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RENAULT MAGNUM DXi
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17RD-17SD-17TD

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RENAULT TRUCKS Société Anonyme au capital de 50 000 000 €
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The manufacturer reserves the right to make any modifications deemed necessary during production. This handbook should not be considered as a specification for the model in question.

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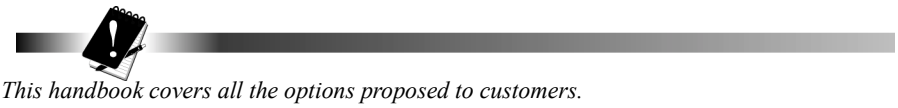
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A-1 Foreword

Welcome onboard your new RENAULT

You have now taken possession of your new vehicle.
We trust that it will give you the entire satisfaction you have the right to expect and which was the reason for your original choice.
This driving and servicing handbook has been laid out to provide all the information you need and will enable you to:

- Get to know your Renault better and, on the same occasion, to derive the maximum of benefit from all the technical perfections with which it is endowed, under the very best working conditions.
- Permanently guarantee optimum operation by simply - but strictly - observing maintenance recommendations.
- Cope with any minor malfunctions not requiring assistance from a specialist, without losing too much time.



This handbook covers all the options proposed to customers.
Take into account only indications corresponding to the model in your possession.

The few moments devoted to reading this handbook will be well worthwhile on account of the information it contains and the new technical features you will discover. If any details remain unclear, our dealer staff will be pleased to provide you with any further information you may require.

To read the text:
The reference numbers, figures ands letters mentioned in the text refer back to two types of illustration:

- *Figures correspond to figures or photographs situated in proximity to the text.*
- *Letters, sometimes followed by a figure, correspond to the instrument panel diagram to be found inside the handbook.*

"Bon voyage" at the wheel of your Renault !

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A-2 Foreword

RENAULT TRUCKS: Frontier-free service
Renault Trucks 24/24 has been in operation for several years now.
19 emergency call centres are listening in for you 365 days a year.
Spare parts officially approved by RENAULT TRUCKS meet both the requirements of the vehicle specification and the regulations in force. Only premium Renault parts will ensure:

- Original Equipment safety standards,
- Full Manufacturer's Warranty,
- Maintenance of original characteristics and performance.

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A-3 Foreword

General usage instructions for commercial vehicles

If you are a professional driver using your own vehicle, or a haulier entrusting one of your vehicles to a member of your staff, it is essential to follow and ensure the application of the following instructions. They are only a reminder of the basics of the trade and standard professional practice and in no way are to be taken as exhaustive. In this way you will obtain the maximum profit from your material and prevent any risk of accidents and incidents.

1. A few basic instructions

- Every driver must possess all necessary licences and should only drive when physically fit and sufficiently rested.
- The vehicle must be in conformity with current legislation in the country or countries in which it is used.
- Any signs indicating hazardous substances must be affixed and be in good condition.
- Loads:
  - All-up or per-axle weights (regulatory or technical) must not be exceeded.
  - Loading and securing of loads must be carried out using conventional procedures, tarpaulins and side curtains must be correctly stretched and fastened and doors and sideboards locked, etc...
- In the cab:
  - Never carry dangerous products (such as petroleum, trichlorethylene, thinner, etc.).
  - If an animal is carried, it must be kept away from the driving position.
- Getting in and out of the vehicle:
  - Use the steps and the handles provided. Never jump down from the vehicle. When leaving the vehicle, observe the traffic flow, particularly if you have been driving for a long time.
  - Take extra care when the climatic conditions are bad (rain, snow, ice) and at night.



- **USE IN CLOSED PREMISES:**
  - **NEVER LEAVE THE ENGINE RUNNING IN CLOSED OR POORLY VENTILATED PREMISES. THE EXHAUST GASES CONTAINED EXTREMELY TOXIC CONSTITUENTS. THEIR CONCENTRATION MAY HAVE VERY SERIOUS EFFECTS ON YOUR HEALTH.**

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2. Before getting into the vehicle, check:

- General condition of your vehicle, visually (as per handbook);
- Tyre condition, tyre pressures (including the spare wheel), and that nothing is jammed between the twin wheels;
- Cleanliness of cab windows, rearview mirrors, headlights and other lights and number plates;
- Regulatory and optional lighting systems for correct operation;
- Semi-trailer and/or trailer for correct coupling (hook, brake hoses - colour coding - electrical connector...);
- For the presence and contents of the onboard tool kit;
- In winter, for the presence of anti-skid chains and that they are securely fastened;
- Vehicles equipped with side guard panels and beams should be permanently provided with this equipment. At the time of removal, make sure that the locks are correctly locked and tighten the setscrews moderately.

3. In the cab

- Check the condition of the non-slip pedal covers.
- Ensure that the safety controls. steering wheel, pedals, gear lever etc... are never cleaned with a slippery product like silicone.
- Adjust your driving position:
  - Steering wheel: check that the steering column is locked;
  - Seat: check that the seat is firmly locked;
  - Rearview mirrors;
  - Seat belt: it is compulsory to wear a seat belt - make use of it;
  - Children onboard: comply with the laws in force.
- Prior to starting the engine, ensure that the gear lever is in neutral.
- Check that all instrument panel indications are normal (if you are not certain of what the nominal readings are supposed to be, refer to the driving handbook) and that the tachograph disc is in place and that the unit is working properly.

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4. When driving

- If you detect any anomaly in the way the vehicle is operating, stop and locate the malfunction.
  Do not move off again until you are sure that the incident has not impaired technical performance and safety.
- When driving, the use of some of the standard-fitted equipment, and other optional or added equipment is strictly forbidden (i.e. hand-operated sun-roofs, television sets, etc...) or only permitted if all necessary precautions are taken so as not to affect road safety (cigar lighter, manual selection of radio stations, CB, onboard telephone...).
- Adapt your driving style to suit your load (cant or bend, if the centre of gravity is high, etc...) to take account of weather conditions and the time of day.
  If necessary, adjust the headlight beam levels.
- Never shut down the engine when the vehicle is moving (as this will cut off the supply to the power-assisted steering system and could decrease brake effectiveness).

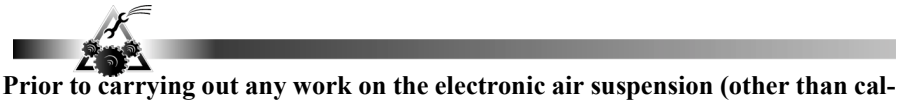
5. When parking

- Check that the vehicle is correctly parked (i.e. that it does not obstruct traffic flow or threaten the security of neighbouring installations).
- If the vehicle is going to remain stationary for some time, use one or more wheel chocks to prevent it from moving (e.g. semi-trailer compressed air leakage, or in black ice conditions...).
- Check that:
  - The parking brake is locked and immobilizes the road train or rig.
  - The gear lever is in neutral.
  - The battery isolating switch is open (turned off).
  - The electromagnetic retarder is switched off.
  - The air vents are not blocked (if an independent heater is used).
  - The parking lights are switched on at night.
- Check that you have not left in the cab:
  - important documents (personal, vehicle, load).
  - unaccompanied animals.

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A-6 Foreword

6. When repairing / servicing the vehicle



Prior to carrying out any work on the electronic air suspension (other than calibration), place axle stands under the chassis.

- Check the tightness of the wheel nuts according to recommendations.
- Prior to tilting the cab:
  - Check that there is enough space in front of the vehicle and take care that during this manipulation nobody tries to cross this area or park in it.
  - Stop the engine, put the gear lever into neutral and make sure that no object is likely to fall onto the windscreen. If a refrigerator is fitted, drain it. Close the doors.
  - Tilt the cab as far as possible. If the cab is only partially tilted, wedge it to prevent accidental movement.
- If the engine is running:
  - Do not approach moving parts (fan, drive belts, etc...).
  - Do not turn off the electrical power supply (shut down the engine first).
- When climbing up onto or down from the ramp behind the cab (tractor), use the steps and grab handles provided. Never jump down from the ramp. Take care not to burn yourself (on the vertical exhaust pipe and silencer).
- Fuel is inflammable: if the fuel filler cap is open, smoking is forbidden and there must be no naked flame in the vicinity.
- Batteries are filled with acids, which can cause serious injuries. They must be handled with great care.
- If you start the engine using an external power source:
  - Use cables of the correct dimensions.
  - Make sure that the + and - polarities are connected properly.
- When changing a fuse, it is vital to use another fuse of the same size.
- Only specialists should install additional power lines.
- The installation of additional air lines requires a technical study carried out or approved by the manufacturer.
- It is strictly forbidden to heat polyamide hoses (braking circuit pipes).
- Raising the vehicle with a jack. chock the wheels prior to jacking.
- Immobilizing the vehicle: use one or several wheel chocks as necessary.
- Wheels and tyres:
  - Never check tyre pressures or inflate or deflate a tyre, which is hot.
  - Never stand in front of a tyre when checking the pressure or inflating it.
  - When fitting a roadwheel, take great care to centre wheels fitted with centring clamps (for trilex wheels, position the clamp at the segment crossover point).
- Repairs on the open road: collect the fluids, which have been drained (such as oil, fuel, coolant...).

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Foreword

– With an eye to environmental protection, take into consideration the laws in force (recovery of oil / anti-freeze / cartridges).

When draining oils (engine / gearbox / drive axles), you run the risk of burning yourself (hot oil).

When draining coolant, you run the risk of burning yourself (hot fluid).

– Independent heater: use motor vehicle diesel fuel only.
– If anti-skid chains are used, the rear wings should be removed, road speed should be reduced and chain tension should be tested at regular intervals.

Any modification to circuits (electrical, electronic or compressed air) may have serious consequences. Such work should only be undertaken in agreement with the manufacturer. RENAULT TRUCKS decline any responsibility in the event of non-conformity in assembly.

Only genuine, original RENAULT TRUCKS parts and circuits defined by the manufacturer guarantee quality, safety and reliability.

By observing the above instructions, you will be using your vehicle in the best possible way. However, you must also carefully read the driving handbook and consult the RENAULT TRUCKS network whenever you need any further information.

We remind you that application of the contractual warranty by RENAULT TRUCKS is subject, among other things, to proof by the customer that servicing and maintenance of the vehicle have been carried out according to our recommendations (frequency, operations to be performed, quality of expendable and consumable products guaranteed by genuine certified or recommended spare parts, quality and training of repair mechanics and use of specific tools...). Observance of these recommendations will also guarantee long-term reliability of the vehicle.

Servicing and maintenance conducted by the RENAULT TRUCKS network is a guarantee of observance of these recommendations. If the operations are conducted outside our network, the customer must provide formal proof that our recommendations have been observed.

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A-8 Foreword

Warnings

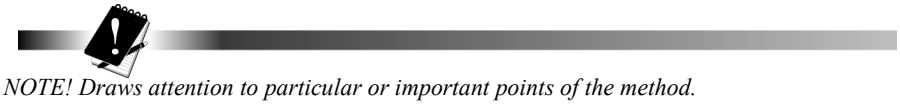
In this document, safety instructions are symbolized as follows:



DANGER! NON-OBSERVANCE OF THE PROCEDURE DESCRIBED OR LACK OF CARE OR ATTENTION RISK CAUSING SERIOUS INJURY OR EVEN DEATH.



WARNING! Any different or inappropriate working method risks causing damage to the product.



NOTE! Draws attention to particular or important points of the method.



Draws attention to special important points of procedures or regulations in force that must be obeyed without fail, especially those relative to the recovery and treatment of used parts and waste.

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B1-1 Presentation

Vehicle access and protection

Keys

KEYS:

- **Ignition key:**
- **Door key:**
- **Remote control:**

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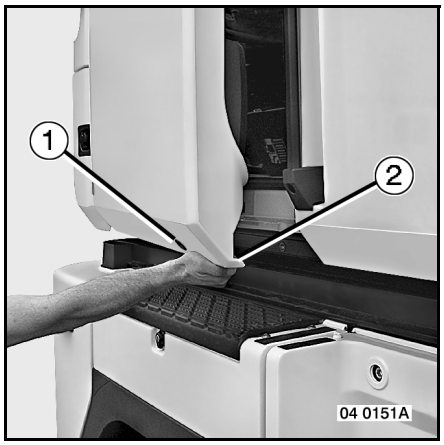
B1-2 Presentation

Doors

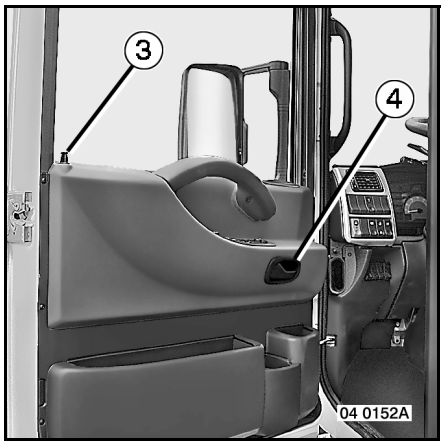
Opening from the outside
Unlock the door with the key in lock (1).
Press handle (2) and pull the door.

Closing
Push the door until it engages automatically.
Lock the door with the key in lock (1).

Opening of the door actuates the stepwell lighting and the overhead lights.

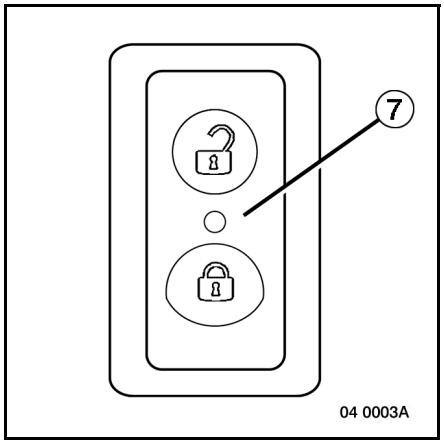


Opening from the inside
Unlocking:
Pull button (3). Pull lever (4) rearwards and push the door.
Press button (6) on the remote control.
Press dashboard switch (7) to unlock both doors.



Closing:
Pull the door until it engages.

Locking:
Push button (3).



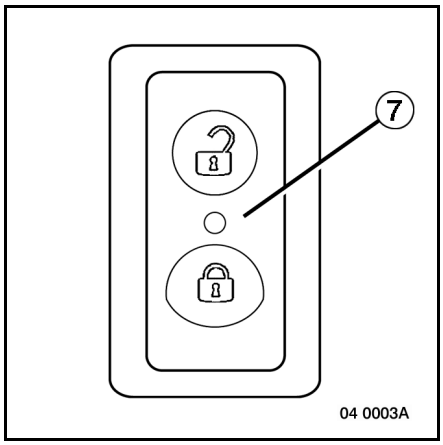
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B1-3 Presentation

Central locking from the inside:
Central locking is actuated:
- manually, by pushing button (3),
- with the remote control, by pressing button (5),
- with button (7) on the dashboard.



With the doors locked, prolonged pressing of switch (7) for more than 5 seconds serves to change over from synchronized mode to de-synchronized mode and vice versa.



Synchronized mode:
- Simultaneous opening of the doors by dabbing button (6) on the remote control.

Desynchronized mode:
- Opening of the driver's door by dabbing button (6) on the remote control.
- Opening of the passenger's door by dabbing a 2nd time on button (6) on the remote control.

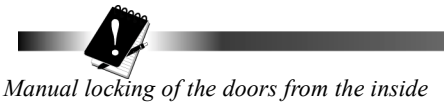
Simultaneous closing of the doors by dabbing button (5) on the remote control.

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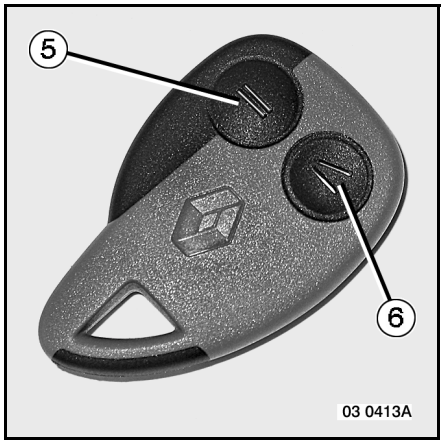
Desynchronized mode
Opening with the key:
- Turn the key once to unlock the driver's or passenger's door.
- Turn the key twice in less than 3 seconds to unlock both doors.

Turn the key one single time to simultaneously close the doors.

With the remote control
When you press locking button (5), the direction indicator warning light and the hazard lights warning light flash 4 times.
When you press unlocking button (6), the warning lights flash once.



Manual locking of the doors from the inside is neutralized by the central locking system. Central locking is neutralized when the door is open.



Doors radio-frequency remote control
This device does the same job as the door keys. All the doors are locked or unlocked without discrimination by keys or the remote control.

Use
The remote control is powered by a battery (CR 2032-3V) that should be replaced when the actuating range of the remote control becomes reduced.

Unlocking the doors and powering up the vehicle
Press button (6). This action, signalled by flashing lights flashing, commands:
- powering up the vehicle,
- opening of the doors.

ADR vehicle (transport of dangerous materials)
(See page B-1-24).

Locking of the doors only
Press button (5). This action, signalled by the flashing lights flashing 4 times, commands closing of the doors. The vehicle is powered up.

Powering down the vehicle
A 2nd press on button (5) less than 10 minutes after the 1st press, signalled by a long flash lasting 1.5 seconds, causes opening of the master switch for vehicles equipped with an electrical master switch.

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B1-5 Presentation

Interior and stepwell lighting

The vehicle is fitted with 2 overhead lights (one above each door) and 2 stepwell lights.
These lights come on and go out when the doors are opened and closed, when the vehicle is unlocked and locked and when the ignition key is turned to certain positions in the ignition switch.

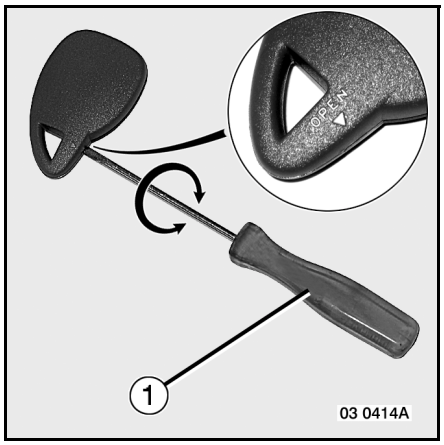
- When the doors are unlocked by the remote control, the lights come on for a period of 17 seconds.
- When a door is opened, the light come on or stay on, if they sere already on, for a period of 5 minutes (if at least one door stays open stays open beyond that limit).
- After a door is closed, the lights stay on for 17 seconds, the time needed for inserting the key into the ignition switch.
- When the ignition is switched on, it causes immediate extinction of the lights.
- Stopping of the engine triggers illumination of the lights for a period of 17 seconds.
- Locking of the doors causes immediate extinction of the lights.

The overhead lights are operated by a two-way system that can be actuated by one of the two switches, one on the top ledge (F1) and the other above the bunk (E3).
If both switches are in the same position, lighting is automatic. If their position is different, lighting is forced.

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B1-6 Presentation

Replacing the battery
Using a screwdriver (1), open the casing in the place marked.
Replace battery (2) complying with the polarity engraved on the cover.
Use an alkaline type battery: **CR 2032-3V**.
The battery service life is about 3 years.





Do not forget to make a note of the number of your keys. If you lose them or would like another set of keys or remote control, contact a RENAULT TRUCKS service point or dealer. Tell him the key numbers and show him the vehicle documents.

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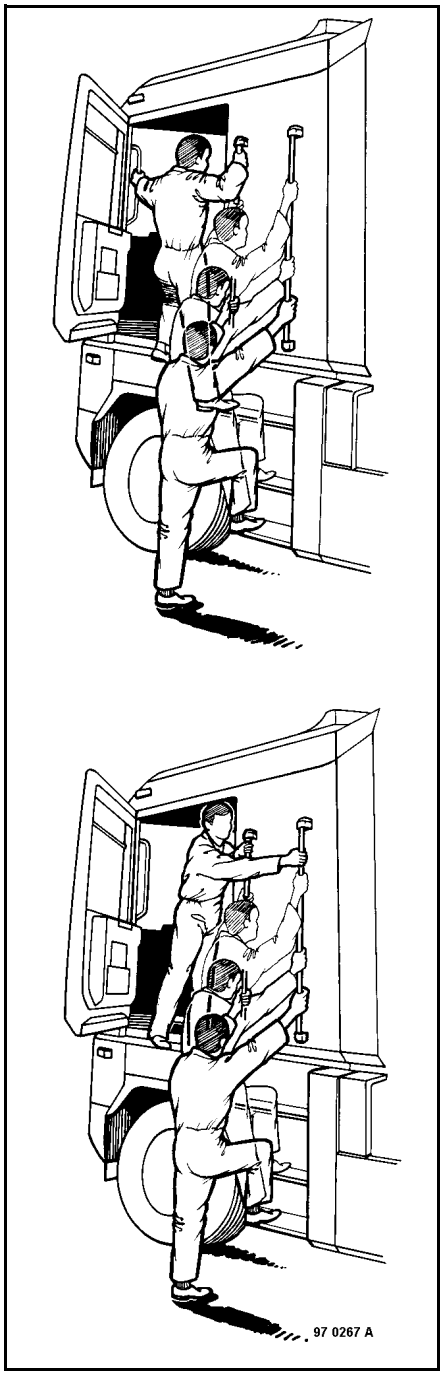
B1-7 Presentation

Access to cab

The design of the steps has allowed the cab to be positioned to enable great comfort (flat floor) to be reconciled with remarkable driving control (dominant position), while ensuring excellent access safety.
In another connection, the cab floor, flat over its entire area (no engine hood), allows you to get in and get out through the door opposite the side nearest the traffic. We advise you to adopt this excellent safety practice.

- **Getting in**
  Use all the steps and handles provided for that purpose.
- **Getting out**
  Use all the steps and handles provided for that purpose

Never jump down from the vehicle.



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B1-8 Presentation

Alarm

Features

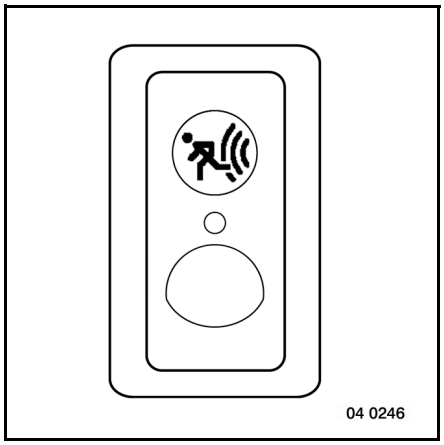
- "Panic" button in the event of aggression to the driver.
- Volumetric protection of the cab.
- Perimetric protection of cab doors.
- Cab tilting protection.
- "After ignition positive" protection.
- Protection against disconnection of batteries and disconnection of siren (self-powered siren).
- Alarm activation warning light on the control box.
- A pictogram and a message on the information display and a sound given off by the siren serve to identify the nature of the aggression.

The following features are only possible if the vehicle body and/or the coupled trailer is equipped with the freight protection box distributed by the RENAULT TRUCKS Boutique.

- Perimetric protection of vehicle body and/or trailer doors.
- Surveillance of onboard freight while at a standstill or when moving (opening of doors and unplugging of trailer electrical socket).

"Panic" button

In the event of aggression, press "panic" button (F2) for about 2 seconds to give the alert. The siren sounds immediately and the hazard lights flash. To stop the siren and the hazard lights, press button (F2) again for about 2 seconds.



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B1-9 Presentation

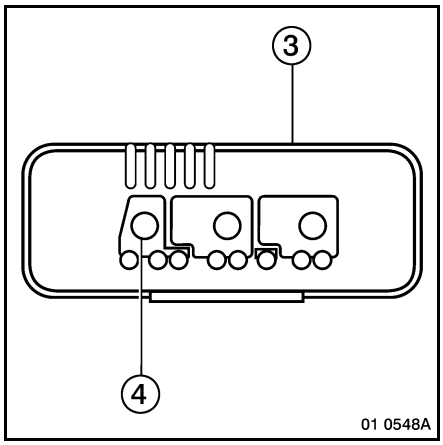
Activation of the alarm

The alarm is activated and disabled by means of the radio frequency remote control. If the vehicle body and/or trailer are equipped with the freight protection box, it will be automatically taken into account by the central alarm box.



Vehicle powered up (master switch closed): press the remote control button (5):

- The cab doors lock.
- The hazard lights flash 4 times.
- The red LED (4) on the control box (3) flashes - the alarm is activated 10 seconds later.



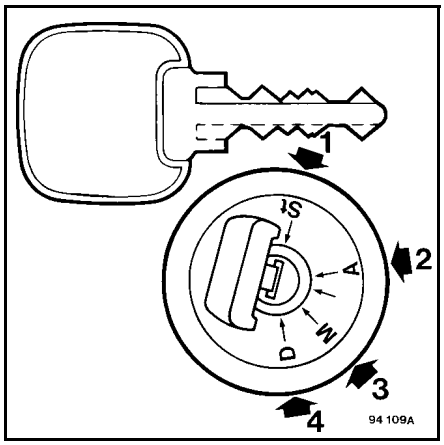
Control box position (1)



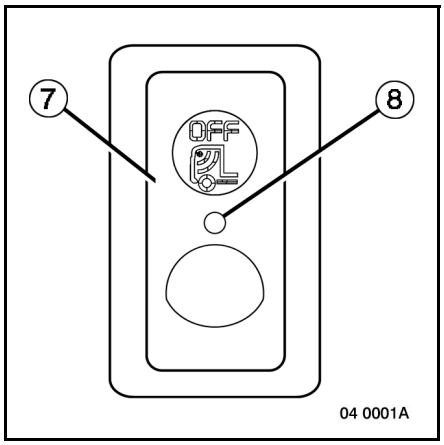
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B1-10 Presentation

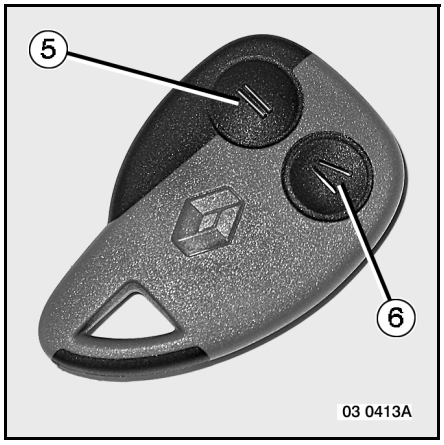
Activation of the alarm without volumetric protection and without cab tilting protection
Vehicle powered up (master switch closed): Two methods are proposed:
Ignition key in steering lock position (1) or (2).



The "volumetric alarm exclusion arm" warning light (8) is on.



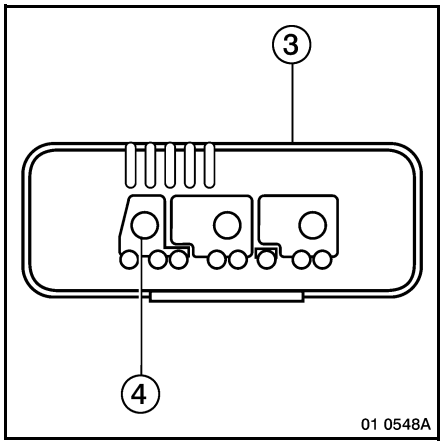
Press the remote control button (5):
- The cab doors lock.
- The warning light on the "volumetric alarm exclusion" switch goes out.
- The hazard lights flash 4 times.



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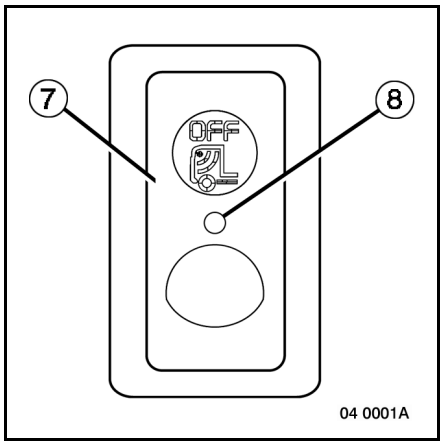
Presentation

– The red LED (4) on the control box (3) flashes - the alarm is activated 10 seconds later.



Ignition key in your possession

– Take the key out of the ignition switch.
– Press "volumetric alarm exclusion" switch (7), warning light (8) comes on.



