of the bottled fitted to the vehicle, with the respective dates of test / expiry (month/year). WARNING: filling station attendants must not fill the bottles with natural gas if the date of test for such bottles has expired. They may also ask the vehicle owner to show the relevant documents certifying the bottle's suitability for use

- Cylinders valves, if dismantled for any reason (overhaul for example), should not be reused but immediately discarded.
- Cylinders are fitted with outflow check valves. Emptying of gas cylinders must be performed following special directions. For safety' sake, avoid tampering with cylinders unless you are thoroughly sure they are empty.
- Cylinders involved in shocks or fires should be immediately discarded.

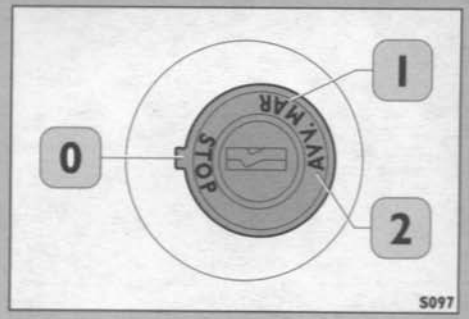
Operations concerning the high pressures system (checks, component replacement etc.) shall be performed exclusively by authorized and highly skilled personnel who will provide a written statement that the system has been brought back into the original condition and meets IVECO specifications (300 bar system seal test).

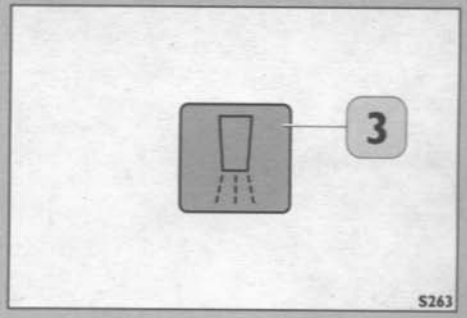
Warning

The warning lamp does not light up in the following cases:
1. Mistaken polarity.
2. Electromagnetic disturbances.
3. Break or short circuit in warning lamp circuit.
4. Supply voltage exceeding rated value.

Self-diagnosis system

The electronic starter control unit is equipped with a self-diagnosis system in case of system malfunction. The system provides a prompt indication of any faults and malfunctions, thus reducing diagnostic time and associated costs. The system is also protected from electrical circuit failures (short circuits, etc.) and operates automatically when the ignition key is turned to position I MAR.
A malfunction is indicated by flashing of warning light 3 (slow or fast).
For fault finding and repair, call the Iveco Service Organization.





Programmed maintenance

Maintenance service table

The following specifications should be adhered to regarding the driving performance.

Engine oil: Selenia SAE 10W40

km intervals			Hours intervals		
M0	**M1**	**M2**	**M0**	**M1**	**M2**
Within the first 2000 km	20.000 km	40.000 km	Within the first 40 hours	400	800

M Services

Including all maintenance operations to be carried out at the specified intervals (km/hours).

IMPORTANT:

- if the distance covered in one year is 20.000 km or less, the engine oil and filter must be changed every 12 months.
- if the distance covered in one year is 40.000 km or less, the transmission and rear axle oil must be changed every 3 years at least.

Intervals for servicing operations (km)

km x1000						Services
20	60	100	140	180	220	M1
40	80	120	160	200	240	M2

Intervals for servicing operations (hours)

hours						Services
400	1200	2000	2800	3600	4400	M1
800	1600	2400	3200	4000	4800	M2

In consideration of the specific type of engine fuel, IVECO recommends that the engine should be serviced shortly after initial use. Operations regarding the engine fuel and injection systems include a CNG engine diagnostics procedure by means of MODUS or IT 2000.

M0 - Warranty coupon

(have this check carried out within the first 2000 km or after the vehicle has been in use for 40 hours)

Engine

- Check engine oil level.
- Check seal of high/low air pressure gas system pipes.
- Check seal of pressure regulator heating fluid pipes.
- Gas system: check wiring continuity and efficiency.
- E.C.M. control unit, coils and spark plugs: check electrical connections.
- Injection system: carry out diagnostic test.
- Check operation of the solenoid valves on the CNG.

Chassis and mechanical assemblies

- Check engine coolant level.
- Check tightening of gas cylinder fastening collars and brackets.

Miscellaneous

- Handling operations.

Miscellaneous

- Check operation of steering system.
- Check operation of service brake,
- Check operation parking and emergency brake.
- Check operation of windscreen wiping unit.
- Check operation of instruments and warning lamps.

PROGRAMMED MAINTENANCE OPERATIONS		
	M1	M2
Hood opening/closing and engine guard attachment/removal check	●	●
Handling operations	●	●
Operational road test	●	●
Engine oil change	●	●
Engine oil filter change	●	●
Electrical connection check: E.C.M. control unit, coils and spark plugs	●	●
Brake hydraulic circuit liquid level check	●	●
High and low pressure gas circuit pipeline sealing check	●	●
Heating fluid pipeline sealing check on pressure regulator	●	●
Visual check of engine electrical wiring	●	●
Gas circuit electrical cable condition and connection check	●	●
Air intake system sleeve condition and collar tightening check	●	●
Diagnostics to check injection system operation	●	●
Condition check of various drive belts	●	
Steering box rack cap condition	●	●
Check brake discs, pads and shoes for wear	●	●

PROGRAMMED MAINTENANCE OPERATIONS		
	M1	M2
Gas cylinder collar and bracket fixing check	●	●
Check parking brake stroke	●	●
Check operation of the solenoid valves on the CNG	●	●
Steering box fixing check		●
Steering column and tie-rod linkage check		●
Drive shaft and universal joint check		●
Headlamp position check		●
Engine CNG system diagnostics by means of MODUS or IT2000 or EASY		●
Air suspension electric compressor air filter replacement		●
Rocker play check		●
Engine ignition spark plug replacement		●
Air suspension levelling check		●

EXTRA PLAN OPERATIONS (possibly in conjunction with maintenance service operations)

EVERY YEAR - annually at the start of Spring

- Pollen filter condition check.

