DAILY TURBODAILY

Use and maintenance

IVECO

Thank you for deciding on Iveco and at the same time, we would like to congratulate you on your choice: with Daily or TurboDaily 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 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 thoroughout 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 refresher courses in the Iveco training schools so that he can cope with the constant technological development of the vehicles.
This training is, of course, indispensable in order to ensure **a precise diagnosis of the service assistance, rapid intervention and high service quality.**

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Moreover, **the Service** organization guarantees the exclusive use of **Iveco ORIGINAL SPARE PARTS, which is a prerequisite for excellent maintenance of the vehicle, These are in fact the ONLY parts which can be perfectly integrated in the "logic of the whole" with which the vehicle was designed and built.**

To ensure that your Daily or Turbodaily is always in perfect working order, we recommend the use of **programmed maintenance,** which provides the best guarantee for perfect operation and an optimization of the operating costs as a result of its fixed maintenance periods.

While reading this Use and Maintenance manual, 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:

Personal danger: To draw attention to the need to take extra care to avoid possible danger to personnel carrying out the relevant instruction.

Serious vehicle damage risks: To draw attention to the need to follow the relevant instructions to avoid possible damage to the vehicle, equipment or component.

Caution: The text following this symbol provides additional useful information to ensure that an instruction is carried out correctly and safely.

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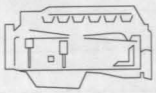
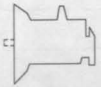
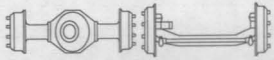
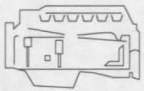
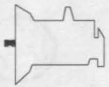
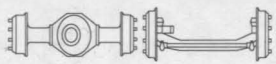
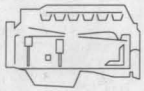
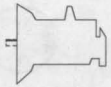
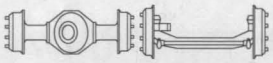
Model coverage:
The following models, detailed on pages 4 to 6, are covered in this publication.

MODEL							
30.8				450211	5811	Disc front	Drum rear
35.8 **40.8**				450311/1	5812	Disc front Disc rear	
35.8 R.S.				450211/2	5812	Disc front Disc rear	
35.8 R.S.	8140.67F PC/NA (+OXICAT)		2826.5	450211/1	5811	Disc front	Drum rear
35.8 **40.8** **35.8 City Version**				450311	5811	Disc front	Drum rear
35.8 Ex Eu **40.8 Ex Eu**				450311	5811	Disc front	Drum rear

Key:
PC = Indirect injection
R.S. = Single rear wheels
Ex Eu = Extra Europe
NA = Naturally aspirated
OXICAT = Catalitized exhaust (where fitted)

MODEL					
30.10			450211	5811	Disc front / Drum rear
35.10 **City Version**			450311	5811	Disc front / Drum rear
35.10 R.S.	8140.23 ID/TC (+OXICAT)	2826.5	450311/2	5812	Disc front Disc rear
35.10 – 40.10 **A40.10**			450311/1	5812	Disc front Disc rear
45.10 – 49.10 **A45.10 – A49.10**			450411/1	5812	Disc front Disc rear
35.10 R.S. EDC **35.10 EDC**	8140.47 ID/TCA/EDC +EGR +OXICAT	2826.5 2826.5	450211/2 450311/1	5812 5812	Disc front Disc rear

Key: ID = Direct injection
TC = Turbocharged engine
TCA = Turbocharged and aftercooled engine
EDC = Electronic Diesel Control system
EGR = Exhaust Gas Recirculation
OXICAT = Catalitized exhaust (where fitted)
R.S. = Single rear wheels

MODEL					
35.12 **40.12** **A40.12**			450311/1	5812	Disc front Disc rear
35.12 R.S.			450211/2	5812	Disc front Disc rear
35.12 **City Version**	8140.43 ID/TCA (+OXICAT)	2826.5	450311	5811	Disc front
35.12 R.S. **35.12**			450211/2 450311/1	5812 5812	Disc front Disc rear
49.12 **A45.12**			450411/1	5812	Disc front Disc rear
59.12			450517	5811/2	Disc front

Drum rear

Drum rear

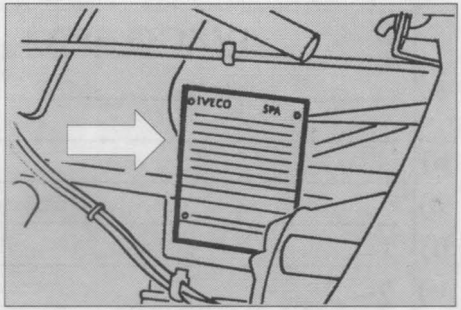
Key: ID = Direct injection
TCA = Turbocharged and aftercooled engine
R.S. = Single rear wheels
EGR = Exhaust Gas Recirculation
OXICAT = Catalitized exhaust (where fitted)

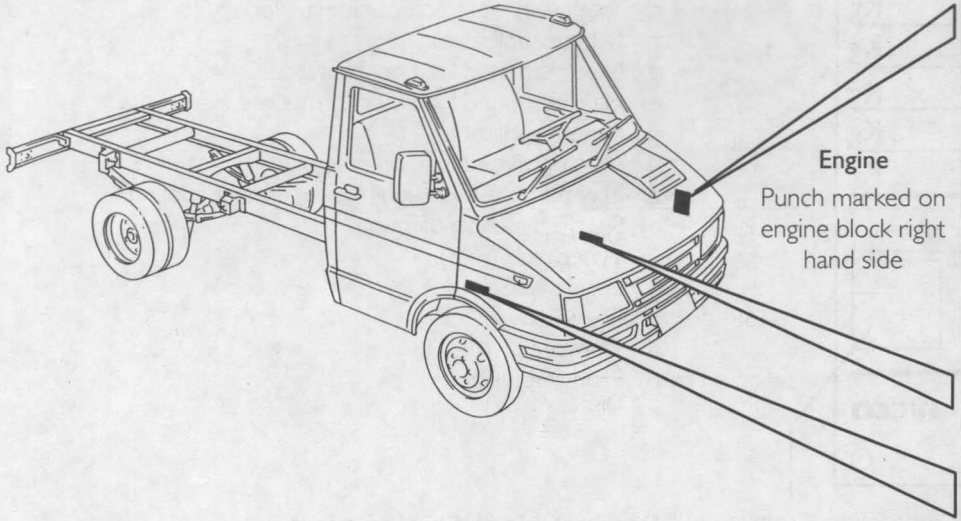
Vehicle identification data

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
(see page 8)

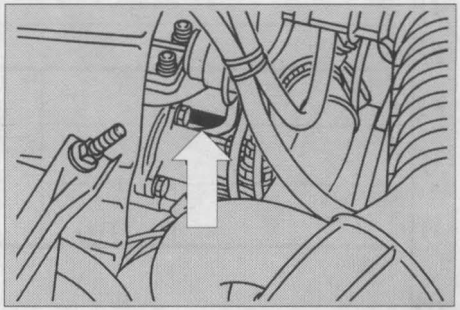
Data for vehicle identification according to E.E.C. standards (inside the engine hood).





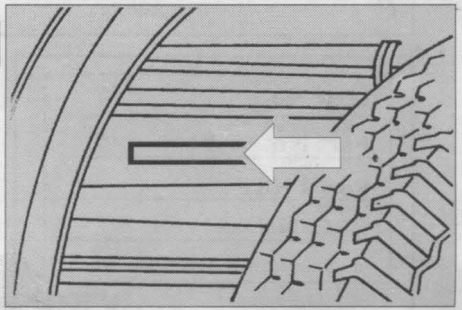
Engine

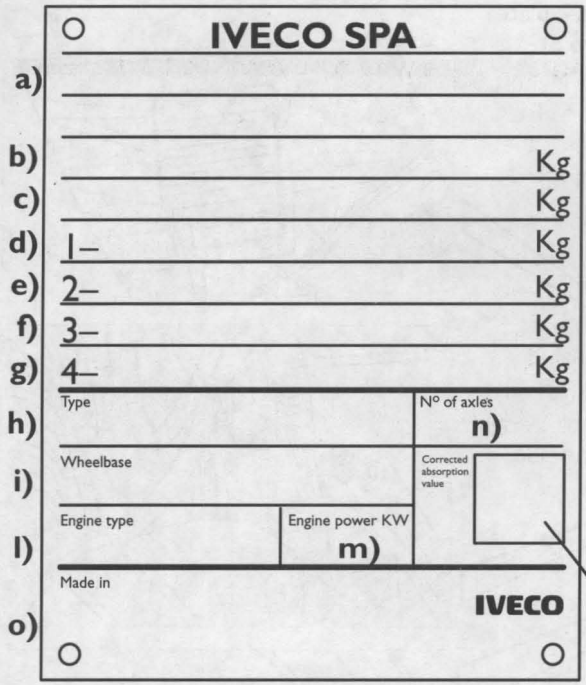
Punch marked on engine block right hand side



Chassis

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





Admissible smoke value

Vehicle identification plate

Key

a) Type approval number; manufacturer's vehicle specification code.
b) Total weight of tractor unit.
c) Total weight of tractor unit + trailer (where applicable).
d) Max. permitted load on front axle.
e) Max. permitted load on intermediate axle (where applicable).
f) Max. permitted load on rear axle.
g) Max permitted load on4th axle. (where applicable)
h) Specific type identification.
i) Wheelbase (mm).
l) Engine type.
m) Engine power.
n) Number of axles.
o) Production plant.

Product identification plate
(inside the engine hood)

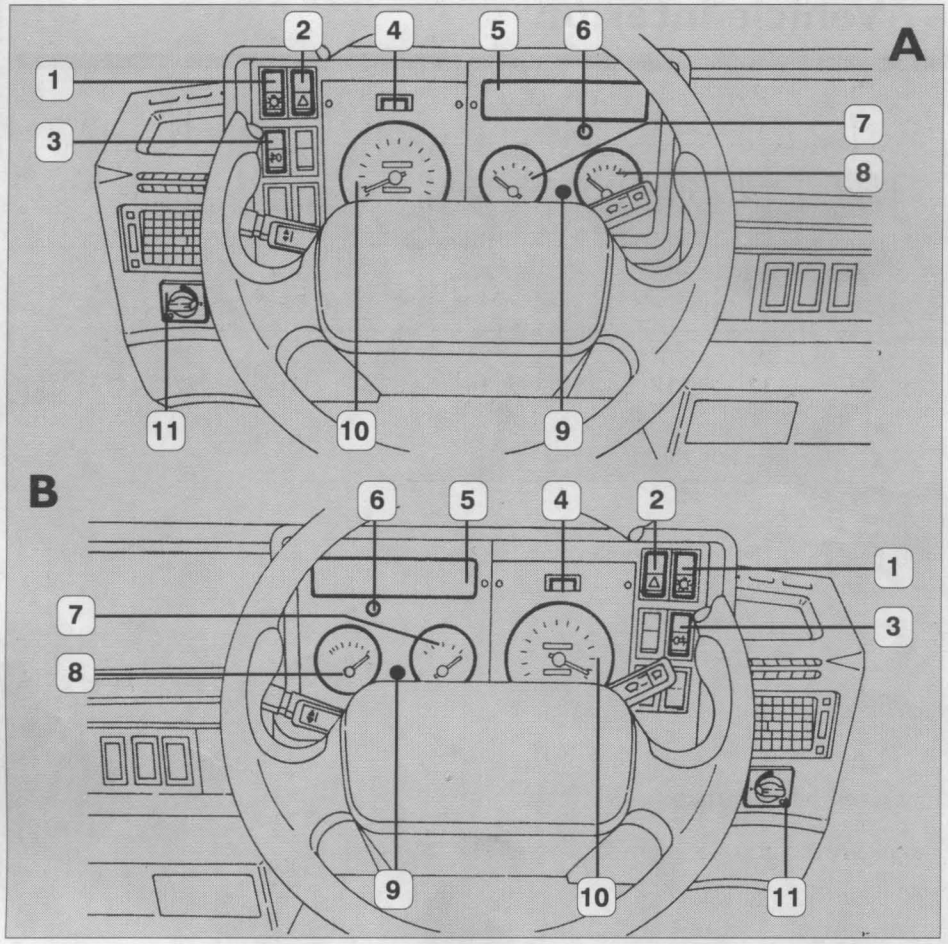
This plate shows P.I.C. (Product Identification Code). This code is of use when obtaining spare parts from an Authorised Dealer. You can also find the P.I.C. on your Warranty Certificate.

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.

Let's familiarize ourselves with the following areas:

- Facia
- Warning lamp cluster.
- Main controls.
- Doors.
- Engine hood.

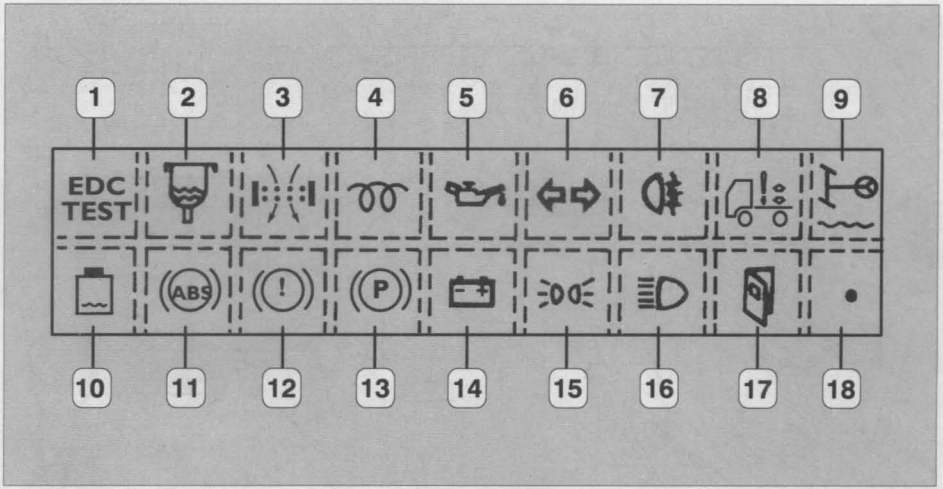


Facia

1. Exterior lighting switch.
2. Hazard lights switch with warning lamp.
3. Rear fog lamp switch.
4. Digital clock (standard on 30 and 35 only).
5. **Warning lamp cluster.**
6. Lamp test button (TEST).
7. Fuel gauge with reserve warning lamp.
8. Water temperature gauge with high temperature warning lamp.
9. Instrument light dimmer (.10 and .12 models only).
10. Speedometer (vehicles with G.V.W. under 3.5t). Tachograph (vehicles with G.V.W. over 3.5t).
11. Headlamp levelling control (where fitted).

A. Left–hand drive vehicles.
B. Right–hand drive vehicles.

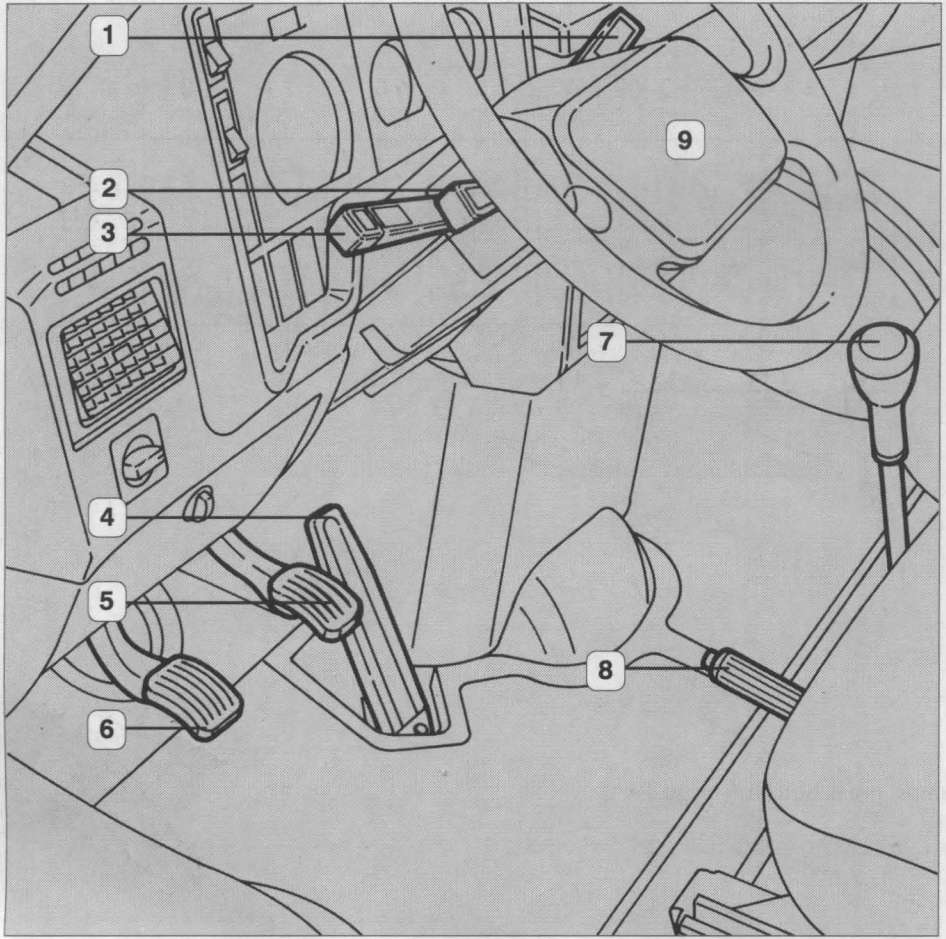
Warning lamp cluster



1.* EDC (where fitted – .10 model).
2. Water in fuel filter.
3.* Air filter restricted (.10 and .12 models).
4.* Preheating plugs (.8 model)
Thermostarter (.10 and .12 models).
5. Low engine oil pressure.
6. Turn signal lights.
7. Rear fog lamp.
8. Air suspension (where fitted – .10 and .12 models).
9. Power steering fluid level low.
10. Engine coolant level low.
11.*ABS system (where fitted).
12. .Brake system malfunction and front brake lining wear (items .10 and .12: rear brake linings also)
13. Parking brake ON.
14. Low battery charge.
15. Parking lights.
16. High beam lights.
17.*Rear door open
(fitted on mail vans only).
18. Not used.

*** To check the operation of these warning lamps, press button 6, page 10.**

Should warning lamps 1–2–3–5–11–12–14 light up, refer to instruction provided on pages 68–69–70.



Main controls

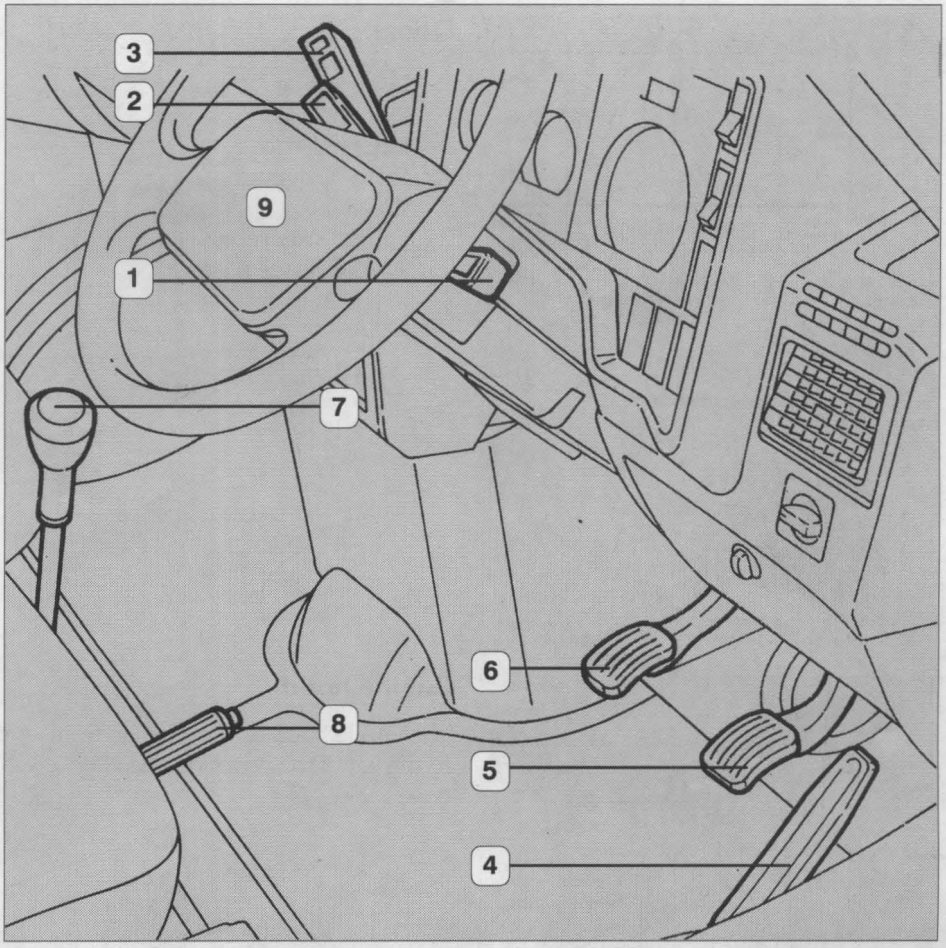
Left–hand drive vehicles

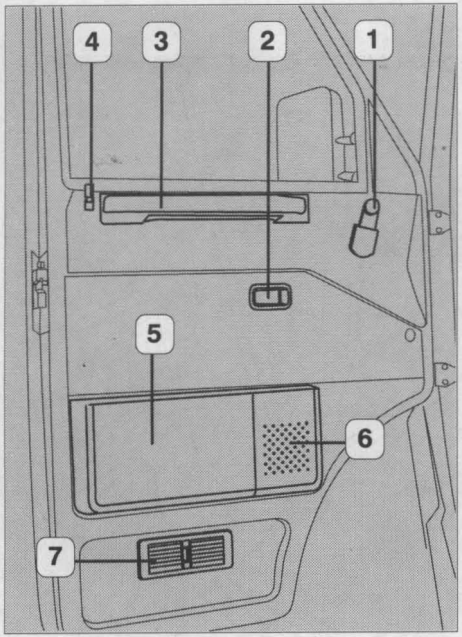
1. Windscreen washer/wiper control lever.
2. Turn indicators control lever.
3. Horn and headlights control lever.
4. Accelerator pedal.
5. Brake pedal.
6. Clutch pedal.
7. Gearshift lever.
8. Handbrake lever.
9. Bearing plate. Desk.

Main controls

Right–hand drive vehicles

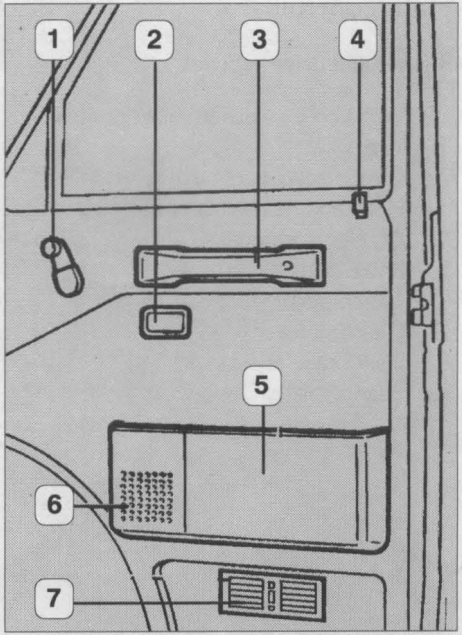
1. Windscreen washer/wiper control lever.
2. Turn indicators control lever.
3. Horn and headlights control lever.
4. Accelerator pedal.
5. Brake pedal.
6. Clutch pedal.
7. Gearshift lever.
8. Handbrake lever.
9. Bearing plate. Desk.

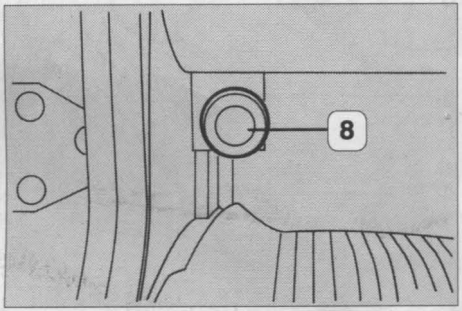




Doors

1. Window regulator.
2. Door handle.
3. Door pull handle.
4. Safety latch button.
5. Glove box.
6. Loudspeaker recess.
7. Air outlet (see page 25).





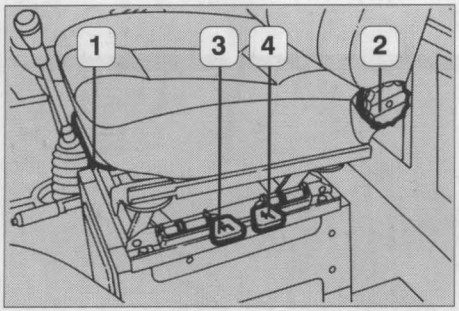
Engine hood

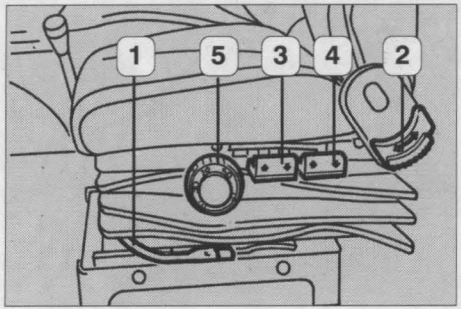
The engine hood can be opened from inside the vehicle by pulling knob 8 located either to the left of the driver (left hand drive vehicles), or to the right of the driver (right hand drive vehicles).

Use of controls

This chapter provides instructions on the use of:

- Driver's seat.
- Seat belts.
- Seats with headrest.
- Tachograph.
- Exterior lighting switch.
- Turn signal lights.
- Headlights and horn.
- Windscreen washer/wiper unit.
- Stowage compartment..
- Vehicles equipped with rear air suspension
- Digital clock.
- Control switches.
- Auxiliary control panel.
- Rearview mirrors.
- Heating and ventilation.
- Air conditioning.
- Headlight levelling control.





Driver's seat with three levels of adjustment (where fitted)

Adjustment for reach

Raise lever 1: the seat is then 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. Rotate it backward to increase the back rake.