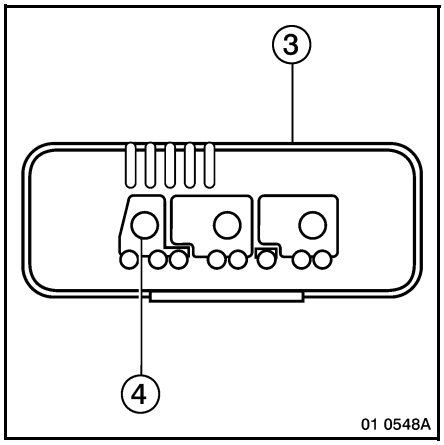
– Press the remote control button (5):
  • The warning light on the "volumetric alarm exclusion" switch goes out.
  • The doors lock.
  • The hazard lights flash 4 times.



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– The red LED (4) on the control box (3) flashes - the alarm is activated 10 seconds later.

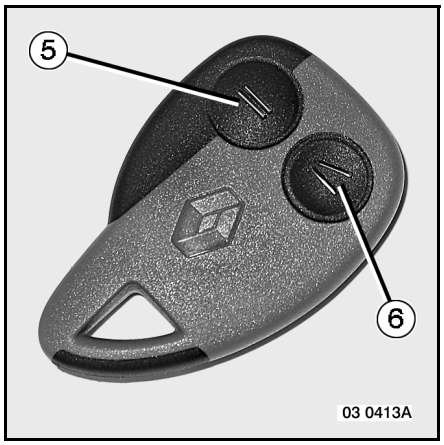
When your vehicle is being transported by boat or rail convoy, activate the alarm without volumetric protection and without cab tilting protection to avoid any inadvertent triggering of the alarm.



Fall-back mode

During the 10 seconds necessary to activate the alarm, all the alarm sensors are checked out. If a door has been left open, the siren sounds to draw attention to the problem. After these 10 seconds, the door in question will be excluded and not protected. The fall-back mode can be used while freight is being unloaded.

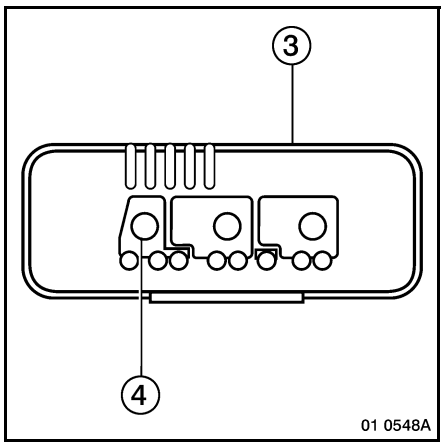
If the door in question is closed after the alarm is activated, it will be locked and protected.



Disabling of the alarm

With the vehicle powered up, press button (6) on the remote control:

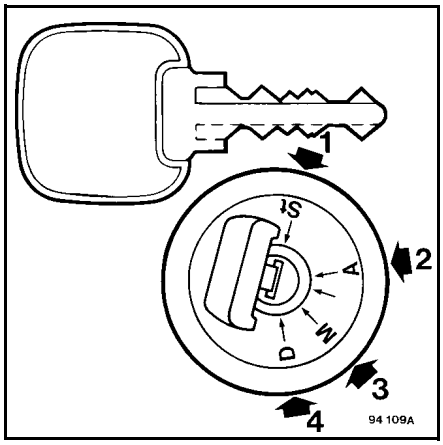
– The vehicle is powered up (only for vehicles equipped with an electrical master switch).
– The cab doors unlock.
– The red LED (4) on the control box (3) goes out.



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B1-13 Presentation

In the event of remote control malfunction, you can disable the alarm by turning the ignition key to the "ignition" position (3). After that, it is necessary to re-synchronize the remote control with the alarm by activating and de-activating the system once more.



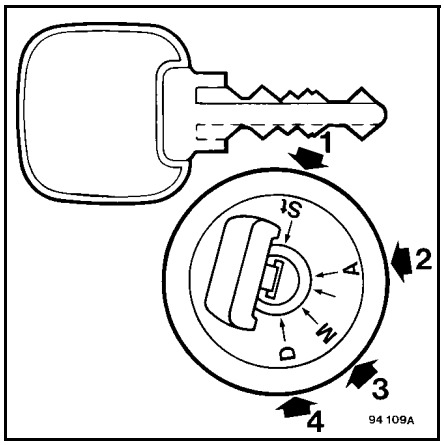
If there is an attempt at theft of the vehicle or its freight, the siren sounds after the alarm has been disabled. It is possible to find out what kind of intrusion has been perpetuated by means of the message and the pictogram (G38) shown on the information display.

The message and the pictogram are erased when the ignition is switched on, with the ignition key in position (3).

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B1-14 Presentation

Starting using the PIN code
In the event of transponder malfunction, it is still possible to start the engine.
With the ignition key in the ignition switch, move the key to position (3).
The message **"Starting impossible "** appears on the information display.
In the information display **"Diagnostic"** menu (see page B-2-37), select the **"Transponder"** sub-menu and enter the 6-figure code number issued by **Techline**.
Confirm.



The following messages may appear:
- "Code correct": the engine can be started.
- "Code incorrect": switch off the ignition and start again.
- "Anti-scanning": you have made 3 consecutive code number errors - the system is blocked for 15 minutes - leave the ignition switched on and wait for 15 minutes before trying again.

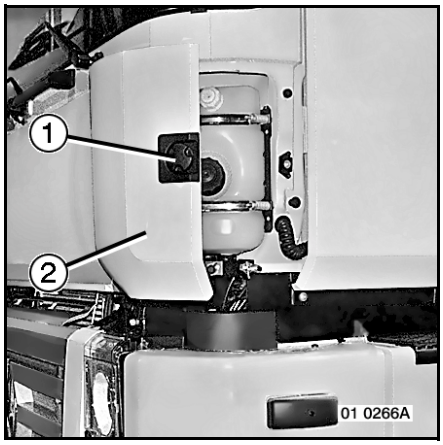
Once the correct code number has been entered, switch off the ignition, switch it on again and start the engine.

Stopping of the alarm without opening the door(s)
If the doors are unlocked and the alarm stops without the doors being opened within a period of 2 minutes, the doors are locked and the alarm is re-activated automatically.

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B1-15 Presentation

Covers and steps



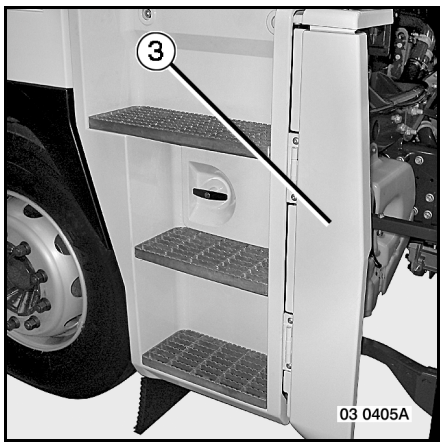
Front end covers
Opening:
Unscrew captive button (1) and pull cover (2) outwards.
Closing:
Push in the cover and screw up captive button (1) while exerting light pressure on the cover.

Left-hand side (LH drive):
Right-hand side (RH drive):

Access:

- to the expansion chamber.
- to the clutch hydraulic system reservoir.

Instructions for use are indicated on the back of the cover.



Side covers
Opening:
Tractor: Pull cover (3).
Closing:
Push cover.

Left-hand side

Access:

- to engine oil filler,
- to engine oil dipstick,
- to windscreen wash reservoir.

Right-hand side

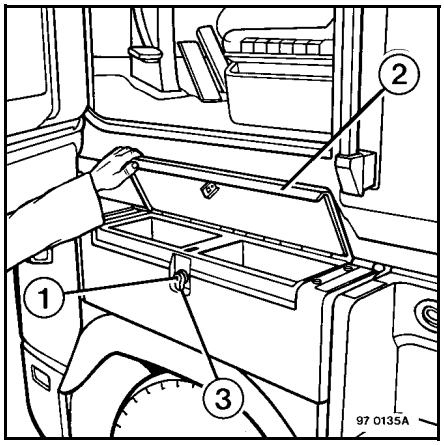
Access:

- to cab tilt hydraulic pump,
- to cab tilt control.

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B1-16 Presentation

Step locker
To lock/unlock
Use key in lock (1).
To open
Swivel knob (3) and raise top (2).
To close
Lower top (2).

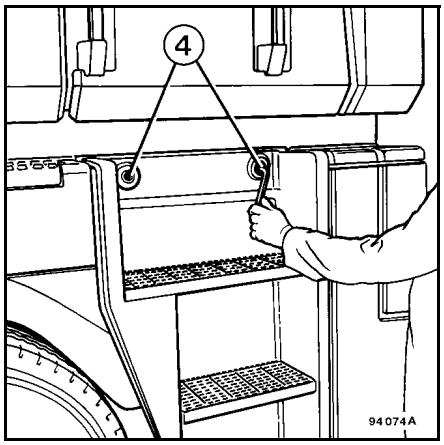


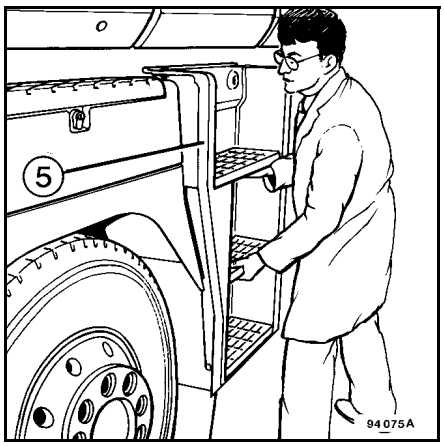
Steps
Removal: Remove screws (4) then lift up and take off steps (5).

Left-hand side

Access:

- to independent heater.



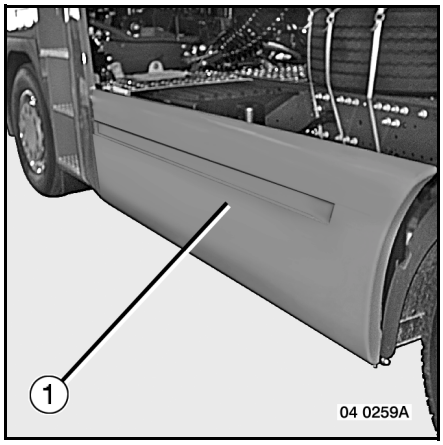


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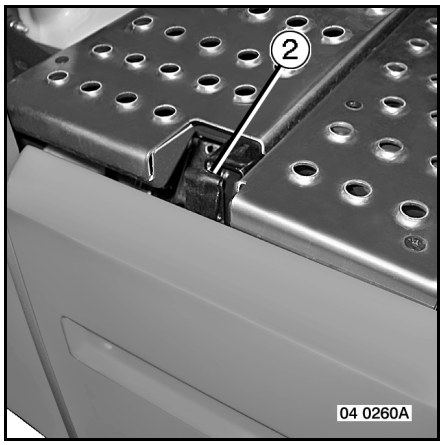
B1-17 Presentation

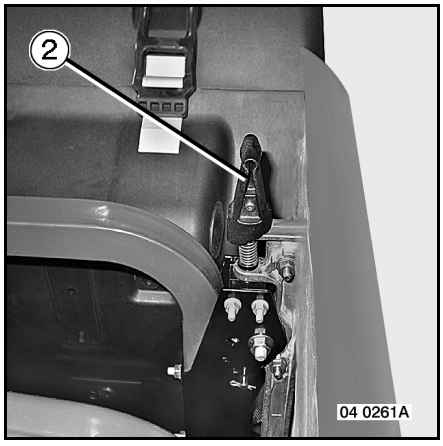
Side fairings

Opening
Unlock side fairings (1):



Lift up catches (2), pivot them through 1/4 of a turn, then pull the fairings until they are held by straps (3).





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It is possible to remove the fairings completely by unhooking the holding straps (3) and pulling the fairings towards yourself to dislodge them from the rubber sandwich mountings (4).

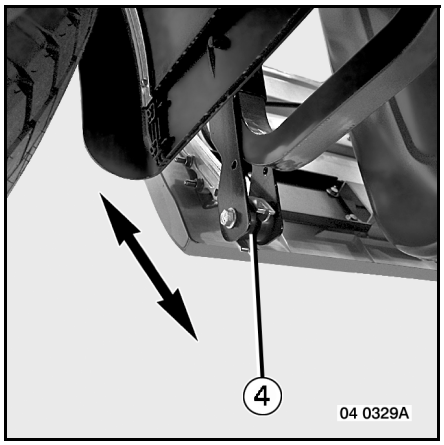


Closing

If the fairings have been removed , fit them into the rubber sandwich mountings (4) by pushing them at the bottom and fasten the strap snap hooks (3).

Push the side fairings (1), pivot the catches (2) through 1/4 of a turn.

Ensure that the fairings are correctly locked.



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B1-19 Presentation

Cab tilting



NEVER TILT THE CAB WHILE THE ENGINE IS RUNNING.

Before restarting the engine, check:

- Cab raised: that the gear lever is in neutral.
- Cab lowered: that the gearshift linkage is locked, after checking that all gears shift correctly.

When working underneath the cab (on the engine, etc...), the cab must be fully immobilized.
Any work on the cab tilt hydraulic system requires strict observance of the safety instructions and should therefore be carried out by a RENAULT TRUCKS service point or dealer.

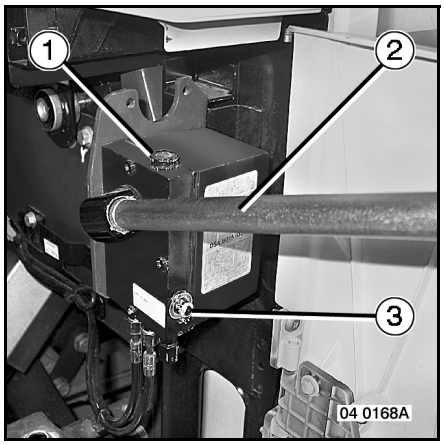
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B1-20 Presentation

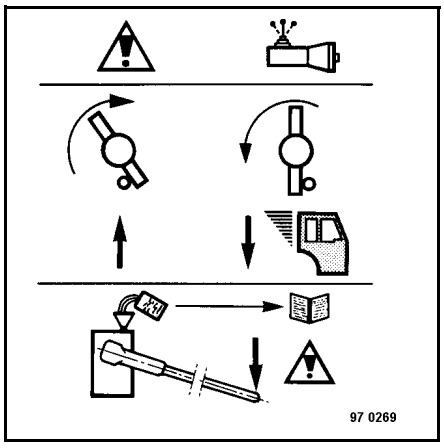
Depending on your vehicle's equipment

Mechanical control

With vehicle immobilized, parking brake applied, engine shut-down, gear lever in neutral, doors properly closed, make sure that no loose articles can be thrown against the windscreen. Clear the area in front of the cab. Place pump lever (3) in the "Up" position. Use jack bar (2). Unlocking is automatic, so pump until the cab is fully tilted. To return the cab to the "road" position, place pump lever (3) in the "Down" position and pump until the pump lever hardens (control locked).



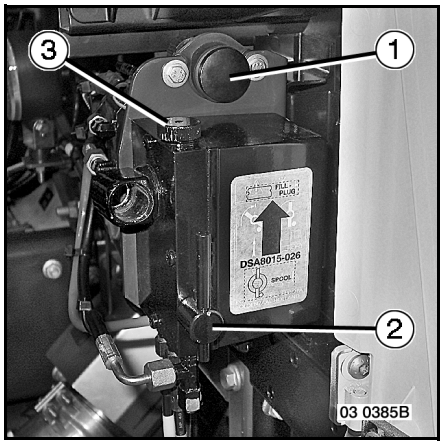
If you experience difficulty in tilting, return the cab to the "road" position and check the oil level. Top up with oil, if necessary, through reservoir filler (1).
Carefully carry out one complete tilting manoeuvre (up and down), then check the oil level again. In the event of malfunction, consult a RENAULT TRUCKS service point or dealer.



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B1-21 Presentation

Depending on your vehicle's equipment



Electrical control

Apply the parking brake and switch on the ignition to supply powder to the control.

With vehicle immobilized, engine shut-down, gear lever in neutral, doors properly closed, make sure that no loose articles can be thrown against the windscreen. Clear the area in front of the cab.

Place pump lever (2) in the "Up" position and press control (1).

Unlocking is automatic, so hold the control down until the cab is fully tilted.

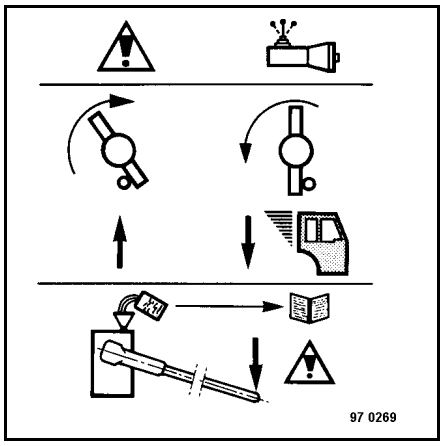
To return the cab to the "road" position, place pump lever (2) in the "Down" position and press control (1). Keep the control pressed until there is a change in the pump speed (change in tone and drop in speed).

Carefully carry out 2 complete tilting manoeuvres (up and down), then wait for 15 minutes for the pump motor to cool down before recommencing.

If you experience difficulty in tilting, return the cab to the "road" position and check the oil level. Top up with oil, if necessary, through reservoir filler (3).

Carefully carry out one complete tilting manoeuvre (up and down). In the event of malfunction, consult a RENAULT TRUCKS service point or dealer.

In the event of electrical failure, use the manual control.

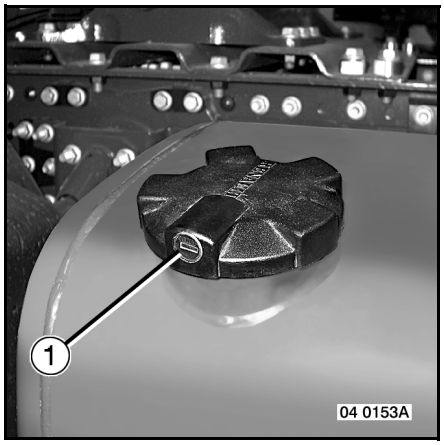


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B1-22 Presentation

Fuel tank(s)

Fuel filler cap
The filler cap is locked by a key lock (1).



Vehicle equipped with two fuel tanks without changeover valve

Since there is no fuel gauge switch, fuel level gauge (N) shows the total contents of both fuel tanks.

Depending on your vehicle's equipment

SWITCH OFF THE INDEPENDENT HEATER BEFORE YOU FILL THE FUEL TANK(S).

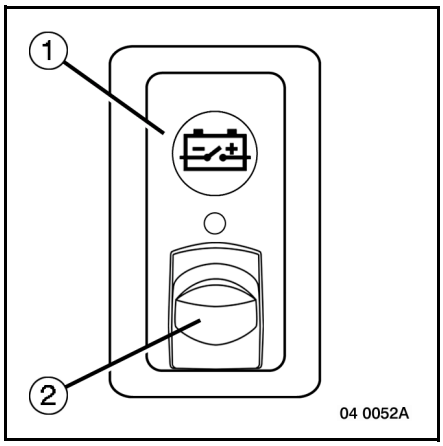
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B1-23 Presentation

"ADR" master switch (transport of dangerous materials)

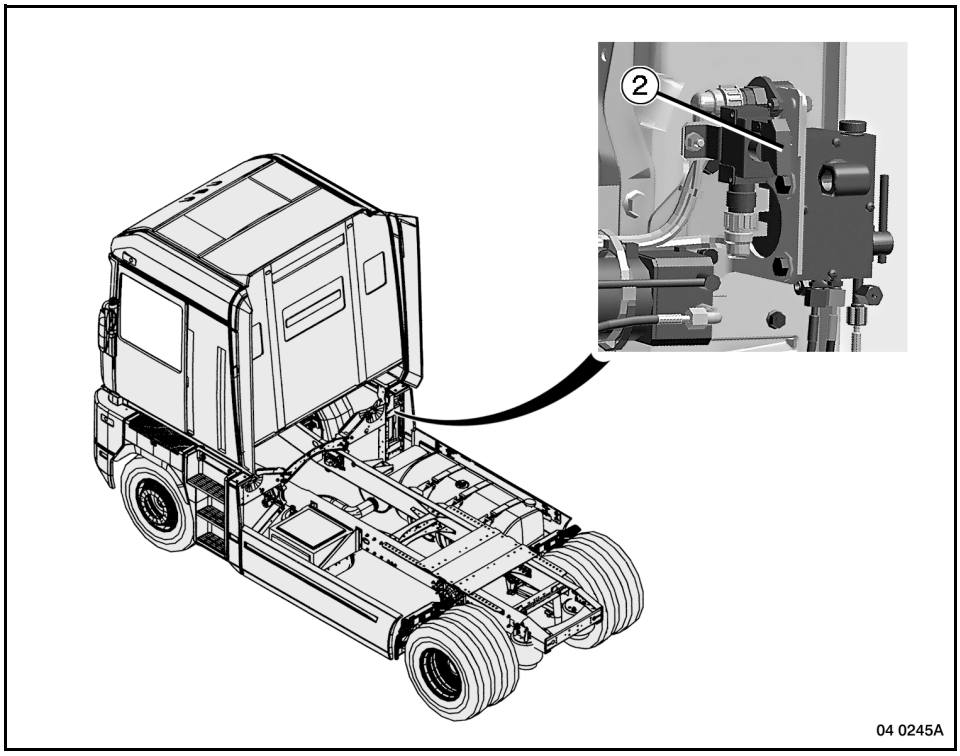
Use of the ADR battery isolating switch
Several parameters are involved:
- ignition key inserted in ignition switch,
- chassis exterior switch,
- cab interior switch,
- following electrical consumers:
  - side/parking lights,
  - hazard lights,
  - suspension,
  - independent heating.

Operation
Cab interior switch (A1)
Chassis exterior switch (2)
Operation by means of switches
Once the ignition key is inserted into the ignition switch, the battery isolating switch can be operated by means of switch (1) or (2).



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B1-24 Presentation



The "ADR" battery isolating switch serves to supply electrical power to the vehicle if neither of the two switches is actuated by the driver.
If either of the two switches is actuated, the "ADR" battery isolating switch cuts the electrical power supply to the vehicle and the engine stops automatically.

Operation by insertion of ignition key in ignition switch

With the "ADR" battery isolating switch in the position for supplying electrical power to the vehicle (switches not actuated and ignition key inserted in ignition switch): if the driver takes the ignition key out of the ignition switch and if none of the electrical consumers quoted earlier is in operation, the "ADR" battery isolating switch cuts the electrical power supply to the vehicle after a period of 20 minutes.
The electrical power supply will be restored to the vehicle when the ignition key is inserted into the ignition switch. If the driver's door is locked by the door key, unlock it with that key.

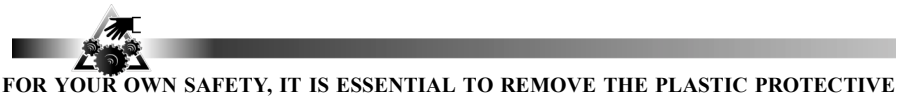
Vehicle equipped with independent heating
(See page B-3-10).

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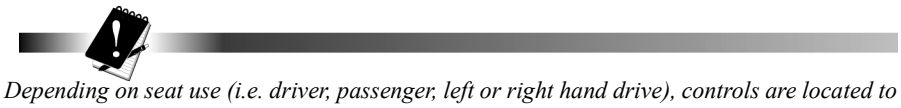
B2-1 Presentation

Driving position

Seats



FOR YOUR OWN SAFETY, IT IS ESSENTIAL TO REMOVE THE PLASTIC PROTECTIVE COVER WHEN PUTTING THE VEHICLE INTO COMMISSION.



Depending on seat use (i.e. driver, passenger, left or right hand drive), controls are located to one side or the other. The seat type shown is just one possible solution.

Seat suspension
Adjust the flexibility of the suspension according to the state of the road and the user's weight.

Air-operated seats
Controls will only work if there is sufficient air pressure.



FOR SAFETY REASONS, ALL SEAT ADJUSTMENT OPERATIONS MUST BE CARRIED OUT WHEN THE VEHICLE IS AT A STANDSTILL.
WHEN THE VEHICLE IS MOVING, ANY USE OF THE SEATS IN A POSITION OTHER THAN THAT OF "FACING THE ROAD" INVOLVES THE RESPONSIBILITY OF THE USERS.

Depending on your vehicle's equipment

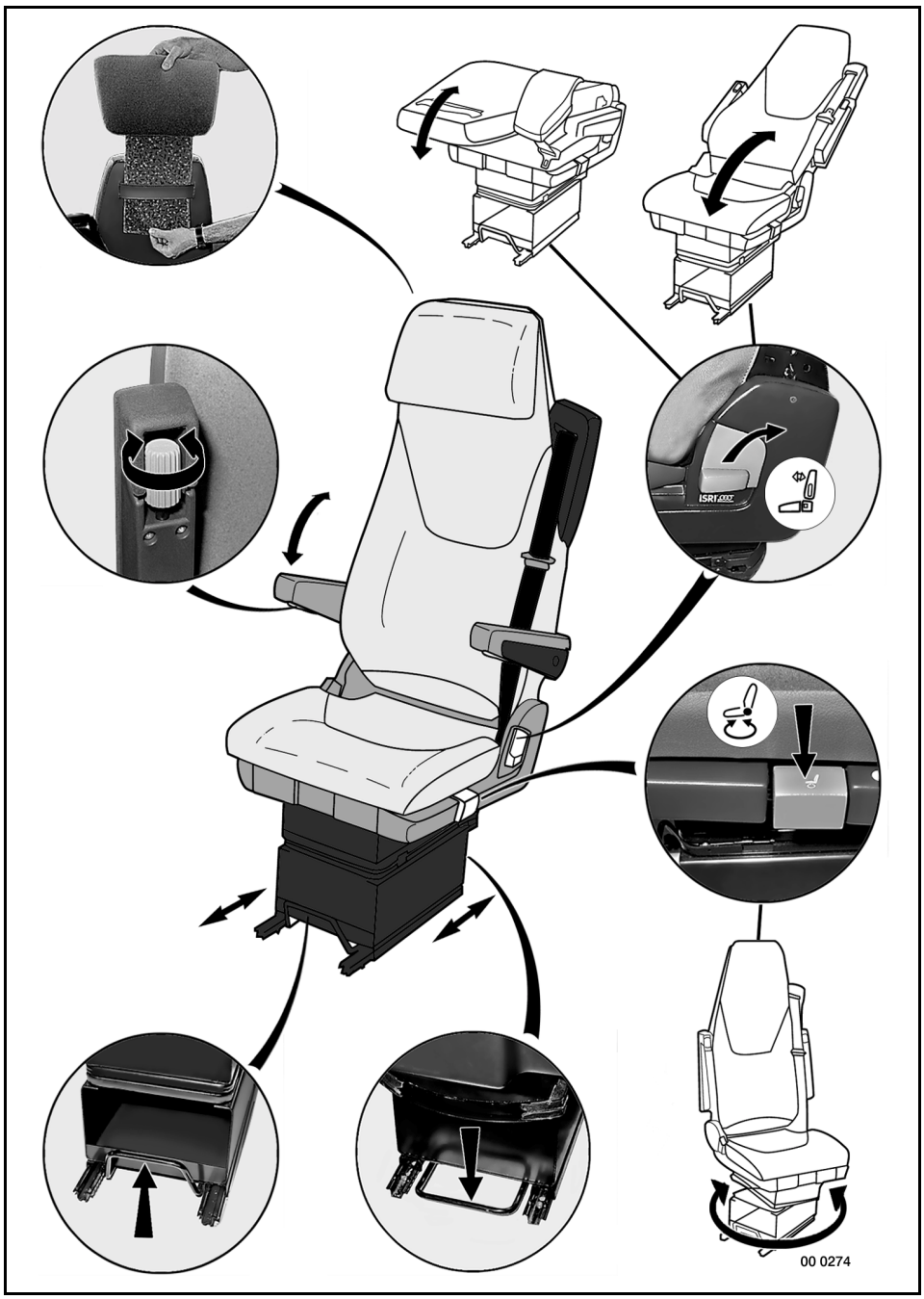
Driver's seat

Passenger(s) seat
1 - Suspension "vertical" flexibility adjustment:
- Upwards: hard suspension.
- Downwards: supple suspension.