EVERY YEAR - annually at the start of Winter

- Engine cooling fluid density check

EVERY TWO YEARS

- Brake fluid replacement.
- Brake hydraulic circuit bleeding.

EVERY THREE YEARS

- Engine air filter housing cleaning and dry cartridge replacement (1).
- Engine cooling fluid replacement.
- Attachment/removal CNG cylinders (periodical inspection)

(1) Premature clogging of the air filter is usually caused by environmental conditions. For this reason the filter must be replaced each time the sensor indicates this requirement, regrdless of the schedule specifications, which in general must be observed unless otherwise specified.

EVERY 60.000 km/1.200 hours

- Pressure reducer gas filter replacement.

EVERY 80.000 km/1.600 hours

- Rear axle oil change.

EVERY 120.000 km/2.400 hours

- Distribution drive cog belt replacement.
- Various drive belt replacement.
- Mechanical gearbox oil change.

Overall maintenance and lubrication plan	
Model	Chassis Registration
Surname	Registration date
First name	
Nome	
Address	
City	Telephone

The Programmed Maintenance summary schemes provided on the following pages include the necessary spaces for affixing dealer stamps confirming that the service has been carried out, as required, at the specified mileage intervals.

Overall maintenance and lubrication plan

Km x 1000		Actual mileage at which service was performed	Date day month year	Affix stamp here
20	M1	....		
40	M2	....		
60	M1	....		
80	M2	....		
100	M1	....		
120	M2	–		

Km x 1000		Actual mileage at which service was performed	Date day month year	Affix stamp here
140	M1	....		
160	M2	....		
180	M1	....		
200	M2	....		
220	M1	....		
240	M2	–		

MODELS	ENGINE	TRANSMISSION	FRONT AXLE	REAR AXLE
35 S 11	8149.03	5S-200	5817	450210
35 C 11	8149.03	5S-200	5819	450311
40 C 11	8149.03	5S-200	5819	450311
50 C 11	8149.03	6S-300	5819	450511
60 C 11	8149.03	6S-300	5823	450517
65 C 11	8149.03	6S-300	5823	450517

Engine

Engine type		8149.03
No. of cylinders		4
Bore	mm	94,4
Stroke	mm	100
Total displacement	cm^3	2798
Max. power rating	kW(HP)	78 (106)
Rated power speed	r.p.m.	3800
Max. torque rating	Nm (kgm)	220 (22,4)
Rated power speed	r.p.m.	2200

	Lubrificants recommended by Iveco	lt	kg
Engine sump*	Selenia (SAE 10W40)	5,2	4,6
Engine sump and filter*		6,3	5,7
Transmission 5S-200	Tutela Truck Gearlite	2	1,8
Transmission 6S-300		2,7	2,43
Rear axle 450210	Tutela W140/M-DA	~1,8	~1,5
Rear axle 450311-450511		~1,9	~1,65
Rear axle 450517		3	2,7
Poser steering	Tutela GI/A	1,4	1,3
Brake system	Tutela TRUCK DOT SPECIAL	1,1	1
Windscreen washer unit	Tutela Professional SC 35	5	4,5
CNG cylinders capacity	–	220÷302	
Cooling system		9	8,1
Protective antifreeze 50% concentration	(2) Paraflu11		
Freezing point -35°C		4,5	4

(*) The engine oil must be changed at least once a year, even if the number of kilometers travelled is less than that specified.
(2) Note: due to anticorrosion reasons always use 50% concentration.

International lubricant designation		Products FL
Engine oil conforms to specifications: CCMC G5 or API SJ ACEA A3/B3		Selenia (SAE 10W40)
Oil for differential and rear wheel hubs to API GL 5 specifications	SAE 80W 90 SAE 85W 140	Tutela W90/M - DA (cold climates) Tutela W 140/M - DA
Oil for mechanical transmissions containing non EP anti-wear additives Conforms to API GL 4	SAE 75W80	Tutela Truck Gearlite
Oil for power steering and hydrostatic transmissions A.T.F. DEXRON II D		Tutela GI/A
Lithium soap based grease for general lubrication consistency N.L.G.I. n. 2		Tutela MR 2
Lithium soap based special grease for bearing and wheel hubs consistency N.L.G.I. n. 3		Tutela MR 3

International lubricant designation	FL products
Hydraulic brake and cluctch control fluid Conforming with specifications N.H.T.S.A. 116, ISO 4925;-Std. SAE J 1703, CUNA NC 956-01 - IVECO STANDARD 18-1820	Tutela TRUCK DOT SPECIAL
Liquid for windscreen wipers-mix of alcohol, water and surfactants CUNA NC 956-11	Tutela PROFESSIONAL SC 35
Concentrated protective fluid for radiators with glycol ethylene base containing corrosion inhibitors: Compliant with IVECO STANDARD 18-1830 - CUNA NC 956-16	PARAFLU[11]

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