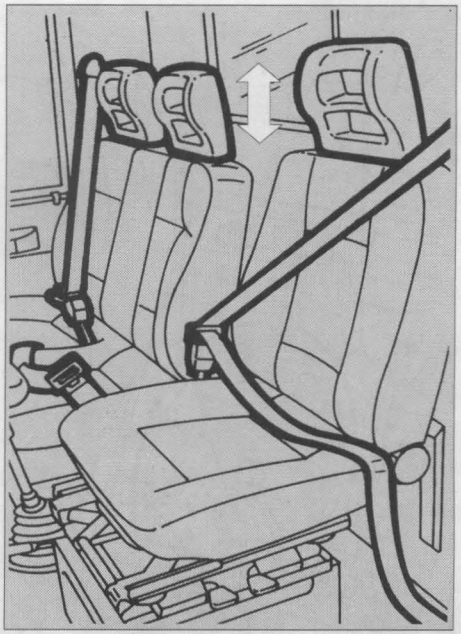
Vertical adjustment and cushion trim (where fitted)

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



This vehicle is equipped with seat belt anchorage points, enabling inertia reel seat belts to be fitted.
To fasten the belt, insert the coupling tang in the buckle until it clicks.
To unfasten the belt, press the 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

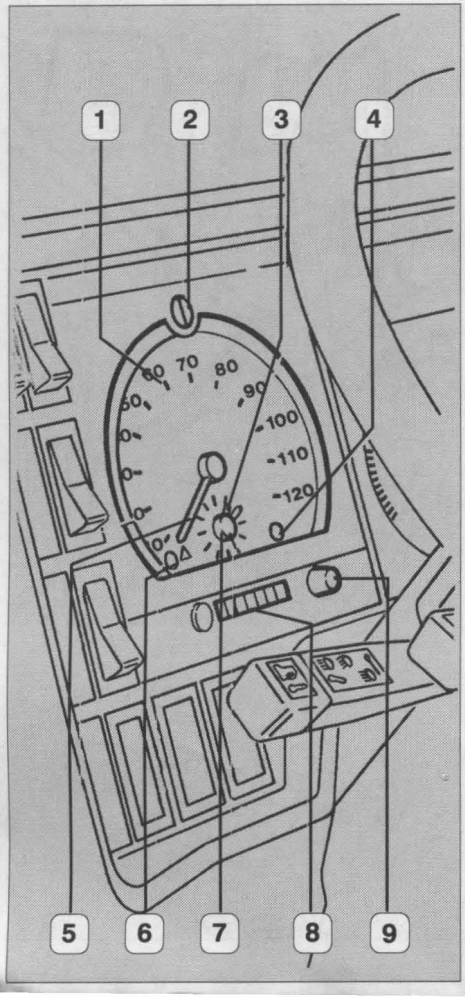
Warning!

- The belt should not be twisted but 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.
- Do not make alterations to the belt as this could result in mechanism malfunction.

Seat belt fitment can be carried out by any authorised dealer.

Seats with headrests (where fitted)

Raise or lower the headrest, as required to obtain the desired vertical position.



Tachograph

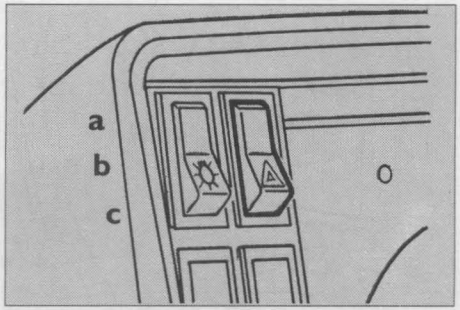
Vehicles with G.V.W. over 3,5 tonnes only

1. Speed scale.
2. Lock with key.
3. Hour hand.
4. Vehicle overspeed warning light.
5. Speed pointer.
6. Tachograph recorder malfunction indicator.
7. Time scale.
8. Odometer.
9. Time selector.
   (Rest and work times).

For tachograph operating instructions, reference should be made to the tachograph manufacturer's booklet supplied with your vehicle.

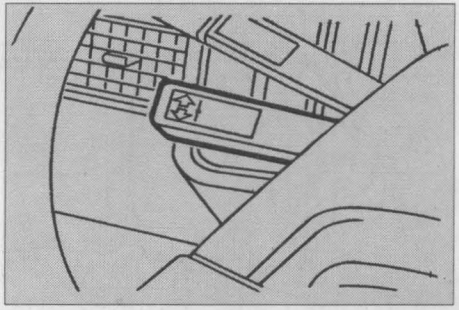
Exterior lighting switch
(three positions)

a. Off.
b. Parking and outline marker lights.
c. Parking, outline marker, high/low beam lights.



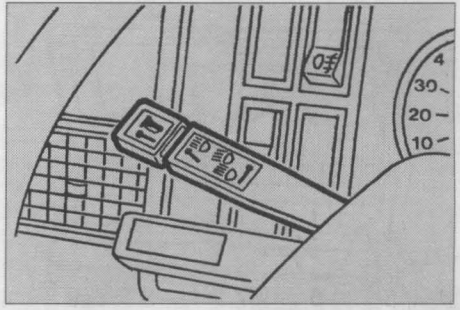
Turns indicator lights

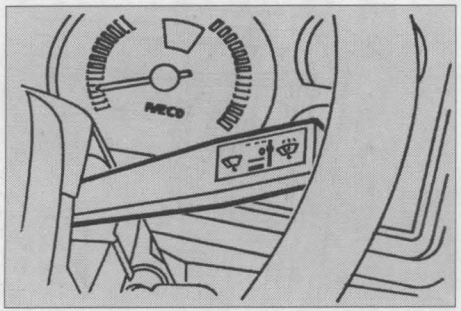
Up = right turn.
Down = left turn.



Headlights and horn

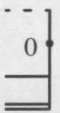
Backward = Headlamp flash
Upward = low beams.
Downwards = high beams.
Inward = horn.





Windscreen washer/wiper unit

Backward = windscreen washer pump jets.

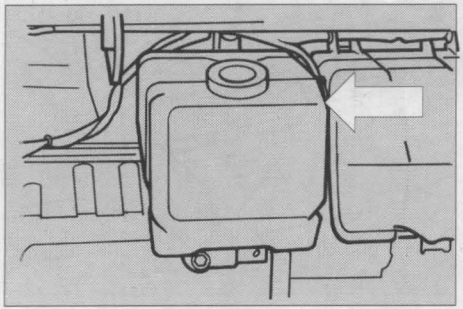


= windscreen wiper intemittent operation every 3 – 4 seconds.

= windscreen wiper off.

= first speed.

= second speed.

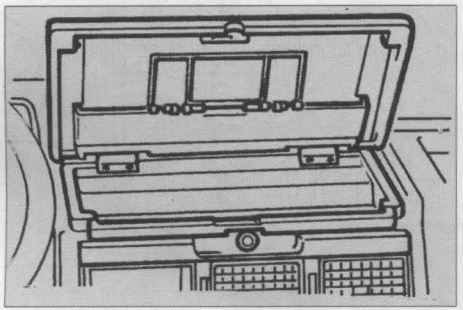


Windscreen/headlight washer unit reservoir (where fitted)

The reservoir is located in the engine compartment. A mixture of water and a detergent antifreeze product such as **Arexons DP1** should be used as follows:

Mixing table

Outdoor temperature	–35°C	–20°C	–10°C	0°C	summer
Arexons DP1 (parts)	1	1	1	1	1
Water (parts)	–	1	2	6	10



Stowage compartment

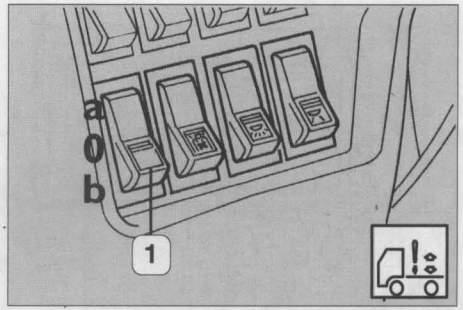
A lockable stowage compartment for the storage of documents, maps etc. is located in the central part of the dashboard and is provided with a key.

Note: .10 cabs are fitted with a glovebox fitted to the rear bulkhead trim panel.

Vehicles equipped with rear air suspension

As soon as the engine is started, the electronic control unit carries out a self–diagnosis. The relevant dashboard warning lamp lights up and remains on **for 2 seconds** and then goes out. In the event of a system failure, the lamp remains on permanently. In this case refer to an Authorised Dealer.

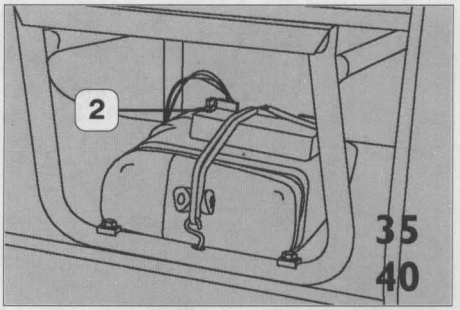
1. **Suspension control switch**
   - **a.** Chassis lifting (with vehicle stationary only).
   - **0.** Chassis in normal position.
   - **b.** Chassis lowering (with vehicle stationary only).



Models 35 – 40

Self–levelling (position 0)
It is set in operation as soon as the engine is started.
Chassis lifting/lowering
This operation can only be carried out with the vehicle at a standstill and parking brake engaged.

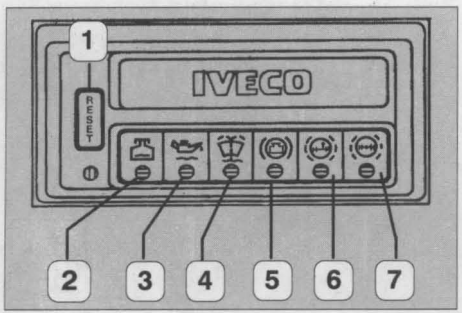
2. = 3A Fuse electronic control unit protection.



Models 45 – 49 – 59

Self–levelling (position 0)
It is set in operation as soon as the engine is started if neither position **a,** or position **b.**
Chassis lifting/lowering (positions a or b)
This operation can only be carried out with the vehicle at a standstill or when it is running at the max speed of 10km/h. The warning lamp lights up at slow intermittent intervals (every 2" approx) during the lifting/lowering operations and also when max high/low levels have been attained. A faster blinking (every 1/2") of the lamp indicates either chassis overloading or a failure in the air system. In the latter case, refer to an Authorised Dealer.
Should the travelling speed exceed 10km/h, the preselected chassis level is maintained: however avoid high speeds if possible or revert to normal conditions (position 0).

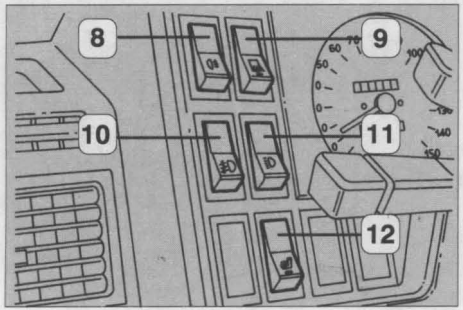
Cargo loading/unloading, chain fitting and travelling, uphill running have been considerably facilitated by the introduction of this system.



Auxiliary control panel (where fitted)

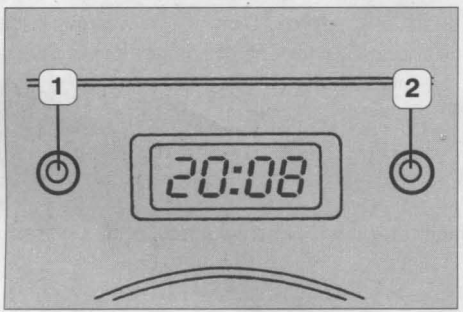
1. Resetting key*.
2. Low engine water level.
3. Low engine oil level.
4. Low windscreen washer fluid level.
5. Low brake fluid level.
6. Front brake.
7. Rear brake.

* The purpose of this key is to restore normal panel operation after the malfunction causing its switching on has been repaired.



Control switches

8. Rear fog lamp.
9. External rearview mirror defrosting (where fitted).
10. Fog lamps (where fitted).
11. Headlamp washing unit (where fitted).
12. Seat heating (where fitted).

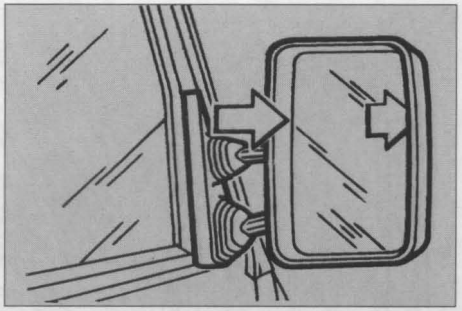


Digital clock (where fitted–It is installed together with the speedometer).

To set the alphanumeric indicator proceed as follows:
Press button 1 to select hours.
Press button 2 to select minutes.
For quick selection of hours and minutes protract button pressure.

Rearview mirrors

Position rearview mirrors manually by forcing on the sides of reflecting surfaces.



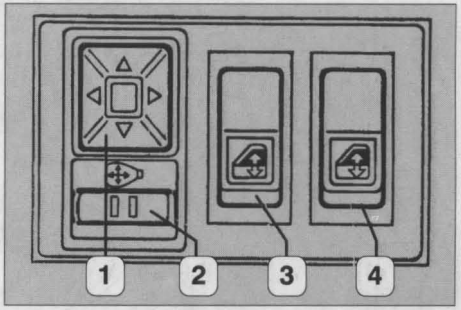
Electrical rearview mirror control (where fitted)

It is located on the driver's side

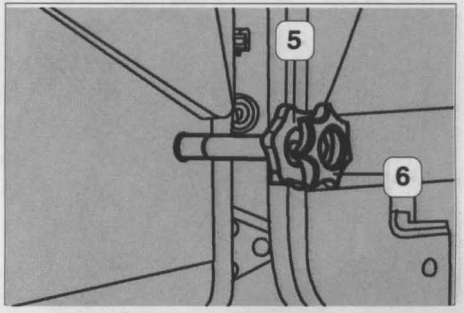
1. Control knob to adjust the mirror horizontally or vertically in the arrow directions.
2. Switch for selecting adjustment of either right or left mirror.

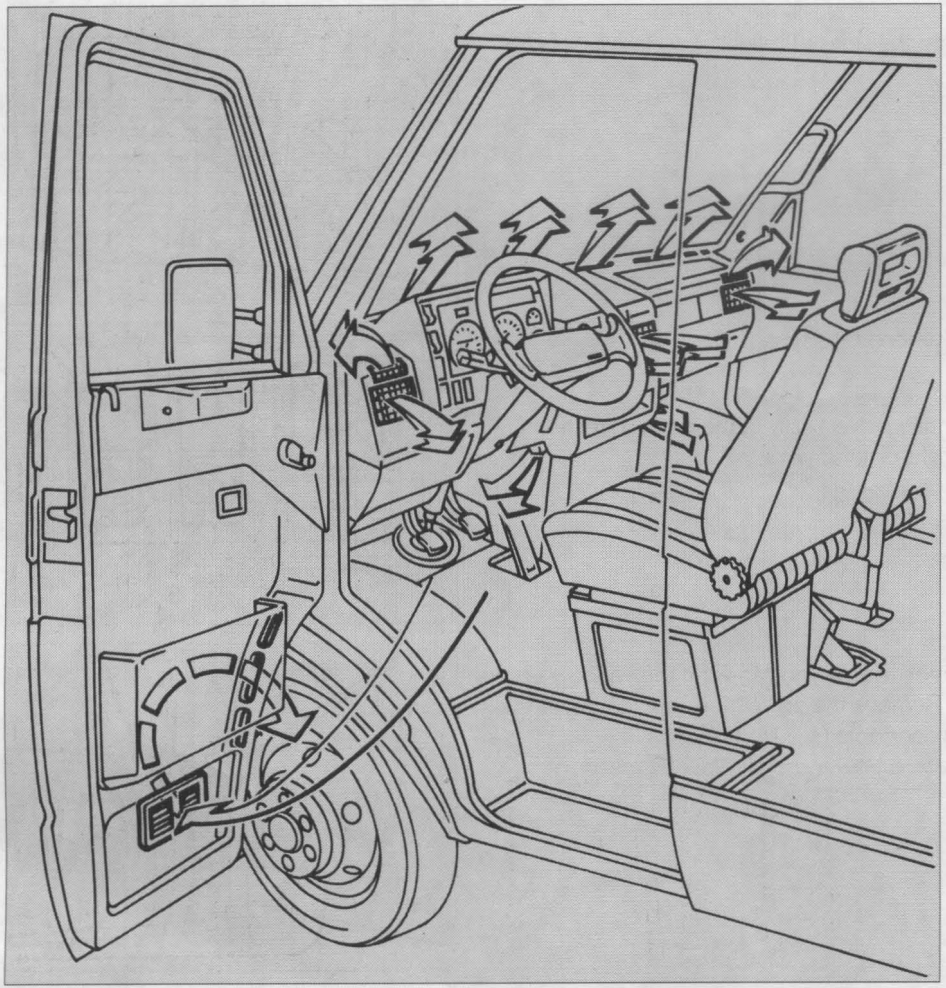
Power window control switch (where fitted)

3. Left window regulator.
4. Right window regulator.



In the event of a failure in the power window mechanism, you can wind the window up or down manually using the following procedure: Remove the protection cap and insert the special device provided with the kit into the proper hole (see illustration).
Screw in knob 5 completely and then either raise or lower the window by means of knob 6.



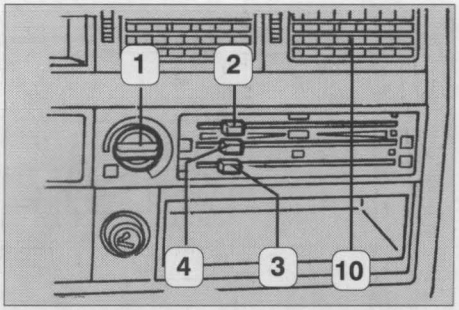


Heating and ventilation

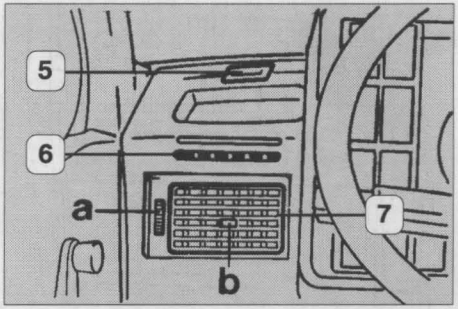
The vehicle is fitted with a heating and ventilation system to keep the cab interior comfortable whatever the weather conditions. The system provides:

- **Winter heating** by warm air inlet inside the cab through the appropriate vents. The air is heated by circulating hot water from the engine cooling circuit round the radiator/heater.
- **Summer ventilation** by air inlet from the outside through the appropriate vents. Air inlet can be increased by means of a fan. Obviously, in this case it will be necessary to shut off the flow of hot water through the heater.
- **Electro–ventilation**
  Enabling a remarkable increase of the quantity of air passing through the system thus permitting window defro–sting by means of forced ventilation of hot or cold air blasted against the win dow glasses.

Heating and ventilation controls

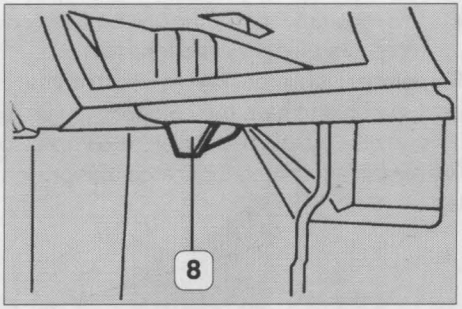


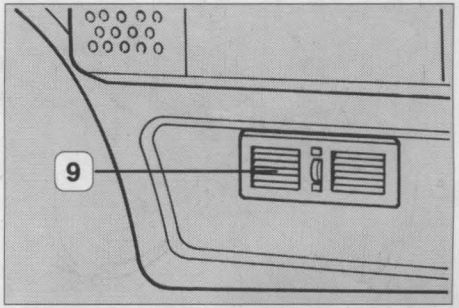
1. 4–speed switch for elctrofan control.
2. Lever for regulating water flow from engine to heater
   - blue = closed.
   - red = open.
3. Lever for air delivery to cab interior.
4. Left lever = external air inlet.
   Right lever = internal air recirculation and simultaneous cut–in of fan 1st speed.
5. Air outlets to windscreen.
6. Air outlets to side windows.
7. Adjustable side vents
   a. opening (□) or closing (■) wheel.
   b. air flow aiming lever.
8. Air outlet to floor area.
9. Door outlet.

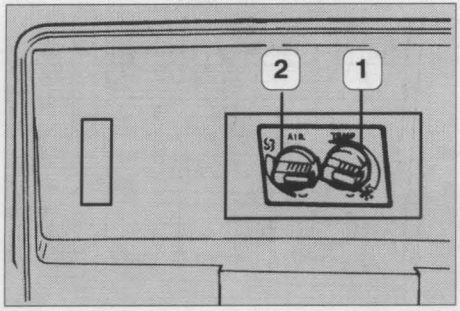


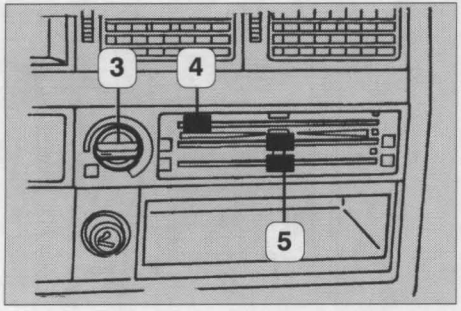
Its purpose is to facilitate door opening and closing as well as to ensure heater efficiency.
On the vehicles equipped with air conditioning device (see next page) close the air outlet so as to improve the capacity of the air conditioning itself.

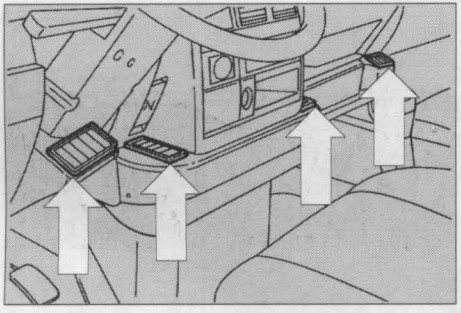
10. Centre outlets.
    They are mainly used for ventilation during the warm season.
    We suggest that they be kept closed during the cold season to enable warm air to flw to the floor area and windscreen.











Air conditioning (where fitted)

Operation

- Start the engine.
- Turn knob 1 (TEMP) clockwise to adjust the temperature inside the cab.
- Turn knob 2 (AIR) clockwise to select the desired degree of ventilation (three positions available).
- Place the heating unit as per central figure: switch 3 OFF; lever 4 wholly on the left; levers 5 in central position.
- Make sure that all air inlets and windows are closed.
- Adjust air inlets (figure below) so that the fresh air flow is not directly affecting the persons inside the cab.
- To disconnect the system, just turn knob 2 counterclockwise until it is in the horizontal position.

Practical hints

- When travelling in heavy traffic condition, keep knob 1 (TEMP) on max position; when running at fast speed turn it counterclockwise by 90^0 approximately.
- In the event of a prolonged stop under the sun, put the air conditioner on maximum position (AIR and TEMP) and ventilate the cab by opening the windows for a few minutes.
- If water leakages from under the vehicle are noticed, these are due to normal condensate drain caused by the de–humidifying effect of the air conditioner.
- We recommend that the unit be serviced at least once a year by an authorized workshop to ensure efficiency and long life.

Remember: it is important to switch on the air conditioner once or twice a week during the cold season and have the compressor run for a few minutes.
This way, the oil splash guard of the compressor and the mechanical components of the circuit will remain adequately lubricated thus preventing possible damage that would cause coolant leaks.

Headlight levelling control

Switch positions depend on conditions tabulated on pages 28–29–30.

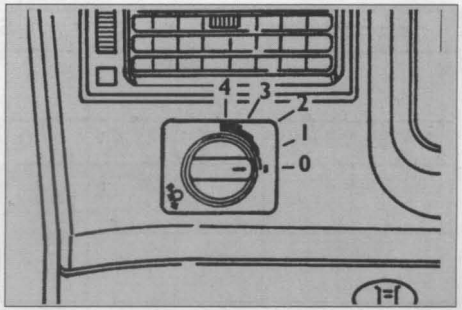


Table to be filled in by the user with regard to his own vehicle

Model	Wheelbase	Rear leaf springs	Switch position

Note: vehicles fitted with rear air suspension are not equipped with headlight beam alignment switch.

Standard headlamp setting value

The label (inside the engine hood) states the headlanp beam angle with switch in position 0.

See page 54 for setting instructions.

Switch positions with fully–laden vehicle													
Model	30.8 All versions		35.8 Truck				35.8 Van			35.8 Dual–purpose			
Wheelbase	2800	3300	2800	3300		3600	2800		3300	2800		3300	
Rear leaf springs	S/Sr		S/Sr	S	Sr	S/Sr	S	Sr	S/Sr	S	Sr	S	Sr
Switch position	3	2	3	3	2	2	3	2	2	3	2	3	2

Switch positions with fully–laden vehicle												
Model	40.8 All versions			35.10 Truck				35.10 Van				
Wheelbase	2800	3300	3600	3300		2800	3600	2800		3300		3950
Rear leaf springs	S/Sr	S/Sr	S/Sr	S	Sr	S/Sr	S/Sr	S	Sr	S	Sr	S/Sr
Switch position	3	2	2	3	2	3	2	3	2	2	2	1

Switch positions with fully–laden vehicle												
Model	35.10 Dual–purpose				40.10 Truck and Van				45.10 49.10 Truck		45.10 49.10 Van	
Wheelbase	2800		3300		2800	3300	3600	3950	3300	3600	3300	3950
Rear leaf springs	S	Sr	S	Sr	S/Sr	S/Sr	S/Sr	S/Sr	S/Sr		S/Sr	
Switch position	3	2	3	2	3	2	2	1	2	2	2	1

Legend : S = Semielliptical Sr = Reinforced semielliptical

Switch positions with fully–laden vehicle				
Model	49.10 Dual–purpose		A40.10/.12	A45.10
Wheelbase	3300	3600	3300	3950
Rear leaf springs	S/Sr		S	S
Switch position	2	2	3	4

Switch positions with fully–laden vehicle													
Model	35.12 Truck				35.12 Van				35.12 Dual–purpose				
Wheelbase	2800	3300		3600	2800		3300	3950	2800		3300		3600
Rear leaf springs	S/Sr	S	Sr	S/Sr	S	Sr	S/Sr	S/Sr	S	Sr	S	Sr	S/Sr
Switch position	3	3	2	2	3	2	2	1	3	2	3	2	2

Switch positions with fully–laden vehicle					
Model	40.12 Truck			40.12 Van	
Wheelbase	2800	3300	3600	3300	3950
Rear leaf springs	S/Sr	S/Sr	S/Sr	S/Sr	S/Sr
Switch position	3	2	2	2	1

Legend : S = Semielliptical Sr = Reinforced semielliptical

Switch positions with fully–laden vehicle							
Model	49.12 Truck		49.12 Van and Van 17 m^3			49.12 Dual–purpose	
Wheelbase	3300	3600	3300	3950	4180	3300	3600
Rear leaf springs	P/S/Sr		P/S/Sr			P/S/Sr	
Switch position	2	2	2	1	1	2	2

Switch positions with fully–laden vehicle								
Model	59.12 Truck		59.12 Van 17 m^3		59.12 Dual–purpose		A45.12 16+1	A 45.12 19+1
Wheelbase	3300	3600	3950	4180	3300	3600	3950	3950
Rear leaf springs	P/S		P/S		P/S		S	S
Switch position	3	3	2	2	3	3	4	4

Legend : S = Semielliptical Sr = Reinforced semielliptical P = Parabolic.