2 - Fast suspension lowering.
3 - "Lower" lumbar support adjustment control.
4 - "Upper" lumbar support adjustment control.
5 - Side support adjustment.
6 - Heated seat cushion and squab (automatic thermostat-regulated operation).

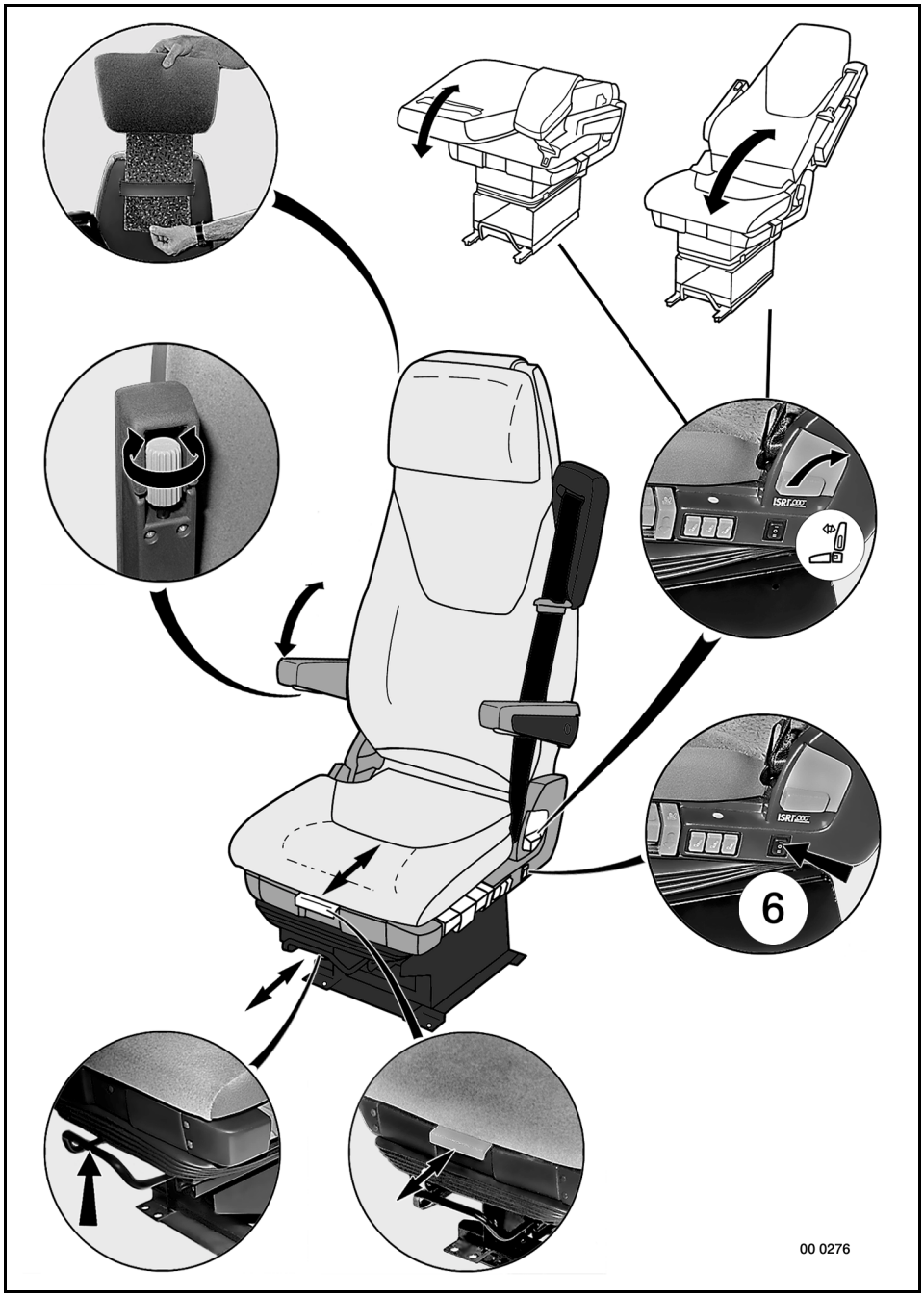
https://truckmanualshub.com/

B2-2 Presentation



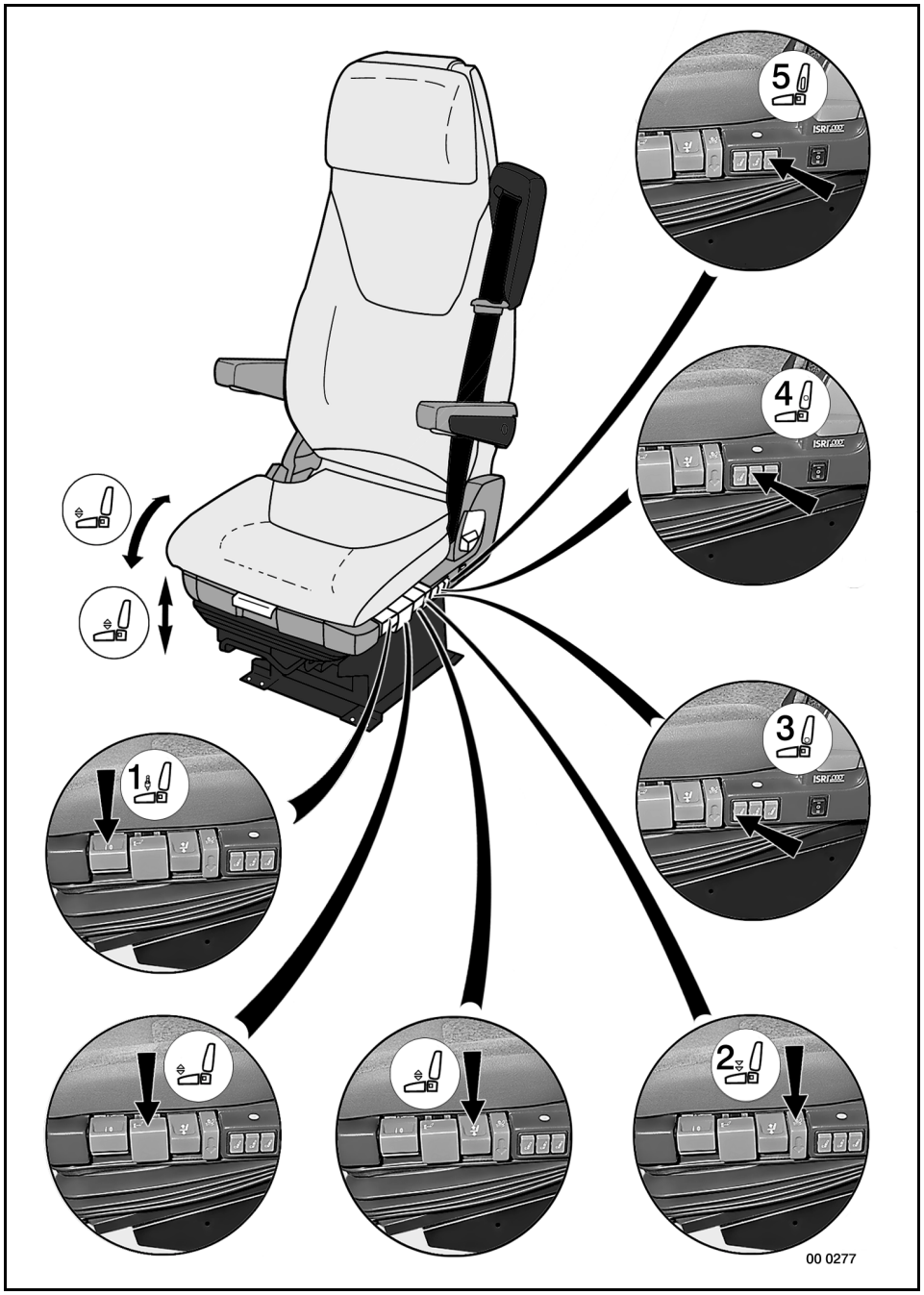
https://truckmanualshub.com/

B2-3 Presentation



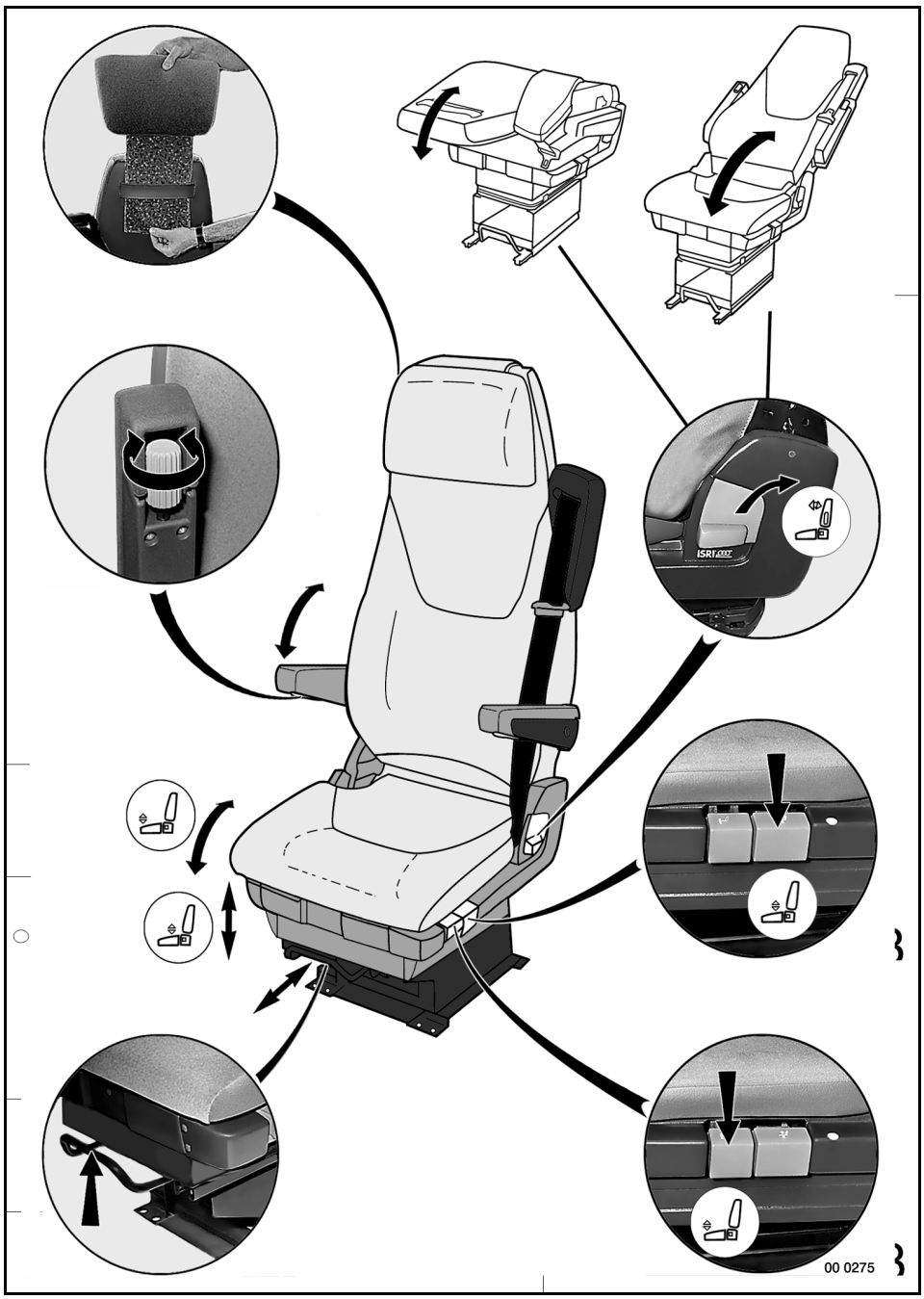
https://truckmanualshub.com/

B2-4 Presentation



https://truckmanualshub.com/

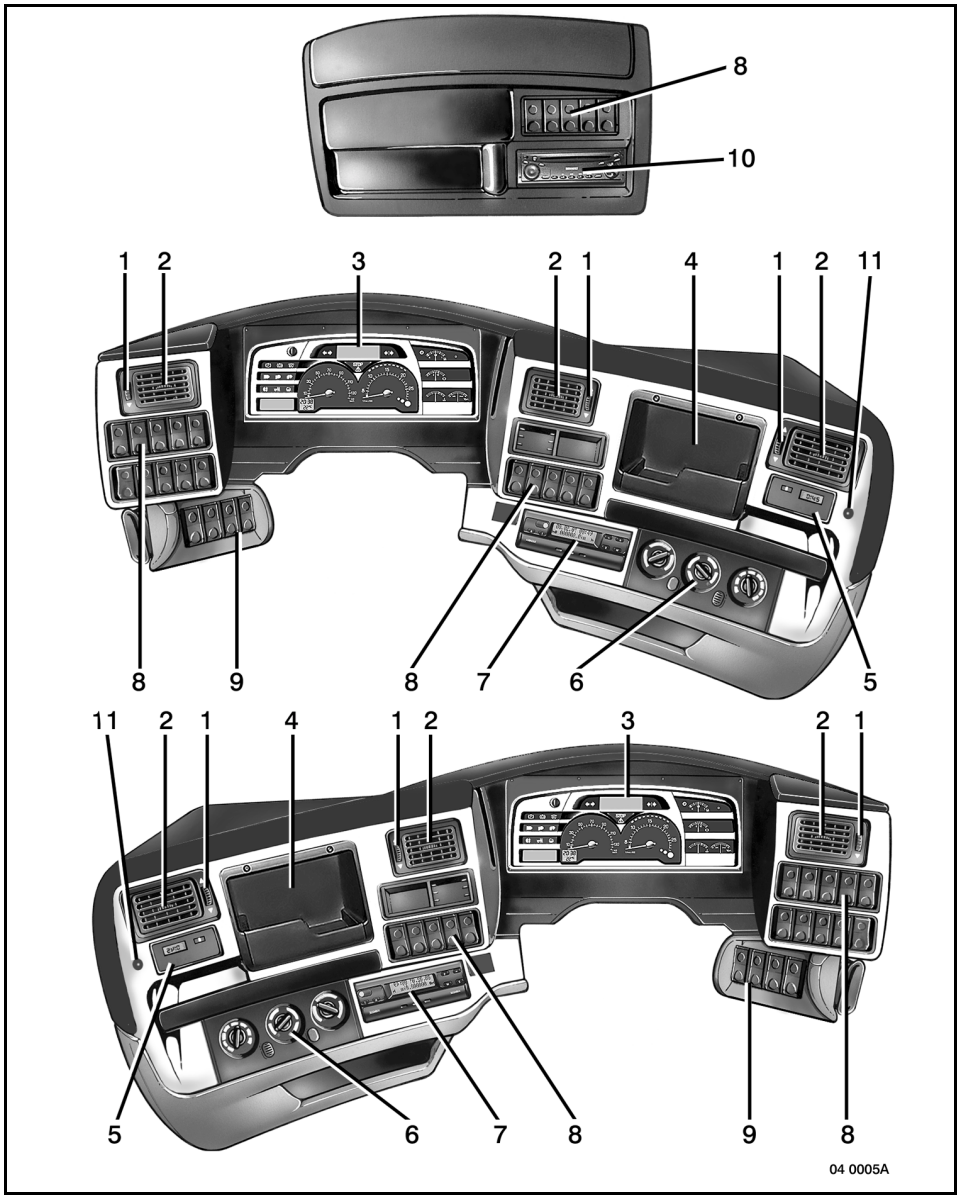
B2-5 Presentation



https://truckmanualshub.com/

B2-6 Presentation

Dashboard



https://truckmanualshub.com/

B2-7 Presentation

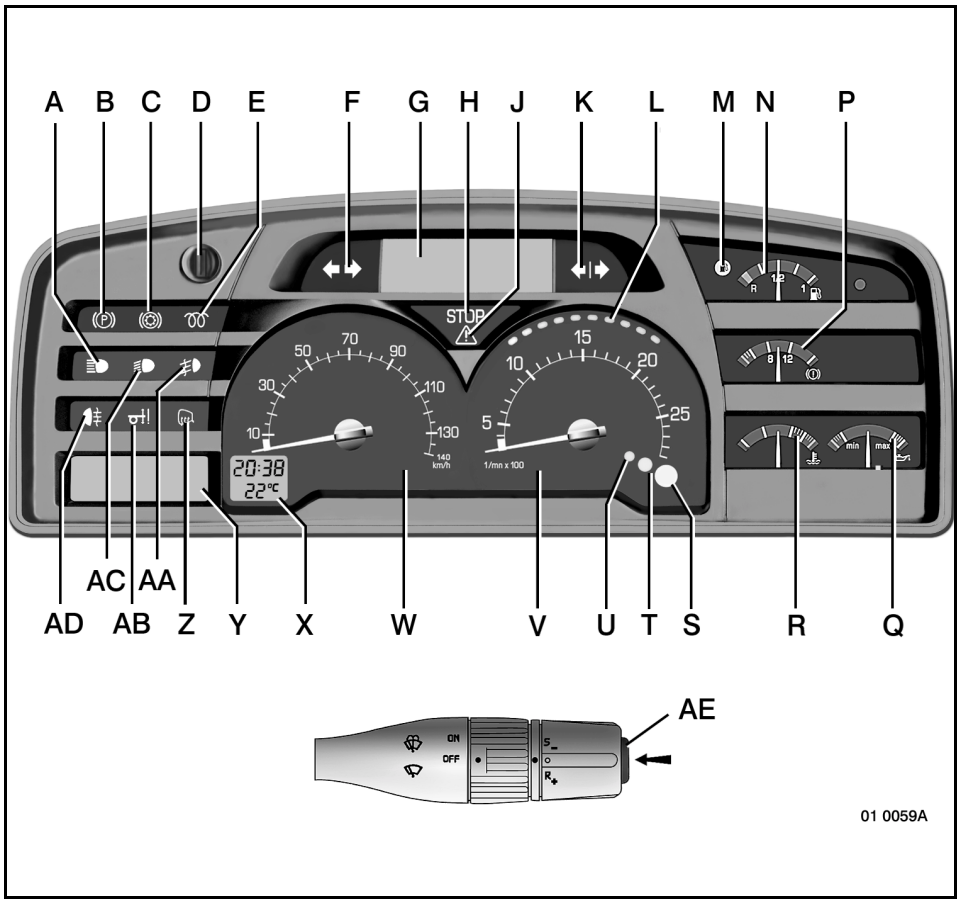
Depending on your vehicle's equipment

1 - Air vent(s) control
2 - Air vent
3 - Information display
4 - Driver's oddments tray
5 - Clock
6 - Thermal comfort panel
7 - Tachograph
8 - Switches (see page B-2-18)
9 - Switches (see page B-2-18)
10 - Space for radio
11 - Socket 24V (360 W max.)

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B2-8 Presentation

Instrument panel



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B2-9 Presentation

A	- Main beam headlights warning light
B	- Parking brake warning light
C	- Electric retarder warning light
D	- Menu selection control
E	- Preheating warning light
F*	- Tractor/rigid direction indicator lights warning light
G	- Multi-function information display (see page B2-22)
H	- Immediate stop "DANGER" warning light
J	- "SERVICE" warning light: Make your way to the nearest RENAULT TRUCKS service point or dealer
K**	- Trailer direction indicator lights warning light
L	- Engine operating speed zone
M	- Fuel minimum reserve warning light
N	- Fuel level gauge
P	- Air pressure gauge
Q	- Engine oil level and pressure gauge
R	- Engine cooling system temperature gauge
S	- Engine overspeed warning light
T	- Engine retarder in operation warning light
U	- Engine brake operation and pre-selection warning light
V	- Rev counter
W	- Speedometer
X	- Comfort information display: – clock – external temperature indicator
Y	- Radio information display
Z	- Windscreen defrosting warning light
AA	- Fog driving lights warning light
AB	- Electronic air suspension "Information" warning light
AB	- Axle load shedding "Information" warning light
AC	- Dipped beam headlights warning light
AD	- Rear fog lights warning light
AE	- Driving information selection button

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B2-10 Presentation

Operation of direction indicator lights warning light

Without trailer

As soon as a direction indicator or hazard lights control is actuated, warning light (F) should flash and the clicker should sound. If they are inoperative, check out the vehicle bulbs.

If the trouble is not due to the vehicle bulbs, make your way to the nearest RENAULT TRUCKS service point or dealer .

** With trailer

As soon as a direction indicator or hazard lights control is actuated, warning lights (F - K) should flash and the clicker should sound.

If warning light (F) is inoperative, check out the vehicle bulbs.

If warning light (K) is inoperative, check out the trailer bulbs.

If the clicker is inoperative, there is a fault both on the tractor and on the trailer.

If the trouble is not due to the vehicle bulbs, make your way to the nearest RENAULT TRUCKS service point or dealer

https://truckmanualshub.com/

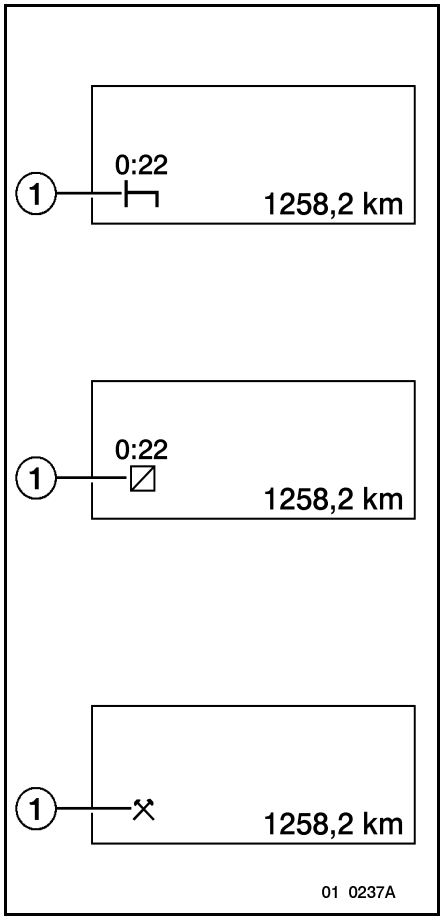
B2-11 Presentation

Tachograph

To avoid damage to the tachograph, carefully read the manufacturer's instruction book supplied with your vehicle's onboard documents.
If warning pictogram (G34) is displayed, make sure the chart is inserted in the tachograph. If this is not the case, make your way to the nearest RENAULT TRUCKS service point or dealer as quickly as possible to get the repair carried out.

To open the tachograph chart tray, the vehicle must be at a standstill and the ignition switched on. Upon opening the tray, the driving time and rest time information shown on the multi-function display is automatically zeroed.

The multi-function information display (G) indicates the activity of driver (1) depending on the tachograph selection made.

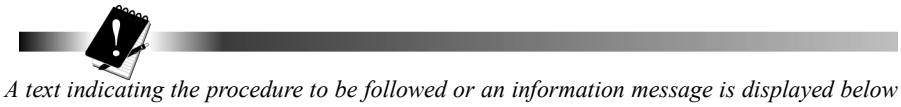


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B2-12 Presentation

Key to warning pictograms

Depending on your vehicle's equipment



A text indicating the procedure to be followed or an information message is displayed below the warning pictogram.



G1 - Driver information warning pictogram



G2 - Information display fault warning pictogram



G3
- Batteries warning pictogram
- Batteries charging fault warning pictogram



G4 - Engine oil pressure "Alert" warning pictogram



G5 - Engine oil temperature "Alert" warning pictogram



G6 - Engine oil level "Alert" warning pictogram



G7
- Vehicle electronic fault warning pictogram
- Cab tilting anomaly warning pictogram



G8 - Unknown electronic box warning pictogram



G9
- Engine electronic fault warning pictogram
- Air preheating "Alert" warning pictogram



G10
- Air minimum pressure "Alert" warning pictogram
- EBS fault warning pictogram

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B2-13 Presentation



G11 - Trailer "ABS/EBS" warning pictogram:
- small pictogram: check-out of device upon ignition switch-on (no fault)
- large pictogram: device fault "Information"



G12 - Tractor "ABS/EBS" warning pictogram:
- small pictogram: check-out of device upon ignition switch-on (no fault)
- large pictogram: device fault "Information"



G13 - Brake pads wear warning pictogram



G14 - Brakes high temperature warning pictogram



G15 - Air management fault warning pictogram



G16 - Parking brake not applied upon opening of driver's door warning pictogram



G17 - ESP calibration lode warning pictogram



G18 - ASR in operation warning pictogram



G19 - Anti-tip-over device in operation warning pictogram



G20 - Information pictogram: vehicle equipped with ESP system
(see page C2-4)



G21 - Hill start device warning pictogram



G22 - Lighting fault warning pictogram

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B2-14 Presentation



G23 - Water in fuel warning pictogram



G24 - Fuel pressure trouble warning pictogram



G25 - Fuel bleeding in progress warning pictogram (electric pump)



G26 - Driver's presence warning pictogram : brake or accelerator pedal depressed



G27 - Clutch overheating warning pictogram



G28 - Fleet management fault warning pictogram



G29 - Maintenance alert warning pictogram



G30 - Electronic air suspension "Alert" warning pictogram



G31 - Engine cooling system temperature "Alert" warning pictogram



G32 - Engine coolant low level warning pictogram



G33 - Air filter / fuel filter clogging warning pictogram



G34 - Tachograph fault warning pictogram
- driving style information pictogram



G35 - Gearbox fault warning pictogram

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B2-15 Presentation



G36 - Piloted starter trouble warning pictogram



G37 - Electronic engine immobilizer fault warning pictogram



G38 - Alarm warning pictogram



G39 - Engine overspeed warning pictogram



G40 - Retarder fault warning pictogram



G41 - Cruise control activated warning pictogram



G42 - Gearbox PTO in operation warning pictogram



G42 - Gearbox PTO in operation warning pictogram



G43 - PTO maximum speed warning pictogram



G43 - PTO minimum speed warning pictogram



G44 - Inter-wheel diff. lock in operation warning pictogram



G44 - Inter-wheel diff. lock in operation warning pictogram



G45
- Wheel slip or "ASR" in operation warning pictogram
- "ASR" threshold change warning pictogram

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B2-16 Presentation



G46 - "ASR" disconnected warning pictogram (roller bench testing)



G47 - Working spotlight warning pictogram

Key to gearbox warning pictograms
Depending on your vehicle's equipment



G48 - OPTIDRIVER 2 warning pictogram: move lever to position (D)



G49 - OPTIDRIVER 2 warning pictogram: move lever to position (N)



G50 - OPTIDRIVER 2 warning pictogram: integral automatic mode



G51 - OPTIDRIVER 2 warning pictogram: full-time or part-time manual mode



G52 - OPTIDRIVER 2 warning pictogram: maximum vehicle mobility



G53 - OPTIDRIVER 2 warning pictogram: use brakes or retarders



G54 - Gearbox splitter fault warning pictogram

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B2-17 Presentation

Key to "tachograph" warning pictograms
Depending on your vehicle's equipment



G55 - Cumulated driving time indication pictogram



G56 - Cumulated rest time indication pictogram



G57 - Rest in progress indication pictogram



G58 - Availability time indication pictogram



G59 - Working time indication pictogram

Key to information pictograms for "bodybuilders" equipment
Depending on your vehicle's equipment