Combi – All versions

Swtch positions with vehicle in the following conditions:

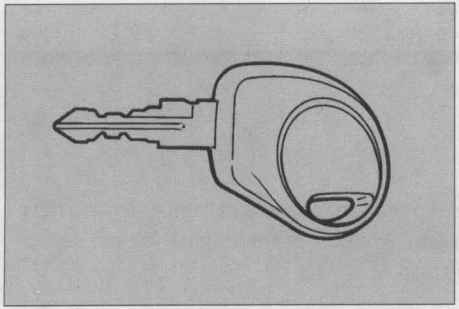
0 – Driver + one passenger on the farthest (from the driver) front seat.
1 – Driver + one passenger on the farthest front seat + all farthest rear seats taken.
1 – All seats taken.
2 – All seats taken + even loading of luggage compartment up to maximum permitted load on rear axle.
3 – Driver + even loading of luggage compartment up to maximum permitted load on rear axle.

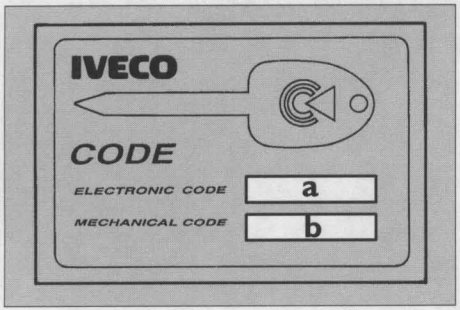
Starting and driving

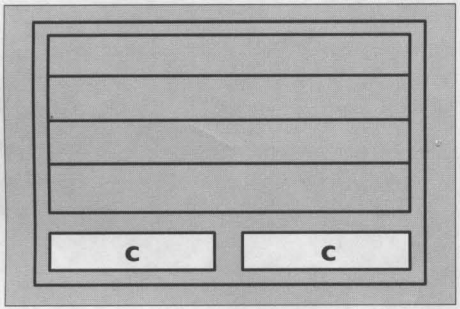
To obtain the best possible combination of performance and reliability from a new vehicle and to ensure long trouble–free life, do not rev the engine for maximum power during the first 1500 km of operation.

This chapter provides information on how to carry out the following operations:

- Iveco Engine Immobiliser System
- Engine starting.
- Engine stopping.
- Engine starting in cold weather.
- Fuel filter heater.
- Self–diagnosis system.
- Use of the transmission.
- Rear brake self–adjustment.
- Differential locking.
- Power take–off.
- Fuel economy and long life.







Iveco Engine Immobiliser System

In order to provide additional protection from attempted theft, your vehicle may be fitted with an Electronic Engine Immobiliser System. Where fitted , the Engine Immobiliser System is automatically activated when any of the ignition keys supplied with the vehicle are removed from the ignition switch.
The ignition keys supplied with your vehicle are fitted with a pre–programmed electronic device which transmits a coded signal to the Immobiliser System Control Unit fitted to the vehicle.

Immobiliser System Master Key

One of the keys supplied with your vehicle is fitted with a red grip. This key is the Immobiliser System Master Key. Only one of these Master Key is supplied, it's function being to store the electronic codes of the other keys supplied with your vehicle, and that of the Control Unit, in it's memory.

Important: The Master Key should be removed from the vehicle at the earliest opportunity and stored in a safe, secure location. Should the red Master Key be lost, it will be necessary for you to buy a new Master Key and Immobiliser System Control Unit (which are supplied as an electronically matched set).

- **Under no circumstances should the Master Key be left in the unattended vehicle.**
- **The Master Key should be only be used as an ignition key when absolutely essential.**

Without the Master Key it will not be possible to carry out repairs to the Iveco Engine Immobiliser System or to the electronic fuel injection pump.

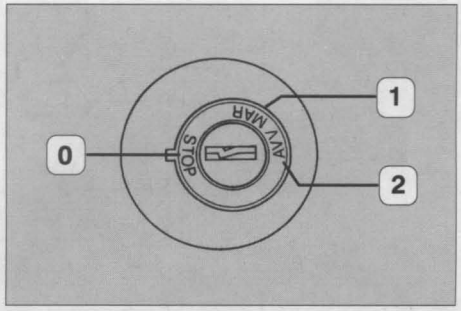
Code Card

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

a. the electronic code to be used in the event of emergency starting (with Iveco Tester),
b. the conventional (mechanical) key code.
c. the spaces on the rear for sticking any remote control unit stickers.

It is recommended that the Code Card is kept with you whenever you are operating the vehicle. **Like the Master Key, the Code Card should not be left in the unattended vehicle.**

Important:



As stated previously, the Master Key stores the electronic codes of the other keys supplied with your vehicle in it's memory. The other keys all share a common conventional (mechanical) code, but each have a unique electronic code. Each unique electronic code must be stored in the memory by the system's Control Unit.

If additional keys are required you should refer an Authorised Dealer, taking **all** keys (including the Master Keys) and the Code Card with you.
It is important that the electronic codes (maximum of seven digits) of the additional keys, and also the existing keys, are stored in the memory of the Control Unit.

When the electronic codes of new keys are stored in the memory of the Control Unit, all existing electronic key code are erased from the memory.
This is a security measure to ensure that any lost, stolen, or misplaced keys are unable to start the engine. It is for this reason that when additional keys are issued, the codes of **all** keys need to be re–stored in the memory of the Control Unit.

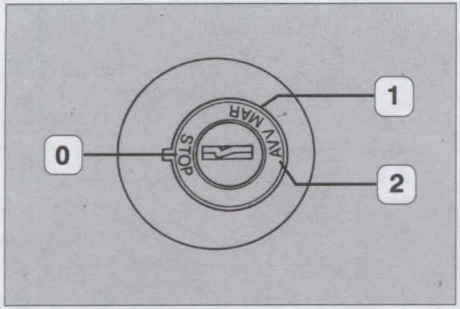
Ignition Switch Positions

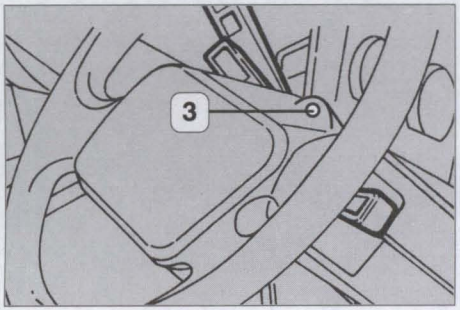
0. = Key insert/remove – engine stopping – steering lock on – Iveco Engine Immobiliser System "on".
1. = Engine pre–starting and auxiliary functions – Iveco Engine Immobiliser System "of".
2. = Engine starting.

If the ignition switch has been tampered with (e.g. as in an attempted theft) you are strongly advised to refer an **Authorised Dealer,** that checks can be carried out to ensure that all electronic and mechanical functions are operating correctly.

Activating the Iveco Engine Immobiliser System

The Engine Immobiliser System is activated automatically when the ignition key is in the "STOP" position (0). In this position, the engine is switched off and key can be removed.





De–Activating the Iveco Engine Immobiliser System

When the ignition key is turned to the "MAR" position (1), the Engine Immobiliser is de–activated automatically **only if** the Control Unit recognises the electronic code transmitted by the key.

If the electronic code is recognised as valid code, the Control Unit sends it's own coded signal to the electronic engine control unit enabling the engine to be started.

If the electronic code is recognised by the system, a Led 3 will illuminate briefly (for approximately one second).
If the code was not recognised by the system, the Led 3 will remain illuminated.

If the code was not recognised, return the key to the "STOP" position (0) and then turn it again to the "MAR" position (1). If the Engine Immobiliser remains activated, repeat the procedure using one of the other keys supplied.

If you are still unable to start the engine, refer to an **Authorised Dealer.**

Important:

If the led 3 illuminates either briefly or permanently while driving or once the engine has started, it does not necessarily indicate a malfunction in the Immobiliser System, but can sometimes indicate a condition that the system interprets as an attempt to interfere with the device, or that the vehicle battery charge is low.

To test the system in this instance, stop the vehicle, turn off the engine and turn the ignition key to the "STOP" (0) position. Turn the key to the "MAR" position (1) again. The Led 3 will again illuminate for approximately one second and then extinguish.
If the Led remains on after this procedure, repeat the operation having waited the key in the "STOP" (0) position for at least thirty seconds. If after this procedure, the Led remains on with the key at the "MAR" (1) position, refer to an **Authorised Dealer** immediately.

Important:

If the vehicle changes ownership, it is essential that all the vehicle's keys (including the red Master Key) and the Code Card are passed to the new Owner.

Engine starting

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

- Turn battery isolation switch (where fitted), inside the engine hood.
- Insert the key in the ignition switch and turn clockwise to position 1 (MAR).

.8 Models only

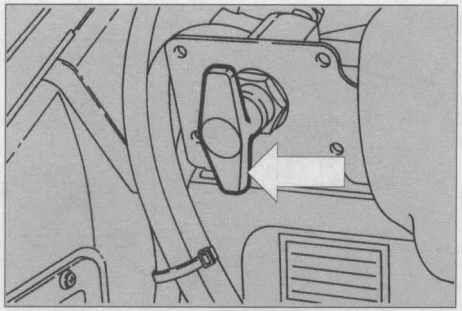
Wait 5 to 7 secs. for preheating plugs to be turned on and dashboard warning light to go out.

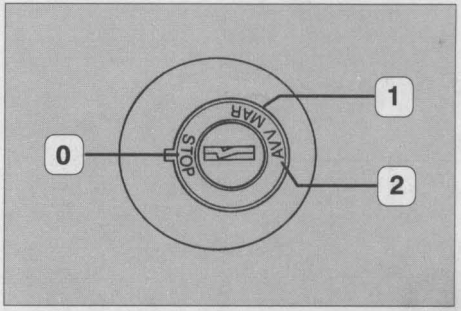
- Turn the key to position 2 (AVV) and release it as soon as the engine starts, **without depressing the accelerator pedal.**
  (If the above instructions are not carefully followed, a puff of black smoke will be emitted on starting the vehicle).
- If starting does not occur immediately, do not operate the starter motor for longer than 30 seconds.
  After starting the engine, proceed slowly and keep 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 limit.
  - Fuel economy.

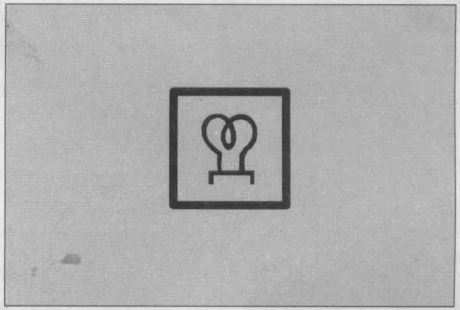
Important! The engine should be allowed to idle (either warm or cold) for quite a long time so as to obtain optimum performance and a reduced quantity of noxious emissions.

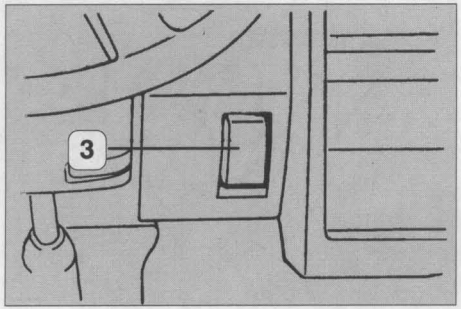
Ignition switch positions

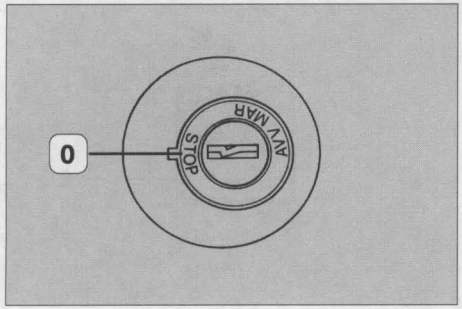
0. = Key in and out – engine stopping – steering lock.
1. = Engine pre–starting and various auxiliary functions.
2. = Engine starting











Engine speed hand control (not fitted to vehicles with EDC)
To be used only with vehicle stationary.

To insert control, **press accelerator pedal** until required speed rate is achieved. With pedal depressed, place hand accelerator control lever 3 in position.

This control must not be used whilst driving the vehicle.

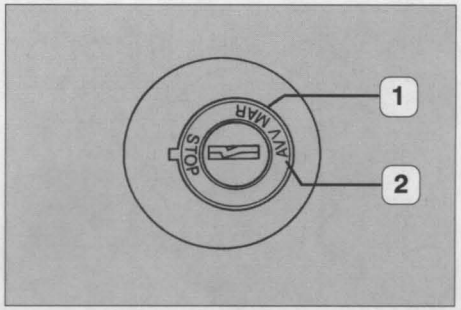
Warning! To safeguard your natural environment and the engine of your vehicle, take immediate action if you notice that the exhaust is excessively smokey. In the first instance the fuel filter cartridges should be replaced. Should inspection/adjustment of the fuel injection system be necessary, it should only be carried out by a skilled Technician. For maximum benefit use only original Iveco cartridges. Any operation on the fuel injection system should be carried out by an Authorised Dealer.

Engine stopping

To stop the engine turn the key to position 0.

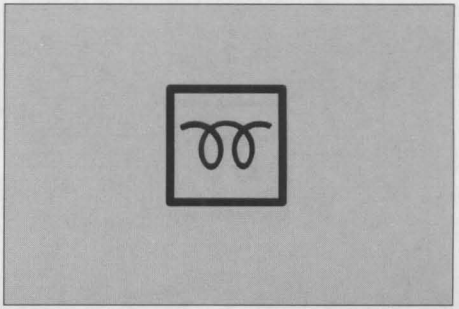
Warning! In case of malfunction of the electrical stop device refer to instructions provided on page 63.

Engine starting in cold weather (.10 and .12 models)



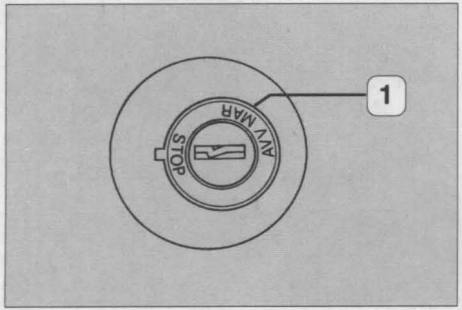
Note: the engine fitted to .10 and .12 models is equipped with glow–plugs which sense coolant temperature within the engine. These operate automatically to warm the air in the inlet manifold to a temperature sufficient to allow normal combustion to occur for starting in low temperatures. The glow–plugs operate when the coolant temperature falls below 2°C.

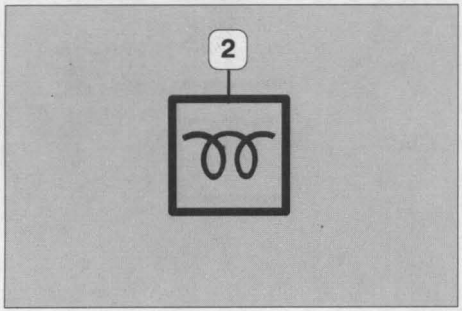
- Insert the key in ignition switch and turn clockwise to position 1 (MAR).
- If the engine coolant temperature is in excess of 2°C, the glow–plugs will not be required to operate. In this case, the glow–plug warning light will flash once to act as a check of the system.
- If the engine coolant temperature is in below 2°C, the glow–plugs will operate and the warning light illuminate for approximately 35 to 40 seconds.
  After this time, the warning light will flash flash for 6 to 10 seconds.
- While the warning light is flashing, start the engine, **without depressing the accelerator pedal**, by turning the key to position 2 (AVV). During starter motor engagement, the warning light will remain illuminated.
- If the engine does not start, repeat the cold starting procedure.
- When the engine has started, the warning light will flash for 30 to 40 seconds, while the glow–plugs perform an after–heating function, to ensure that the intake air has reached a sufficiently high temperature to allow normal combustion to occur.



Heated fuel filter (where fitted)

At ambient temperatures of below 6°C, a heating element within the fuel filter heats the fuel to assist starting in low temperatures.





Self–diagnosis system

The engine cold start system control unit is equipped with a unique self–diagnosis system in case of circuit malfunction.
This system indicates damage to, or failure of the cold start system, thus reducing diagnostic time and associated costs. The system is protected from electrical circuit failures (short circuits, etc.), and operates automatically when the ignition key is turned to position 1 (MAR).

· A malfunction of the cold start system is indicated by slow or fast flashing of the warning light 2.

In cases of malfunction, refer to an Authorised Dealer.

Note: 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.

Use of the transmission

Starting the vehicle

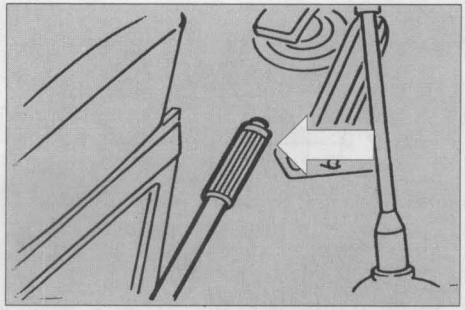
- Fully depress the clutch pedal and move the gearshift lever to the first gear position.
- Release the parking brake;
- Slowly release the clutch pedal and gradually increase engine speed;
- Engage remaining gears as necessary.

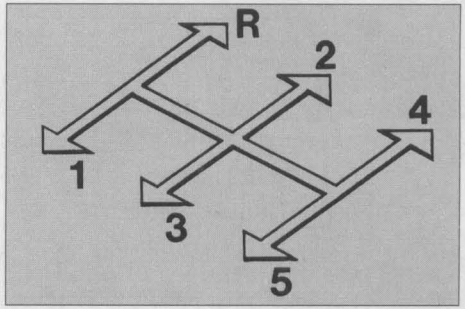
NEVER exceed the engine maximum rated speed (see Specifications and data), even when travelling downhill.

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, and move the gearshift lever to the neutral position.

Your vehicle is equipped with independent front and rear hydraulic brake circuits. In the event of loss of hydraulic fluid from either the front or rear brake circuit, your vehicle can be safely brought to a halt, although with increased stopping distances, due to the continued operation of the remaining brake circuit.





Rear brake auto–adjustment (vehicles with rear brake drum only)

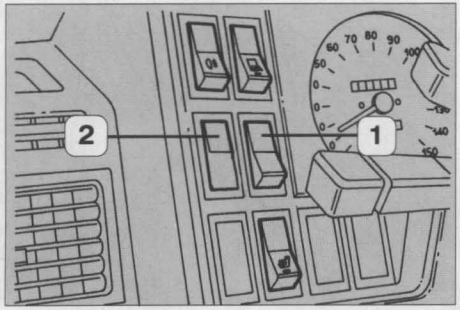
The above models are fitted with rear drum brakes which incorporate an automatic adjustment facility to compensate for brake wear.

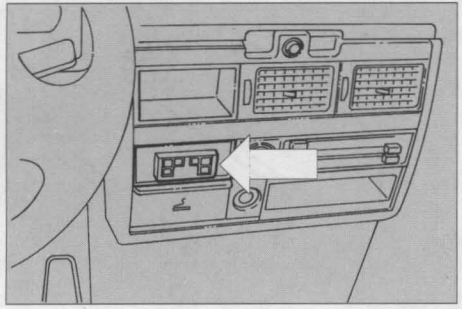
The auto–adjustment facility, wich allows the specified clearance between the brake drums and brake linings to be maintained at all times, operates as follows:

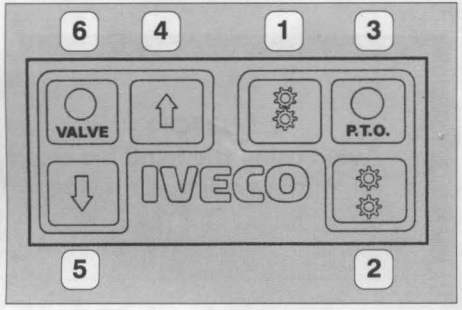
- Perform thorough brakings in both riding directions (mod. with Perrot brakes)
- Perform thorough brakings in the reverse gear (mod. with API–Lockheed brakes).

To ensure correct auto–adjust operation, including even adjustment of the brake shoes, it is recommended that, at regular intervals, the brake pedal be applied firmly (in both directions of travel) during the operating cycle of the vehicle.

CAUTION
Avoid using the hand brake when the vehicle is moving







Rear Axle Differential Lock Engagement (where fitted)

To engage the front axle differential lock, ensure that the vehicle is either stationary or at a very low speed, and depress the switch 1, the warning lamp 2 will illuminate.

As soon as the vehicle is normally running, turn the switch 1 again to the idle position, thus causing the lock to be enabled and the warning lamp to extinguish.

Power take–off for body tipping (where fitted, on K–version vehicles)

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.
- **Release the clutch pedal very slowly.**
  Engagement of the power take–off device generally occurs during this stage.
  The transmission should therefore be started as slowly and gradually as possible.
  Led 3 illuminates to indicate that engagement has occurred.
- Now rev up the engine to the speed required for a satisfactory performance of the system. Engine rpm can be increased from the ground through the hand accelerator control located on the driver's seat left–hand drive.
- 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.

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.
5. Pushbutton for body lowering.
6. Body motion warning lamp.

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.

Fuel economy and long life: hints

Sensible use of the vehicle will result in:

- Improved fuel economy;
- Reduced wear of major components yet obtaining maximum performance in keeping within the limits imposed by currently effective regulations.

To this end, you should consider the following suggestions:

1 – Reduce engine speed rates
The best "performance–consumption" ratio is obtained by keeping engine r.p.m. within the green area approximately corresponding to maximum torque rate. A 12% fuel saving is thus obtained without increasing transportation costs.
Provided the type of road so allows, it will be necessary to stabilze the speed rates by selecting the highest possible gear ratio permitted by a speed rate as near as possible to max. torque r.p.m.

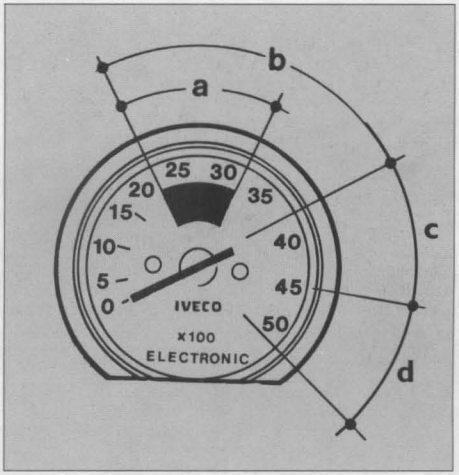
2 – On inclines
Select the gear that best meets the torque involved, and remember that is up to your driving skill and proper use of the transmission to ensure high average speeds and optimum fuel economy.

Always keep the speed rates beyond max. torque rates and approximately 80% below maximum r.p.m.

3 – On descents

Do not allow engine to overrev beyond maximuim speed rate.
By selecting the proper gear you will avoid excessive brake wear and at the same time travel at ease and in greater safety.

Hard accelerations and braking means waste of energy, greater stress on mechanical components, faster wear of brakes and tyres. Avoid such bad driving habits.



a. green area (economy speed)

b. green sector (normal speed rates)

c. yellow/red sector

d. red sector (overrevving)

Driver check items

To familiarise yourself with the vehicle, you should carry out the simple checks and inspections detailed on the following pages.

These simple checks and inspections will ensure that your vehicle is maintained in first class working order.

Warning: If exhaust is excessively smokey, refer to an Authorised Dealer to have the injectors checked and, if necessary, calibrated.

If tappets are noisy, refer to an Authorised Dealer to have the valve clearances checked and, if necessary, adjusted.

- **Before each journey**

1 Engine oil level.

2 Engine coolant level.

3 Brake fluid level.

4 Windscreen washer fluid level.

5 Air filter warning lamp.

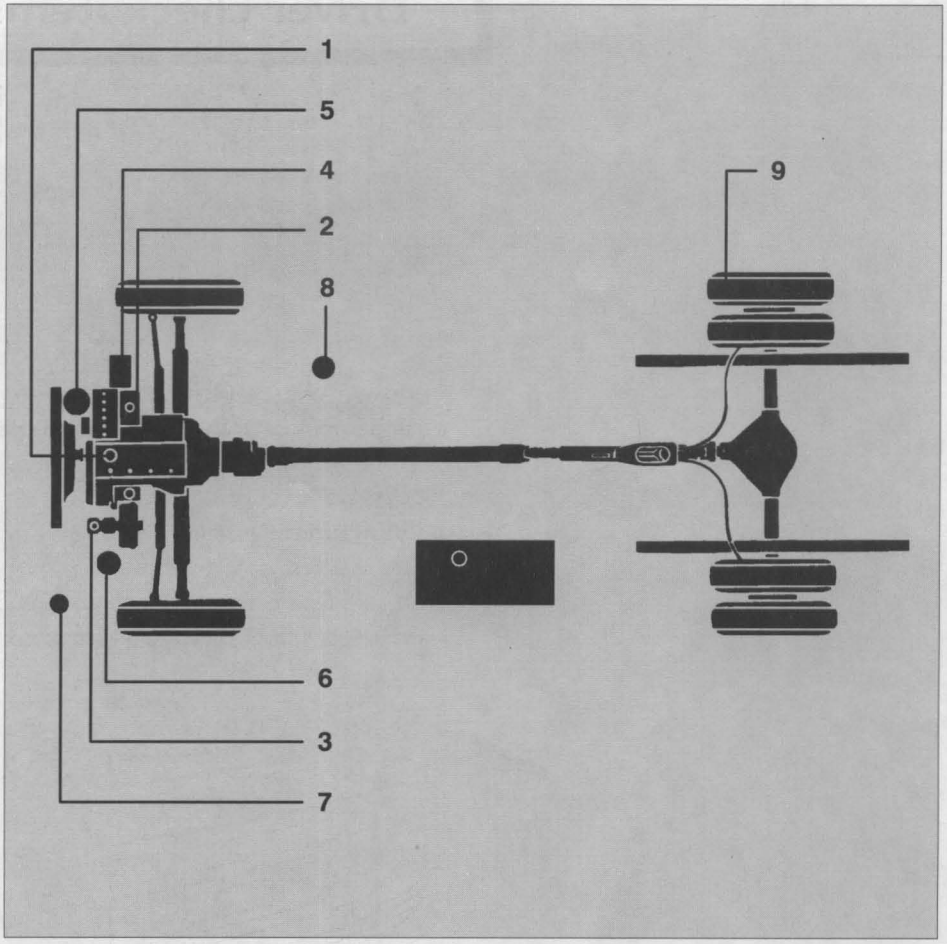
- **Weekly**

6 Power steering fluid level (where fitted).

7 Fuel filter.

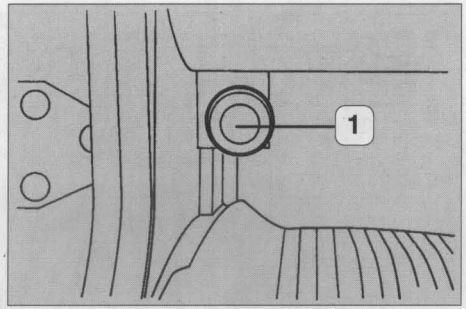
8 Jack.

9 Tyres.

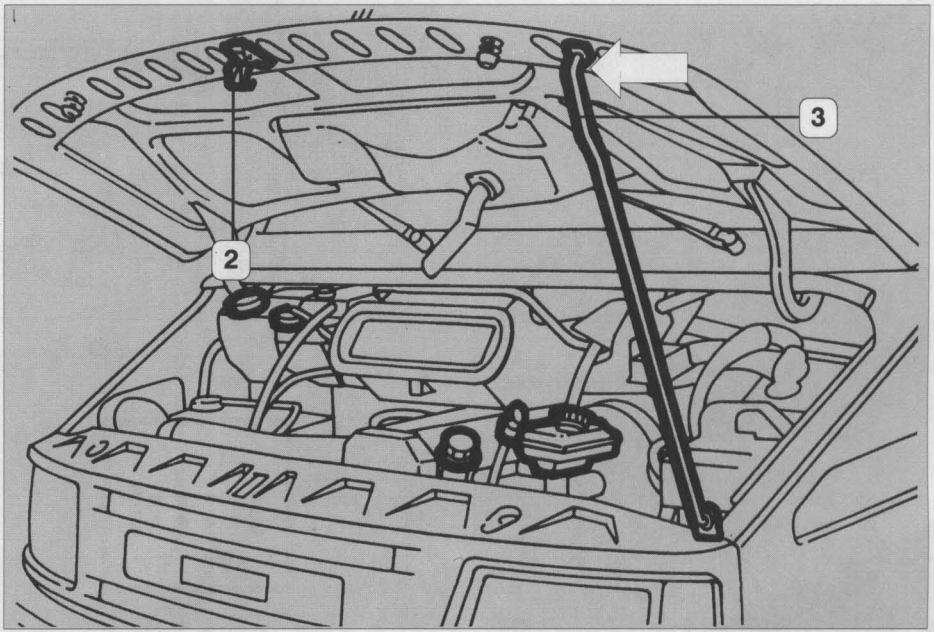


Before each journey

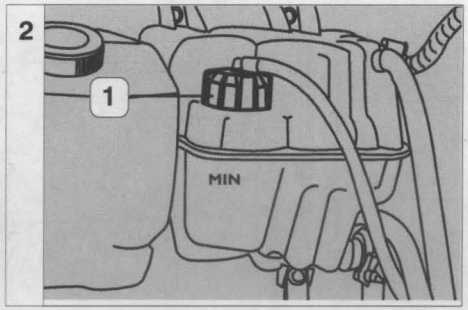
Pull knob 1 to unlock engine hood from inside the vehicle.

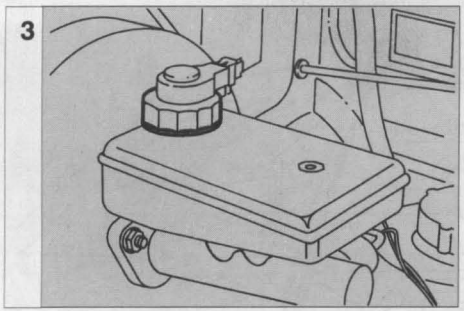


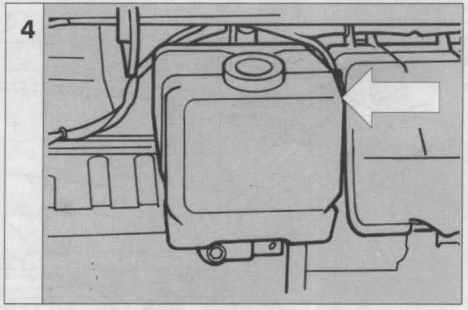
Release hook 2 and lift the hood.
Insert rod 3 in its seat.

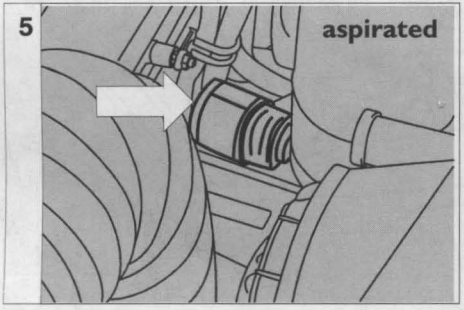


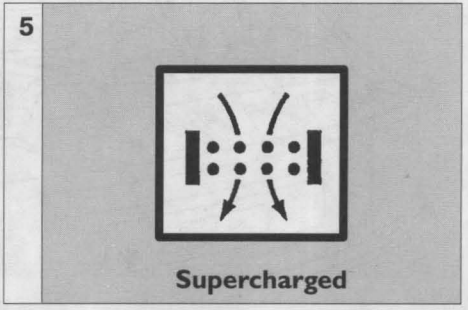
Carry out inspections described on page 46.











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

2 Check coolant level. It may never fall below the MIN level.
Top up, if necessary, through filler 1.

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

4 Check the level of windscreen wiper fluid. Use a mixture of water and Arexons DP1 additive (see page 20) for topping up.
Also check that pipes are not clogged; use a needle to clean the nozzles, if necessary.

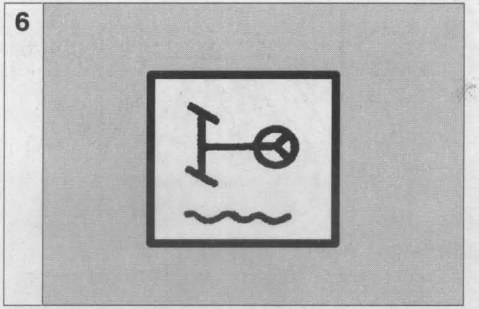
5 Visually check the efficiency of air filter restriction signalling system.

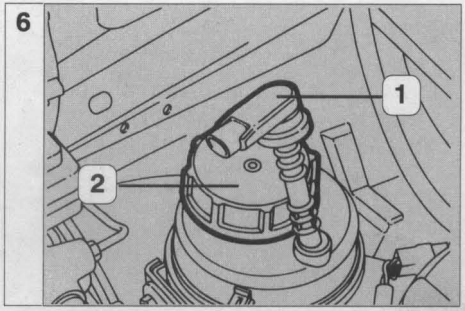
Also check:

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

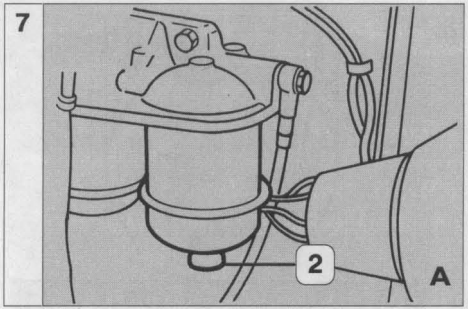
Weekly

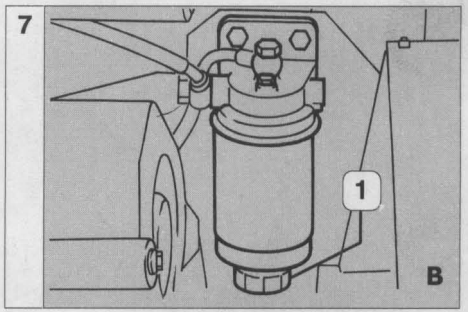
6 If light on dashboard switches on, remove plug (after removal of transmitter) and with engine running and wheels in the straight ahead driving position, of power steering reservoir and check that the oil level reaches the upper reference mark on dipstick.
With engine stopped, wheels in straight ahead position, the oil level must exceed the upper reference on dipstick by 1 or 2 cm: remove cap 2 to top up, if necessary.



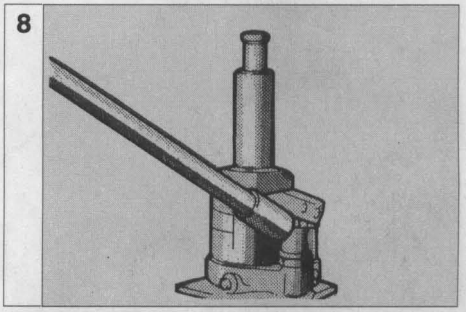


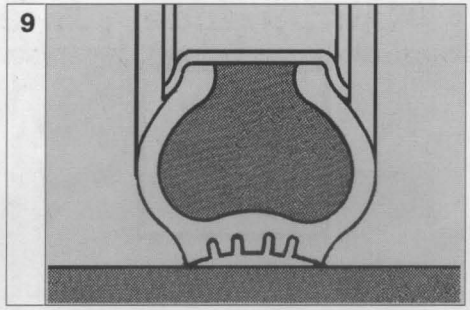
7 **Aspirated engine (A)**
Through perspex check for possible accumulation of water in fuel filter. If so, drain it through tap 2.
Supercharged engine (B)
Should indicator on dashboard (2 page 11) light up, drain condensate water turning tap 1.

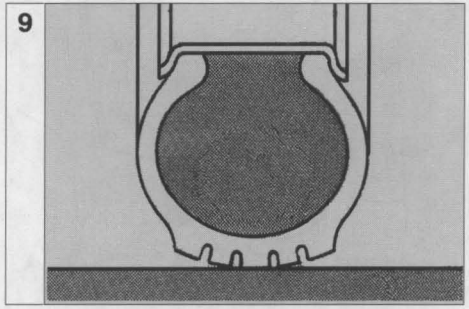




8 For checking and maintenance instructions, strictly abide by the documentation supplied by the manufacturer.







9 Check tyres for wear and pressure (don't foget the spare wheel!).
If necessary, inflate to the specified pressure.
If pressure is low tyres when running tend to wear on the outer side of the tread.
If pressure is too high, tyres tend to wear on the central part of the tread.
Should abnormal wear of tread be noticed (either on the inside or on the outside of the tread), have wheel toe–in checked.
Never exceed max permitted load on each axle (however this should not affect the weight of the fully–laden vehicle).

Also check:

- Efficiency of the exhaust system.
- Check the oil level in oil bath air filter (where fitted)

Maintenance – A few practical hints

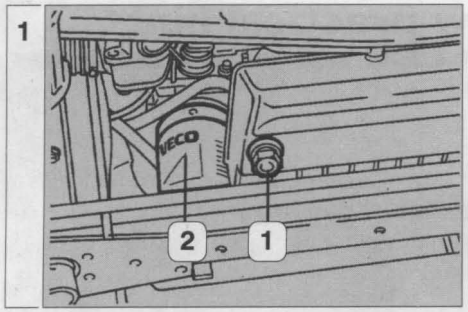
Your vehicle has been designed to ensure ease of access to mechanical components. This will enable you to carry out a number of simple maintenance tasks. Therefore, keep to instructions provided on the following pages and you will be able to perform the basic maintenance work yourself.

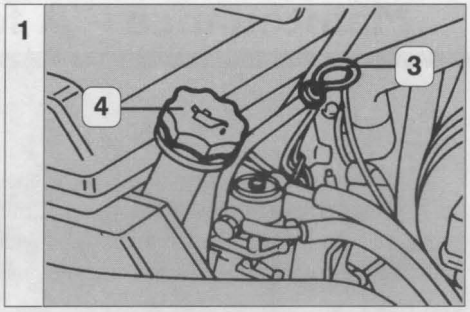
Used Engine Oils

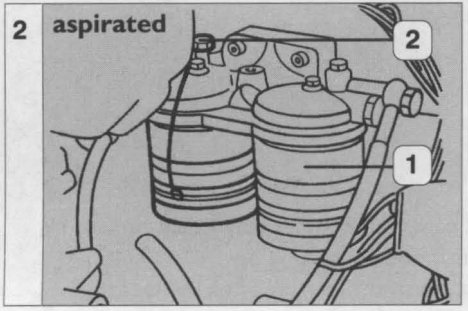
Warning! Prolonged and repeated contact may cause serious skin disorders, including dermatitis and cancer.

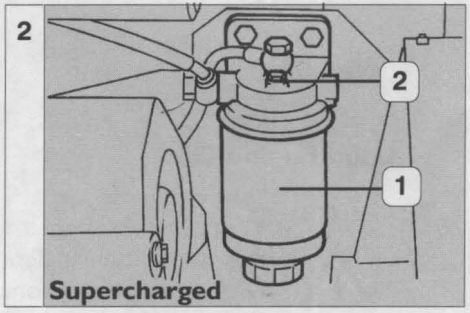
- Avoid excessive contact, wash thoroughly after contact.
- Keep out of reach of children.

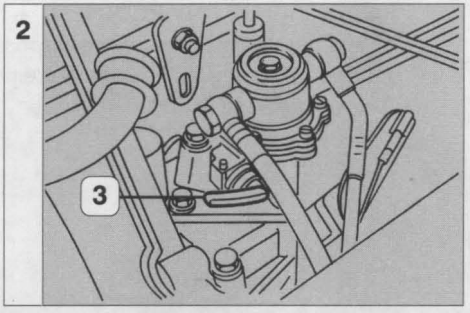
PROTECT THE ENVIRONMENT – It is illegal to pollute drains, water courses or soil. Use authorised waste disposal facilities, including civic amenity sites and garages providing facilities for receipt of used oil. If in doubt, contact your Local Authority for advice.











Engine

1 Engine oil change

- Remove the guard and drain the oil through plug 1 into a container.
- Change oil filter 2.
- Before fitting the new cartridge smear the seal with engine oil.
- Hand tighten the cartridge until it touches the mounting and then screw it in 3/4 of a turn.
- Withdraw dipstick 3.
- Refill with new oil through filler 4 (see table on page 72).

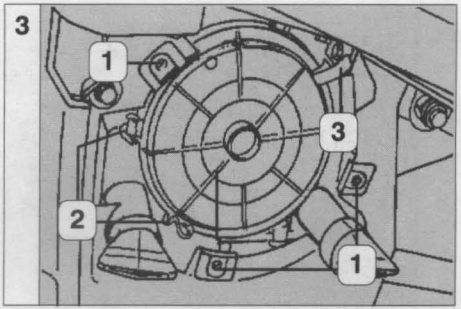
2 Fuel filter replacement

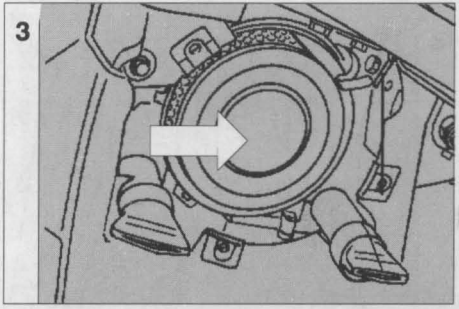
- Replace filter 1 and air–bleed the system, if necessary. Proceed as follows:
- Loosen screw 2.
- Work on lever 3 of feed pump.
- Retighten screw 2.
- Continue to work on lever 3 until the feed pump starts idling.

Warning! In case of engine stop owing to lack of fuel (and air inlet into the pipes), slacken the pipe sockets of at least two injectors. Simulate starting, and once bleeding is completed, retighten the pipe sockets.

3 Air filter replacement

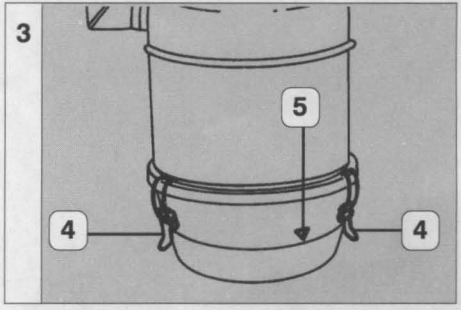
- Work from under the vehicle and proceed as follows:
- Undo scews 1 and remove the guard.
- Release hooks 2 and spring hook 3 and remove the cover.
- Clean the cartridge housing and replace the pressure–fitted cartridge (Use an original Iveco cartridge).
- Position the cover as shown between reference marks and the filter body.
- Refit the guard.





3 Bath air cleaner oil change (where fitted)

- Release retaining clips 4.
- Change the oil.
- Oil level must the edge of groove 5.



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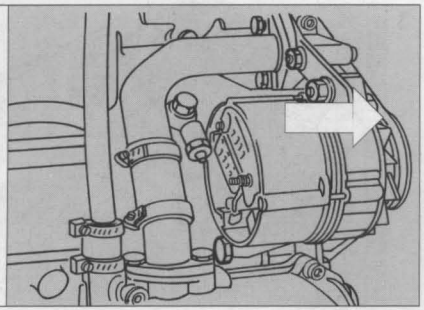

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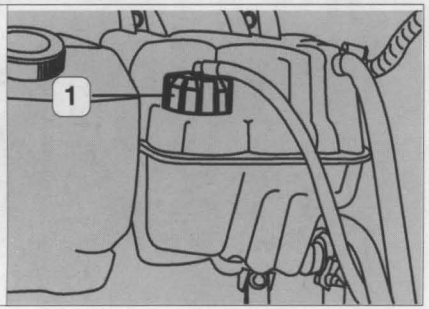


4 Checking belts

- Check condition of water pump, fan, and alternator drive belts.
  If worn out or loose, refer to an authorised dealer

5 Checking antifreeze concentration

- Use a densimeter through filler 1 to check the percentage of PARAFLU[11] in the engine coolant. It should be at least 40%; this value should be kept constant all the year round. Top up, if necessary, with water and 50% PARAFLU[11] to ensure good protection from corrosion.

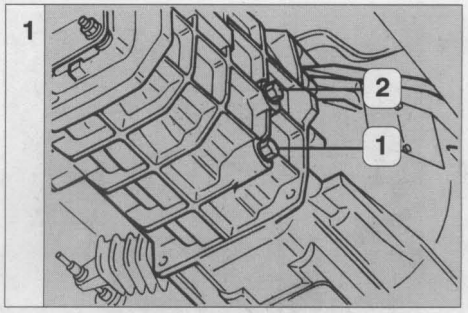
Fuel feed system

During the cold season it is advisable to use the appropriate fuels produced by oil companies.

Transmission – rear axle

1 Transmission oil change (after removing the guard)

- With transmission warm, remove plug 1 and drain the oil in a suitable container.
- Refill with new oil through hole exposed by plug 2 (see table on page 72).

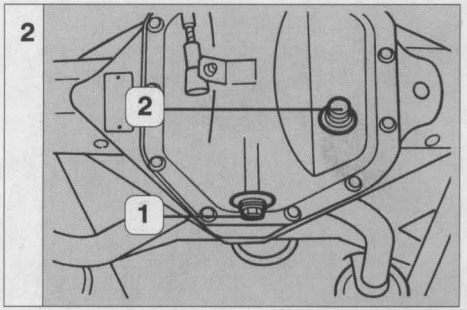


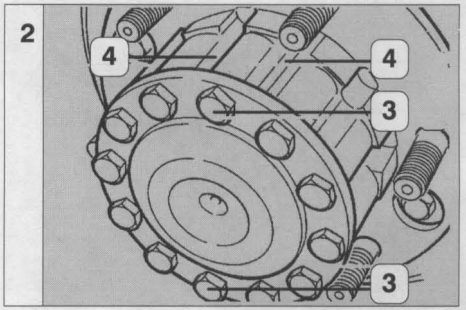
2 Rear axle oil change

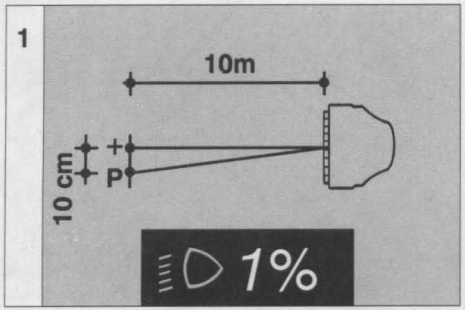
- With rear axle warm, remove plug 1 and drain the oil in a suitable container.

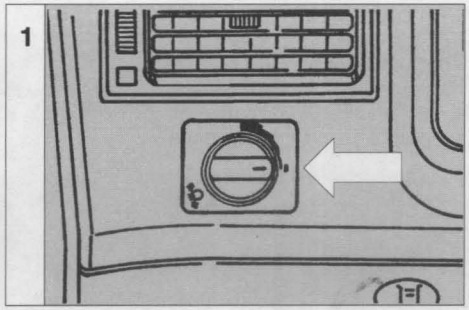
Mod. 59.12

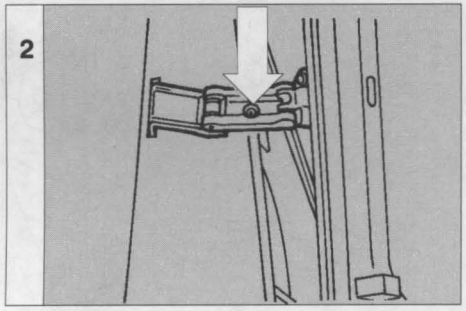
- Position either of the two screws 3 to the bottom.
  Screws can be easily found as they are placed between two relieves 4, on hub periphery.
- Take off lower screw 3 and drain oil. Tighten screw back.
- Take off upper screw 3 and fill with 0.2 l new oil. Tighten screw back.
- Carry out same operation on opposite wheel.
- Refill with new oil through hole exposed by plug 2 (see table on page 72).
- Clean the oil vapour breather.

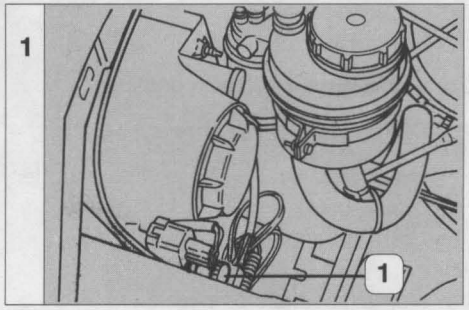


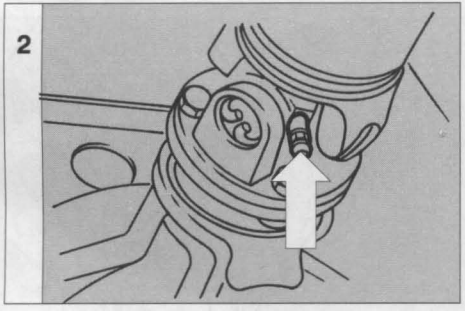


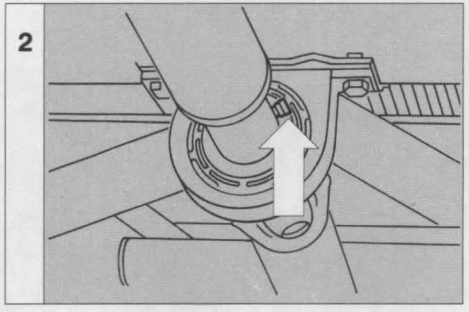












Electrical system

1 Headlight aiming

- Place the unladen vehicle on even ground in front of a light wall and check that tyre inflation pressures are as specified.
- Draw two crosses on the wall in line with headlight centres.
- Position the switch (where available) on 0.
- Reverse the vehicle 10 metres from the wall and switch on the low (dipped) beams.
- The distance between the crosses and points P (corresponding to the head–light beam angle) should be 10 cm (1%, as specified on label).
- 1. Light beam horizontal aiming screw.

Note: For the sake of safety have headlight aiming checked by an authorised dealer with the suitable equipment.

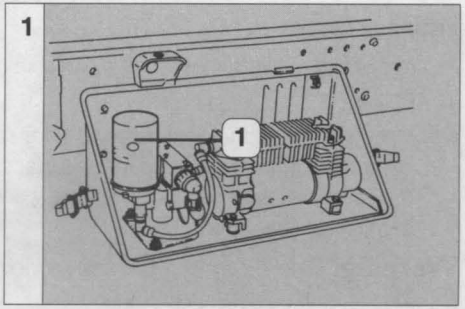
Greasing

2 Lubricate using the relevant pump:

– the hinges of the rear doors of the van.

– The propeller shafts.

1 Air suspension (where fitted – models 45 – 49 – 59)



Drier filter replacement

This filter 1 is located after the compressor. It is regenerated each time the vehicle is lowered by means of the air stored inside the air bellows.
Renew this filter, if necessary, screwing the new one in by hand until it touches the mounting. Tighten it 3/4 of a turn.

Bodywork maintenance

- Wash the vehicle regularly with neutral surface–active agents in order to eliminate corrosive substances (sand, salt, etc). Do not use brushes, hard fibres or dirty doths, (this avoids deep scouring and lack–lustre of the paint).
- Dry carefully using compressed air in order to completely eliminate any patches of water.

Cleaning of plastic components

External plastic components should be cleaned using the same procedure as for washing the vehicle. Should tracs of 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 products containing aromatic solvents, methanol or hydrocarbon.

Warning! The cleaning of cloth upholstery is usually carried out by means of dry foam or solvents. Use these products with care as they are inflammable and emit fumes. Therefore aereate the cab until they are perfectly dry. Chlorinated solvents such as trichloroethylene or hyperchloride should be definitely avoided.

Engine washing

Warning!

for vehicles equipped with EGR system, engine washing to be carried out with **extreme care** to avoid possible damages to system.

Fitting accessories

A range of top quality accessories is available through the authorised dealer network. If fitting accessories yourself, the following points should be considered;

- When drilling additional holes (e.g. for radio aerial) in the cab panels, you should prime the concerned area so as to avoid premature oxidation of the outer and inner surfaces.
- Proceed with care when fitting a new accessory. Avoid contacting the paint with screwdrivers or cutting tools thus causing permanent damage to the vehicle body.

Warning! Before carrying out any servicing operation on the vehicle, disconnect the battery's negative terminal.