G60 - Body interior lighting tell-tale pictogram



G61 - Bodybuilder system unlock tell-tale pictogram



G62 - Bodybuilder system active tell-tale pictogram



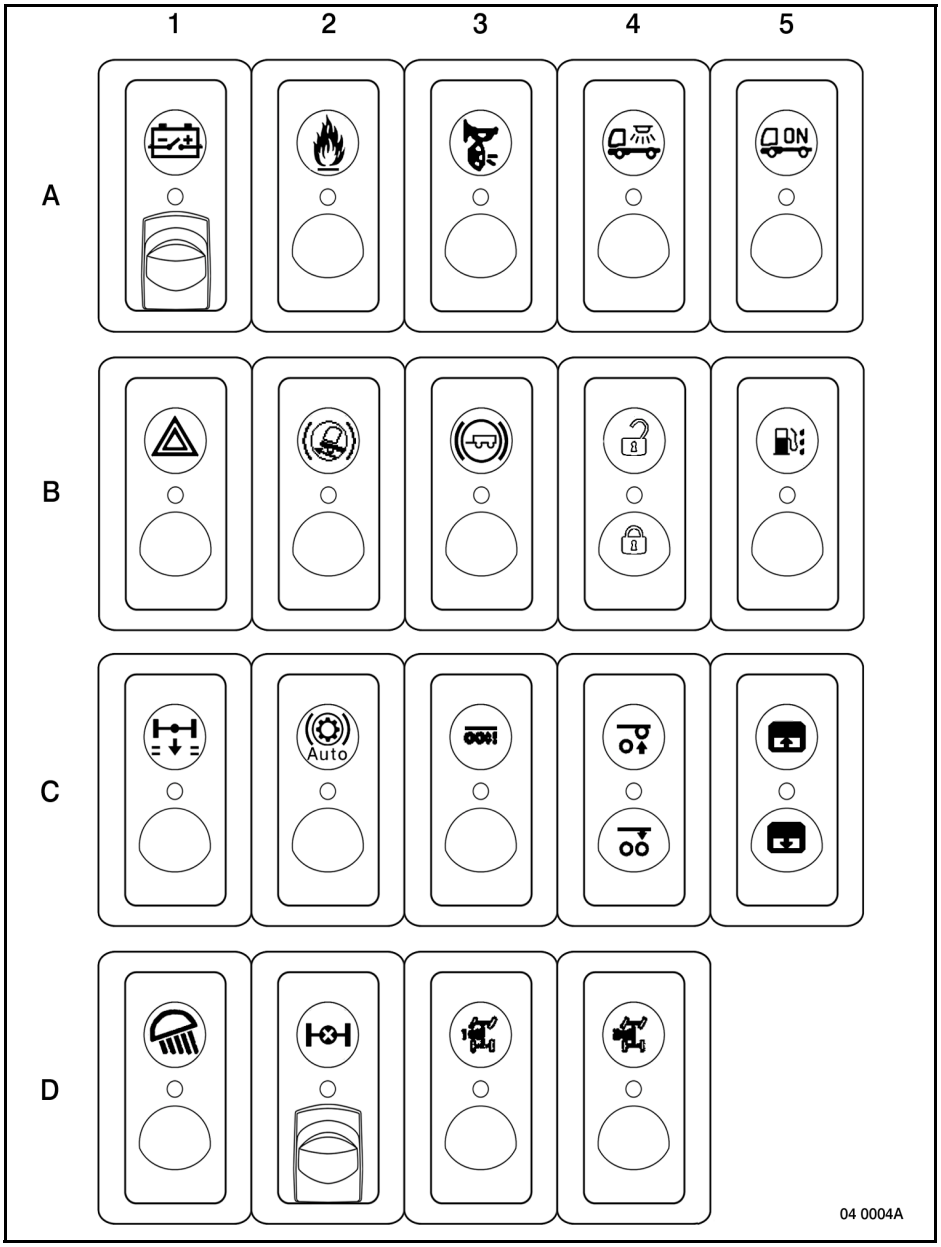
G63 - Bodybuilder system in working position tell-tale pictogram

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B2-18 Presentation

Key to switches

Dashboard



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B2-19 Presentation

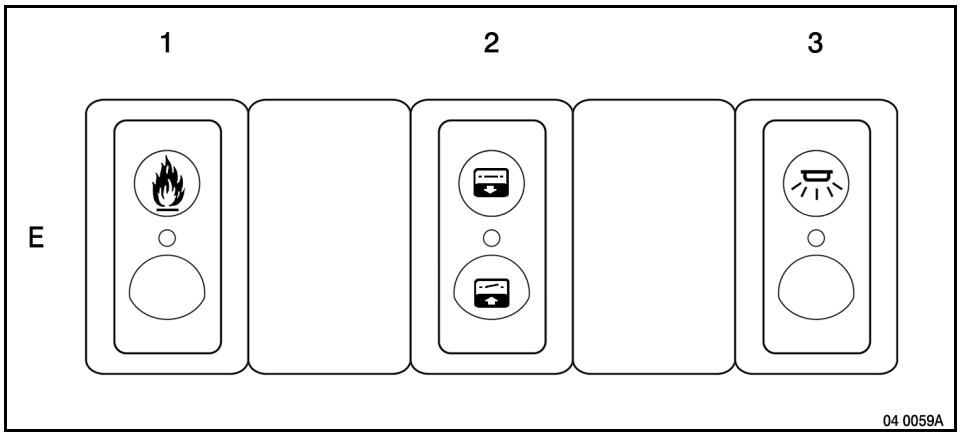
Depending on your vehicle's equipment

A1 - Master switch cut-off control switch (ADR)
A2 - Independent heating control switch(ADR)
A3 - Reversing buzzer control switch
A4 - Bodybuilder's lighting control switch
A4 - Bodybuilder's lighting warning light
A5 - Bodybuilder's equipment control switch
A5 - Bodybuilder's equipment warning light
B1 - Hazard lights control (see page C-4-36)
B1 - Hazard lights warning light
B2 - Hill start device control switch
B3 - Trailer brake control switch
B4 - Central doors locking control switch
B5 - Bleed water from fuel control
C1 - "ASR" control switch
C2 - Retarder control switch (manual / automatic)
C3 - Axle load-shedding control switch
C4 - Lift-up axle control switch
C5 - Frontal sun visor control switch
D1 - Working spotlight control switch
D2 - Inter-wheel diff. lock control switch (4x2 - 6x2)
D3 - Power take-off control switch
D4 - Additional PTO control switch

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B2-20 Presentation

Bunk



E1 - Independent heating control switch

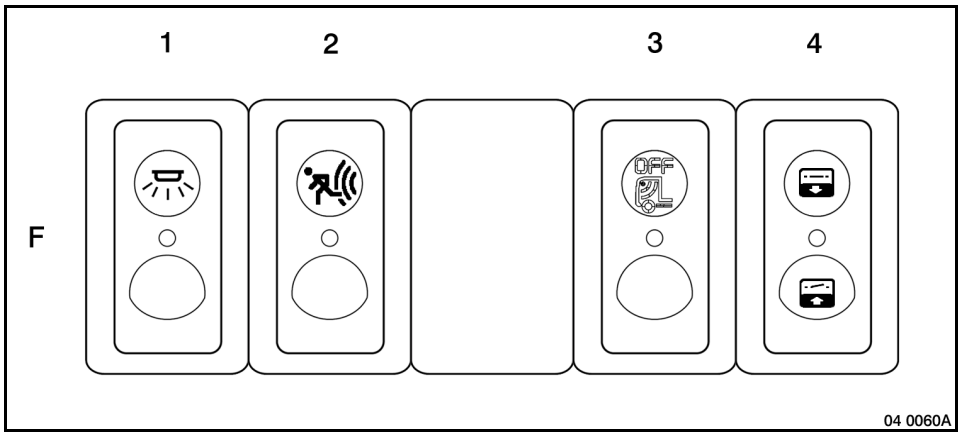
E2 - Sun-roof control switch

E3 - Overhead light control switch

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B2-21 Presentation

Ledge



F1 - Overhead light control switch

F2 - "Panic" alarm control switch

F3 - Volumetric alarm exclusion control switch

F4 - Sun-roof control switch

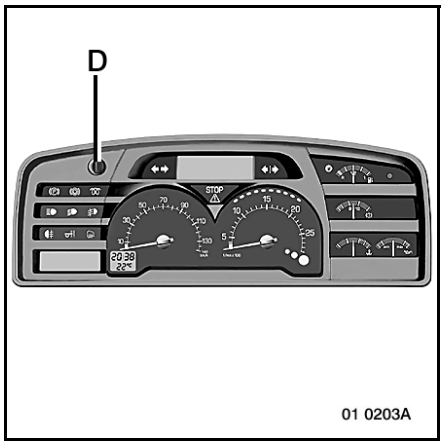
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B2-22 Presentation

Multi-function information display

Controls

FOR SAFETY REASONS, IT IS ADVISED TO USE CONTROL (D) WITH THE VEHICLE STATIONARY AND PARKED CORRECTLY.



Button (D) features 3 control options (+ / - / V).

Nudge or push towards (+) or (-):

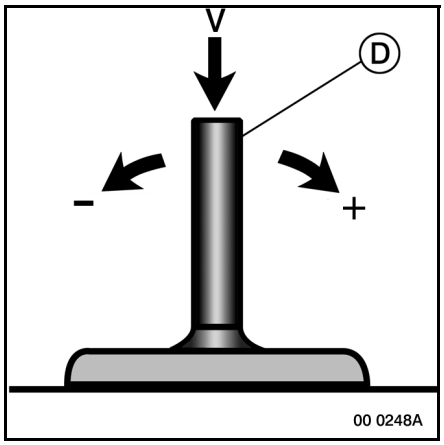
- to gain access to the different menus and sub-menus.
- to make an adjustment or choice in an opened menu.

Brief nudge(s) (V):

- to open a selected menu.
- to confirm an adjustment or a choice in the menu selected.
- to scroll through present or memorized faults in succession.

Sustained nudge (V):

- to return to zero in the maintenance menu.



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B2-23 Presentation

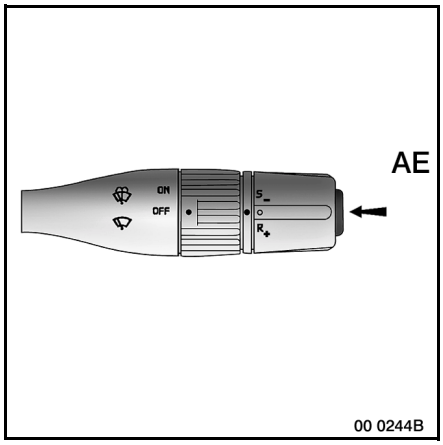
Button (AE) features 2 control options.

Brief nudge(s):

- to go back to the default display.
- to close an opened menu without confirming the adjustment or choice.
- to display the driver's different supplementary driving menus.

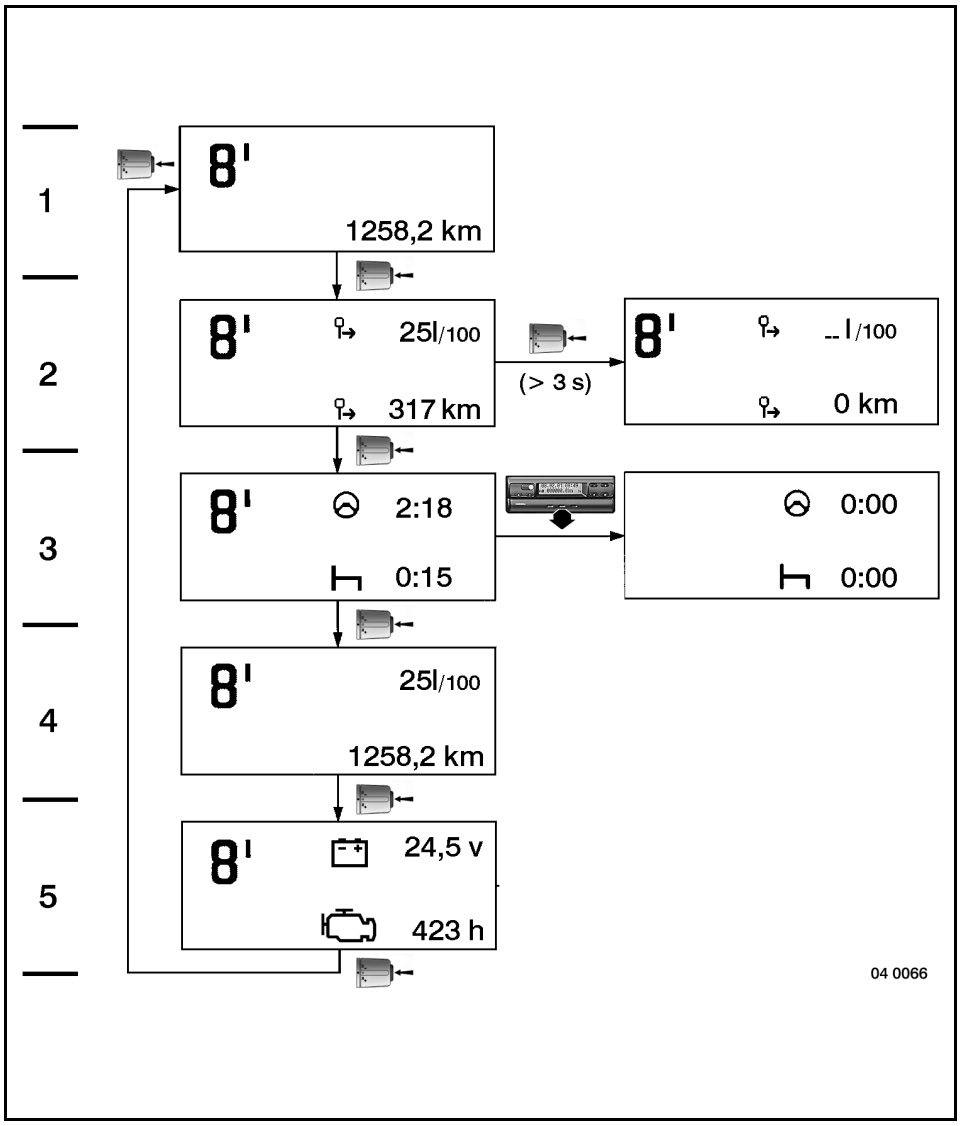
Sustained nudge:

- to return to partial mileage and average fuel consumption per 100 km.



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B2-24 Presentation



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B2-25 Presentation

Supplementary driving information

Using control (AE) (see page B-2-22), it is possible to display different information items in succession, that can amount to 5 and vary depending on your vehicle's equipment.

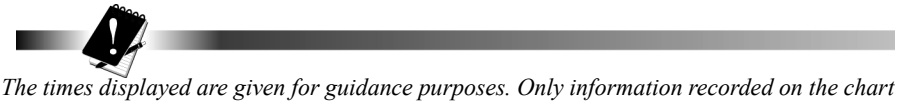
The display of this information is time-delayed when the ignition is switched on, with the engine running or shutdown, and when the vehicle is not moving.

As soon as the vehicle moves off, if you select an information item, it remains permanently displayed, provided you have not selected another one, except for the total mileage counter.

1– Total mileage counter (in km).

2– Average fuel consumption in litres per 100 km and partial mileage (in km).. When there is a zero in front of the partial mileage, it means a distance of 9999 km has been travelled.
Press button (AE) and keep it depressed for more than 3 seconds in order to zero this information.

3– Cumulated driving time and cumulated rest time.
The cumulated rest time is incremented after a period of 15 minutes of rest or availability at a stretch.
The cumulated driving time displayed on the instrument panel corresponds to the effective vehicle running time (speed different from 0 km/h).
Brief stops, due to traffic, are automatically deducted.
This information is zeroed:
- when the tachograph chart tray is closed,
- when driving or working is resumed after 45 minutes of accumulated rest.



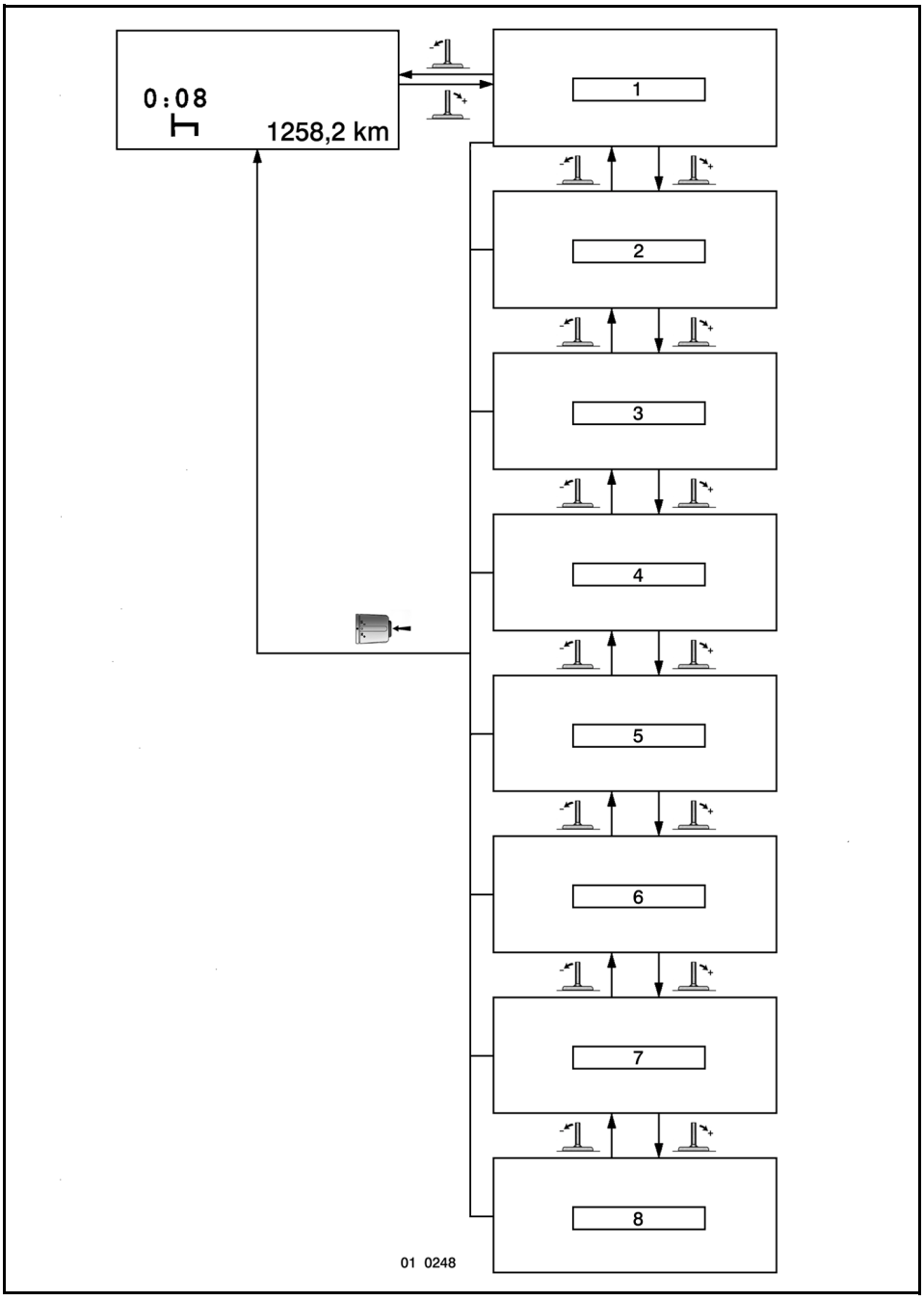
The times displayed are given for guidance purposes. Only information recorded on the chart has any legal value.

4– Instant fuel consumption in litres per 100 km and total mileage (in km).
The instant fuel consumption is given for guidance purposes - it may reach substantial proportions during acceleration or when moving off, but it is not significant of the vehicle's average fuel consumption.

5– Battery voltage and engine operating hourmeter.

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B2-26 Presentation



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B2-27 Presentation

Vehicle with ZF gearbox

Menus

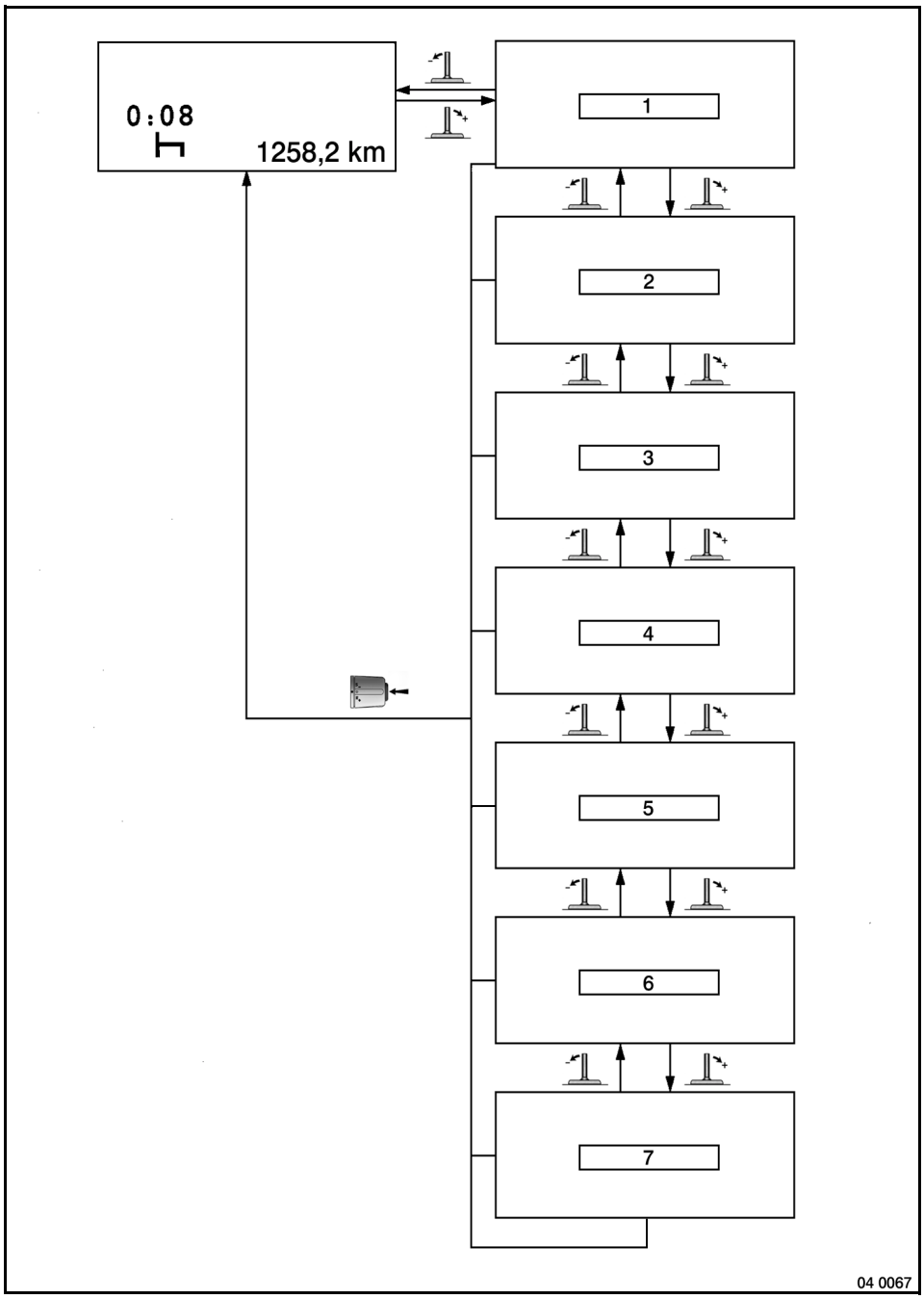
Use controls (AE / D) (see page B-2-22).

1– Maintenance
2– Diagnostics
3– Auto-test
4– Brightness adjustment
5– Sound volume
6– Recommended gear
7– Choice of language
8– Time of day adjustment

To use the different menus, see the following pages.

https://truckmanualshub.com/

B2-28 Presentation



https://truckmanualshub.com/

B2-29 Presentation

Vehicle with Optidriver 2 gearbox

Menus

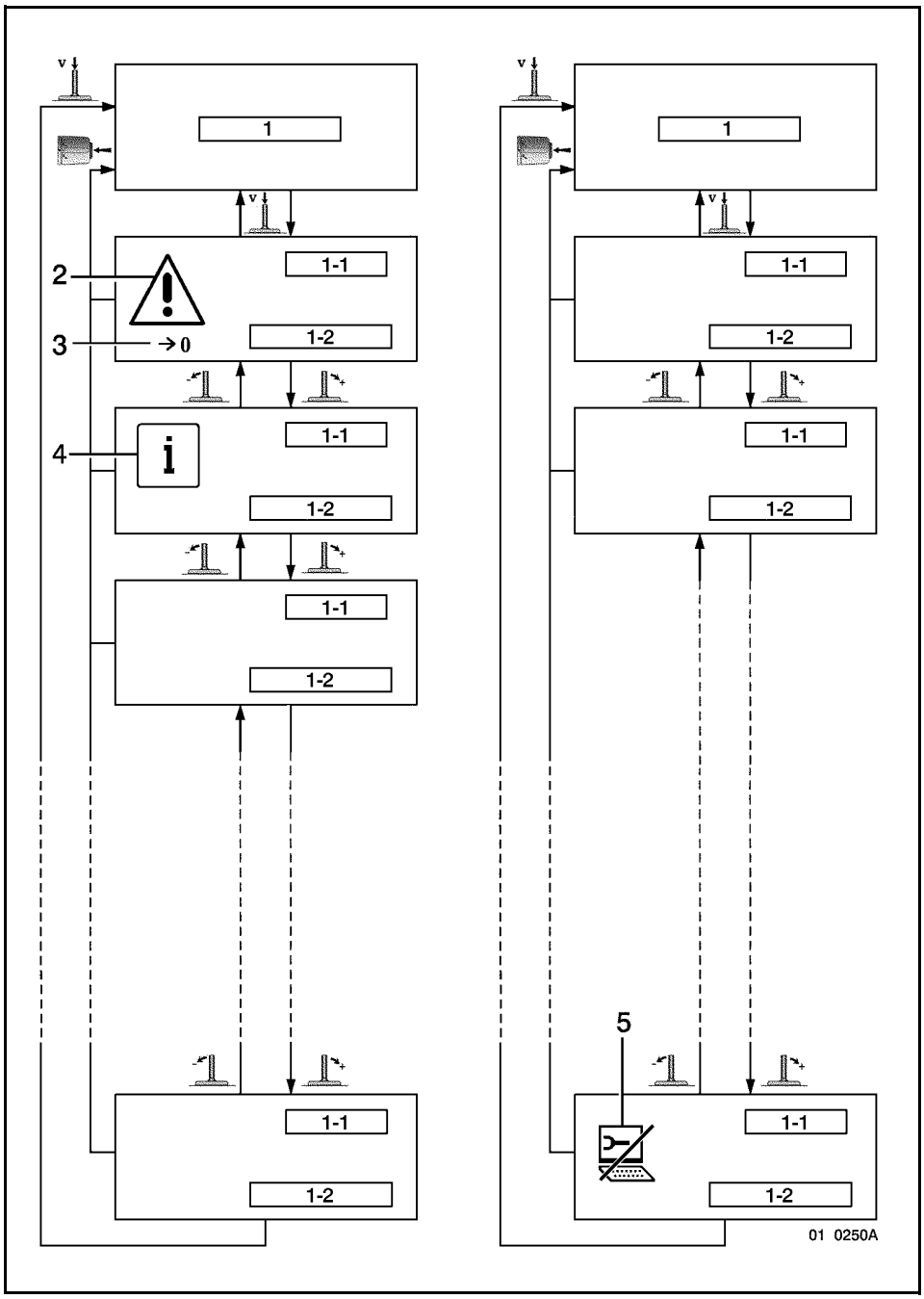
Use controls (AE / D) (see page B-2-22).

1– Maintenance
2– Diagnostics
3– Auto-test
4– Brightness adjustment
5– Sound volume
6– Choice of language
7– Time of day adjustment

To use the different menus, see the following pages.

https://truckmanualshub.com/

B2-30 Presentation



https://truckmanualshub.com/

B2-31 Presentation

1 - Maintenance menu

Use controls (AE / D) (see page B-2-22).

When consulting the maintenance menu, only engine oil, APM and brake lining wear (for vehicles equipped with EBS) information features are active. It is possible to activate other maintenance features (see page B-2-31) by using the RENAULT TRUCKS test tool or INFOMAX software after the first oil change has been made.

1 - 1: Time when the maintenance should be carried out.

The display is shown in kilometres, date or engine operating time or in %, depending on which term is closest.

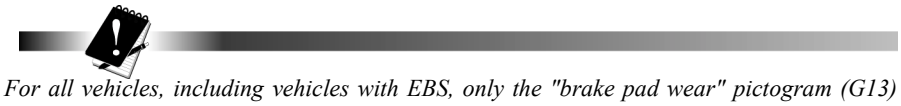
1 - 2: Display of maintenance features (see page B-2-31).

The "pre-alert" pictogram (4) means that the maintenance term in question is close.

The "alert" pictogram (2) means that the maintenance term in question is due.