Stickers (Deco–strips)

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

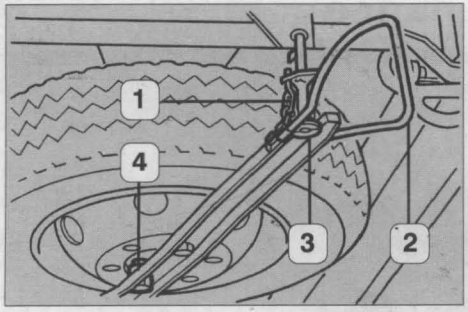
Doors

Regularly check efficiency of door closing mechanism.
As regards vans: turn to an authorised dealer should closing of the side sliding door prove difficult.

Brakes

Brake disc maintenance to be carried out by an Authorised Dealer only, to avoid occurrance of damages to seals and/or bearings.

On the spot maintenance



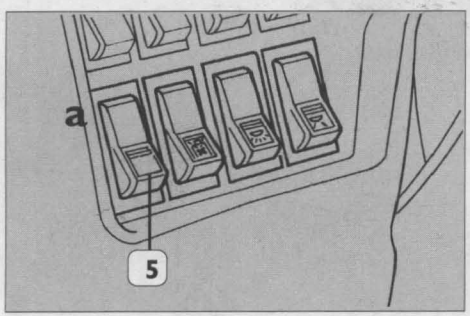
Spare wheel

Proceed as follows to remove spare the wheel:

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

Note! Raise the chassis (switch 5 in position **a**) to gain access to the spare wheel on vehicles fitted with air suspension.

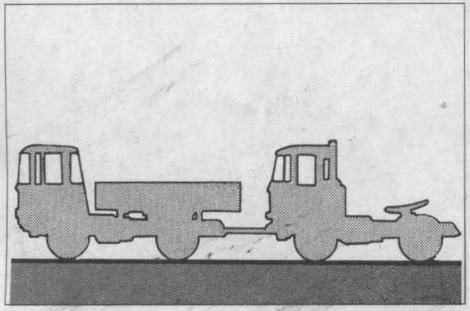
Warning! On replacing the replaced wheel make sure that the locking device 3 on wheel carrier is fastened securely.



On vehicles equipped with single–wheel rear axle, the spare wheel is arranged on the upper part of the side member. To pull it off it is necessary to unscrew the two nuts fixing the spare wheel to the wheel carrier.

On van and combi versions, the spare wheel is mounted inside the vehicle. To remove it iundo the central wing nut.

Vehicle towing and emergency starting



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

If the vehicle fails to start (e.g. dead battery or very cold climates), use an auxiliary battery with similar electrical specifications.

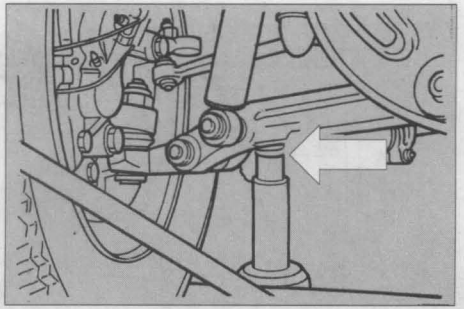
Push start is not advised.

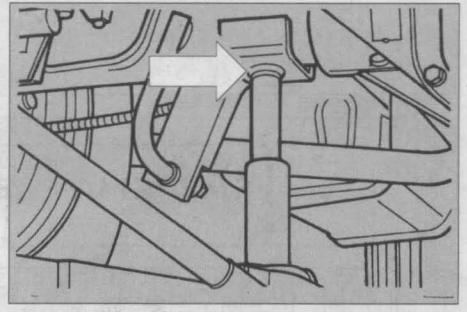
However, should tow or push start be needed, observe the following instructions:

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

Wheel changing

We suggest that you carry out this operation on level ground.
Jack up the vehicle: jack must be applied in the areas shown by arrows in the illustrations, either under the rear axle or under the front suspension arm respectively.





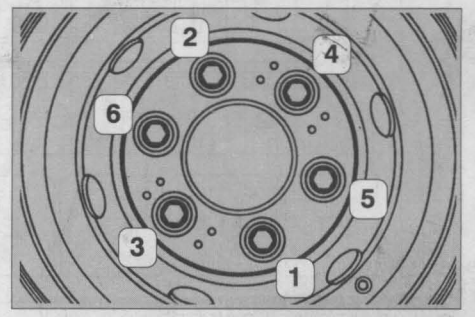
Warning! For a correct use of the jack, strictly abide by the labelled instructions.

Also remember that after applying parking brake and before jacking up the vehicle, the wheels remaining on ground must be chocked securely.

Before fitting a new wheel, carefully clean studs, nuts and contact surfaces.
For correct tightening, slightly oil the contact surface between nut, integral washer and the stud threads.
Note: Follow this procedure to make it easier when screwing out the nuts.

Tighten wheel nuts in the sequence shown in the diagram following the steps described below, using the specially provided tools:

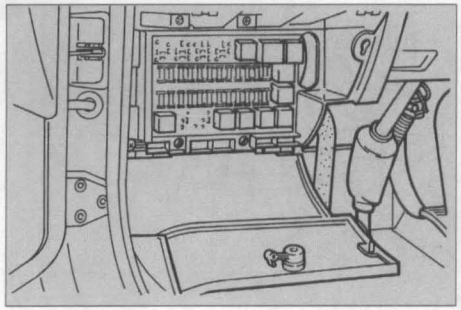
- Slightly tighten the nuts so that the wheel is properly positioned on the hub flange.
- Tighten the nuts according to the sequence shown.
- Lower the wheel to the ground and tighten the nuts by loading the lever end with your body weight (about 70kg). This way the tightening torque approximately corresponds to the prescribed torque value.



Wheel nuts tightening torque: 320 + 30 Nm (32 + 3 kgm).

Important: Tightening of wheel nuts should be checked periodically and at every wheel removal. Strictly adhere to the instructions on vehicle window sticker.

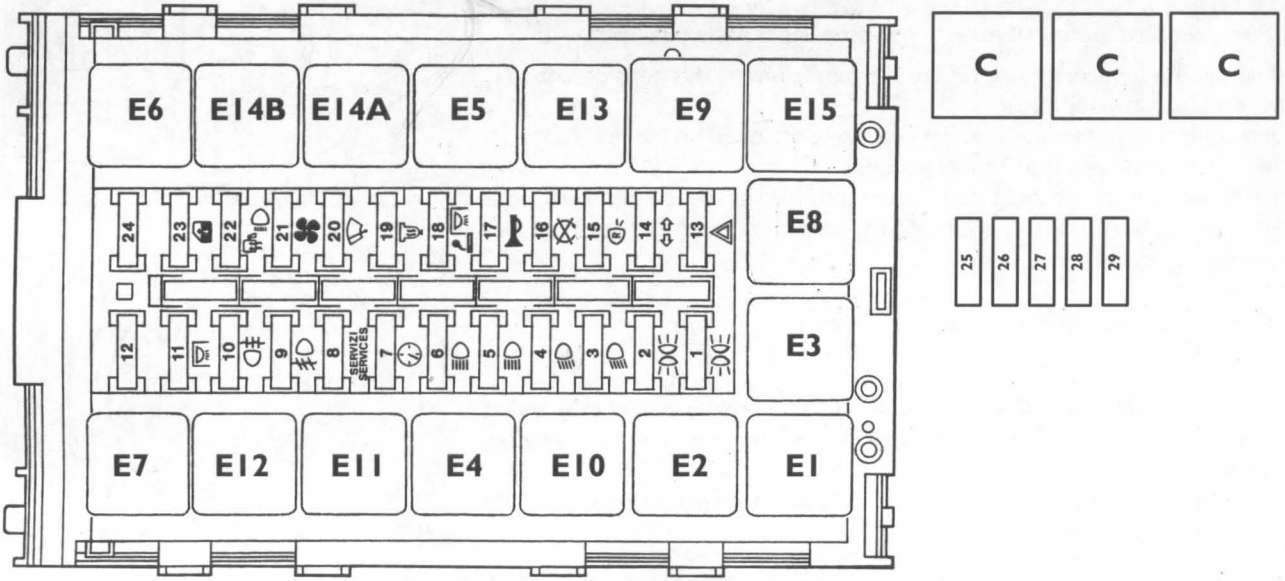
Remember: For your own safety, never use wheels and associated parts other than supplied or available as original equipment.



Relay and fuse box

Located on the driver's left hand side.
Access is gained by opening the door.

Warning! Always disconnect battery cables before proceeding with any servicing operation on the electrical system.
Do not dismantle electrical system of vehicles equipped with EDC (electronic diesel control) if maintenance is required, refer to an Authorised Dealer.



Fuses

1 – 5A Lh front parking light – Lh number plate light– Rh rear parking light – Rh front and Lh rear marker lights – Dashboard.
2 – 5A Rh front parking light – Rh number plate light – Lh rear parking light – Lh front and Rh rear marker lights.
3 – 7,5A Lh low beam light.
4 – 7,5A Rh low beam light.
5 – 7,5A Lh high beam light.
6 – 7,5A Rh high beam light.
7 – 3A Electronic speedometer or tachograph.
8 – 5A Brake – instrument – telltale failure.
9 – 10A Fog headlights.
10 – 3A Rear fog lamps.
11 – 5A Interior lighting (bus).
12 – 7,5A Not used.
13 – 10A Hazard lights.
14 – 5A Tractor unit turn signal lights.
15 – 3A Engine stop.
16 – 7,5A Reversing lights –stop lights.
17 – 10A Horns.
18 – 7,5A Interior lighting – Cigar lighter.
19 – 15A Heated fuel oil filter.
20 – 10A Windscreen wiper – Windscreen washer pump.
21 – 15A Electric heater – Electromagnetic fan.
22 – 7,5A Push switch lighting – flashing light.
23 – 25A Power window – Electromagnetic fan.
24 – 10A Emergency control pushbutton (Bus).

Fuses

25 – 20A Air conditioning.
26 – 20A Air conditioning.
27 – 25A Air conditioning.
28 – 25A Electric heater.
29 – 40A Thermostarter control unit.

Relays

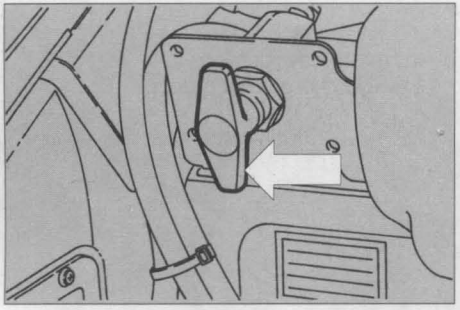
E1 Low beam lights (switch contacts).
E2 High beam lights (N.O. contact).
E3 Users cutoff during starting stage (N.O. contact).
E4 Fog lamps (switch contacts).
E5 Heated fuel oil filter.
E6 Emergency control unit.
E7 Day lights + fog lamps.
E8 Horns (N.O. contact).
E9 Windscreen wiper intermittent.
E10 Flashing light (N.O. contact).
E11 Diode for emergency control unit (with day lights).
E12 Not used.
E13 Brake system failure (switch contact).
$E14_A$ Emergency control unit (with day lights).
$E14_B$ Emergency control unit (with day lights).
E15 Direction indicators – single charge emergency.
C Air conditioning.

N.O. = Normally open.

Precautionary measures for Electronic Control Units installed on 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 by the following instructions:

- In case of operations on the chassis requiring electric arc welding it is necessary to:
  - disconnect the connector from the control units;
  - for weldings to be carried out near the control units, remove the control unit involved from the chassis.
- Never disconnect and/or connect connectors from control units with engine running or with control units energized.
- After any servicing operation requiring battery disconnection make sure that on reconnection terminals are well secured on terminals.
- 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 temperature higher than 80° C.



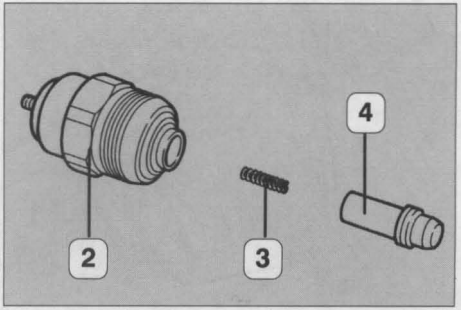
Precautions to be strictly observed

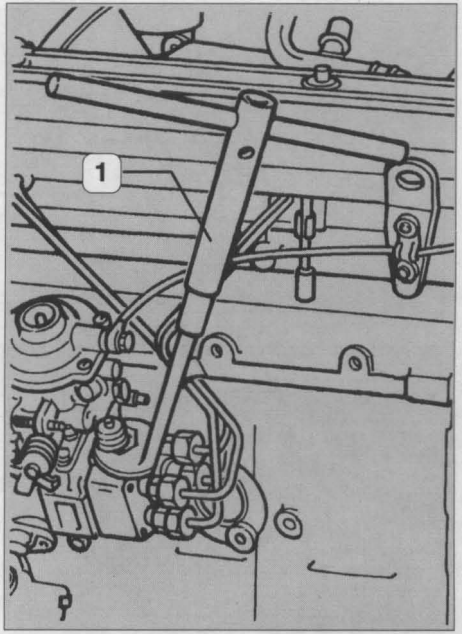
Before carrying out any servicing operation on the electrical system control unit and in particular before replacing the engine starting relay, it is absolutely necessary to take the following precautions to avoid the risks of short circuits:

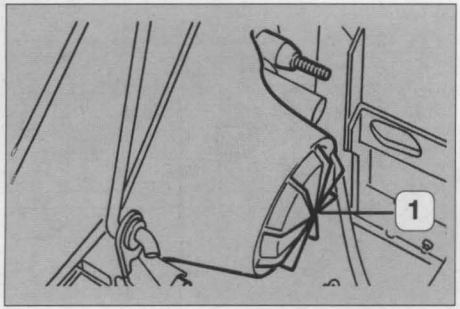
- Before removing the relay from the control unit, it is of the utmost importance that you switch off the main switch or disconnect battery terminals.
- A new relay is to be installed where the plastic casing has come off during relay removal or if the relay has been opened for any reason.

Electrical stop device failure

In case of failure of the electrical stop device the engine will not start or, if already in operation, will stop spontaneously. As a temporary measure, before having the device replaced by an Authorised Dealer dismantle the unit using spanner 1 on issue and take out magnetic core 4 and its spring 3. Then reassemble the unit. The engine can then be normally started, and can be stopped by braking the vehicle with a gear engaged.



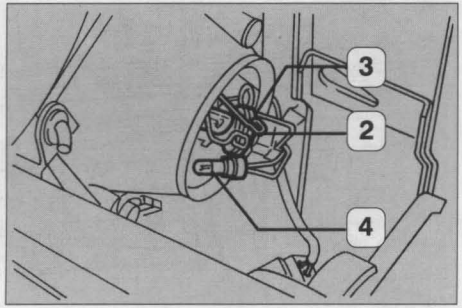




Headlamps

Proceed as follows to replace the bulb of the front headlamp unit:

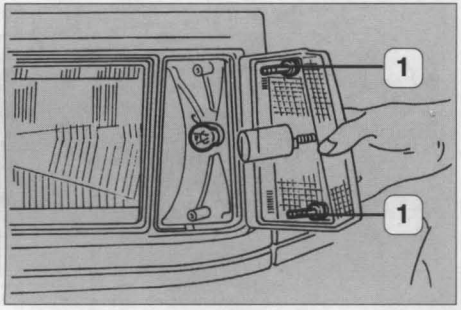
- Remove cover 1 inside the engine hood.
- Remove the two lampholder 2 retaining springs.
- Replace the defective bulb.



Bulbs are arranged as follows:

3. Lamp holder with double filament removable halogen bulb.
4. Tubular removable bulb (parking lights).

- Reassemble the two lamp holder 2 fastening clips.
- Install cover 1.



Front indicator bulbs

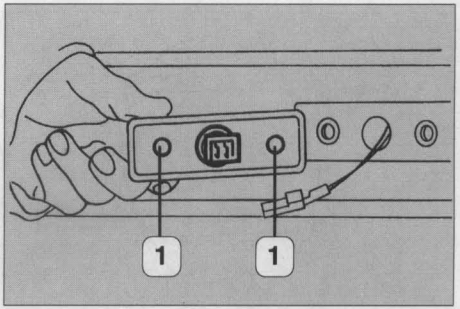
Proceed as follows to replace the front indicator bulb:

- Loosen diffuser fixing screws 1.
- Remove the diffuser.
- The bulb to be replaced can be removed through its bayonet–coupling system.
- Refit the diffuser.
- Retighten the diffuser fixing screws 1.

Side repeater bulbs

Proceed as follows to replace the side repeater:

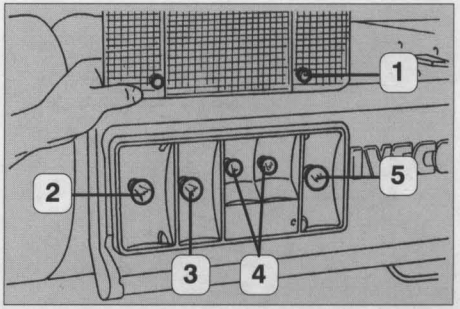
- Press the pressure couplings 1.
- Replace the defective bulb.
- Refit the diffuser to its couplings 1.



Tail lights

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

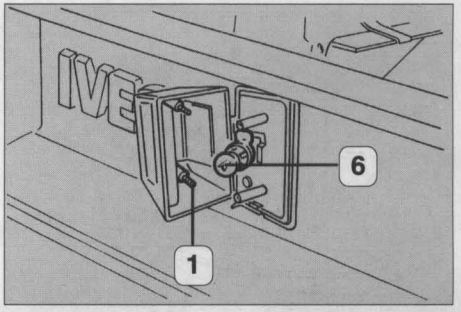
- Loosen the diffuser fixing screws 1.
- Remove the diffuser.



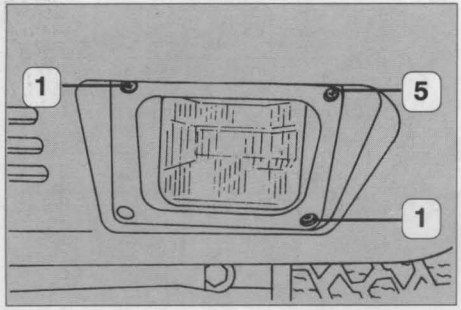
The bulbs are arranged as follows:

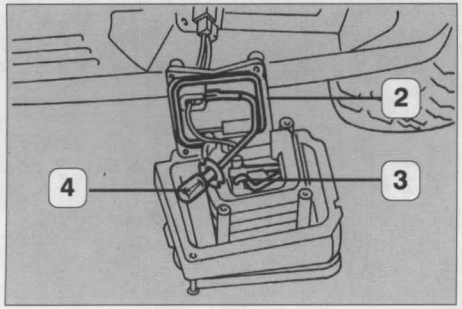
2. Spherical bulb, indicator lights.
3. Spherical bulb, stop lights.
4. Spherical bulbs, parking lights.
5. Spherical bulb, reversing and rear fog lights.
6. Spherical bulb, number plate lights.

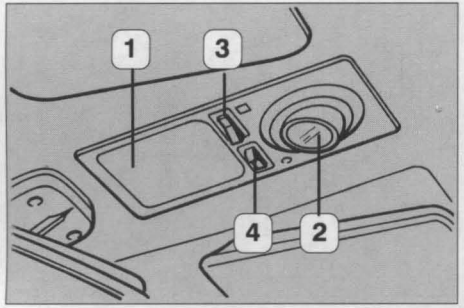
All bulbs can be removed through their bayonet–coupling system.



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







Fog lights (where fitted)

Proceed as follows to replace the bulb:

- Loosen screws 1 to dismantle the lamp.
- Then take out the four screws to remove the cover 2.
- Remove the lamp holder retaining springs 3.
- Replace halogen lamp 4.

  On refitting the new bulb avoid touching it as you might affect the efficiency of its operation.
- Refit the lamp holder retaining springs.
- Screw in the four screws to reassemble the cover 2.
- Tighten screws 1 to reassemble the foglight.

Rotate screw 5 to aim the light beam.

Interior lights

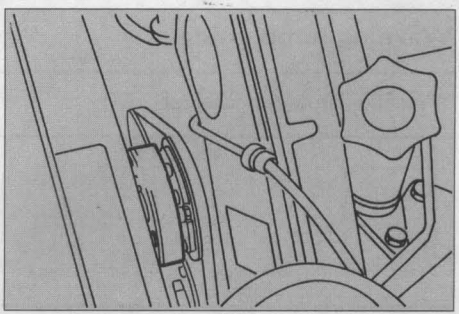
Proceed as follows to replace the bulbs:

- Carefully prise the ceiling light unit from its mounting.
  Bulbs are arranged as follows:
  1. Two cylindrical bulbs.
  2. Tubular bulb (adjustable light beam).
- Carefully replace light unit.

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

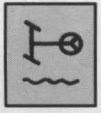
Note: Lamp wattage is tabulated on page 84.

Electromagnetic fan

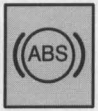
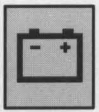


Control of the fan is of the electromagnetic type and it is operated by the engine working temperature.

Warning lamp guide

Warning lamp on	Defect	Remedy
	Water in fuel filter	Drain the water as described on page 47. 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.
	Power steering fluid level low	Check fluid 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. Should the problem persist, refer to an Authorised Dealer.

* The ABS system warning lamp should be "on" in the following conditions:

- When the key is inserted in the starting switch.
- When the vehicle speed is less than 5 to 10 km/h.

Note – In case of temporary vehicle stops (i. e. traffic lights etc), the warning lamp must be off.

Warning lamp guide

Warning lamp on	Defect	Remedy
	Engine stopping	Refer **immediately** to an Authorised Dealer.
EDC TEST	Reduced engine performance (power reduced to about 40 HP)	Refer to an Authorised Dealer.
	Fuel system malfunction	Refer to an Authorised Dealer.
	* Water in fuel filter	Drain the water as described on page 47. If lamp stays on, replace filter.

* Warning!
water in fuel filter may damage the EDC system. Therefore stop the engine and drain the water as soon as the warning lamp.

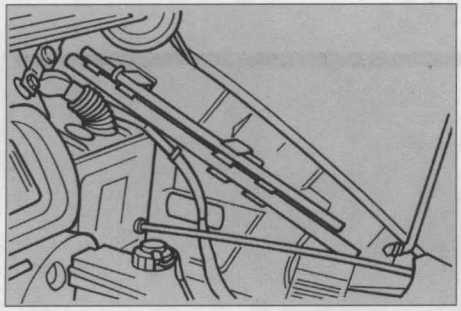
Capacities

	Lubricants recommended by Iveco	It	Kg
Engine sump*	Urania Turbo	5,9	5,3
Engine sump and filter*		7	6,3
Transmission	Tutela ZC 90	1.5	1,35
Rear axle	Tutela W140/M–DA	1,9	1,7
Rear axle (59.12)	Tutela W140/M–DA	3	2,7
Power steering	Tutela GI/A	1,4	1,3
Brake system	Tutela DOT SPECIAL – DOT4	1,11	1,0
Windscreen washer unit	Arexons DP1	2.6	–
Fuel tank	–	70	–
Cooling system	Paraflu[11]	13	–
Protective antifreezer 50% concentration Freezing point – 40°C		6,5	–

(*) In any case the engine oil must be changed once a year even if the specified mileage interval is not reached within this period.

International lubricant designation		Fiat Lubrificanti products
Engine oil Conforms to E2–96 specifications		**Urania Turbo**
Oil for differentials and rear wheel hubs to MIL–L–2105 D–API GL 5 specifications	SAE 80W 90 SAE 85W 140	**Tutela W90/M – DA** (Cold climates) **Tutela W 140/M–DA** (Temperate/warm climates)
SAE 80W/90, oil, not EP for mechanical transmission Containing anti–wear additives MIL–L–2105 oppure API GL3		**Tutela ZC 90**
Hydrostatic transmission oil A.T.F. DEXRON II D		**Tutela GI/A**
Lithium–based grease consistency N.L.G.I. n. 2		**Tutela MR 2**
Lithium–based grease consistency N.L.G.I. n. 3		**Tutela MR 3**
Hydraulic brake and clutch control fluid Conforming with specifications F.M.V.S.S. n. 116 ISO 4925 SAE J1703 CUNA NC 956–01 Iveco Standard 18–1820		**Tutela DOT SPECIAL**

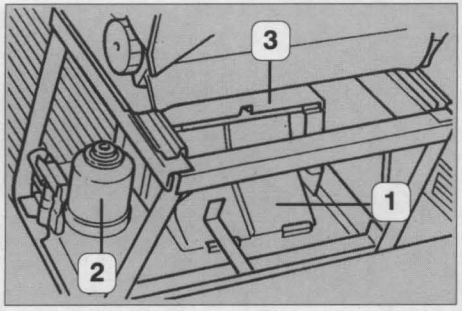
Tool kit



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

Location: inside the engine hood.

- Box spanner, 27 mm.
- Box spanner handle
- Jack handle



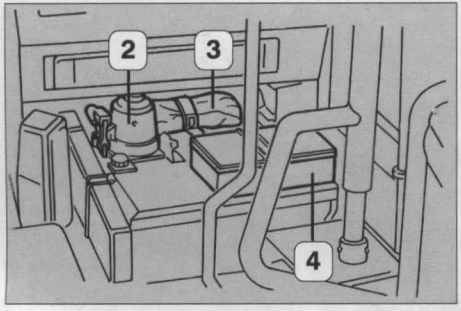
Location: under the passenger's seat.

1. Chocks.
2. Jack.

3. Tool bag containing:

- Cutting pliers.
- Screwdriver for standard and cross–head screws.
- Special spanner for dismantling electrical stop device.
- Double–ended spanner 10 x 11 mm.
- Double–ended spanner 13 x 17 mm.
- Double–ended spanner 19 x 22 mm.
- Box spanner 14 mm.

Emergency handle for electric window regulator (where fitted).



Bus kit

4. First aid box (where fitted).

Specifications and data

Engine		Aspirated	Supercharged
Engine type		8140.67F	8140.47
(HP)		82	109
Turbocharger type		–	KKK
Main data:			
No. of cylinders		4	4
Bore	mm	93	93
Stroke	mm	92	92
Total displacement	cm^3	2499	2499
Type: Diesel four–stroke		Indirect injection	Direct injection
Performance:			
Max. power rating	kW(HP)	60 (82)	81 (109)
Rated power speed	r.p.m.	4200	3800
Max. torque rating	Nm (kgm)	155 (16)	250 (25,5)
Rated torque speed	r.p.m.	2400	1700
Fuel injection system:			
Injection pressure	bar	120 + 8	240 + 8
Injection order		1–3–4–2	1–3–4–2
Adjustment (cold engine):			
Valve clearance (intake)	mm	0,50 ± 0,05	0,50 ± 0,05
Valve clearance (exhaust)	mm	0,50 ± 0,05	0,50 ± 0,05

Engine		Supercharged	Supercharged	Supercharged
Engine type		8140.23	8140.43	8140.43 (EGR)
(HP)		103	122	122
Turbocharger type			Mitsubishi/Garrett	
Main data:				
No. of cylinders		4	4	4
Bore	mm	94,4	94,4	94,4
Stroke	mm	100	100	100
Total displacement	cm^3	2800	2800	2800
Type: Diesel four–stroke			Direct injection	
Performance:				
Max. power rating	kW(HP)	76 (103)	90 (122)	90 (122)
Rated power speed	r.p.m.	3600	3600	3600
Max. torque rating	Nm (kgm)	250 (25,5)	285 (29)	235 (24)
Rated torque speed	r.p.m.	1900	1900	1600
Fuel injection system:				
Injection pressure	bar	230 + 8	230 + 8	230 + 8
Injection order		1–3–4–2	1–3–4–2	1–3–4–2
Adjustment (cold engine):				
Valve clearance (intake)	mm	0,50 ± 0,05	0,50 ± 0,05	0,50 ± 0,05
Valve clearance (exhaust)	mm	0,50 ± 0,05	0,50 ± 0,05	0,50 ± 0,05

Clutch Mechanical control type	
Transmission Mechanical type with forward gear synchronizers	**Iveco 2826.5**
1st gear	6,19
2nd gear	3,89
3rd gear	2,26
4th gear	1,42
5th gear	1,00
Reverse gear	5,69
Rear axle single–reduction type	Ratios
35.10 CV – 35.12 CV– 35.12 RG	3,357
59.12	3,909
35.8 CV - 35.10 CV – 35.12 CV– 35.12 RG – A40.10–A40.12–A45.12	3,615
35.10 RS – 49.10 – A45.10–A49.10	3,917
30.8 – 35.8 CV - 35.10 RG– 35.12 RG – 35.12 RS – 49.10 – 49.12	4,182
59.12	4,300
59.12	4,556
35.8 RG – 35.10 RS – A40.10–A45.10–A45.12	4,444
35.8 RS	4,889
59.12	5,125
35.8 RG – 35.8 RS	5,222
35.8 RG	5,857

Legend: CV = City Version RG = Twin rear wheels R.S. = Single rear wheels

Steering system

Mechanical (models 30.8–30.10–35.8–35.10–40.8–40.10–A40.10)
Hydraulic (all other models)

Front suspension

Independent front wheels, with longitudinal torsion bar.
Telescopic shock absorbers.
Stabilizer bar.

Rear suspension

Leaf springs with spring bushing:
- parabolic on van and combi
- Multiple leaf spring type on trucks, van, dual–purpose, chassis cowl vehicles and bus.

Telescopic shock absorbers.
Stabilizer bar.
Optional: rear air suspension on .10 and .12.

Brakes

Front, disc type – Rear, disc or drum according to model.
Vacuum brake indipendent circuit hydraulic system.

Wheels

Disc type.

Front wheel geometry

	30	35 and 40 Disc/Drum	35 – 49 Disc/Disc	59.12
Toe–in	mm 2 ± 1	mm 2 ± 1	mm 2 ± 1	mm 2 ± 1
Camber	1° ± 20'	1° ± 20'	0° 30' ± 20'	1° 30' ± 20'
Caster	0° 45' + 40'	0° 45' + 40'	1° 30' + 40'	3° + 40'

Tyres

Models	Type	Front Axle		Rear Axle	
		Max load kg	bar	Max load kg	bar
30.8 – 30.10	195/75 R 14	1500	3,5	1925	4,5
35.8 – 40.8 – 35.10	175/75 R 16	1550 1650	4,25 4,5	2600	3,75
	185/75 R 16	1550 1650	3,75 4,0		3,5
	195/75 R 16	1550 1650	3,5 3,75		3,25
35.12	175/75 R 16	1650	4,5		3,75
	185/75 R 16	1650 1800	4,0 4,25		3,5
	195/75 R 16	1650 1800	3,75 4,25		3,25
35.8 RS – 35.10 RS RS = Single rear wheels	215/75 R 16	1550 1650	3,0 3,25	2300	4,5
35.12 RS RS = Single rear wheels	215/75 R 16	1650 1800	3,25 3,5		4,5

Tyres

Models	Type	Front Axle		Rear Axle	
		Max load kg	bar	Max load kg	bar
40.8	185/75 R 16	1550	3,75	3100	4,0
		1650	4,0		
	195/75 R 16	1550	3,5		4,0
		1650	3,75		
40.10 – A40.10	185/75 R 16	1650	4,0		4,0
	195/75 R 16	1650	3,75		3,75
40.12 – A40.12	185/75 R 16	1650	4,0		4,0
		1800	4,5		
	195/75 R 16	1650	3,75		3,75
		1800	4,25		
45.10	185/75 R 16	1800	4,5	3400	4,5
A45.10 – A45.12	195/75 R 16		4,25		4,25
49.10 – 49.12 A45.10 – A45.12 – A49.10	195/75 R 16		4,25	3700	4,5
59.12	205/75 R 16 Reinforced	2000	4,5	4650	5,25
59.12	225/75 R 16		3,75		4,5
35.8 – 35.10 – 35.12 City Version (on rear axle)	165/55 R 14	—	—	2600	5,75
Extra Europe model	6.50 R 16	1550	3.5	2600	3,0
		1650	4,0	3100	3,75
		1800	4,5	3400	4,25
				3700	4,75
	7.00 R 16	2000	4,5	4650	5,5

Electrical system

Voltage 12 V

Battery	88Ah
Optional	90Ah
	110Ah (only Bus)
Starter motor	2,2 KW
Generator	55 A
Generator Bus	85 A

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
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

Programmed maintenance

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

To make that sure 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 an Authorised Dealer 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 an Authorised Dealer who will affix the date, stamp and signature in the specially provided spaces of the Overall Maintenance Scheme as validation (see pages 101 to 111).

Bear in mind that ...

Mileage intervals for engine lubrication are based on a less than 0,5% sulphur percentage in fuel.
NOTE: If sulphur content is over 0.5%, distance intervals for engine oil change should be halved.

Maintenance service table

On pages 87 you will find a table that will help you select the Programmed Maintenance Plan that best suits your vehicle's operating conditions.
This table is a useful reference for the choice of the Maintenance Plan as it combines the type of transport profile with the appropriate user group; it can also be used as a guide for types of transport and goods other than those specified in the table.
The Programmed Maintenance Plan covers the following types of vehicle use:

R = On-road operation
H = Heavy duty operation

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

Models	Type of use	Km intervals			Hours intervals		
		EO	**M1**	**M2**	**EO**	**M1**	**M2**
Indirect injection (.8)	**R**	10,000 km	20,000 km	60,000 km	200	400	1200
	H	10,000 km	20,000 km	60,000 km	200	400	1200
Direct injection (.10 .12)	**R**	—	20,000 km	60,000 km	—	400	1200
	H	10,000 km	20,000 km	60,000 km	200	400	1200

EO Service
Including engine oil change only.

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

Guide to the selection of the maintenance plan
R = On–road duty
H = Heavy duty

Type of transport	Market sectors																	
	General mixed cargo	Bakery	Meat and fisch	Milk	Dairy products	Fruits and vegetables	Bulk cargo	Drinks	Food retail sales distributo	Electrical appliance	Electronic material	Chemicals & pharmaceut.	Consumer good	Public works and construc	Daily rental	Municipal works	Civil protection	Leisure activities
Civil protection																	H	
Municipal works														H		R		
Light off–road duty							H							R		H		H
Heavy off–road duty														H				
Long distance duty ≥ 250 km	R		R	R	R	R	R	R		R	R	R	R		R		R	R
Medium distance duty ≤ 200 km	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R		R	R
Suburban distribution Short distance	R	R	R	R	R	R	H	R	R	R	R	R	R	H	R	R	H	H
Urban distribution (door to door, bus, mail service)	H	H	H	H	H	H		H	H	H	H	H	H	H	H	H	H	H

Service interval plan

R = On–road operation

Engine oil: **Urania Turbo** (E2–96)

km x 1000						**Services**
10	130	250	370	490	610	**EO**
20	140	260	380	500	620	**M1**
30	150	270	390	510	630	**EO**
40	160	280	400	520	640	**M1**
50	170	290	410	530	650	**EO**
60	180	300	420	540	660	**M2**
70	190	310	430	550	670	**EO**
80	200	320	440	560	680	**M1**
90	210	330	450	570	690	**EO**
100	220	340	460	580	700	**M1**
110	230	350	470	590	710	**EO**
120	240	360	480	600	720	**M2**

Service interval plan

H = Heavy duty operation

Engine oil: **Urania Turbo** (E2–96)

km x 1000						Services
10	130	250	370	490	610	EO
20	140	260	380	500	620	M1
30	150	270	390	510	630	EO
40	160	280	400	520	640	M1
50	170	290	410	530	650	EO
60	180	300	420	540	660	M2
70	190	310	430	550	670	EO
80	200	320	440	560	680	M1
90	210	330	450	570	690	EO
100	220	340	460	580	700	M1
110	230	350	470	590	710	EO
120	240	360	480	600	720	M2

M12

Quality of Ownership Check

You are invited to have a thorough check of your vehicle carried out just prior to the end of the first twelve months of original ownership, the vehicle should be returned to your Dealer for the Quality of Ownership Check (M12). This will enable him to check your vehicle and make any necessary adjustments in order to assure you of continued trouble free operation. The Quality of Ownership Check (M12) is free with the exception of materials used, eg oils, fluids etc.

We would like to remind you that the Authorised Dealer places the skill of its Technical and Sales personnel at the Customer's disposal for the whole of the vehicle's life.

Engine

- Control engine idle speed.
- Visual check of engine exhaust system.
- Check condition and tension of various control belts.

Chassis and mechanical assemblies

- Check mechanical assemblies for leaks.
- Check brake pipes and cooling system for leaks.
- Check power steering system oil level.
- Check condition of gear lever boot.
- Check security of supt. bracket, anch. bars leaf springs.
- Check steering rack bellows.
- Check steering linkage, joints and steering column.
- Check levelling pneumatic suspensions.
- Check fuel lines for leaks.
- Check shock absorbers for leaks.
- Check exhaust brake operation.
- Check condition of pneum. suspension rubber bellows.
- Check of power steering hydraulic stop device.
- Visual check of state of wear of tyres.
- Check condition of sleeves, boots (gearbox, clutch, steering).

Brakes

- Check operation of service brakes.
- Check operation of emergency and parking brakes.
- Check brake discs, pads & shoes for wear.

Cab and electrical components

- Visual check of vehicle ext. scratches, dents, paintwork
- Check operation instrumentation & warning devices.
- Check cab heater & ventilator operation.
- Check operation interior lights.
- Check operation exterior lights.
- Check operation of battery disconnect switch.

Sundry

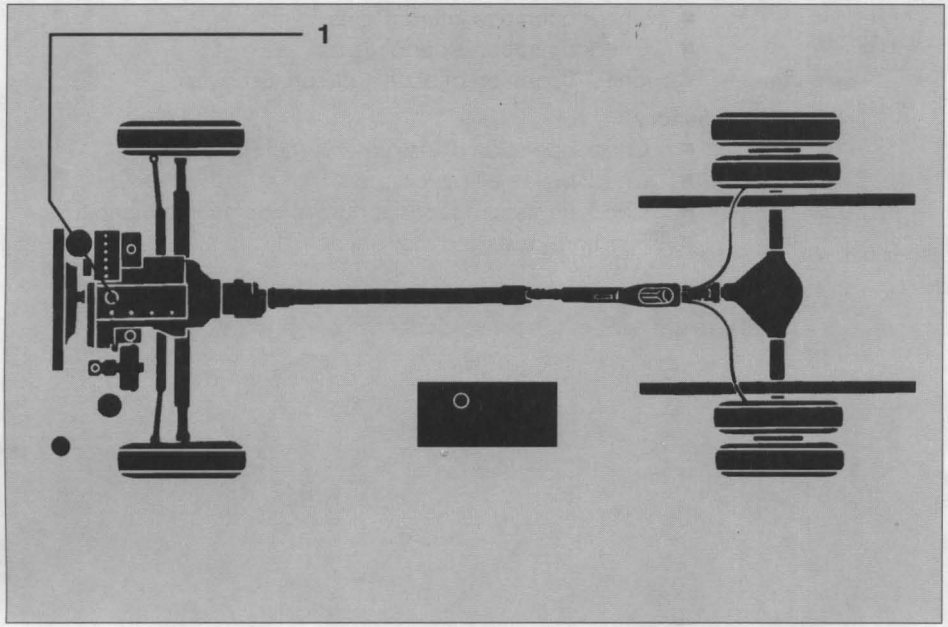
- Check operation of instruments (during road test).
- Check brakes efficiency.
- Check engine emissions at normal operation temperature.
- Functional tests and movement.

Service EO (Engine Oil)

Including engine oil change only.

R Every 10,000 Km / Every 200 hours (models .8 only)

H Every 10,000 Km / Every 200 hours



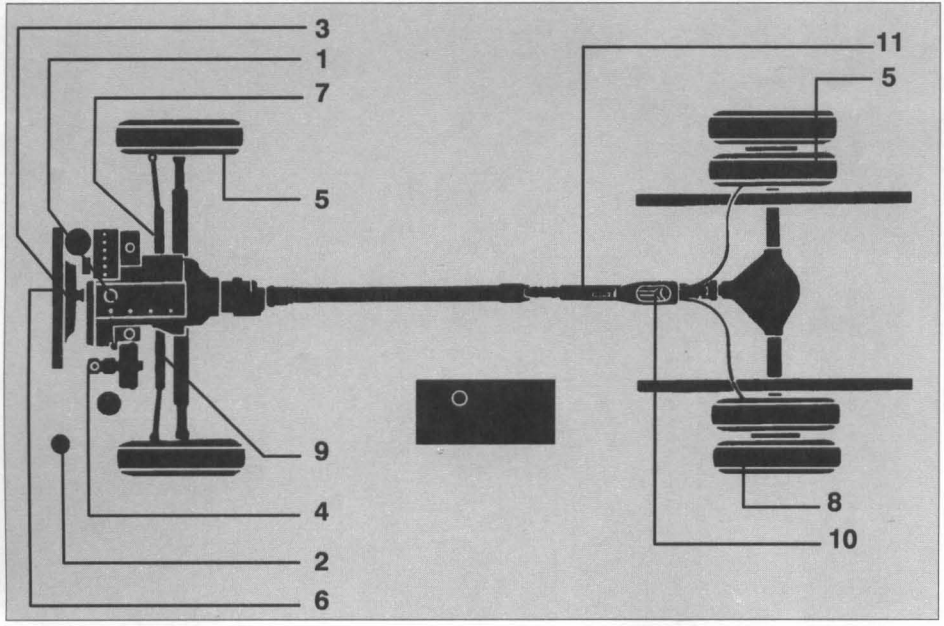
The engine oil must be changed at least once a year, even it the annual mileage is less than that specified.

EO service

1 – Change engine oil.

Service M1

R	Every 20,000 Km / Every 400 hours
H	Every 10,000 Km / Every 400 hours



The engine oil must be changed at least once a year, even it the annual mileage is less than that specified.

M1 service

1 – Change engine oil and filter.
2 – Change fuel filter.
3 – Check condition of water pump, fan and alternator drive belts.
4 – Check fluid level in brake hydraulic system.
5 – Check efficiency of front and rear (as applicable) wheel brake pads and discs.
Warning! Brake disc maintenance to be carried out by an Authorised Dealer only, to avoid occurance of damages to seals and/or bearings.
6 – Security of InterCooler syustem sleeves and collars (where fitted).
7 – Check of steering box fixing.
Check of steering box rack shroud.
Check of linkages, steering knuckles and steering column.
8 – Check wheel nuts tightening torque (follow specifications provided on page 59).
9– Check adjustment of brake and clutch pedals.
10– Check adjustment of hand brake lever.
11– Grease propeller shafts and the hinges of the rear door of the van.
With mileage per year equal, to or below, 20,000 km, propeller shafts should be greased at least once a year.

Also:

- Security and condition of sleeves and hoses of air intake system.
- Visual check of E.G.R. system components.
- Change air cleaner oil (where fitted).
- Visual check of all mechanical assemblies for leaks.
- Check bearing grease seals of rear hub assemblies (except 59.121).
- Visual check of all pipes and hoses for leaks.
- Check moving parts for interference.

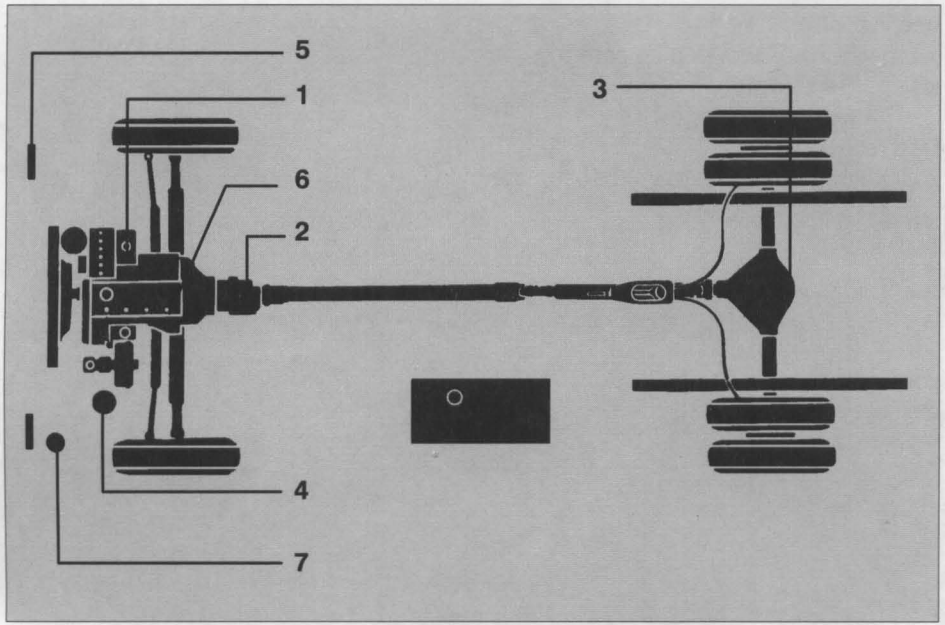
Vehicle test and handling.

Service M2

Including all M1 Service operations plus those described on the opposite page.

R Every 60,000 Km / Every 1200 hours

H Every 60,000 Km / Every 1200 hours



The oil in mechanical components must be changed at least once a year, even if the annual mileage is less than that specified.

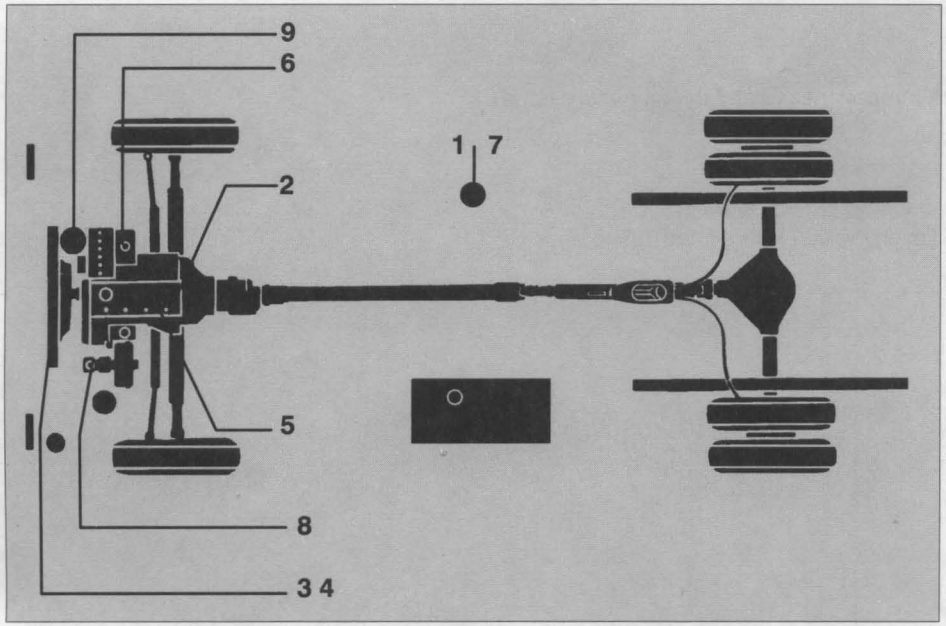
M2 service

1 – Check the antifreeze percentage in the engine cooling fluid by means of a densimeter.
2 – Change transmission oil.
3 – Change rear axle oil. 59.12 only: replace rear wheel oil hubs.
Clean oil vapour breather.
4 – Change power steering system filter.
5 – Check headlamp alignment
6 – Carry out a functional test of preheating plugs (.8 model).
7 – Replace additional fuel filter (.8 model).

Also:

- Functional test of E.G.R. system.
- Dismantle and wash all oil bath air cleaner components. Chang the oil (where fitted).
- Check leaf spring fastening.
- Check engine suspension fastening.
- Check universal joints and flange security.
- Check security of air suspension bellow mountings (where fitted).
- Check operation of air suspension stroke limiting valve (where fitted).

Non standard maintenance



Non standard maintenance

Every 40,000 km / Every 800 hours

1 – Replace air suspension air cleaner (where fitted. Mod. 45 – 49 – 59).

Every 60,000 km / Every 1200 hours

2 – Replace preheating plugs (.8 model).

Every 100,000 km / Every 2000 hours

3 – Replace alternator and water pump drive belts.
4 – Replace timing drive belt.

Every 120,000 km / Every 2400 hours

5– Check injector settings
6 – Change cooling fluid (before the cold season).
7 – Replace air suspension drier filter (where fitted. Mod. 45 – 49 – 59).

Every year

8 – Change brake fluid.

Every two years

9 – Replace dry air filter cartridge (regardless condition).

Overall maintenance and lubrication plan

Model	Chassis
Registration	Registration date
Surname	
First name	
Address	
City	Telephone

Overall maintenance and lubrication plan (up to 720,000km)

(Fuel with less than 0,5% sulphur).

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.

The service operations involved are described on the pages detailed below:

EO:	92
M1:	94
M2:	96

Overall maintenance and lubrication plan

Km x 1000 Tick off selected plan	H	R	Actual mileage at which service was performed	Date day month year	Affix stamp here
10	EO	EO		— — —	
20	M1	M1		— — —	
30	EO	EO		— — —	
40	M1	M1		— — —	
50	EO	EO		— — —	
60	M2	M2		— — —	
70	EO	EO		— — —	
80	M1	M1		— — —	

Overall maintenance and lubrication plan

Km x 1000 Tick off selected plan	H	R	Actual mileage at which service was performed	Date day month year	Affix stamp here
90	EO	EO		— — —	
100	M1	M1		— — —	
110	EO	EO			
120	M2	M2		— — —	
130	EO	EO		— — —	
140	M1	M1		— — —	
150	EO	EO		— — —	
160	M1	M1		— — —	

Overall maintenance and lubrication plan

Km x 1000 Tick off selected plan	H	R	Actual mileage at which service was performed	Date day month year	Affix stamp here
170	EO	EO		— — —	
180	M2	M2		— — —	
190	EO	EO		— — —	
200	M1	M1		— — —	
210	EO	EO		— — —	
220	M1	M1		— — —	
230	EO	EO		— — —	
240	M2	M2		— — —	

Overall maintenance and lubrication plan

Km x 1000 Tick off selected plan	H	R	Actual mileage at which service was performed	Date day month year	Affix stamp here
250	EO	EO		— — —	
260	M1	M1		— — —	
270	EO	EO		— — —	
280	M1	M1		— — —	
290	EO	EO		— — —	
300	M2	M2		— — —	
310	EO	EO		— — —	
320	M1	M1		— — —	

Overall maintenance and lubrication plan

Km x 1000 Tick off selected plan	H	R	Actual mileage at which service was performed	Date day month year	Affix stamp here
330	EO	EO		— — —	
340	M1	M1		— — —	
350	EO	EO		— — —	
360	M2	M2		— — —	
370	EO	EO		— — —	
380	M1	M1		— — —	
390	EO	EO		— — —	
400	M1	M1		— — —	

Overall maintenance and lubrication plan

Km x 1000 Tick off selected plan	H	R	Actual mileage at which service was performed	Date day month year	Affix stamp here
410	EO	EO		— — —	
420	M2	M2		— — —	
430	EO	EO		— — —	
440	M1	M1		— — —	
450	EO	EO		— — —	
460	M1	M1		— — —	
470	EO	EO		— — —	
480	M2	M2		— — —	

Overall maintenance and lubrication plan

Km × 1000 Tick off selected plan	H	R	Actual mileage at which service was performed	Date day month year	Affix stamp here
490	EO	EO		— — —	
500	M1	M1		— — —	
510	EO	EO		— — —	
520	M1	M1		— — —	
530	EO	EO		— — —	
540	M2	M2		— — —	
550	EO	EO		— — —	
560	M1	M1		— — —	