The display "-> 0" (3) means that zeroing of the term is possible by the user (after carrying out the maintenance operations). Such zeroing may be forbidden by using the RENAULT DIAGNOSTICA tool or INFOMAX software.

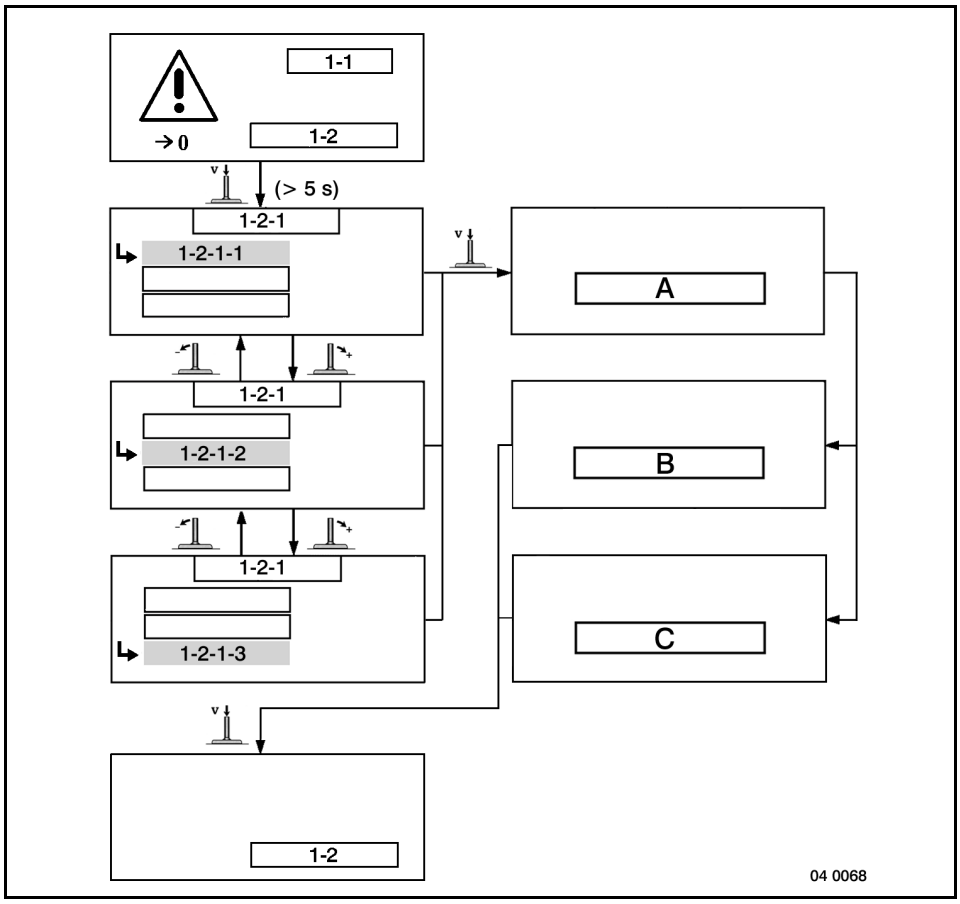
The pictogram (5) means that the predictive maintenance feature is no longer active. Contact a RENAULT TRUCKS service point or dealer.



For all vehicles, including vehicles with EBS, only the "brake pad wear" pictogram (G13) indicates that the brake pads are to be replaced. In this case, the "alert" pictogram (2) does not appear.

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B2-32 Presentation



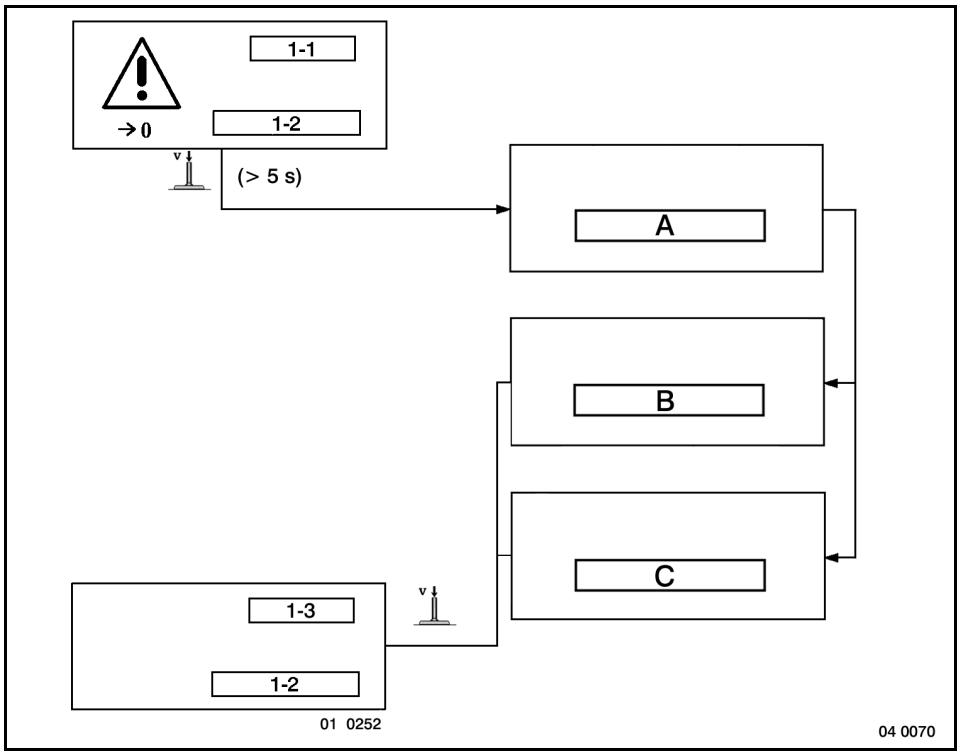
https://truckmanualshub.com/

B2-33 Presentation

Zeroing the engine oil maintenance feature
Use control (D) (see page B-2-22)
This maintenance feature involves the choice of oil grade. This choice sets a new term which will be calculated and changed according to engine use. The new term will be displayed after 100 or so hours of engine operation.
1 - 1: Term
1 - 2: Engine oil
1 - 2 - 1: Engine oil grade
1 - 2 - 1 - 1: RD-2
1 - 2 - 1 - 2: RLD-2
1 - 2 - 1 - 3: Others
- **(A)**: Zeroing in progress
- **(B)**: Zeroing OK
- **(C)**: Zeroing invalid

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B2-34 Presentation



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B2-35 Presentation

Zeroing a maintenance feature other than engine oil change

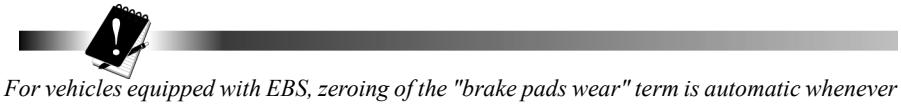
1 - 1: Term due

Press control (D) and keep it depressed for more than 5 seconds to zero the term (see page B-2-22).

- **(A)**: Zeroing in progress
- **(B)**: Zeroing OK
- **(C)**: Zeroing invalid

1 - 2: Display of the maintenance feature

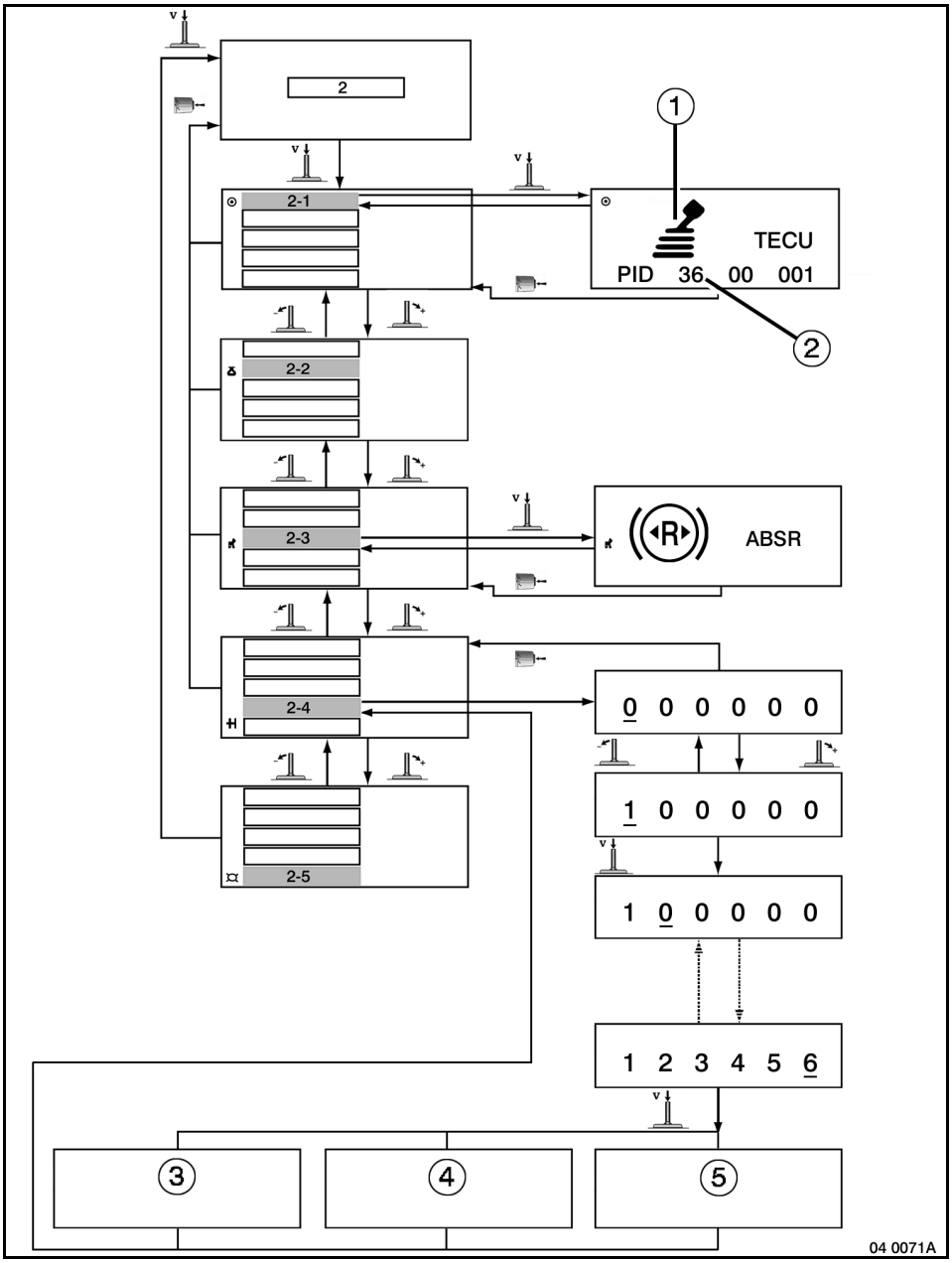
1 - 3: New term after zeroing



For vehicles equipped with EBS, zeroing of the "brake pads wear" term is automatic whenever the brake pads are replaced. The new term will not be displayed before the pads have reached 20% of their predictive wear.

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B2-36 Presentation



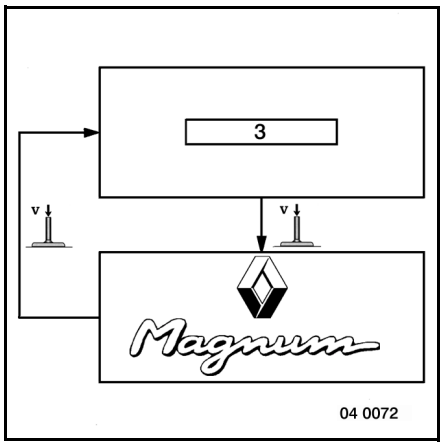
https://truckmanualshub.com/

B2-37 Presentation

2 - Diagnostics menu
Use controls (AE / D) (see page B-2-22).
When the menu is open, the stop warning light (H) comes on.
Sub-menus
2 - 1: Present faults.
Whatever the case, pictogram (1) shows the function or system presenting a fault. To see the other faults, actuate control (D) as often as necessary. Code number (2) characterizes the present fault.
2 - 2: Sub-menu reserved for the RENAULT TRUCKS service point or dealer.
2 - 3: Blink code
2 - 4: Transponder code.
- **(3)**: "Code correct": the engine can be started.
- **(4)**: "Code incorrect": switch off the ignition and start again.
- **(5)**: "Anti-scanning": You have made 3 consecutive code entry errors, the system locks up for 15 minutes - leave the ignition switched on and try again 15 minutes later.

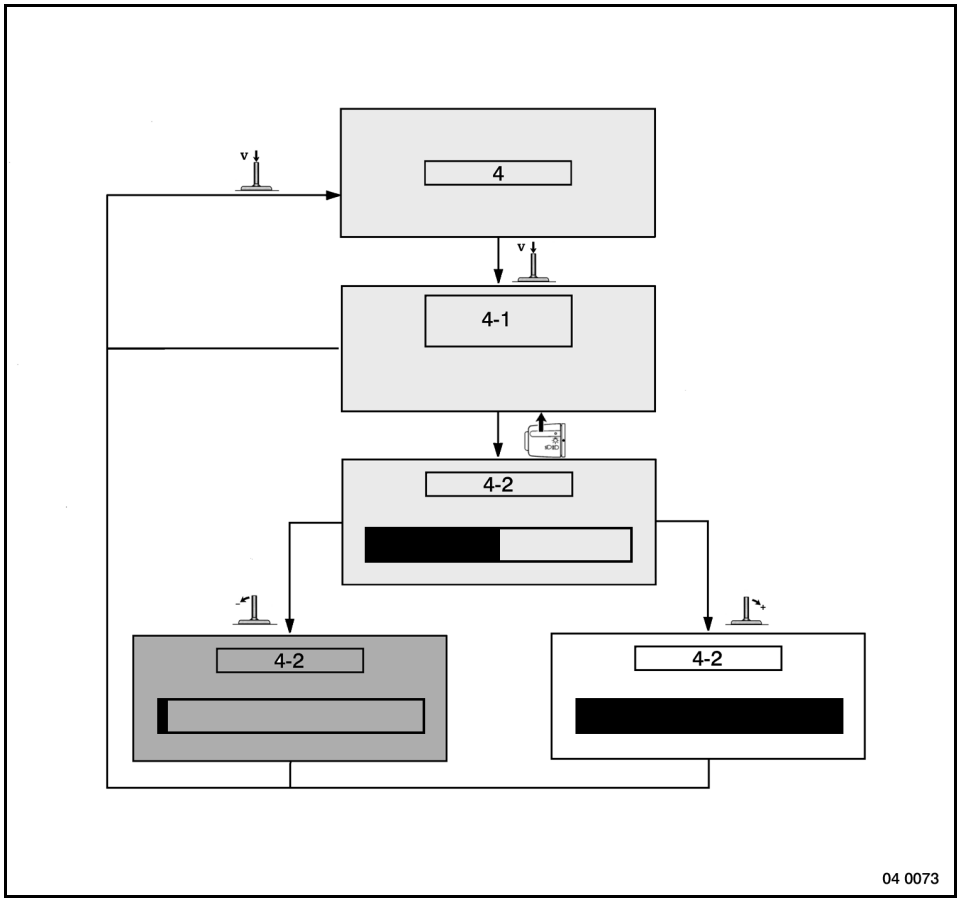
2 - 5: Quit

3 - Auto-test menu
Use control (D) (see page B-2-22).
Tests all the instrument panel warning lights and indicators.



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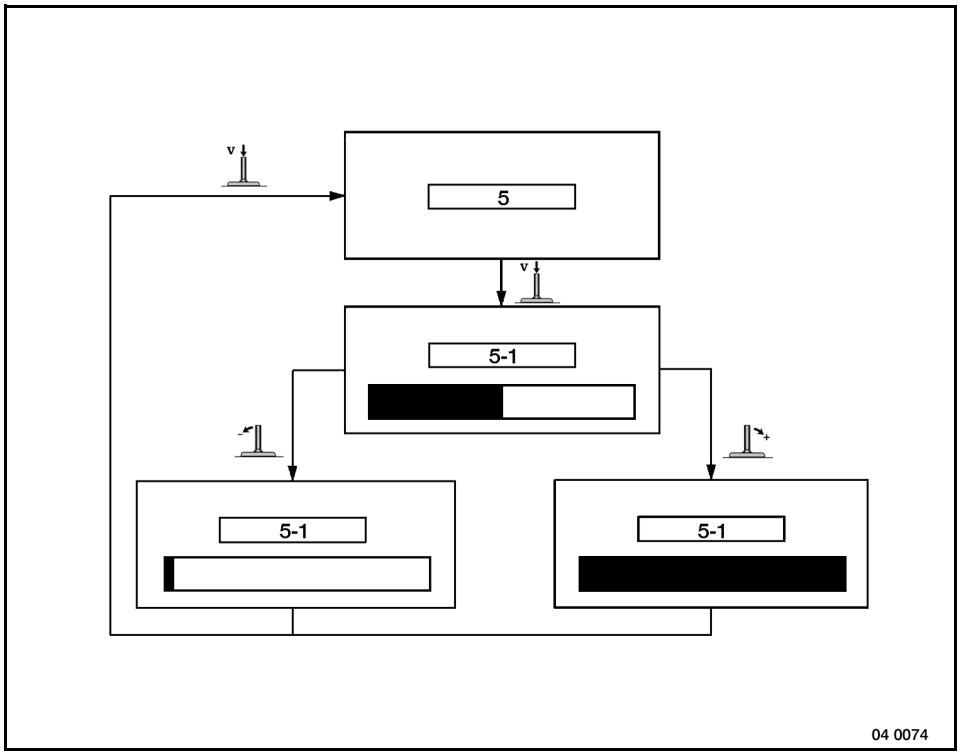
B2-38 Presentation



4 - Brightness adjustment menu
Use controls (AE / D) (see page B-2-22).
4 - 1: Side/parking lights switched on
4 - 2: Brightness adjustment
Perform this adjustment at night with the side/parking lights switched on. During the day, a cell corrects and adapts the brightness of the display according to the ambient light.
Confirm the choice at the end of adjustment.

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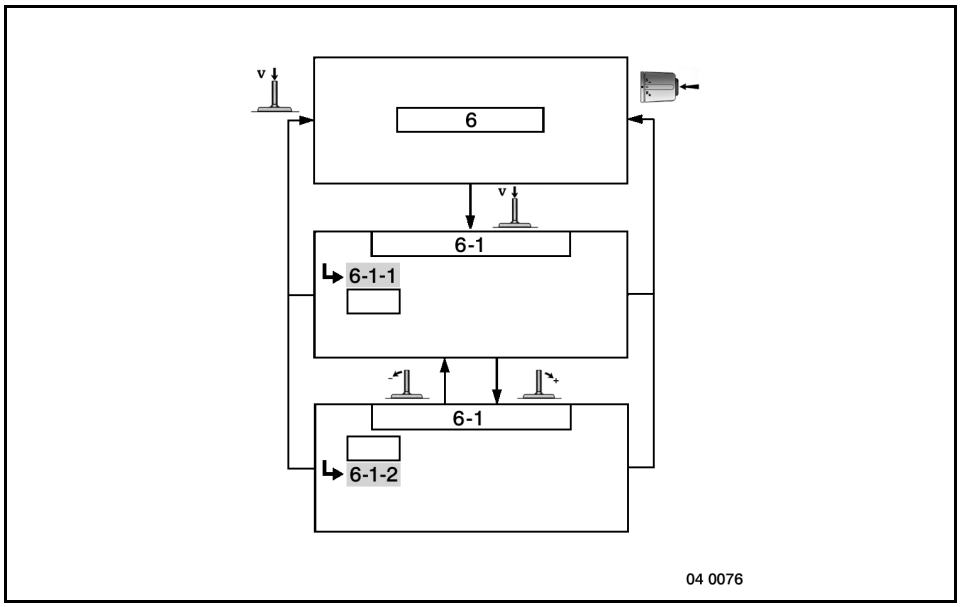
B2-39 Presentation



5 - Sound volume menu
Use control (D) (see page B-2-22).
5 - 1: Sound volume
Confirm the choice at the end of adjustment.

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B2-40 Presentation

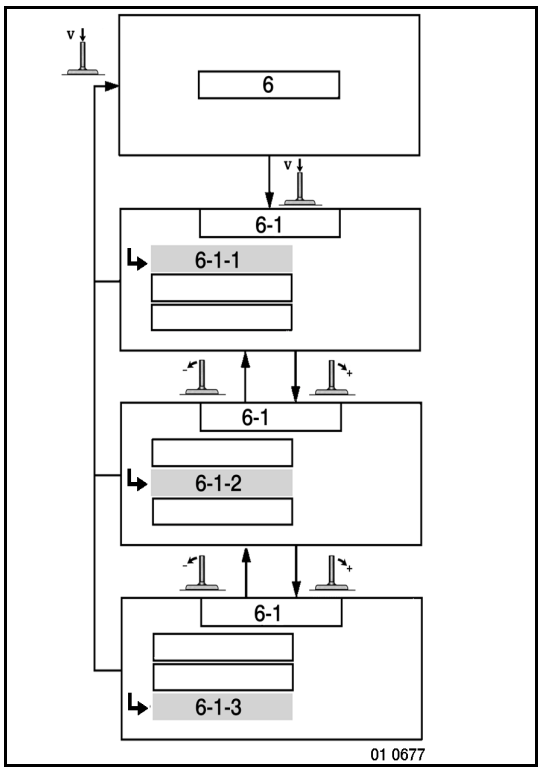


Vehicle with ZF gearbox

6 - Recommended gear menu
Use control (D) (see page B-2-22).
6 - 1: Recommended gear.
6 - 1 - 1: with bleep.
6 - 1 - 2: without bleep.

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B2-41 Presentation

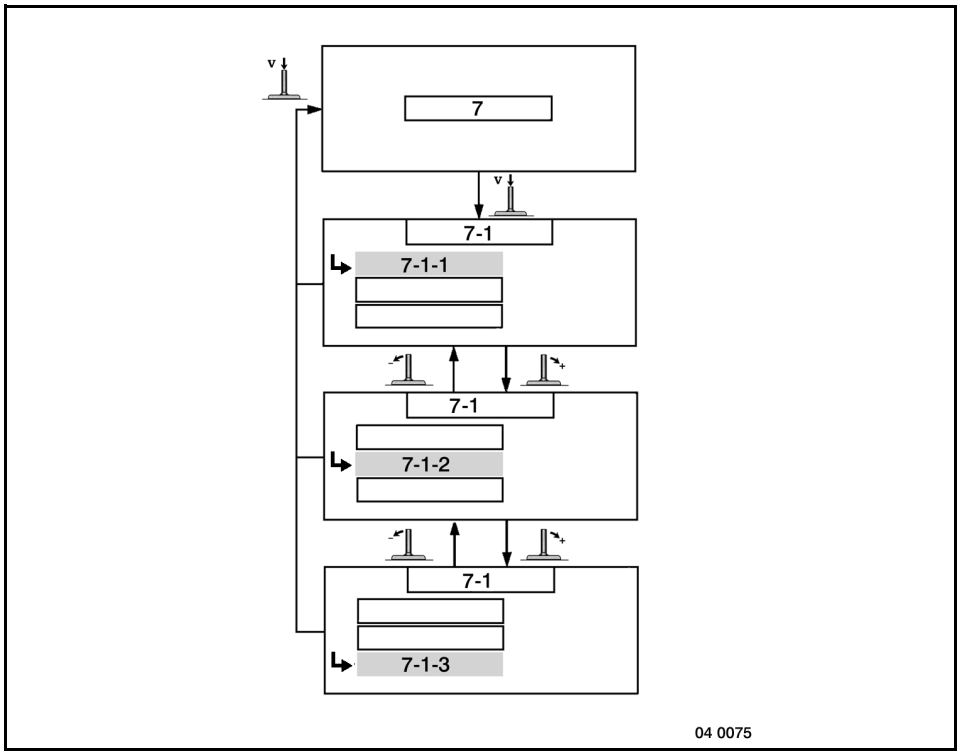


Vehicle with Optidriver 2 gearbox

6 - Choice of language menu
Use control (D) (see page B-2-22).
6 - 1: Memorized language active
6 - 1 - 1: First language
6 - 1 - 2: Second language
6 - 1 - 3: Third language
Three languages are proposed, by default. The choice of language can be modified by a RENAULT TRUCKS service point or dealer.

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B2-42 Presentation

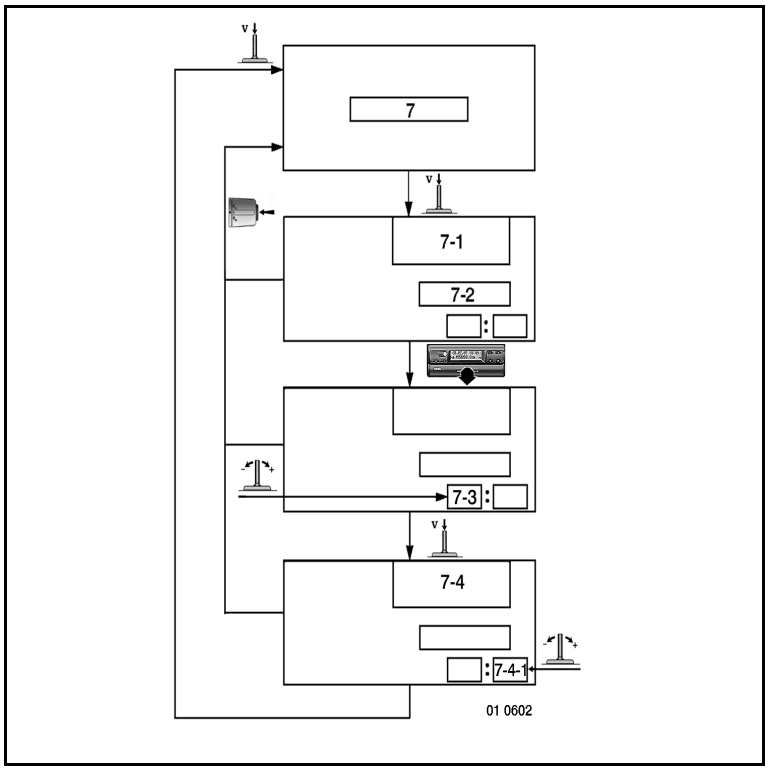


Vehicle with ZF gearbox

7 - Choice of language menu
Use control (D) (see page B-2-22).
7 - 1: Memorized language active
7 - 1 - 1: First language
7 - 1 - 2: Second language
7 - 1 - 3: Third language
Three languages are proposed, by default. The choice of language can be modified by a RENAULT TRUCKS service point or dealer.

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B2-43 Presentation



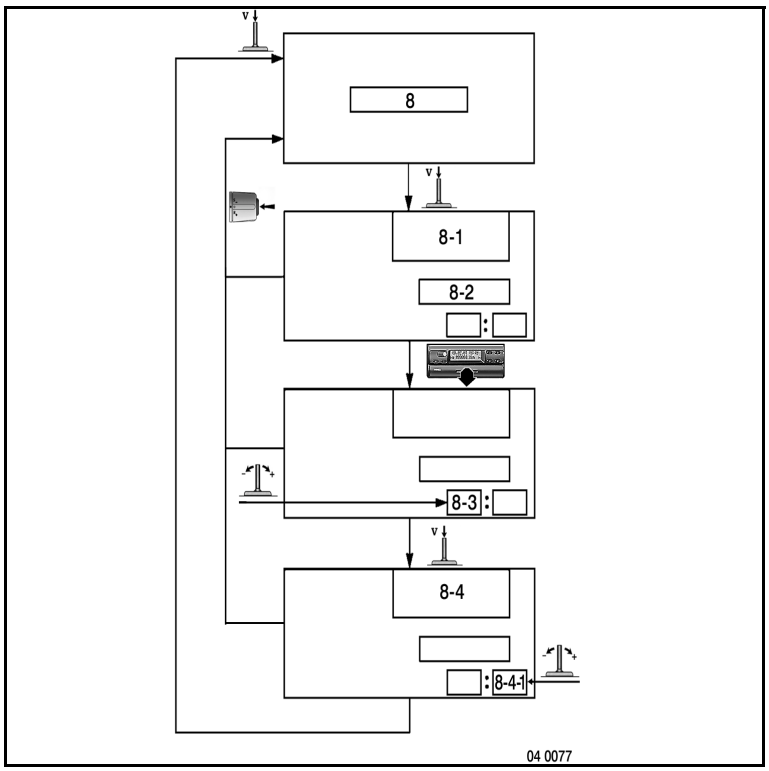
Vehicle with Optidriver 2 gearbox

7- Time of day adjustment menu
Use controls (AE / D) (see page B-2-22)
7 - 1: Adjustment of time of day.
Consult the operating instructions.
7 - 2: Date
7 - 3: Adjust the hours.
7 - 4: Adjust the minutes.
Consult the operating instructions.
7 - 4 - 1: Adjust the minutes.
The tachograph chart(s) should be removed and the tray closed.
To open the chart tray, see the tachograph operating instructions.