Overall maintenance and lubrication plan

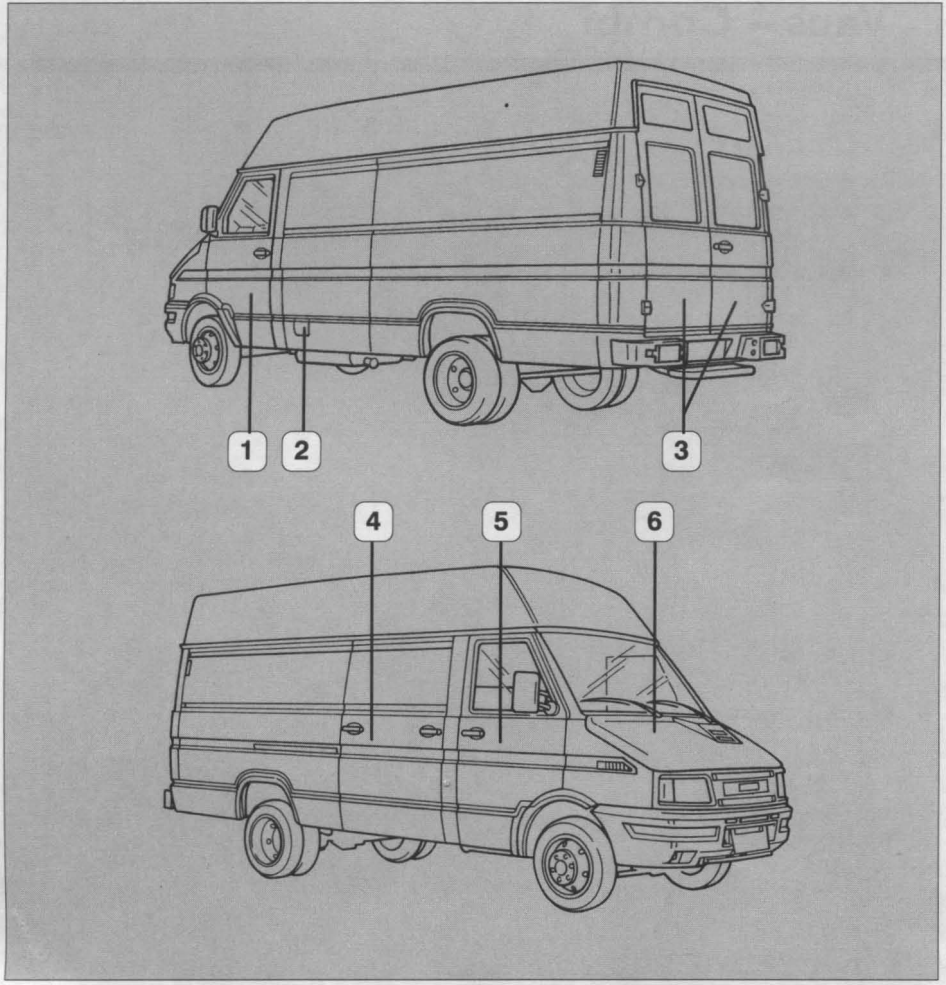
Km x 1000 Tick off selected plan	H	R	Actual mileage at which service was performed	Date day month year	Affix stamp here
570	EO	EO		— — —	
580	M1	M1		— — —	
590	EO	EO		— — —	
600	M2	M2		— — —	
610	EO	EO		— — —	
620	M1	M1		— — —	
630	EO	EO		— — —	
640	M1	M1		— — —	

Overall maintenance and lubrication plan

Km × 1000 Tick off selected plan	H	R	Actual mileage at which service was performed	Date day month year	Affix stamp here
650	EO	EO		— — —	
660	M2	M2		— — —	
670	EO	EO		— — —	
680	M1	M1		— — —	
690	EO	EO		— — —	
700	M1	M1		— — —	
710	EO	EO		— — —	
720	M2	M2		— — —	

Vans – Combi

- Van – Access from outside
- Combi – Access from outside
- Side door
- Twin rear loading door
- Interior lighting

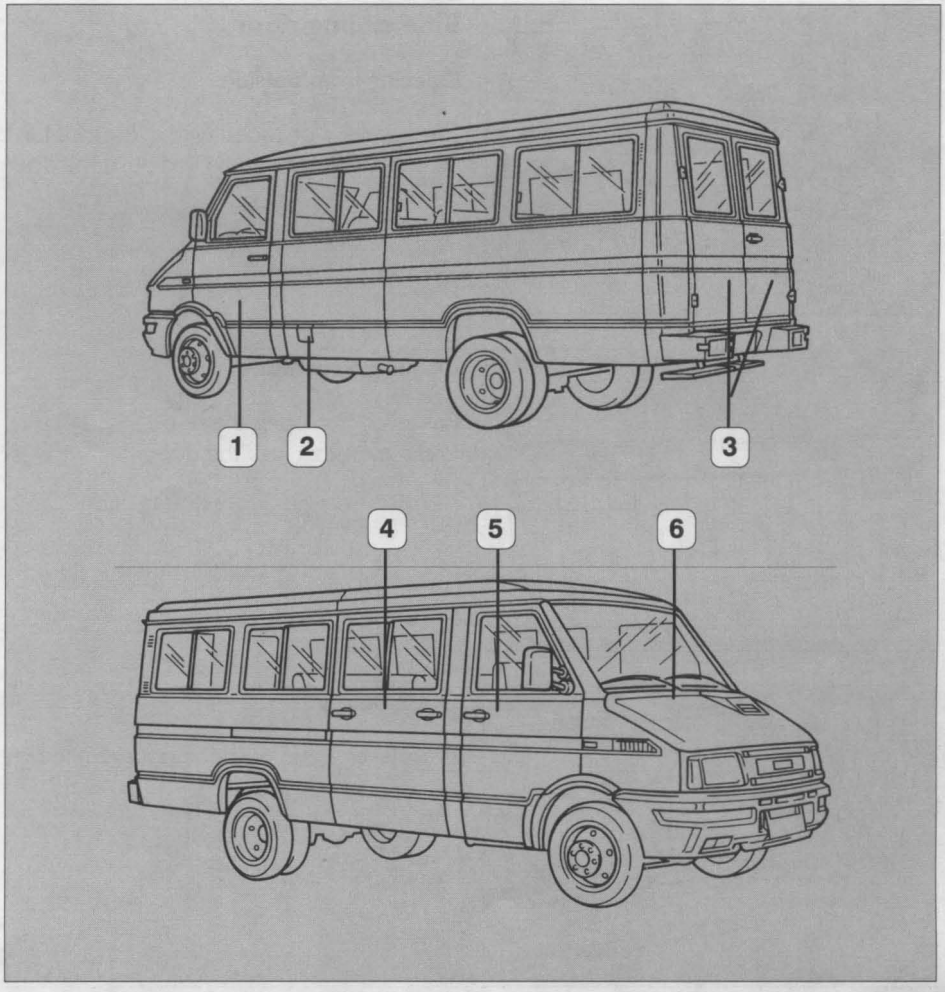


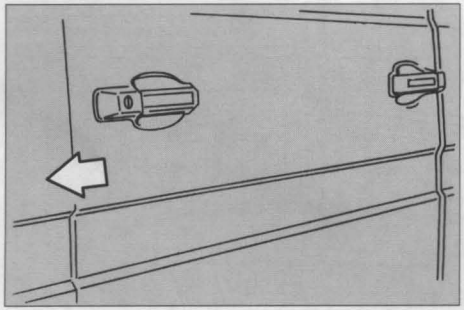
Van – Access from outside

1. Driver's door.
2. Fuel filler.
3. Rear loading doors
4. Side sliding door.
5. Passenger's door.
6. Engine hood.

Combi – Access from outside

1. Driver's door.
2. Fuel filler.
3. Rear loading doors
4. Side sliding door.
5. Passenger's door.
6. Engine hood.

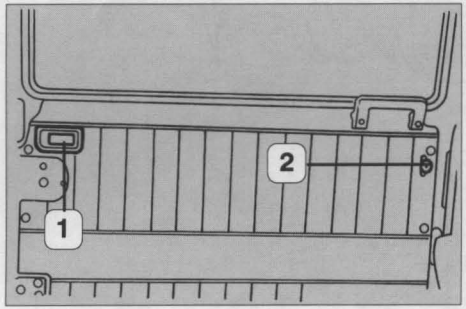




Side sliding door

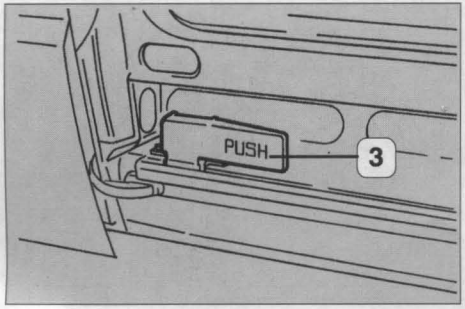
Opening from outside

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

Pull lever 1 to open the door.
Press lever 2 to lock the door.



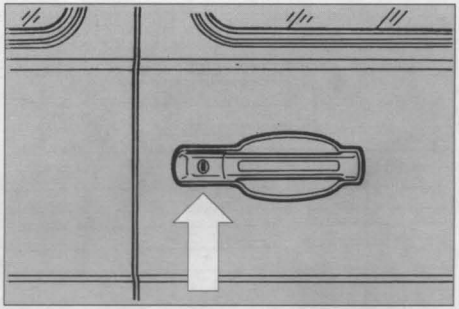
Door closing

Press lever 3 and push the door to the right until it closes.

Rear loading doors

Opening from outside

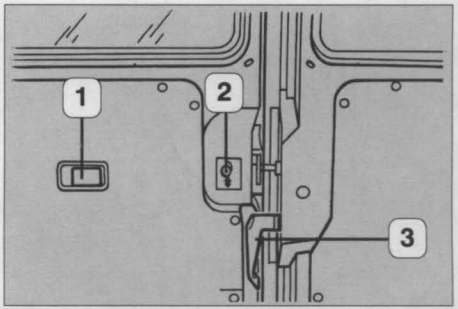
The handle is provided with a key lock for locking from outside.
Pull the handle to open the door.

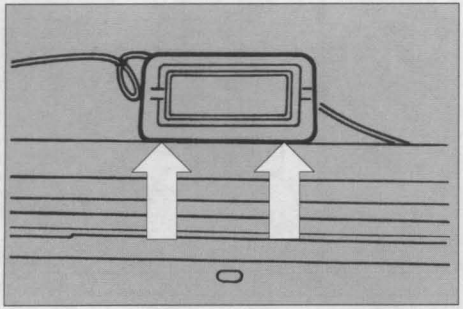


Opening from inside

Proceed as follows:

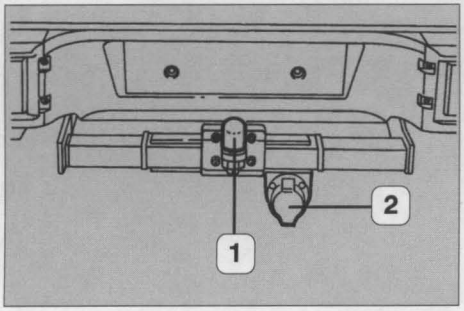
- Lift lever 2 to unlock the door.
- Use lever 1 to open one of the two doors.
- Turn handle 3 outwards to open the other door.





Interior lighting

Internal lights are located above the side doors. To switch them on press on one of the two points indicated by the arrows.
Lights located above the twing rear loading door are switched on when doors are opened or pressed on either side.



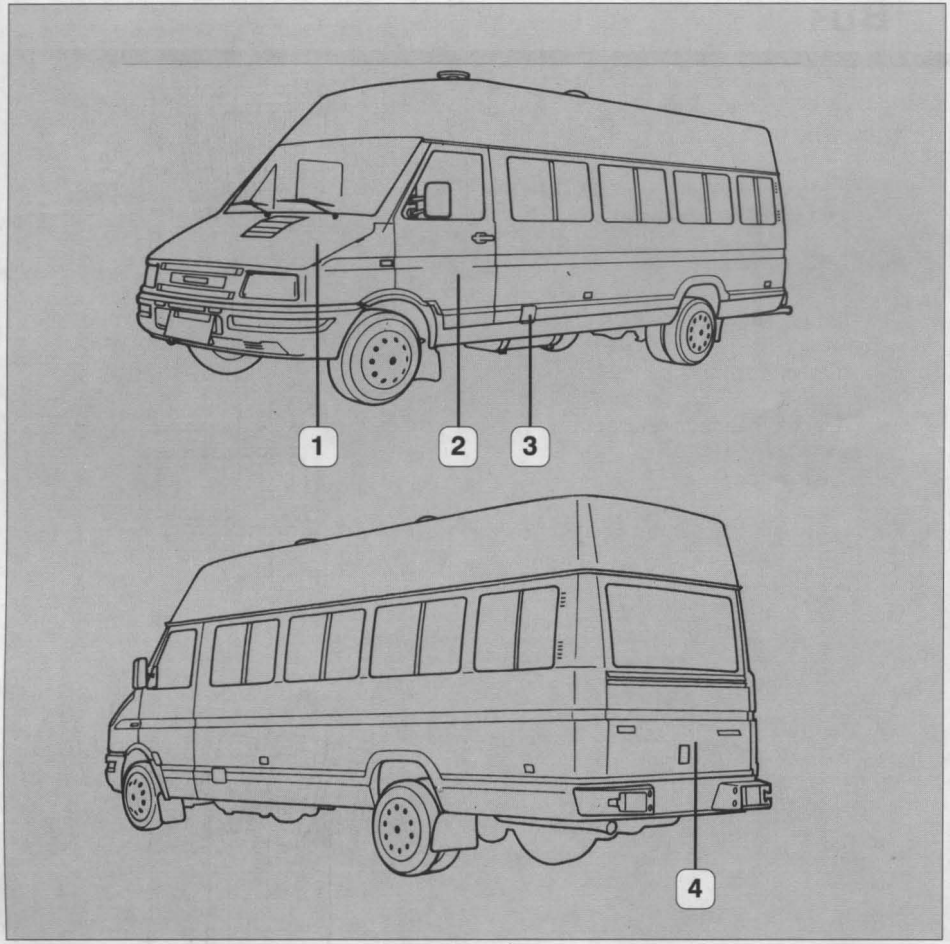
Trailer hook (where fitted)

For trailers having inertial braking.

1. Spheric trailer hook.
2. 7–pin (12 V) for lighting system.

Bus

- Access from outside.
- Interior lighting.
- Emergency control pushbutton.
- Driver's control panel.
- Electromagnetic retarder.
- Swing door.



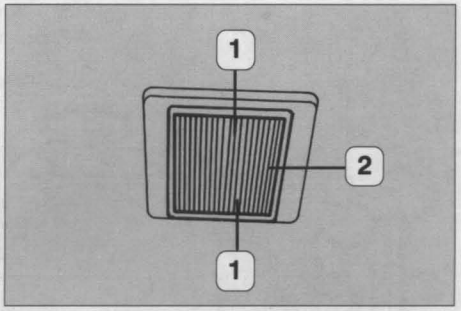
Access from outside

1. Engine hood.
2. Driver's door.
3. Fuel filler.
4. Luggage compartment.

Interior lighting

Aisle lights.

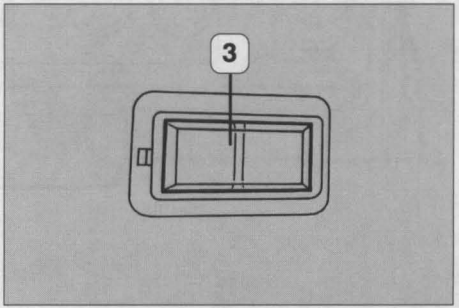
Consisting of:
1. Two 10W removable white bulbs.
2. One 5W removable blue bulb.



Courtesy and driver's lights.

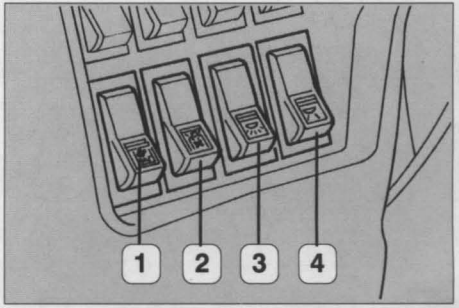
3. One 10W removable bulb.

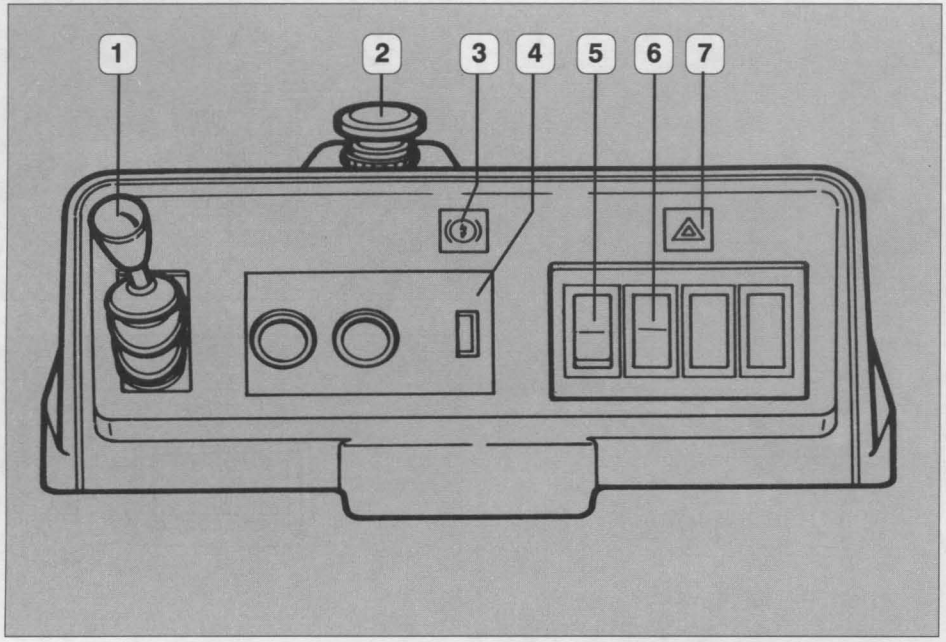
Push–fit diffuser.



Control switches.

1. Heater.
2. Aspirator.
3. White aisle lights.
4. Blue aisle lights.





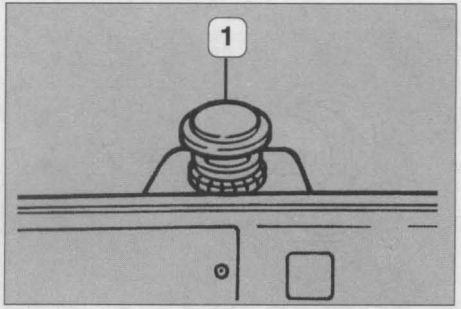
Driver's control panel

1. TELMA retarder control.
2. Emergency control pushbutton.
3. TELMA retarder warning lamp.
4. Swing door controls.
   (School Bus version).
5. Main relay control switch.
6. Horn switch.
7. Hazard lights warning lamp.

Emergency control pushbutton

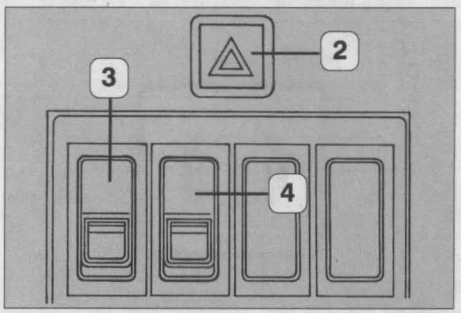
Press the red pushbutton 1 on the driver's left hand (or right–hand) side to activate the following functions:

- Hazard lights connection (warning lamp 2).
- Engine stop.
- Main current relay disconnection.



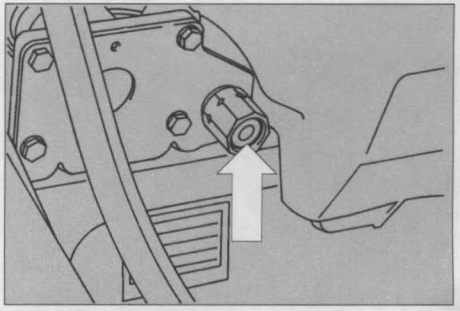
Note: To reset the relay contact press switch 3.

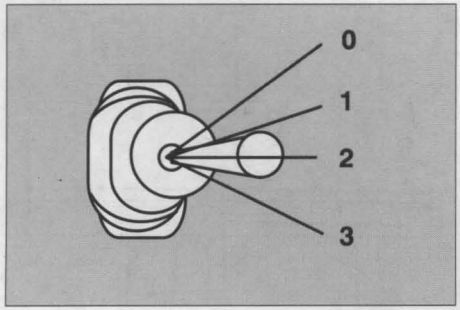
4 = Horn switch (A 45 regular service bus).



Battery switch

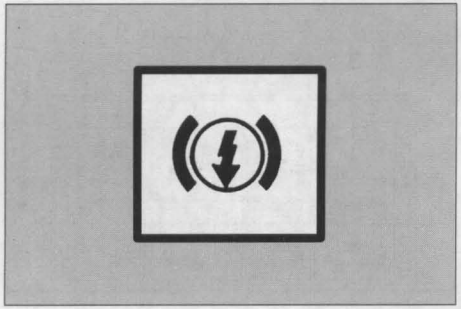
It is fitted inside the engine hood. The electric system is switched off by operating the battery switch.





Electromagnetic TELMA retarder (where fitted)

3 retarder types can be adjusted by actuating the lever.
0 – Switched off.
1 – Minimum.
2 – Medium.
3 – Maximum.



Switching on is indicated by the warning lamp.

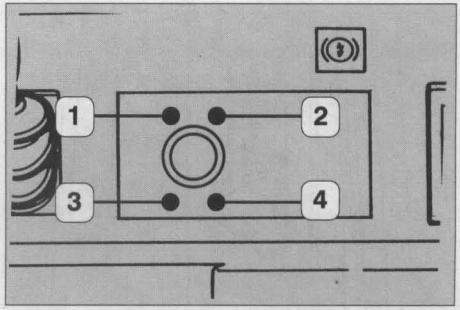
Warning! After retarder has been in use for long time, it is recommended that you do not switch off the ignition immediately to permit cooling of the electric brakes.
When vehicle is at a standsill, switch off Telma by moving lever to 0 position.

Swing door

Controls

The system is provided with a control panel having 4 leds (red, green, yellow, orange) and a sonic alarm.

- Red led 1: it lights up when the door opens and remains lit as long as the door is open.
- Green led 2: it lights up only when the door is perfectly closed.
- Yellow led 3: it lights up only when the emergency handle 8 page 126 is pulled.
- Orange led: it lights up only when the antitheft device is switched on (where fitted).

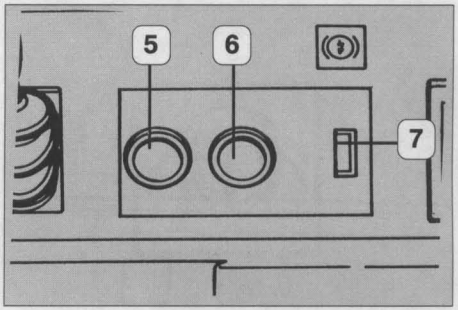


Controls for School Bus version

The system is provided with a control panel with two luminous pushbuttons:

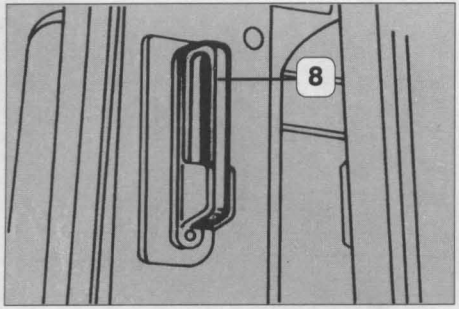
- Red button 5: it lights up when the door opens and remains lit until it is open.
- Green button 6: it only lights up when the door is perfectly closed.

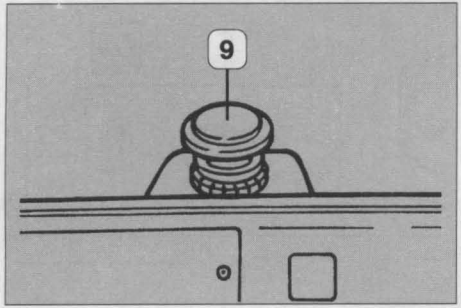
Fuse holder 7 with 15A strip fuse protects the whole system.

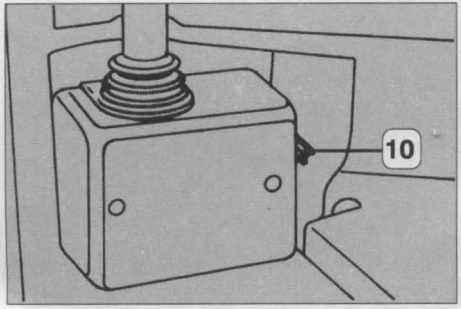


Safety device

The swing door is equipped with an automatic device which stops the door in the closing stage when an obstacle or a person is in the way; it will also automatically reopen thus avoiding the possibility of harming the person or object.







Emergency device

In case of an emergency or power failure, the swing door can be operated by a manual system.
To open the door from the inside pull the red plastic handle 8 fitted near the door compartment.
In case of emergency proceed as follows:

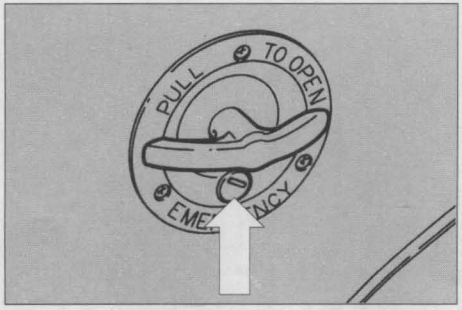
- Press button 9 to disconnect the battery.
- Pull the above handle downwards, thus releasing the driving shaft and the door from the gearmotor
- Open the door manually.

To reset after using the emergency handle proceed as follows:

- Press the black lever 10 beside the gearmotor.
- Turn the door control support shaft, thus making the gearmotor gear mesh easier.
- Reset lever 8 to its normal position.

External emergency device

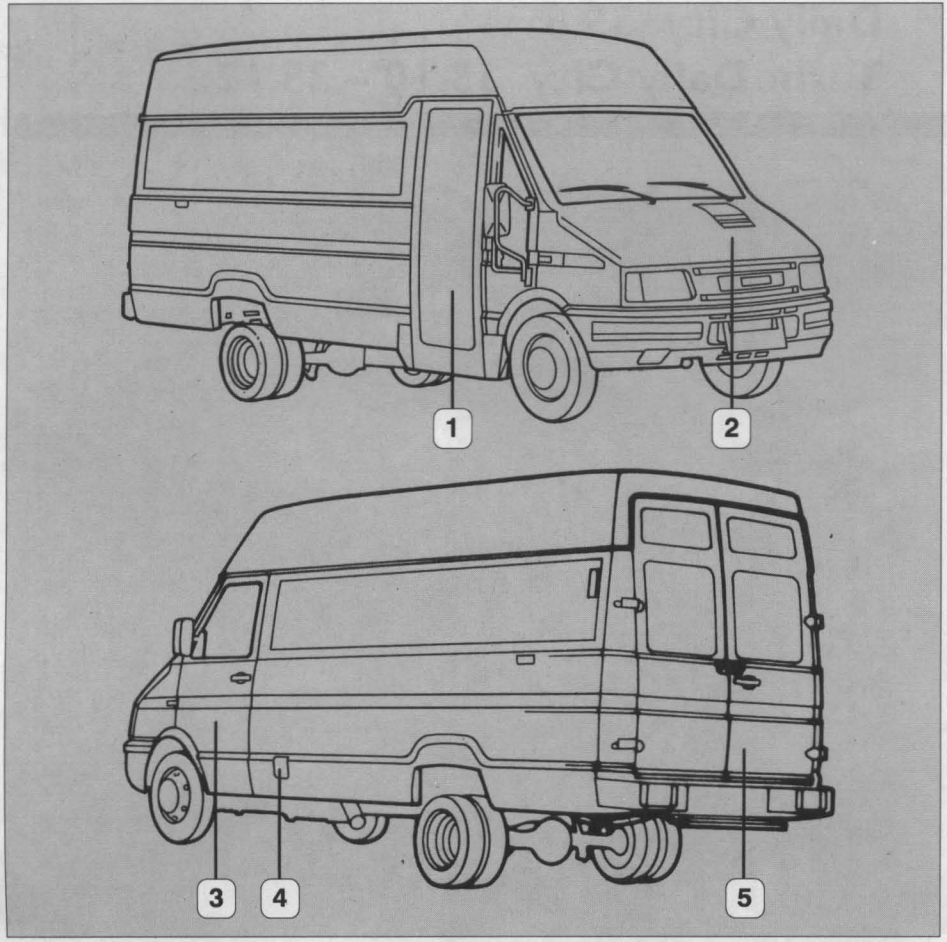
It consists of an handle fitted outside the vehicle for the manual opening of the swing door in case of an emergency.
It is connected to the antitheft ringer (if fitted) as well as the led 4 page 125.



For opening insert the key of the driver's door, turn it and pull the handle.
The door will now open manually. Follow the above instructions to get back to normal running.

Daily City 35.8
TurboDaily City 35.10 – 35.12

Special versions for "door–to–door" delivery



Access from outside

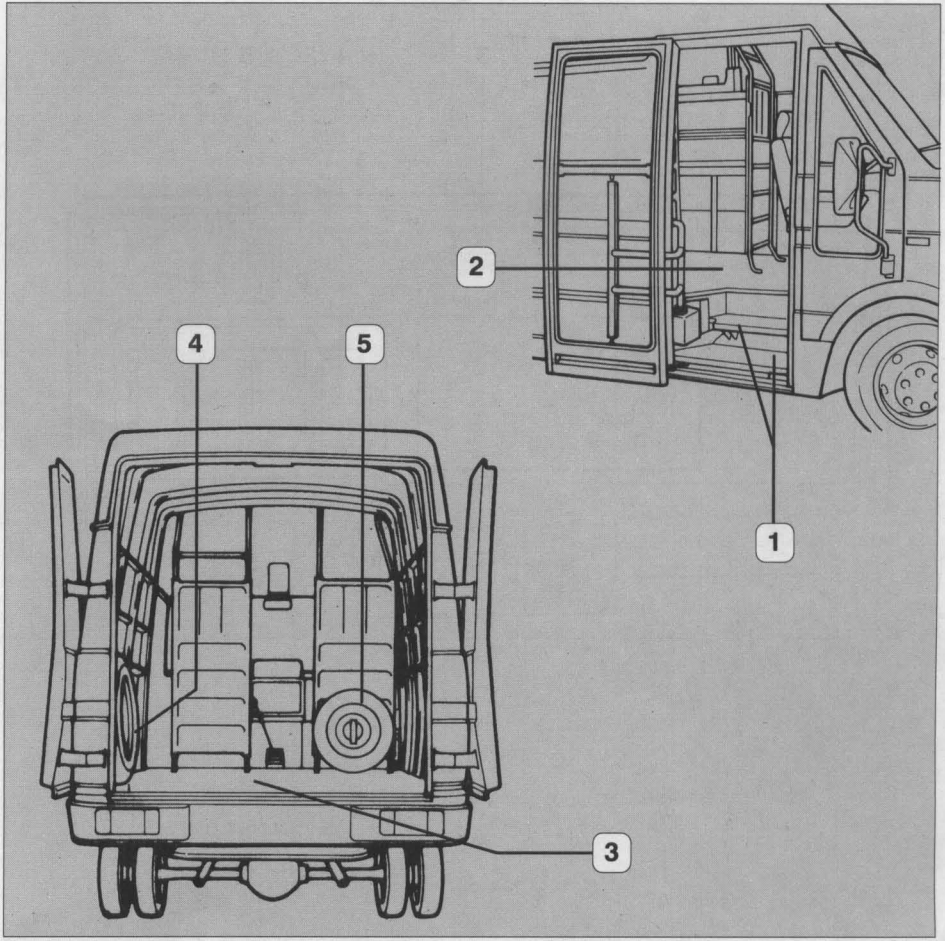
1. Swing door.
2. Engine hood.
3. Driver's door.
4. Fuel filler.
5. Twin rear doors

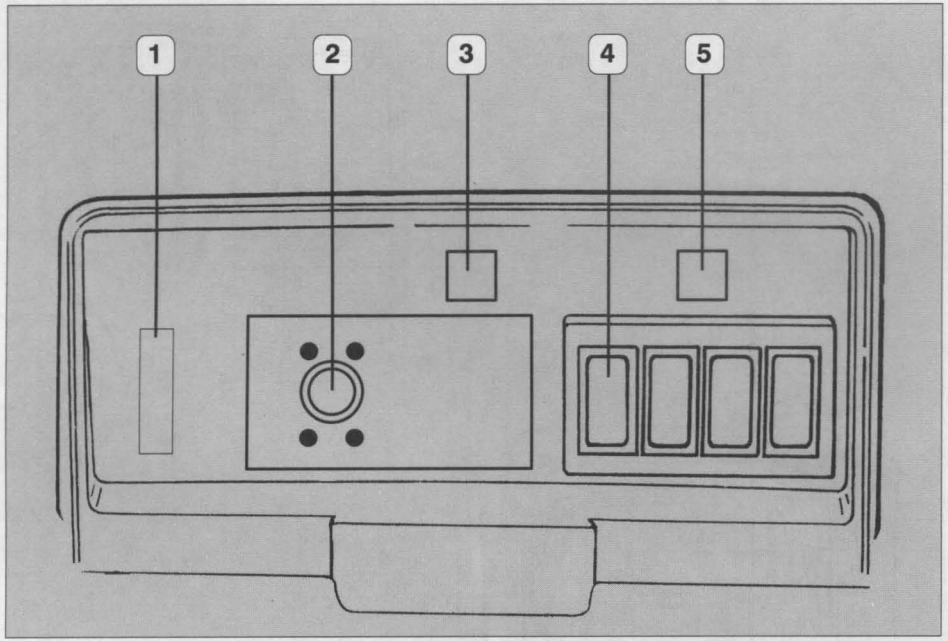
Access from the swing door

1. Access door steps.
2. Gangway for easier transport of goods.

Rear access

3. Loading platform.
4. Rear spare wheel.
5. Front spare wheel.

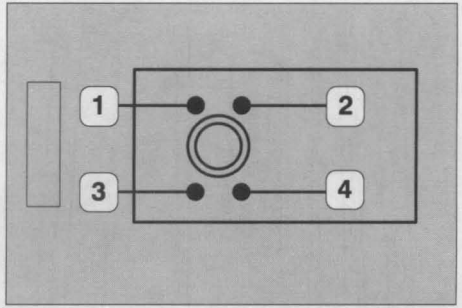




Driver's control panel

1. TELMA retarder control (where fitted).
2. Swing door controls.
3. TELMA retarder warning lamp (where fitted).
4. Available for switches.
5. Available for warning lamp.

Swing door



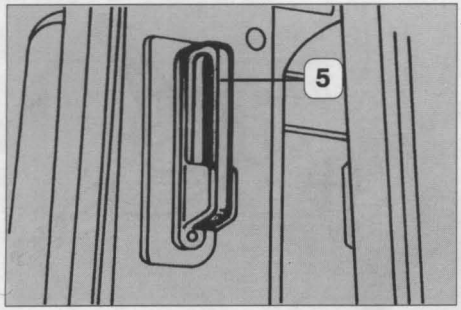
Controls

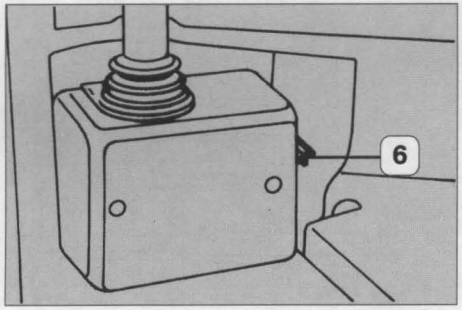
The system is provided with a control panel having 4 leds (red, green, yellow, orange) and a sonic alarm.

- Red led 1: it lights up when the door opens and remains lit as long as the door is open
- Green led 2: it lights up only when the door is perfectly closed.
- Yellow led 3: it lights up only when the emergency handle 5 page 132 is pulled.
- Orange led: it lights up only when the antitheft device is switched on (where fitted).

Safety device

The swing door is equipped with an automatic device which stops the door in the closing stage when an obstacle or a person is in the way; it will also automatically reopen thus avoiding the possibility of harming the person or object.





Emergency device

In case of an emergency or power failure, the swing door can be operated by a manual system.
To open the door from the inside pull the red plastic handle 5 fitted near the door compartment.
In case of emergency proceed as follows:

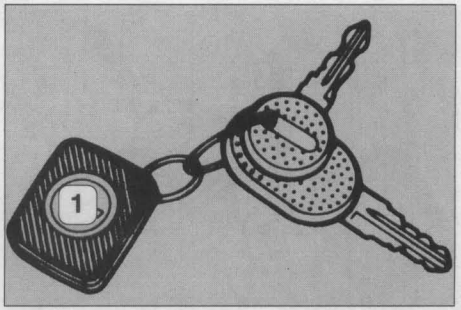
- Pull the above handle downwards, thus releasing the driving shaft and the door from the gearmotor
- Open the door manually.

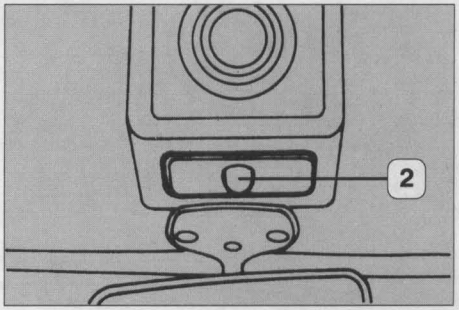
To reset after using the emergency handle proceed as follows:

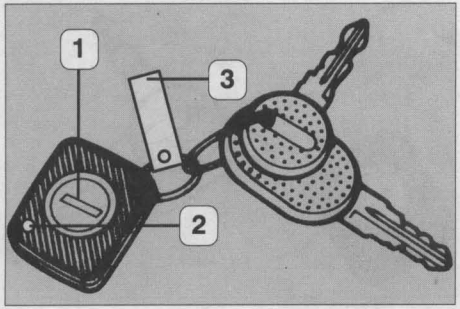
- Press the black lever 6 beside the gearmotor.
- Turn the door control support shaft, thus making the gearmotor gear mesh easier.
- Reset lever 5 to its normal position.

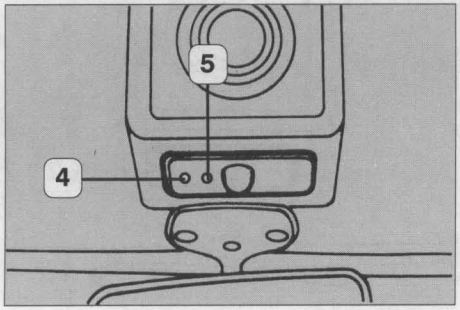
Door locking

The vehicle is mainly aimed at a "door–to–door" city transport.
For the utmost safety and speed in delivery the vehicle is equipped with a remote control locking device for door opening and closing.
As soon as he leaves the vehicle with the goods, the driver can lock the doors with the remote control (swing door, rear door and driver's door).
After the delivery, he can, through the remote control, open only the swing door, the other doors remaining locked.
2. Sensor for infrared remote control.









Remote control

Transmitter

On the transmitter there are:

1. Push–button control.
2. Optical indicator (LED).
3. Metal plate with stamped code number.

Receiver

On the receiver there are a push–button 5 for memorizing the code given out by the transmitter and a led 4 for signal display.
The receiver can memorize up to six different codes, corresponding to six different transmitters (vehicle used by up to people).

How to programme the remote control

a. Press and hold the programming push–button 5; led 4 lights up and remains lit to indicate "ready to receive code".
b. Keeping the push–button 5 pressed, operate the push–button 1 of the transmitter. The extinction of led 4 on the receiver means that code has been received.
c. Release push–button 5. At this point, led 4 flashes for about 15 sec. Led flashing means that the code has been memorized and the universal code has been cancelled. By again pressing push–button 5 (while the led flashes), the operator starts again from point **a** in order to programme any further code (in case of a vehicle used by more than one person).

How to programme new codes

The receiver can memorize up to six different codes. To programme a new code, proceed as follows:

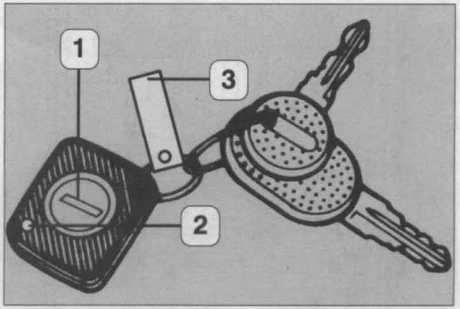
d. Press and hold the programming push–button 5. After about 2 sec. led 4 will blink out.

e. Keeping the push–button 5 pressed, operate the push–button 1 on a transmitter whose code is already memorized in the receiver. Led 4 lights up fixed.

f. Operate the push–button 1 of a new transmitter. After about 0,5 sec. led 4 out, meaning that the code of the new transmitter has been received.

g. Release push–button 5; led 4 flashes for about 15 sec. meaning that the new code has been memorized.

h. To immediately fit another code, while led 4 is flashing, press and keep pressed the push–button 5. The cycle starts again from point **c.**



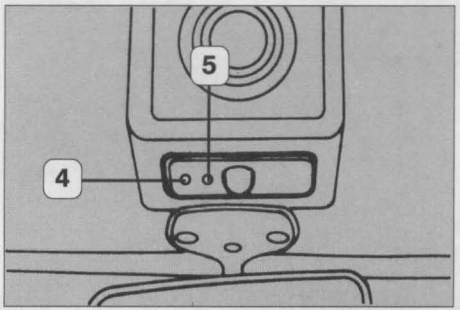
Manual access programming (transmitter loss)

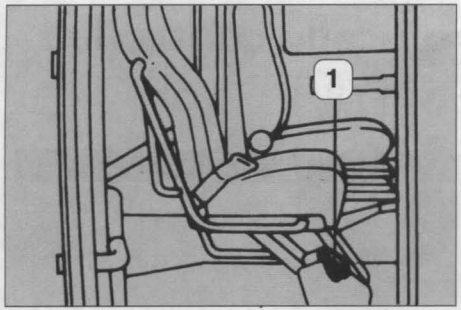
It is possible to programme a new code without having a transmitter whose code has already been memorized in the receiver (for example in case of transmitter loss).
In this case, it is necessary to have the metal plate 3, supplied along with the original transmitter that has lost. On this metal plate are stamped four numbers, representing the code to input following these instructions:

i. Press twice the programming push–button 5. Led 4 gives three flashes and extinguishes after about 2,5 sec.

l. When led 4 lights again, press the push–button 5 as many times as indicated by the first figure on the metal plate (0=do not press). After about 2,5 sec. from the last pressing, led 4 dies out for a further 2,5 sec.

m. Repeat the operation from point **l.** to input the other code figures on the plate. If this manual operation is carried out correctly, led 4 will start flashing. At this point, to input a new code it is necessary to have a new transmitter and go back to point **h.**

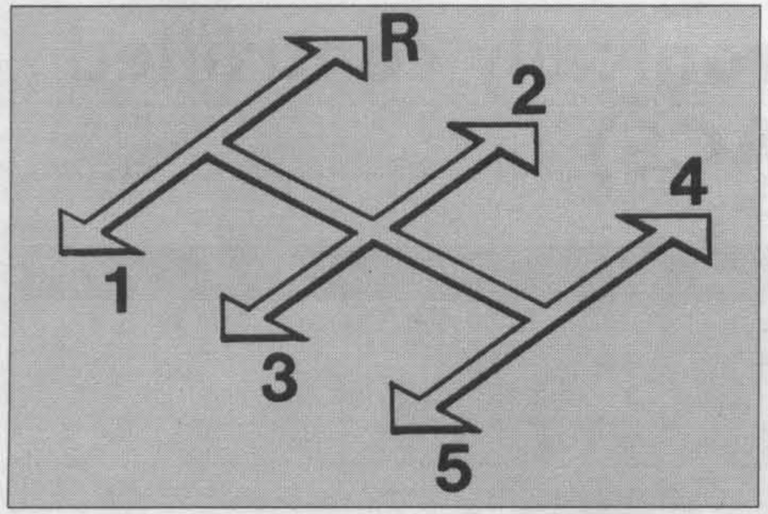


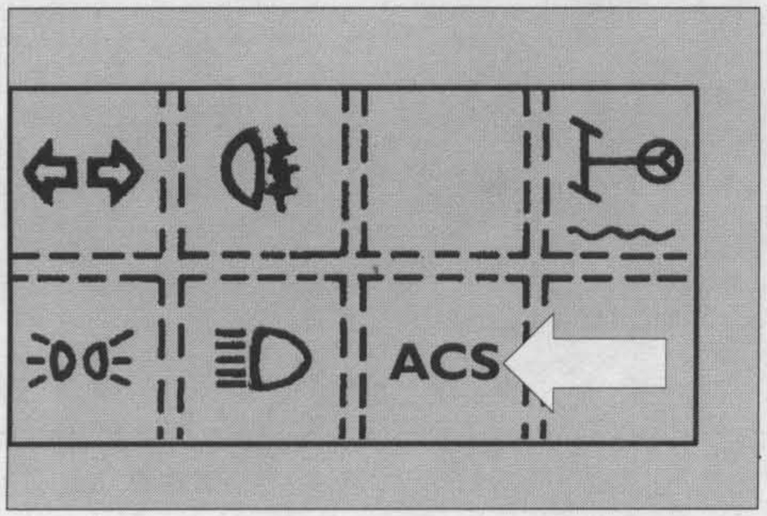


Passenger's seat (where fitted)

This seat can be completely tilted forward pressing lever 1, so as to make the transport of goods easier.

Vehicles with electronically controlled automatic clutch (ACS)





The automatic clutch system (ACS)

Description

The "ACS" eliminates the drivers clutch pedal by automatically controlling the clutch during take up from rest, gear shifting and slowing down.
The clutch is also controlled to provide engine braking and tow starting.
Clutch control is achieved simply through use of the accelerator pedal and gear shift lever.
The clutch is disengaged whilst the vehicle is stationary and in gear.
Take up is controlled by the driver who engages a gear (R, 1st or 2nd) and then depresses the accelerator pedal to raise the engine speed.
Take up engine speed increases with the amount of throttle applied.
When the vehicle is running, the gear shift is performed simply by operating the gear lever.

Warning strategy (see pages 139 and 140)

An audible warning buzzer is used to convey the following information associated with the drivers behaviour.

- Clutch overheating (caused by irregular use of the vehicle).
- Driven plate overspeed (possibly caused by down shifting into a low gear).
- Drivers door open when engine running and in gear.
- Selection of reverse gear.
- Take up from rest being attempted in a "non take up gear" (3rd, 4th or 5th).

Fault conditions are indicated by a warning light and a buzzer:
Continuous lamp – non hazardous system failure.
Continuous lamp+buzzer – hazardous system failure.

Drivers Advice

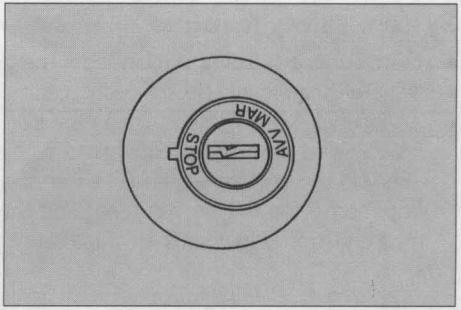
Description	Duration	Message	Status
Short Beep & Lamp	100 mS	1. Key – MAR buzzer & lamp check. 2. OK to select gear on tow start.	1. Buzzer & lamp OK. 2. Minimum tow start speed has been achieved. 3. After 6 sec rolling in opposed gear.
Pulsing Buzzer 400 mS on 400 mS off	Min 2 S	1. Reverse gear selected. 2. Bonnet open whist in gear and engine running. 3. Drivers door open whilst in gear and engine running. 4. Clutch overheating. 5. Wrong take–up gear selected. 6. Engine started whilst in gear.	1. Reverse gear selected.

Drivers Advice

Description	Duration	Message	Status
Continuous lamp		1. Take vehicle serviced as soon as possible.	1. Non hazardous system failure.
Continuous lamp + Buzzer	Min 1.2 S	1. Driver should stop as soon as convenient (preferably without gear change). 2. Follow given procedure to check/clear faults: ■ Switch off engine for at least 10 seconds. ■ Key – MAR, if warning has cleared then proceed as normal. Recommend vehicle is serviced as soon as possible. If warning will not clear then the vehicle can be driven by following procedure: ■ Key – STOP. ■ Remove ACS fuse 2, page 142, or connector (the clutch will remain engage and warning light will be on). ■ It is now possible to start the vehicle moving by starting the engine while in gear. ■ Key – STOP or select neutral to stop the vehicle.	1. Hazardous system failure.

Engine starting

The engine can only be started in neutral.



Vehicle starting and driving

Sensors in the gear lever knob detect gear lever loading in the "push" and "pull" directions and automatically initiate clutch disengagement to enable gear disengagement or selection to occur.

- Engage the 1st or 2nd gear according to the driving conditions.
  (Take up in other gears is allowed, but the driver is warned by the buzzer and also the take up engine speed is held low to induce a "lugging" effect.)
- Accelerate gradually and shift normally.
- If an attempted gear engagement will result in a clutch driven plate overspeed situation (especially during a downshift) an audible warning is given to the driver.

Warning! If a gear cannot be selected while stationary in neutral (especially reverse) depress the accelerator pedal for a short time in neutral to rev the engine and then re–attempt gear selection when engine speed has returned to idle.

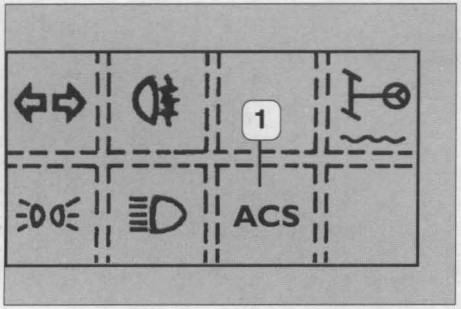
It is strongly recommended **NOT** to engage a gear which opposes the running direction. (eg selection reverse and rolling forward downhill or vice versa.)

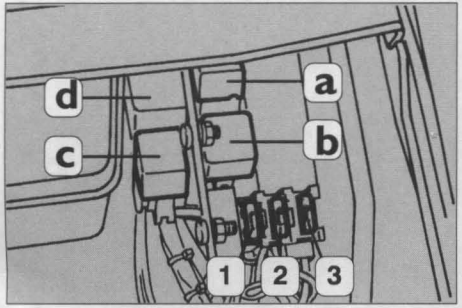
Clutch overheating

An audible warning is sounded if the clutch is overheated (by, for example, crawling up a hill for a long period, fully laden in 2nd gear). The warning continues until the cause of overheating is removed.

System safety features

- The audible warning is sounded if the driver door is opened when the engine is running and a gear is selected.
- The engine cannot be started in gear.
- A bonnet switch detects when the bonnet has been opened. If the bonnet is opened when the vehicle is stationary and in gear with the engine running clutch engagement is inhibited until the bonnet is closed and neutral has been selected.
  Should the bonnet switch fail when the vehicle is moving, normal operation of the clutch will be maintained until the drivers door is opened. If the engine is running and the
  transmission is in gear then clutch engagement will be inhibited until neutral has been reselected and the bonnet fault cleared.





Emergency operation

A dash mounted warning light 1 indicates the presence of system faults to the driver.
A flashing light indicates service assistance is needed soon.
A continuous lamp and buzzer indicates a serious system fault and that the driver should stop as soon as possible.
Key off and restart (after approximately 10 seconds) may be attempted. If the fault is still present engine start may be inhibited.
Under these conditions restarting is only possible by removing supply fuse 2 of the ECU (under which circumstance the warning lamp 1 remains on).
First select a gear appropriate to the conditions (upward slope, downward slope – level ground) and then start the engine. This will cause the vehicle to move forward since the clutch is engaged. Once started changing gear will be difficult but driving in the engaged gear should allow the driver to reach an authorised dealer.

Warning!

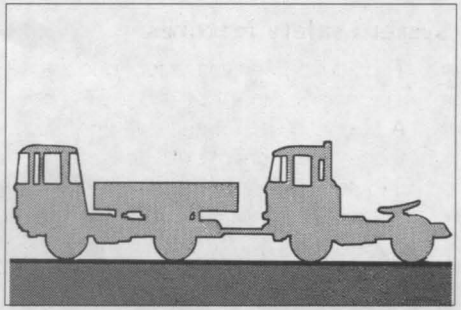
The user has not to intervene on any of the components, he has instead to turn to an authorised dealer.

Fuses and relays

1. – 30A Electro–hidraulic assembly (Power Pack)
2. – 20A Electronic control unit (from battery positive)
3. – 20A Electronic control unit (lock and key protection)

a. Circuit protection diode casing
b. Optical indicator ON button
c. Reversing light
d. Buzzer (acoustic indicator)

Tow starting

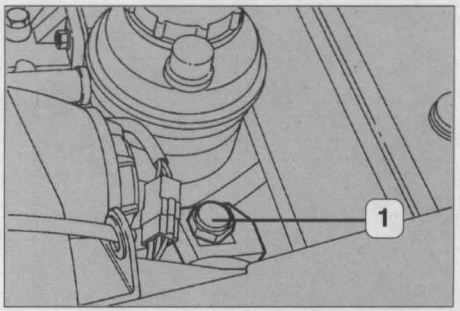


Tow start procedure is as follows:

- key on.
- Select neutral.
- Start towing (or roll forwards downhill).
- When the warning buzzer sounds (single beep at approximately 7 kph) engage 2nd gear, clutch will engage to turn and start the engine.
- If being towed select neutral before operating the accelerator pedal.
- If rolling downhill continue to drive normally.
- Tow starting is not advised in reverse gear.

Warning! The system doesn't work if the V Battery < 8Volt.

ACS power pack reservoir



With the vehicle on level ground,check the fluid level (every month) in the reservoir 1, key on, but don't start the engine when the pump has finished running.
The fluid level should be above the mark on the reservoir 1.
If not consult dealer for investigation into causes of loss.
Top up, if necessary, with **Tutela DOT3 or DOT4.**
Capacity 0.5 lts
The system is supplied hydraulically pre–filled and it is not recommended that any attempt is made to change hydraulic fluid over the service life of the system.

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Please comply with the recommendations given in this Use and Maintenance manual to ensure efficient and trouble–free vehicle usage.

Our products are subject to constant development; as a result, certain part of this publication might not be up to date.

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