The date cannot be adjusted.
Opening of the tachograph chart tray causes automatic zeroing of the cumulated driving time and rest time.

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B2-44 Presentation



Vehicle with ZF gearbox

8- Time of day adjustment menu
Use controls (AE / D) (see page B-2-22)
8 - 1: Adjustment of time of day.
Consult the operating instructions.
8 - 2: Date
8 - 3: Adjust the hours.
8 - 4: Adjust the minutes.
Consult the operating instructions.
8 - 4 - 1: Adjust the minutes.
The tachograph chart(s) should be removed and the tray closed.
To open the chart tray, see the tachograph operating instructions.

The date cannot be adjusted.
Opening of the tachograph chart tray causes automatic zeroing of the cumulated driving time and rest time.

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B2-45 Presentation

Electrically operated rearview mirrors

With the master switch engaged, move control (1) to position:

- **A** to adjust the LH rearview mirror.
- **C** to adjust the RH rearview mirror.
- **B** to render the control inactive.

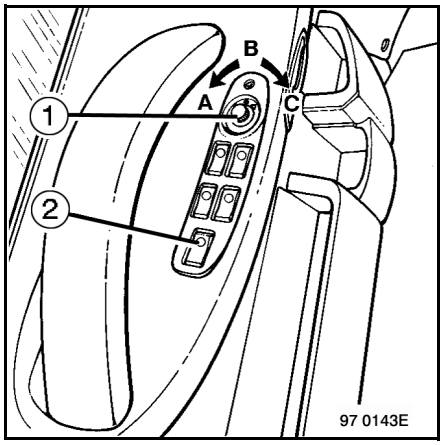
Adjustment

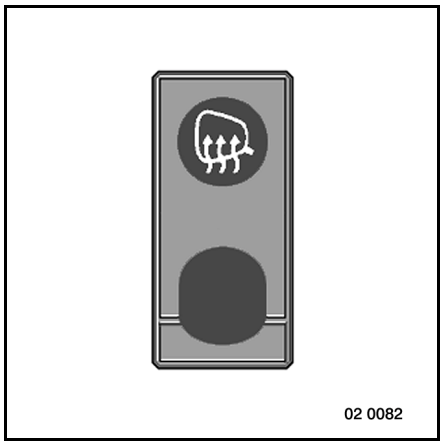
Select the rearview mirror to be adjusted, then press control (1). The control is of the omnidirectional type.

Defrosting

To defrost, actuate the control (2).

The warning light (Z) comes on during the defrosting operation.

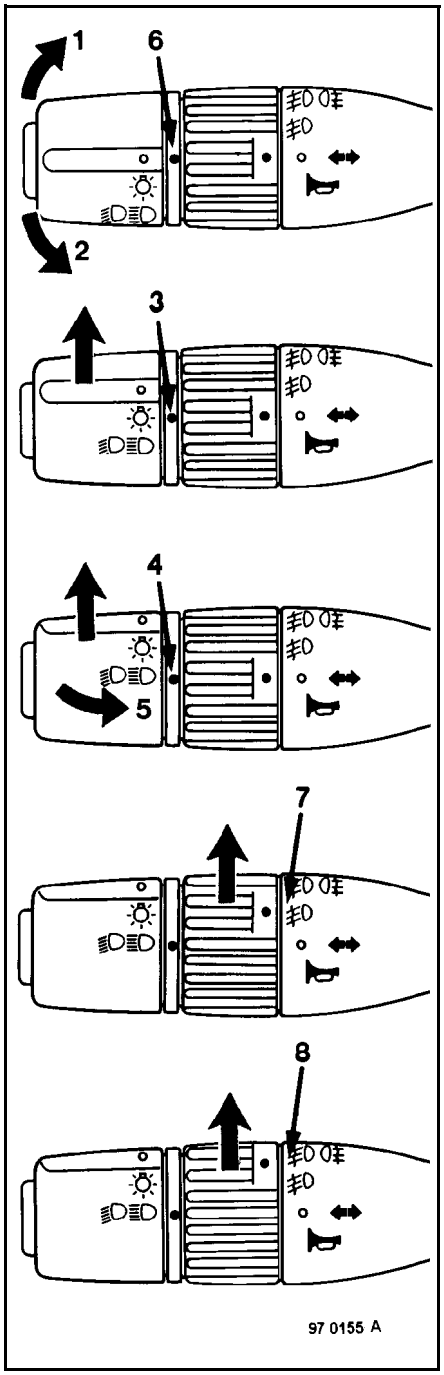




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B2-46 Presentation

Combined lights and horn switch



Direction indicator
Move the control stalk parallel to the steering wheel.
Position (1): RH flasher.
Position (2): LH flasher.
When the stalk is released, it automatically returns to its initial position.

Horn
Push down on the end of the control stalk to sound.

Headlamps flasher warning unit
Pull the control stalk towards you.
Warning light (A) comes on.

Lights

Side/parking lights
Turn the control stalk to position (3).

Dipped beam headlights
Turn the control stalk to position (4).
Warning light (AC) comes on.

Main beam headlights
With the control stalk in position (4), pull the control stalk towards you to position (5).
Warning light (A) comes on.
To dip the headlights again, pull the control stalk towards you to position (5).
Warning light (AC) comes on.
The instrument panel lighting comes on in all **"Lights"** positions.

Extinction
The control stalk must be in position (6).

Fog driving lights
With the side/parking lights or dipped beam headlights on, turn the ring to position (7).
Warning light (AA) comes on.

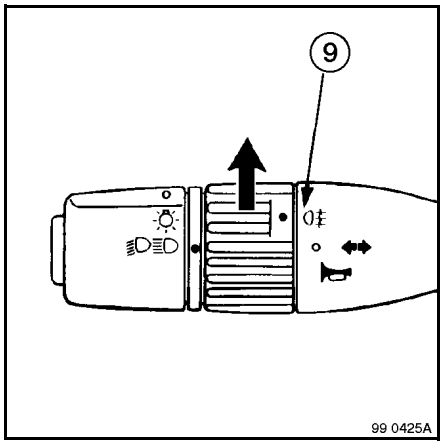
https://truckmanualshub.com/

B2-47 Presentation

Fog driving lights and fog lights
With the side/parking lights or dipped beam headlights on, turn the ring to position (8). Warning lights (AA - AD) come on.

Depending on your vehicle's equipment

Control without fog driving lights
Fog lights
With the dipped beam headlights on, turn the ring to position (9).
Warning light (AD) comes on.



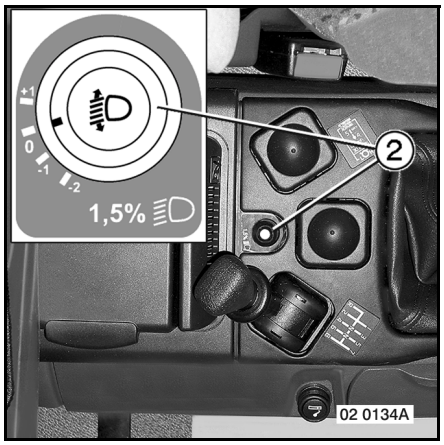
If the dipped beam headlights warning light does not come on (AC), check the operation of the dipped beam headlights; if necessary, replace the defective bulb (see page E3-2).
If the trouble is not due to the bulbs, Make your way to the nearest RENAULT TRUCKS service point or dealer.

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B2-48 Presentation

Headlights adjustment

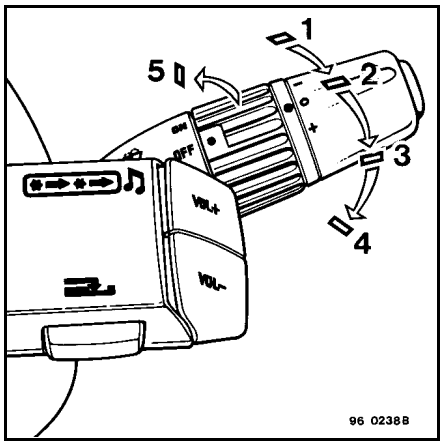
Depending on your vehicle's equipment
Vehicle unladen: the control (2) is in position 0.
Vehicle laden: turn the control anti-clockwise to correct the beam height.



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B2-49 Presentation

Windscreen wiper, windscreen wash and headlamps wash control



Move the control stalk parallel to the steering wheel.
Position (1): Stop.
Position (2): Intermittent wipe.
Position (3): Slow wipe.
Position (4): Fast wipe.

Flick wipe:
Flick the control stalk in the direction of position (5) and let it return on its own. The windscreen wiper will make 2 to and fro wipes.
Hold the control stalk in position to operate at the same time:

- screen wipe and screen wash,
- headlamp wash (if fitted) provided the lights are on.

When you release the stalk, headlamp washing and screen washing are interrupted.
The screen wiper continues for a few wipes before stopping.

Adjusting the steering wheel



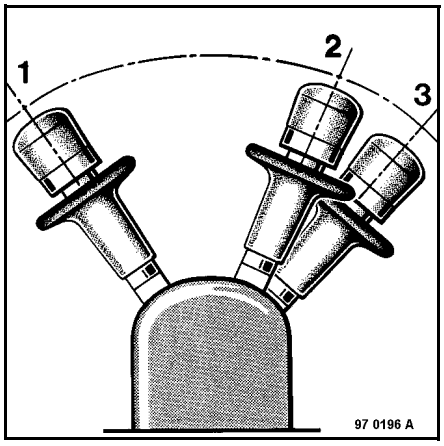
Depress foot control (1).
Pull, lift, raise or push the steering wheel to the required position.
Release foot control (1).

The foot control (1) is operative only when the circuit air pressure is sufficient.

https://truckmanualshub.com/

B2-50 Presentation

Parking brake



This valve acts simultaneously on the rear axle of the tractor and on the semi-trailer.

Release
Lift the locking sleeve and move the lever from position (2) to position (1). Warning light (S) goes out.

Application
Move the lever from position (1) to position (2) (negotiate the hard spot). Make sure the lever is correctly locked in position (2). Warning light (S) comes on.
See page(s) C4-43.
Depending on your vehicle's equipment

Vehicle with trailer
Before leaving the vehicle, move the lever to the "**Test**" position to ensure efficiency of the parking brake.

Test
Press the lever and move it from position (2) to position (3). This position releases the trailer brake and holds the road combination on the tractor brake. This position serves to ensure that the tractor can alone hold the entire immobilized vehicle.
As soon as the lever is released, it returns automatically to position (2), i.e. to the parking position.

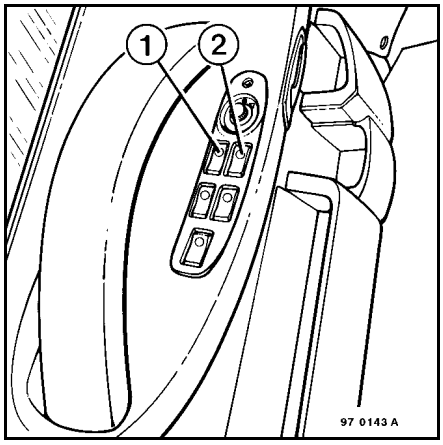
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B3-1 Presentation

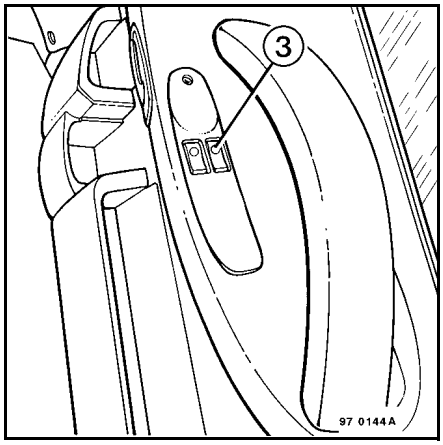
Comfort

Electric window raiser controls

(1) - Driver's left side window raiser control
(2) - Driver's right side window raiser control



(3) - Passenger's right side window raiser control



Use of the controls:
Lowering: Press the rear of the control.
Raising: Press the front of the control.

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B3-2 Presentation

Electrically operated sun-roof

Depending on your vehicle's equipment

The sun-roof is operated by means of a 2-position control switch (E2/F4).

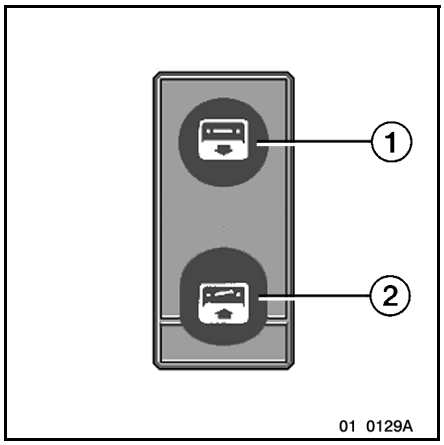
Opening

Press end (1) of the control until the sun-roof opens as far as you wish.

Closing

Press end (2) of the control until the sun-roof is fully closed.

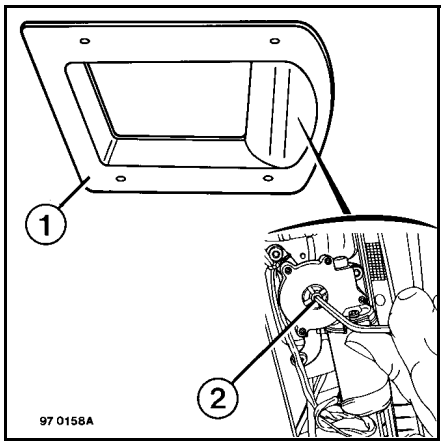
Before you leave the vehicle, as precaution, make sure the sun-roof is properly closed.



In the event of incident, it is possible to operate the sun-roof by hand.

Remove trim (1) to gain access to the emergency control.

Insert a 5 mm Allen key into hole (2). Drive in the key to release the motor clutch and turn it to operate the sun-roof.



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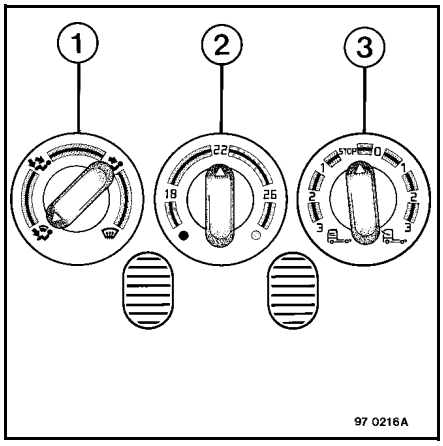
B3-3 Presentation

Heating - Ventilation

Depending on your vehicle's equipment

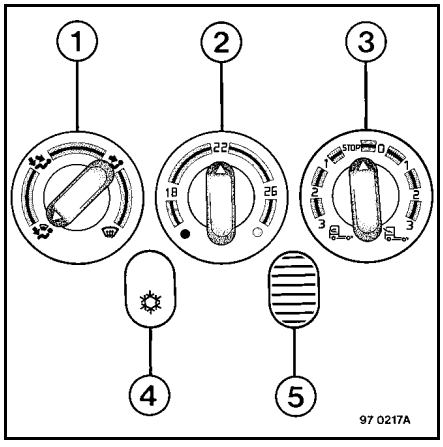
Version without air conditioning:

1– Cab air distribution control
(see detail page B-3-4).
2– Temperature variator
(see detail page B-3-7).
3– Ventilation control
(see detail page B-3-6).



Version with regulated air conditioning:

1– Cab air distribution control knob
(see detail, page B-3-4).
2– Temperature variator knob
(see detail, page B-3-7).
3– Ventilation control knob
(see detail, page B-3-6).
4– Air conditioner control knob
(see detail, page B-3-6).
5– Air temperature probe.



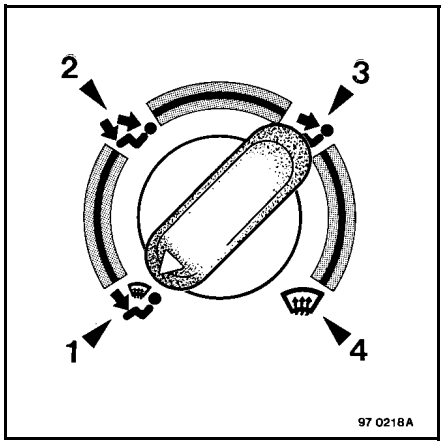
To limit risks of leakage subsequent to prolonged lay-up, it is recommended to run the air conditioning system for a few minutes at least once a week.

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B3-4 Presentation

Air distribution control knob

The control distributes the air between the various outlet ports according to the position chosen.
Combined with the temperature variator and the ventilation control, it assures optimized temperature according to the positioning of the outlets.



Position 1
Air directed downwards (to footwell air vents) and gentle flow upwards (to windscreen and side window air vents).

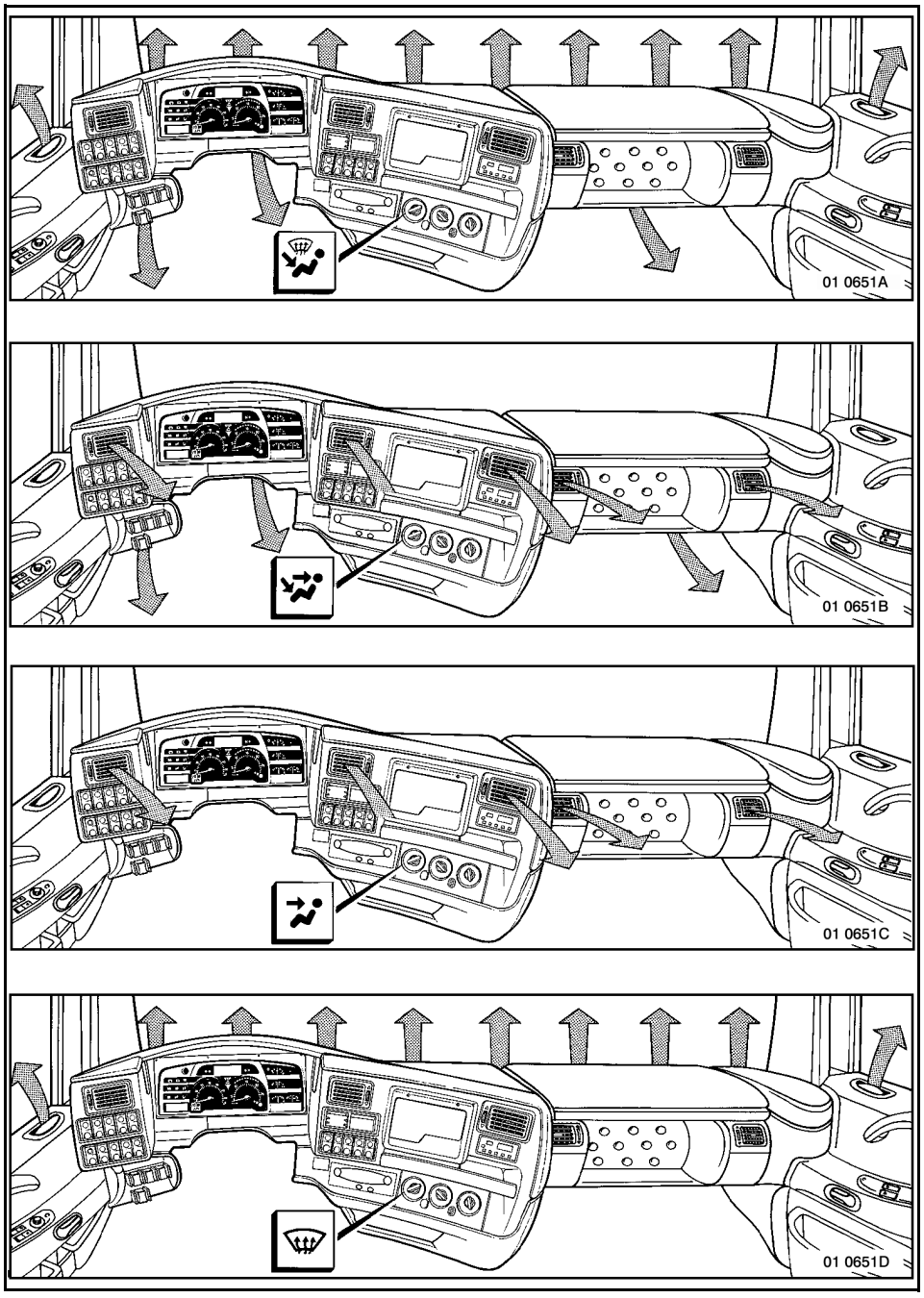
Position 2
Air directed upwards (to dashboard and side window air vents).

Position 3
Air directed upwards (to dashboard air vents) and gentle flow downwards (to footwell air vents).

Position 4
Air directed upwards only (to windscreen and side windows air vents).

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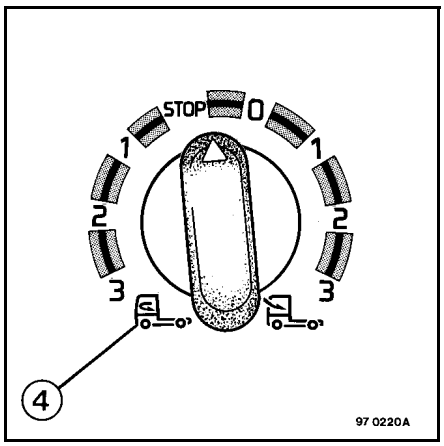
B3-5 Presentation



https://truckmanualshub.com/

B3-6 Presentation

Ventilation control knob
This control knob incorporates two functions:
External air ventilation function
Turn the knob clockwise:
- Position STOP: stop (air intake closed).
- Position 0: stop (air intake slightly open).
- Position 1: fan control (1st speed).
- Position 2: fan control (2nd speed).
- Position 3: fan control (3rd speed).

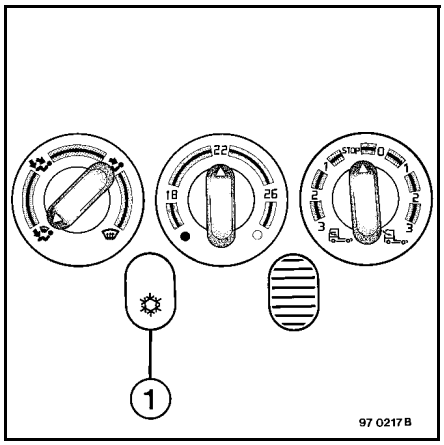


Internal air ventilation function
Turn the knob anti-clockwise:
- Position STOP: stop (air intake closed).
- Position 1: fan control (1st speed).
- Position 2: fan control (2nd speed).
- Position 3: fan control (3rd speed).

A warning light (4) comes on when the control knob is in the air recycling mode: position Stop, 1, 2 or 3.
Recycling makes it possible to:
- avoid breathing in stale air from the exterior (road tunnel, polluted area...).
- obtain maximum cooling or maximum heating power from the air conditioner.

Only use the recycling feature in short spells.

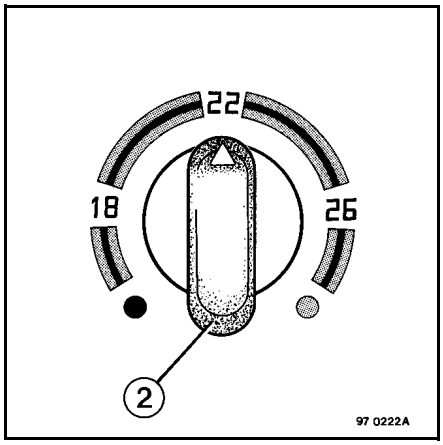
Air conditioner control button (1)
With the engine running, move the ventilation control knob to at least position 1 and press the air conditioner control button to operate the air conditioning.
A built-in warning light comes on when the air conditioning feature is activated.
Set the temperature variator to the desired temperature.



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B3-7 Presentation

Temperature variator knob
Move the temperature variator knob to the desired temperature and wait for a few moments to appraise the result before changing it slightly, if necessary. The figures 18, 22, 26 serve to situate the temperature level but do not exactly correspond to a precise value in degrees.



Depending on your vehicle's equipment

Quick defrosting (warm hold feature)
This device speeds up the defrosting feature.
With the vehicle stationary, for an ambient temperature below 5°C and a coolant temperature below 70°C, a device that actuates the exhaust brake serves to quickly raise temperature of the cooling system.
This feature is cancelled when the cooling system temperature reaches 70°C, when the accelerator pedal is depressed or when the vehicle is moving.

The feature can be re-activated if the vehicle remains stationary for more than 60 seconds and the temperature conditions are still lower than the disabling threshold of the feature.

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B3-8 Presentation

Use in cold weather:

Defrosting / demisting

- Move the fan control to position "0" (external air side).
- Move the air distribution control knob to the "defrosting/demisting" position.

As soon as the temperature rises:

- Move the ventilation control knob to position 1.
- Increase the air flow as the engine temperature rises.

When the "defrosting/demisting" action is finished, move the temperature variator into the desired zone. The reaction time varies according to the position chosen. Maintain a minimum air flow for better efficiency.

Use in hot weather:

If the temperature inside the cab is higher than the outside temperature:

- Aerate the cab by driving for a few minutes with the windows down.
- Move the temperature variator knob to "max. cold" and the ventilation control knob to position 3 to obtain maximum air flow.

With air conditioning:

- Press the air conditioner control button.

As soon as the desired level of comfort is reached:

With or without air conditioning:

- Return the temperature variator knob to a more moderate position.
- Choose the air distribution control knob position.
- Reduce the ventilation. Maintain a minimum air flow for better efficiency (position 1 minimum).

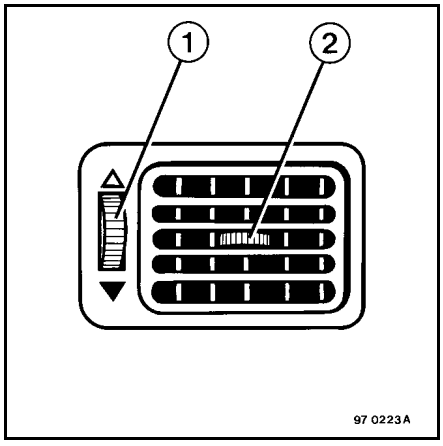
If you wish to increase the heating or cooling power, use the cab air recycling feature with the air conditioner engaged. Only use the recycling feature in short spells.

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B3-9 Presentation

Depending on your vehicle's equipment

Air vents
To open the flow:
Turn knurled wheel (1) upwards.
To close the flow:
Turn knurled wheel (1) downwards.
To swivel horizontally: Use control (2).
To swivel vertically: Tilt the air vent.



THE EVOLUTION OF CLIMATE CONTROL AND SOUNDPROOFING HAVE LED TO CABS BECOMING MORE AND MORE HERMETICALLY SEALED. IT IS THEREFORE NECESSARY, WHEN YOU HAVE TO STAY INSIDE THE CAB FOR A LONG PERIOD, TO PROVIDE ADEQUATE VENTILATION (WINDOWS PARTLY OPEN, ROOF AIR VENT) TO AVOID CONFINEMENT OF THE AIR.

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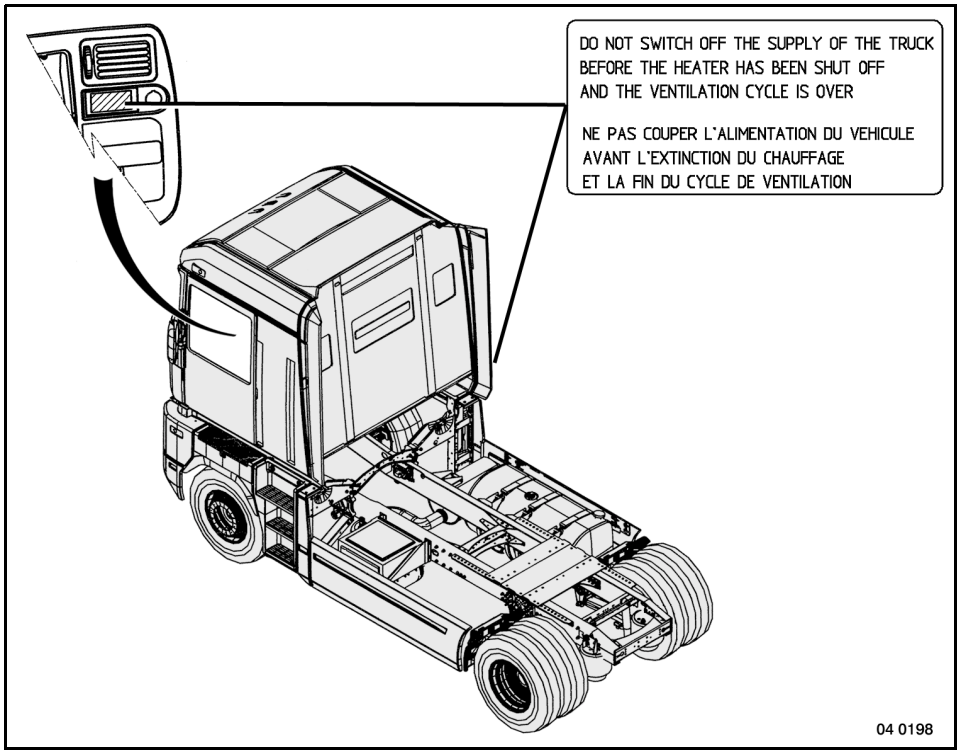
B3-10 Presentation

Independent heating

Depending on your vehicle's equipment

Shut off the heater near filling stations. If electric welding work is carried out on the vehicle, it is essential to disconnect the batteries to prevent causing irreparable damage to the electronic control system.

ADR vehicle (transport of dangerous materials)



DO NOT POWER DOWN THE VEHICLE BEFORE THE END OF THE INDEPENDENT HEATER VENTILATION CYCLE.

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B3-11 Presentation

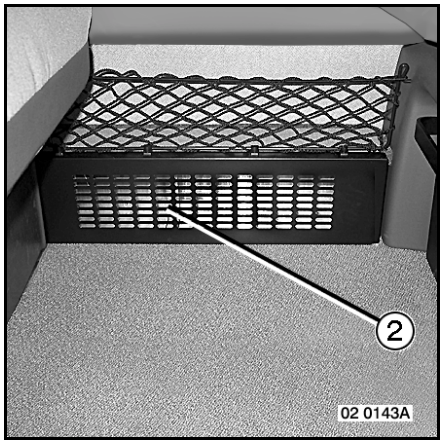
A safety label giving a reminder of this instruction is affixed to the dashboard and next to the external master switch.

THE EVOLUTION OF CLIMATE CONTROL AND SOUNDPROOFING HAVE LED TO CABS BECOMING MORE AND MORE HERMETICALLY SEALED. IT IS THEREFORE NECESSARY, WHEN YOU HAVE TO STAY INSIDE THE CAB FOR A LONG PERIOD, TO PROVIDE ADEQUATE VENTILATION (WINDOWS PARTLY OPEN, ROOF AIR VENT) TO AVOID CONFINEMENT OF THE AIR.

Independent heater fuel supply

The independent heater operates perfectly with commercial diesel fuel. If the heater is supplied from a separate tank, it must contain the same diesel fuel as the vehicle fuel tank. When changing over from summer diesel fuel to winter diesel fuel, run the independent heater to purge the fuel pipes.

WHEN USING THE INDEPENDENT HEATER, MAKE SURE THE DISCHARGE APERTURE (2) IS NOT OBSTRUCTED.

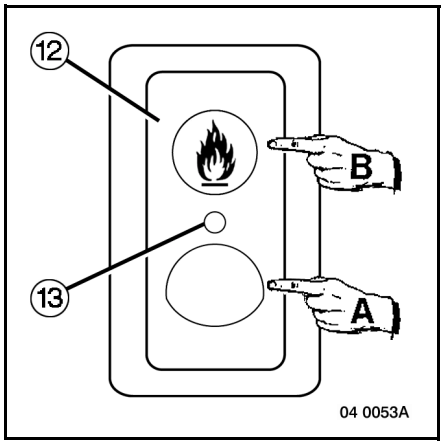


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B3-12 Presentation

WEBASTO independent heater type Thermo 90 ST

Depending on your vehicle's equipment
This heating system provides excellent thermal comfort and enables the engine cooling circuit to be isolated when the engine is shut down.
Move the temperature variator to the "hot" position.

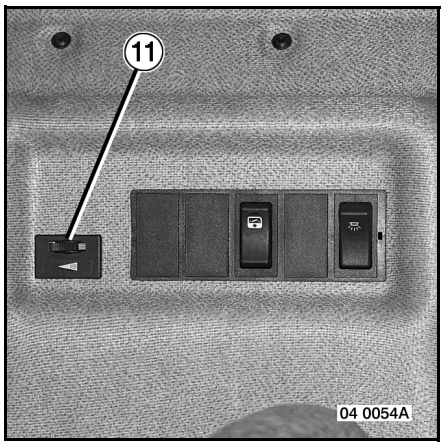


Engine shut down:

- With control (12) set to "0" (position **A**): the independent heater heats the engine cooling circuit and the cab heating circuit.
- With control (12) set to "Flame" (position **B**): the independent heater heats the cab heating circuit.

In both these positions, the master switch must be closed.

Engine running: Whatever the position of control (12), the heating function is provided by the engine. The independent heating system compensates, if necessary.
To improve heating efficiency, use the cab air recycling control.



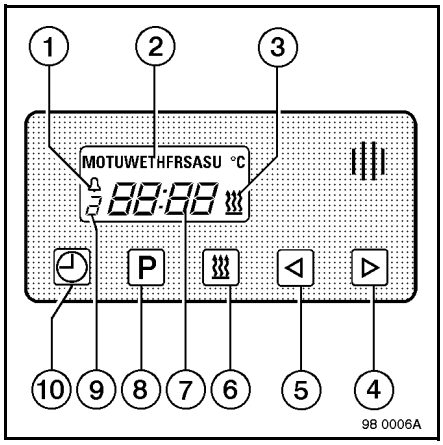
Prior to starting
Before taking any action, make sure that all suction and delivery apertures are unobstructed.

Regulating the temperature
Set the required temperature on ambient temperature thermostat (11).

https://truckmanualshub.com/

B3-13 Presentation

Setting the timer into service
When the heater is switched on, the control panel lights up.
If electrical power is cut to the timer, all the indications flash. Press button (10): **12 00** is displayed and flashes for 5 seconds, then day indication flashes for 5 seconds and the screen lighting is extinguished.
Adjusting the time of day
Press button (10). When hour indication (7) flashes, press button (4) or (5) to set the hour of the day.
When day indication (2) flashes, press buttons (4 - 5) to set the day.



Mo	Tu	We	Th	Fr	Sa	Su
Mon	Tues	Wed	Thurs	Fri	Sat	Sun

Alarm clock feature
Press button (8) 4 times. The "alarm clock" pictogram (a bell) (1) appears. Press button (4) or (5) to make the hour indication flash. Adjust the hour (7) by pressing buttons (4 - 5). The display of the hour (7) disappears after a period of 5 seconds.
It is not possible to choose the day.
To activate:
Press (8) 4 times. The "alarm clock" pictogram (a bell) (1) appears.
The bell goes off at the pre-selected time and stops, either automatically after 5 minutes, or by pressing button (4) or (5).
To disable:
Press button (8) 5 times. The "alarm clock" pictogram (a bell) (1) disappears.

Replacing bulb
A kit sold by RENAULT TRUCKS Spare Parts with directions for use serves for replacing the control panel bulb.

https://truckmanualshub.com/

B3-14 Presentation

Heating feature

Start-up without programming

Press button (6). Heating pictogram (3) appears.

To change the heating time, use buttons (4 - 5). See "Heating operating time " paragraph to memorize the duration.

The flame glow plug is supplied with voltage and the blower runs at low speed. After about 30 seconds, combustion begins. Check that the heater is operating correctly. The blower speed varies according to temperature.

Start-up with programming

3 times and days options:

Selection 1: Press button (8) once. Pictogram "1" (9) flashes. Press buttons (4 - 5) to select the time of day. Wait for the day indication to flash and press buttons (4 - 5) to select the day. The selection is memorized. Pictogram "1" remains illuminated. The hour indication (7) disappears after 10 seconds.

Selection 2: Press button (8) twice. Pictogram "2" (9) flashes. Proceed as for selection 1 to adjust the time of day and the day.

Selection 3: Press button (8) 3 times. Indication "3" (9) flashes. Proceed as for selection 1 to adjust the time of day and the day.

Heating operating time:

The timer limits the heater operating time to 120 minutes.

"Heating disabled": Press button (5) for 3 seconds. A heating time appears. As soon as it flashes , press buttons (4 - 5) to adjust the time (adjustment possible from 10 to 120 minutes). The screen lighting is extinguished, the heating time is memorized. This time is common to all heating selections.

"Heating activated": You can alter the heating time, if the heating is activated, at any moment. Press button (4) or (5) to alter the time (adjustment possible from 1 to 120 minutes). This forced time does not alter the memorized time.

When the heating is switched back on (forced or pre-selected mode), the memorized time is displayed.

To activate a pre-selection:

Press button (8) 1, 2 or 3 times, depending on the selection chosen. The corresponding pictogram (9) appears.

To disable a pre-selection:

If you have activated a pre-selection, press button (8) several times until the selections disappear.

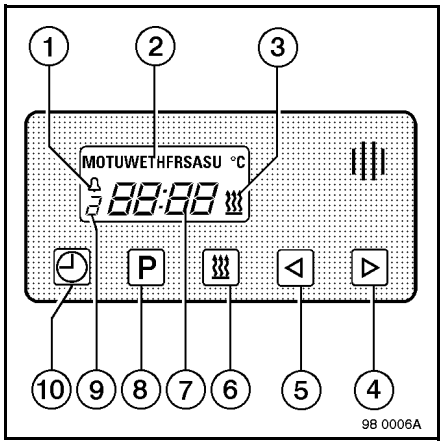
Stopping

Press button (6). Pictogram (9) disappears, together with the pre-selection. The blower continues turning to cool the heater (retarded shutdown) then stops automatically.

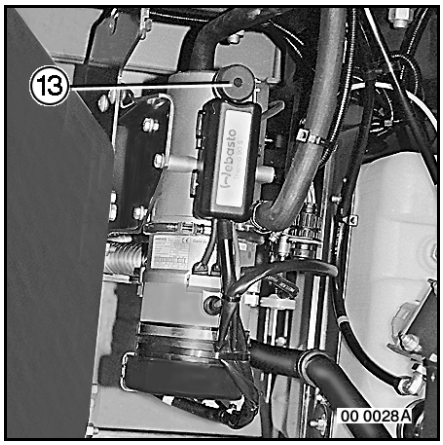
https://truckmanualshub.com/

B3-15 Presentation

Troubleshooting
Heater will not start:
The control panel allows the heating function to be programmed, but the heater will not start. Check fuse(s) (F6 – F31 – F108). Actuate button (6) again.
The control panel no longer displays any information. Check fuse(s) (F6 – F31 – F108). Reprogram the timer and actuate button (6) again.
If the heater does not start after the start-up cycle, call in a RENAULT TRUCKS service point or dealer.



Heater stops when in operation:
Heater overheating:
Make sure the suction and discharge apertures are not obstructed.
Let the heater cool down, then re-engage the circuit-breaker (13) by pressing the rubber finger. Restart the heater (warning pictogram (3) visible).
If it stops again, call in a RENAULT TRUCKS service point or dealer.



Flame goes out: Determine the cause:
- Fuel supply defect,
- Electrical power supply failure,
- Appliance or regulation control unit defect,
- Cooling circuit circulation defect,
- Cooling circuit bleeding.

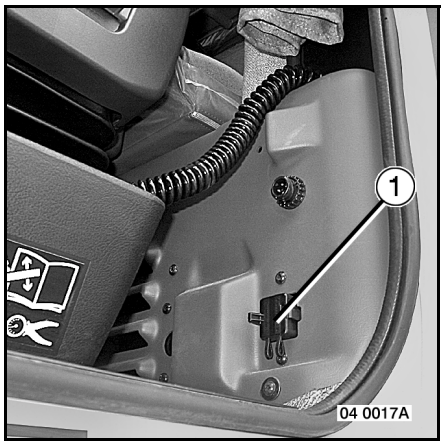
To restart, press button (6) to stop and repeat the procedure (no more than three times).
If the heater stops again, call in a RENAULT TRUCKS service point or dealer.

https://truckmanualshub.com/

B3-16 Presentation

If the vehicle is laid up for a prolonged period of time, remove fuse (F6).
It is forbidden to use the heater in closed premises or in places where inflammable or explosive vapours or accumulations of dust might be produced.
Avoid exposing gas cartridges and spray canisters to the hot air flow.
If electric welding work is carried out on the vehicle, it is essential to disconnect the batteries to prevent causing irreparable damage to the electronic control system.
Stop the heater before disengaging the master switch.

Diagnostic socket (1)
The diagnostic socket serves for checking out the independent heating system using the RENAULT TRUCKS test tool.



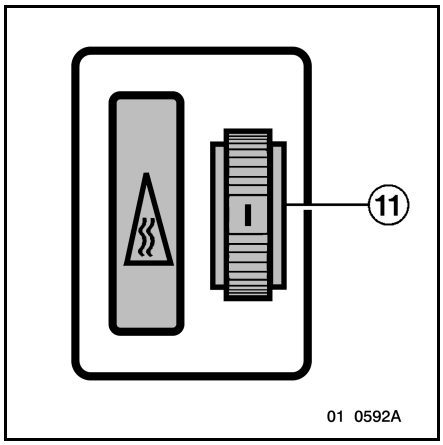
https://truckmanualshub.com/

B3-17 Presentation

WEBASTO independent heater AT 2000 ST

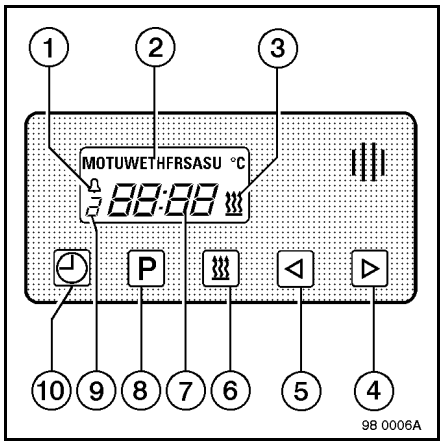
Prior to starting, make sure the suction and discharge apertures are not obstructed. There should be no objects encumbering the area reserved for the heater unit.

Temperature regulation
Set the required temperature on thermostat (11).



Setting the timer into service
When the heater is switched on, the control panel lights up.
If electrical power is cut to the timer, all the indications flash. Press button (10): **12 00** is displayed and flashes for 5 seconds, then day indication (2) flashes for 5 seconds and the screen lighting is extinguished.

Adjusting the time of day
Press button (10). When hour indication (7) flashes, press button (4) or (5) to set the hour of the day.
When day indication (2) flashes, press buttons (4 - 5) to set the day.

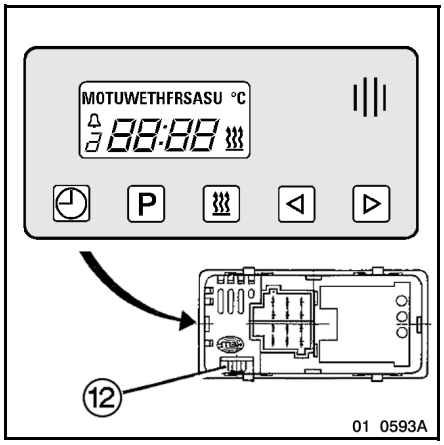


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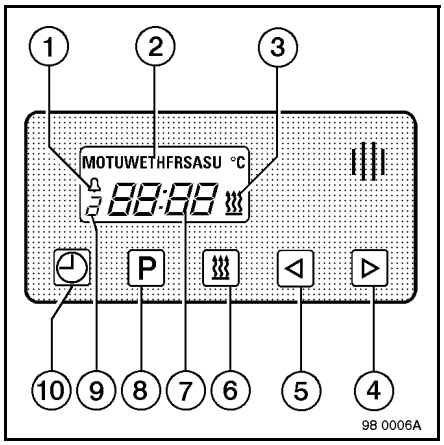
Presentation

Replacing bulb (12)
A kit sold by RENAULT TRUCKS Spare Parts with directions for use serves for replacing the control panel bulb.



Depending on your vehicle's equipment

Alarm clock feature
Press button (8) 4 times. The "alarm clock" pictogram (a bell) (1) appears. Press button (4) or (5) to make the hour indication flash. Adjust the hour (7) by pressing buttons (4 - 5). The display of the hour (7) disappears after a period of 5 seconds.
It is not possible to choose the day.



To activate:
Press (8) 4 times. The "alarm clock" pictogram (a bell) (1) appears.
The bell goes off at the pre-selected time and stops, either automatically after 5 minutes, or by pressing button (4) or (5).

To disable:
Press button (8) 5 times. The "alarm clock" pictogram (a bell) (1) disappears.

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B3-19 Presentation

Heating feature

Start-up without programming

Press button (6). Heating pictogram (3) appears.

To change the heating time, use buttons (4 - 5). See "Heating operating time" paragraph to memorize the duration.

The flame glow plug is supplied with voltage and the blower runs at low speed. After about 30 seconds, combustion begins. Check that the heater is operating correctly. The blower speed varies according to temperature.

Start-up with programming

3 times and days options:

Selection 1: Press button (8) once. Pictogram "1" (9) flashes. Press buttons (4 - 5) to select the time of day. Wait for the day indication to flash and press buttons (4 - 5) to select the day. The selection is memorized. Pictogram "1" remains illuminated. The hour indication (7) disappears after 10 seconds.

Selection 2: Press button (8) twice. Pictogram "2" (9) flashes. Proceed as for selection 1 to adjust the time of day and the day.

Selection 3: Press button (8) 3 times. Indication "3" (9) flashes. Proceed as for selection 1 to adjust the time of day and the day.

Heating operating time:

The timer limits the heater operating time to 120 minutes.

"Heating disabled": Press button (5) for 3 seconds. A heating time appears. As soon as it flashes , press buttons (4 - 5) to adjust the time (adjustment possible from 10 to 120 minutes). The screen lighting is extinguished, the heating time is memorized. This time is common to all heating selections.

"Heating activated": You can alter the heating time, if the heating is activated, at any moment. Press button (4) or (5) to alter the time (adjustment possible from 1 to 120 minutes). This forced time does not alter the memorized time.

When the heating is switched back on (forced or pre-selected mode), the memorized time is displayed.

To activate a pre-selection:

Press button (8) 1, 2 or 3 times, depending on the selection chosen.

The corresponding pictogram (9) appears.

To disable a pre-selection:

If you have activated a pre-selection, press button (8) several times until the selections disappear.

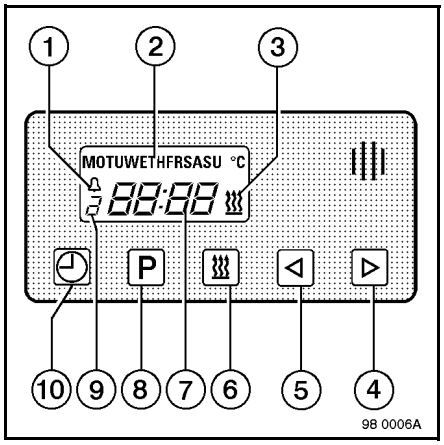
Stopping

Press button (6). Pictogram (3) disappears, together with the pre-selection. The blower continues turning to cool the heater (retarded shutdown) then stops automatically.

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B3-20 Presentation

Troubleshooting
Heater will not start:
The control panel allows the heating function to be programmed, but the heater will not start. Check fuse(s) (F6 – F31 – F108) and actuate button (6) again.
The control panel no longer displays any information. Check fuse(s) (F6 – F31 – F108), reprogram the timer and actuate button (6) again.
If the heater still will not start after performing the start-up cycle, call upon a RENAULT TRUCKS service point or dealer.



Heater stops when in operation:
Heater overheating:
Make sure the suction and discharge apertures are not obstructed.
After a few minutes, restart the heater (pictogram (3) visible).
If it stops again, call upon a RENAULT TRUCKS service point or dealer.
The flame goes out: Determine the cause.
- Fuel supply defective.
- Electrical power supply failure.
- Appliance or regulation control unit defective.

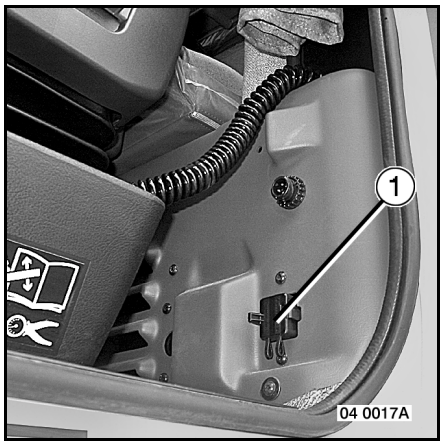
To restart, press button (6) to switch off the heater and recommence the procedure (no more than 3 times).
If the heater stops again, call upon a RENAULT TRUCKS service point or dealer.

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B3-21 Presentation

If the vehicle is laid up for a prolonged period of time, remove fuse (F6).
It is forbidden to use the heater in closed premises or in places where inflammable or explosive vapours or accumulations of dust might be present.
Avoid exposing gas cartridges and spray canisters to the hot air flow.
If electric welding work is carried out on the vehicle, it is essential to disconnect the batteries to prevent causing irreparable damage to the electronic control system.
Stop the heater before disengaging the master switch.

Diagnostic socket (1)
The diagnostic socket serves for checking out the independent heating system using the RENAULT TRUCKS test tool.

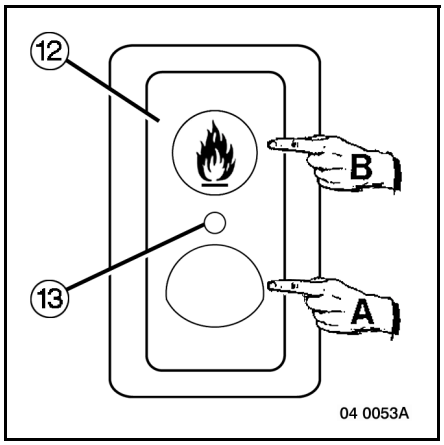


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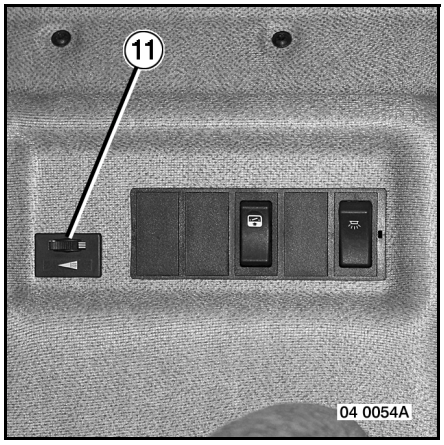
B3-22 Presentation

WEBASTO independent heater type AT 2000 ST "ADR"

Prior to starting
Make sure that all suction and delivery apertures are unobstructed. There should be no objects encumbering the zone reserved for the heater.
Knob (12) should be in position "A".
Starting
Move knob (12) to position "B". Warning light (13) comes on. The flame glow plug is supplied with voltage and the blower runs at low speed. After about 50 seconds, combustion begins. Check that the heater is operating correctly. The blower speed varies according to temperature.



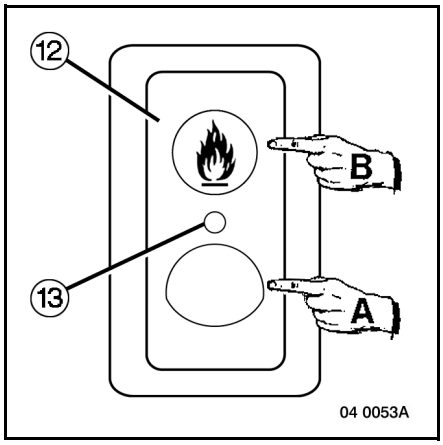
Regulating the temperature
Set the required temperature on ambient temperature thermostat (11).
Stopping
Move knob (12) to position "A". Warning light (13) goes out. The blower continues turning to cool down the heater (retarded shutdown) and stops automatically. The blower speed varies according to the temperature.



Troubleshooting
Heater will not start:
If the heater does not start: check fuse(s) (F6 – F31 – F76 – F108). Replace, if necessary.
Determine the cause.
Press button (12) to restart the heater.
If the heater has not started after the third attempt, call in a qualified agent.

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B3-23 Presentation



Heater stops when in operation
Upon starting the engine or when using an auxiliary pump, the heater stops.
Heater overheating:
Make sure the suction and discharge apertures are not obstructed.
Move knob (12) to position "A". After a few minutes, restart the heater.
If it stops again, call in a qualified agent.
Flame goes out: Determine the cause.

- Fuel supply defect.
- Electrical power supply failure.
- Appliance or regulation control unit defect.

To restart, move the knob to position "B".
Repeat the procedure if necessary (no more than three times).
If the heater stops again, call in a qualified agent.

It is forbidden to use the heater in closed premises or in places where inflammable or explosive vapours or accumulations of dust might be present.
Avoid exposing gas cartridges and spray canisters to the hot air flow.
If electric welding work is carried out on the vehicle, it is essential to disconnect the batteries to prevent causing irreparable damage to the electronic control system.
Stop the heater before disengaging the master switch.

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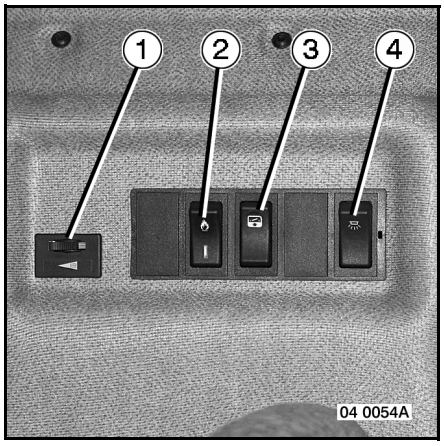
B3-24 Presentation

Cab comfort

Depending on your vehicle's equipment

Bunk compartment control panel

1– Ambient temperature thermostat.
2– Independent heater control switch (non ADR) (E1).
3– Sun-roof control switch (E2).
4– Bunk lighting control switch (E3).



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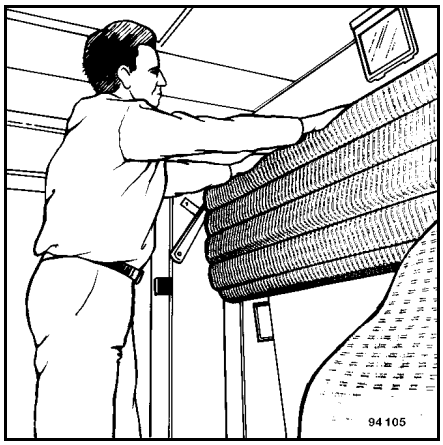
B3-25 Presentation

Bunks and storage compartments

Depending on your vehicle's equipment

Top bunk

To position the bunk, move the seats forward.
Before taking the road, raise the bunk.



Bottom bunk

1– Storage compartments.
2– Refrigerator.



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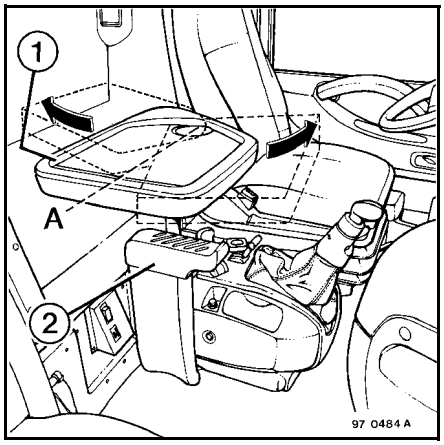
B3-26 Presentation

Depending on your vehicle's equipment

Use of table (1)

- When stationary: tilt the table to the position you require.
- While moving: the table must be in the locked position (A).

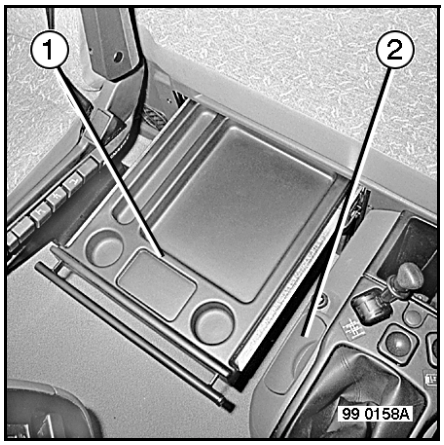
Step (2) serves to gain access to the top bunk.



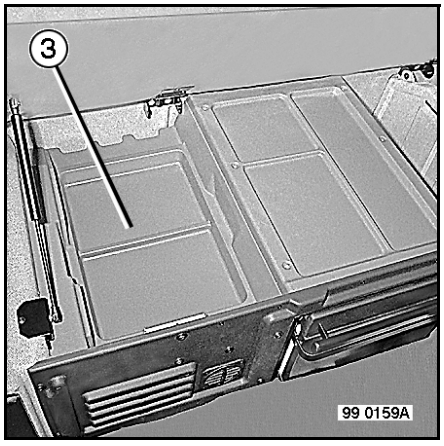
Depending on your vehicle's equipment

Cab comfort

1– Storage ledge.
2– Ashtray.



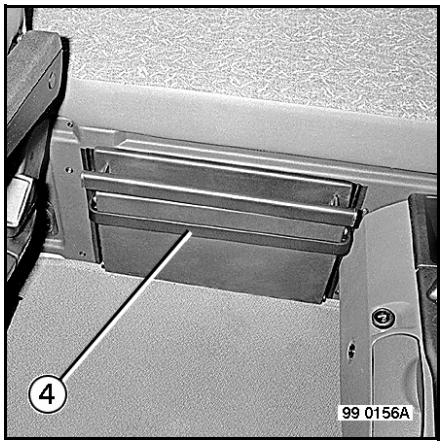
3– Storage compartment on independent heater.



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Presentation

4– Storage compartment.



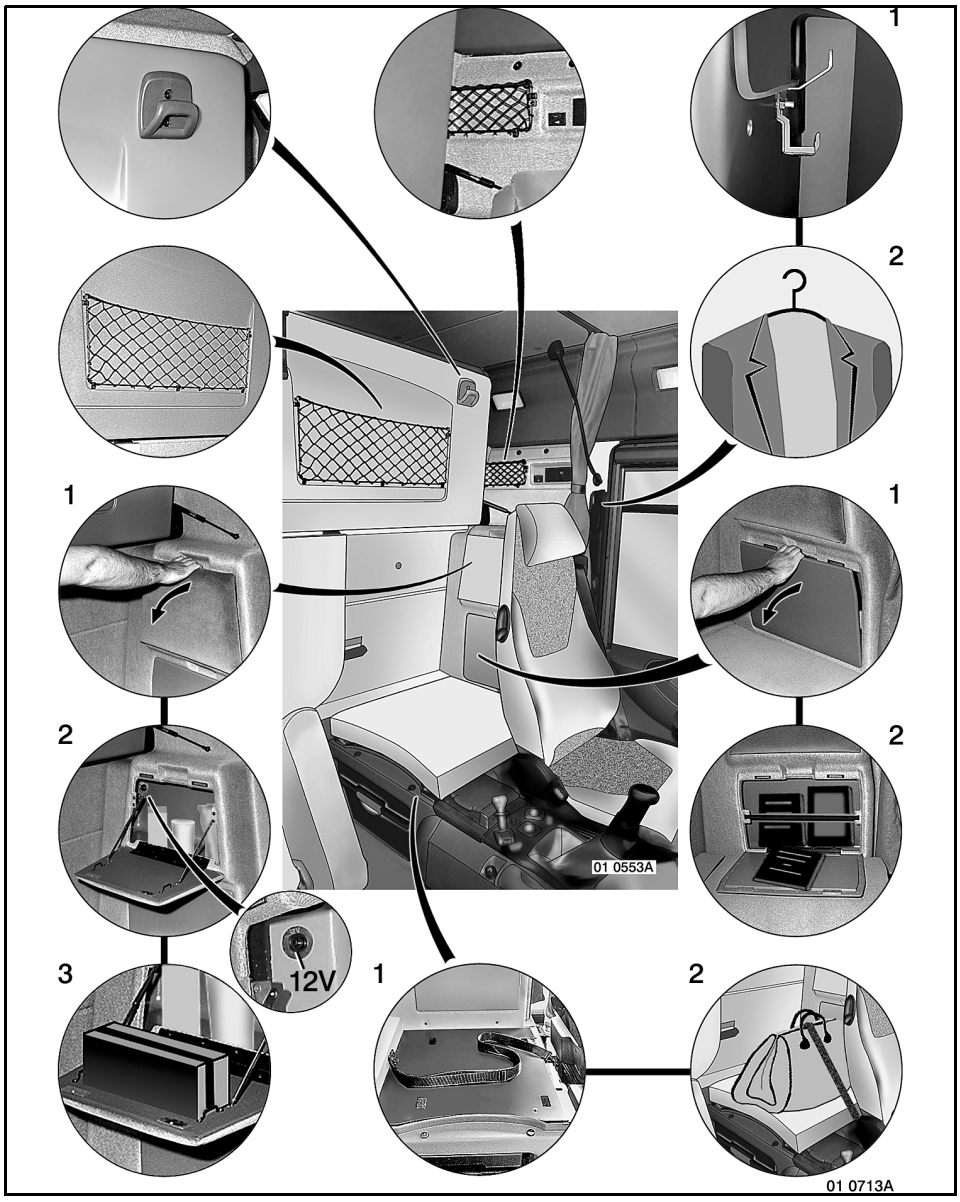
Storage compartment (4)
Opening
Tilt the handle upwards and pull the door.
Closing
Push the door until it snaps shut automatically.

Before using the ledge (1), remember to close the ashtray (2). Avoid climbing on it.
The storage compartment (3) on the independent heater supports a load of less than 10 kg.
Before tilting the cab, switch off the refrigerator, empty it and the storage compartments.

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B3-28 Presentation

Depending on your vehicle's equipment
Driver's side storage compartments



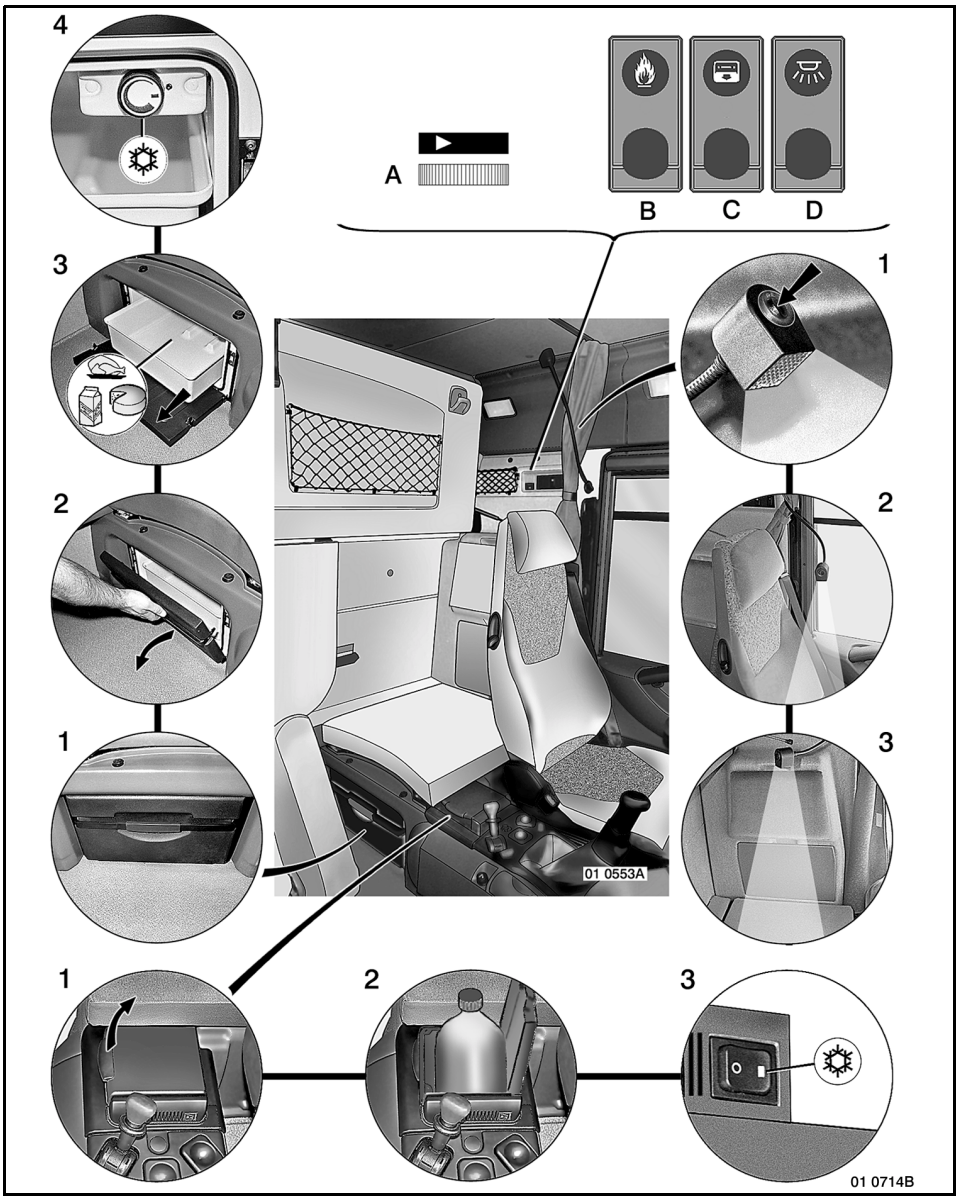
https://truckmanualshub.com/

B3-29 Presentation

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B3-30 Presentation

Depending on your vehicle's equipment
Refrigerator units, reading light, bunk control panel



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B3-31 Presentation

Depending on your vehicle's equipment

Bunk compartment control panel
(A) - Ambient temperature thermostat.
(B) - Independent heater control switch (non ADR) (E1).
(C) - Sun-roof control switch (E2).
(D) - Bunk lighting control switch (E3).

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B3-32 Presentation

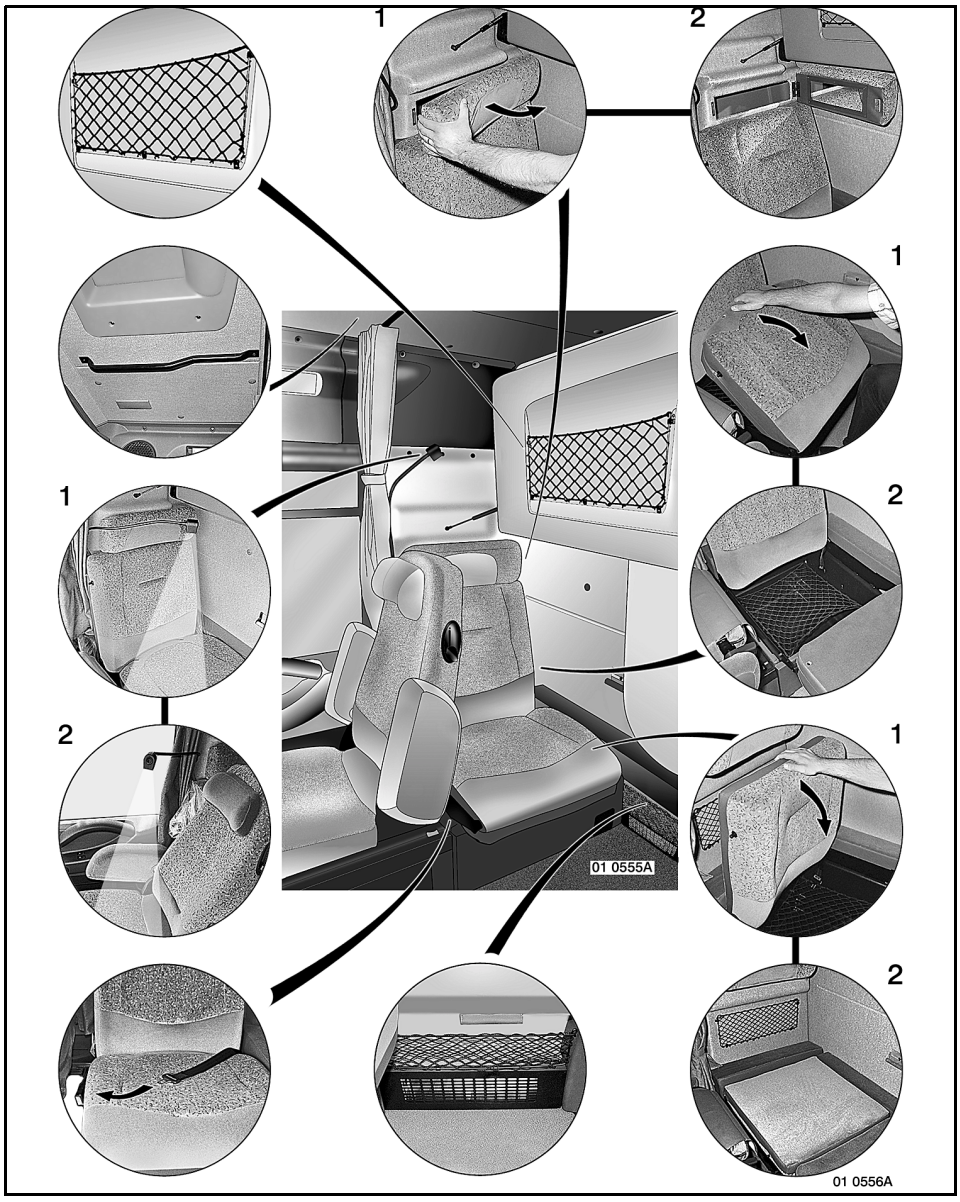
Depending on your vehicle's equipment
Passenger's side storage compartments



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B3-33 Presentation

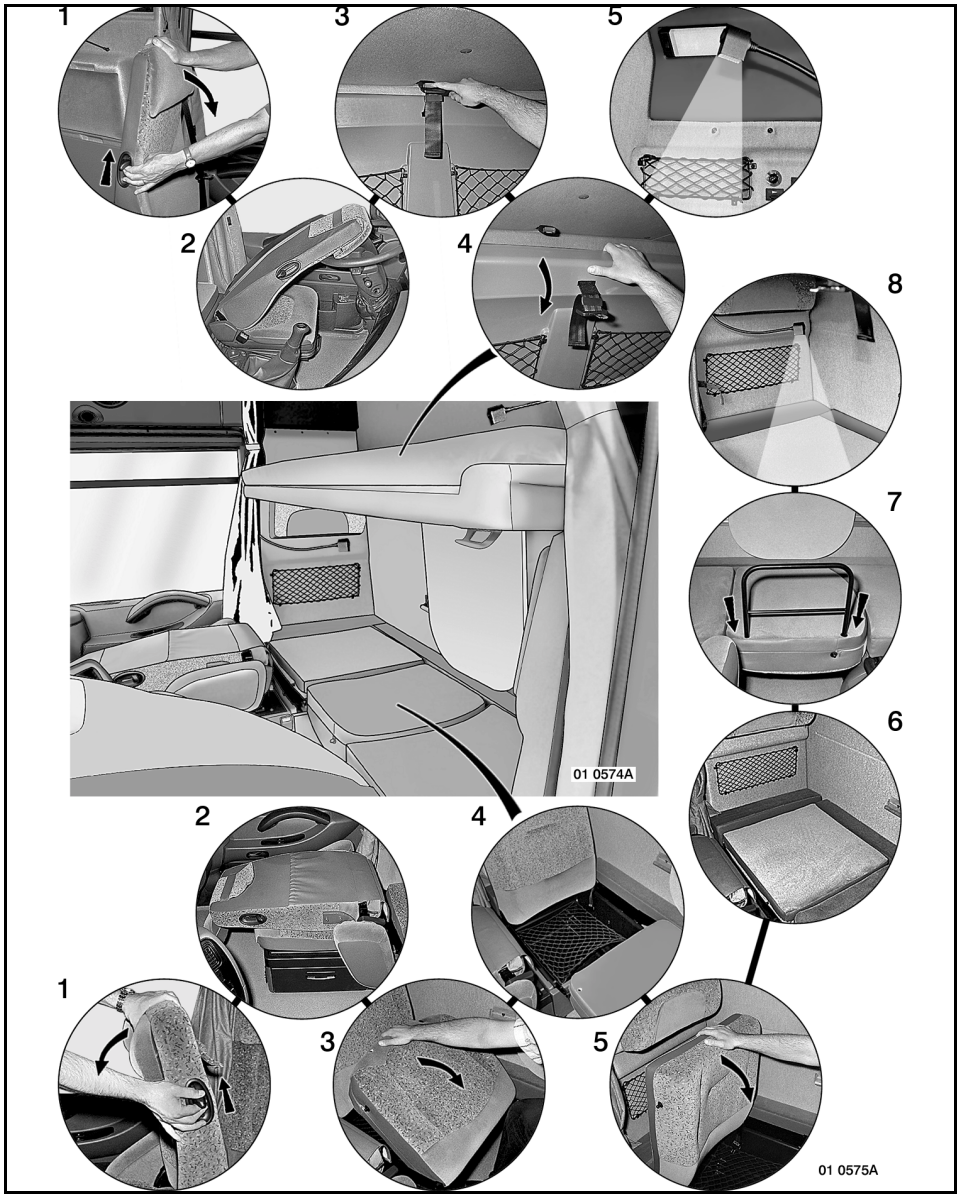
Depending on your vehicle's equipment
Storage compartments and accessories



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B3-34 Presentation

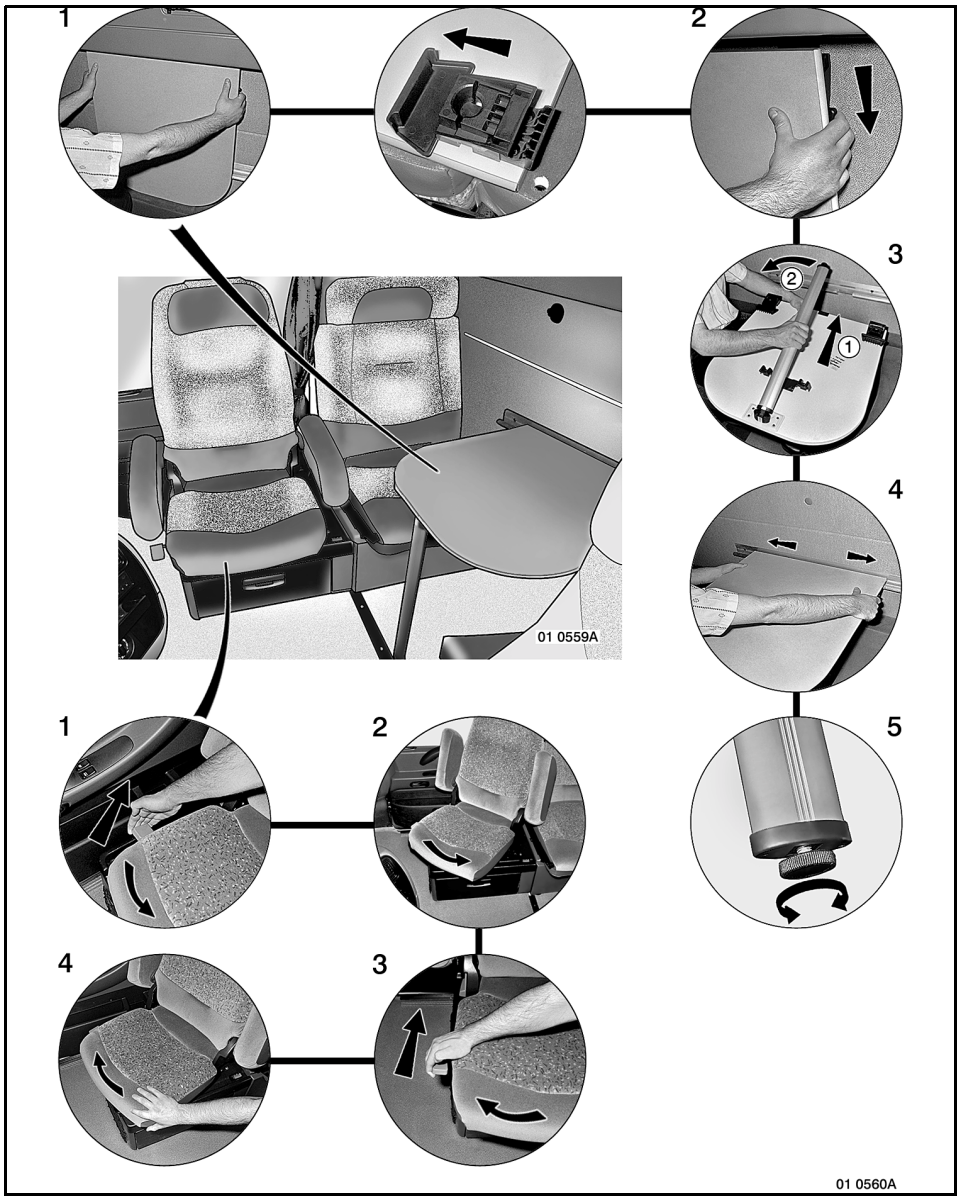
Depending on your vehicle's equipment
Setting up bunks



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B3-35 Presentation

Depending on your vehicle's equipment
Setting up meal, working, etc... environments

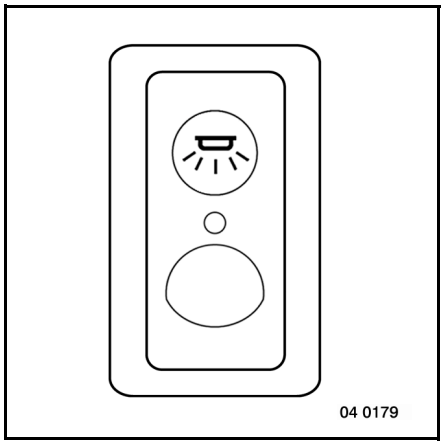


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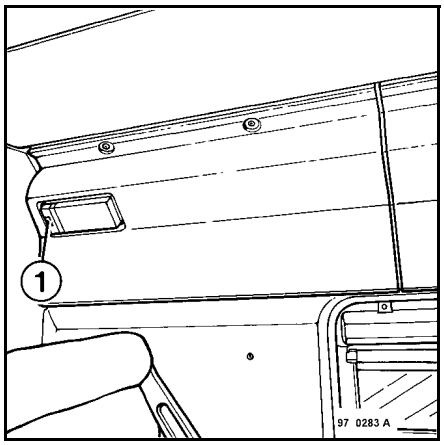
B3-36 Presentation

Cab overhead lights

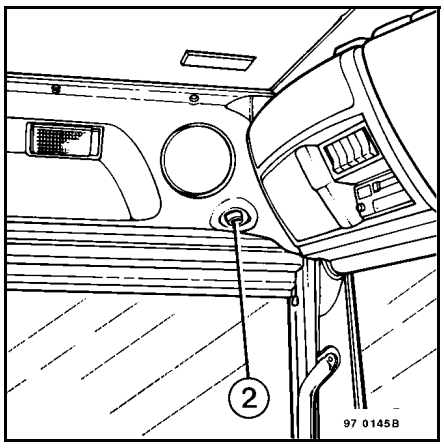
Control switches (E1 - F1) for the front overhead lights.



Each bunk overhead light is provided with its own control switch (1).



The map reader light (2) is switched on by rotating the ring located on the end of the lamp.



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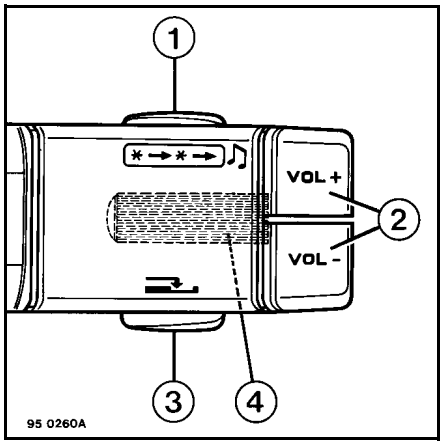
B3-37 Presentation

Onboard radio

Depending on your vehicle's equipment
Carefully read the notice supplied in the onboard kit.

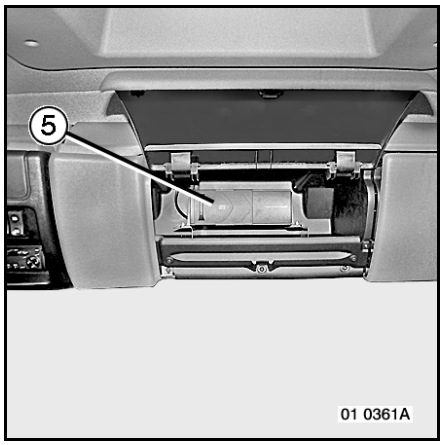
Onboard radio remote control

1– Selection of set frequencies.
2– Adjustment of sound volume.
3– Activation of stations automatic search.
4– Call-up of memorized stations.



For any work on the onboard radio, contact a RENAULT TRUCKS service point or dealer.
Any modification to the installation may lead to vehicle malfunction.

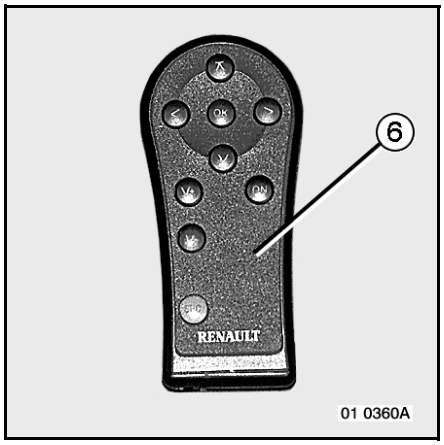
Your vehicle is equipped with a radio/cassette player or a radio/mono CD player. To these two equipment items can be added a CD loader (5) and an infra-red remote control (6).



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B3-38 Presentation

In the case of infra-red remote control equipment (6), there is no bunk radio switch.
The onboard radio is supplied with 24 V current and can be used with the ignition switched off but with the master switch engaged.



Anti-theft code
Your set is supplied with the code not activated.

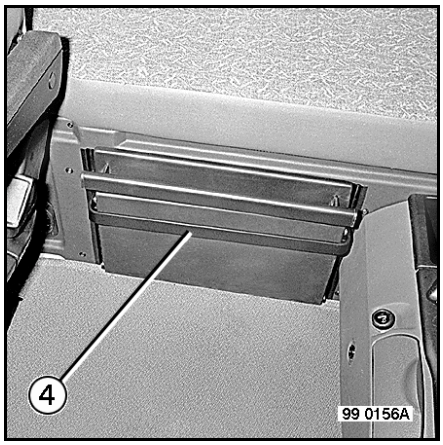
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Presentation

Refrigerator

Depending on your vehicle's equipment

Opening
Open the door with handle (4).
Closing
Push the door until it engages automatically.



Operation
Operation is regulated by a thermostat (5).
To stop the refrigerator, set the thermostat to position "0".
Access to the thermostat
The thermostat is located on the inside top of the refrigerator, accessible through the door.

In the event of malfunction, contact a RENAULT TRUCKS service point or dealer.

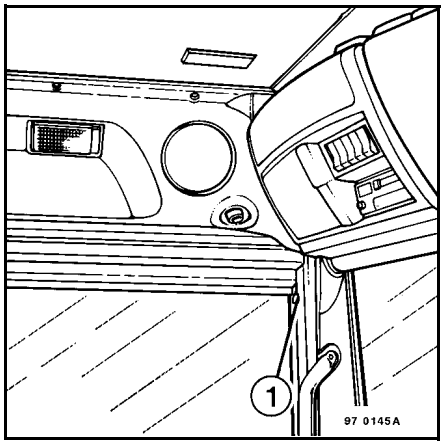


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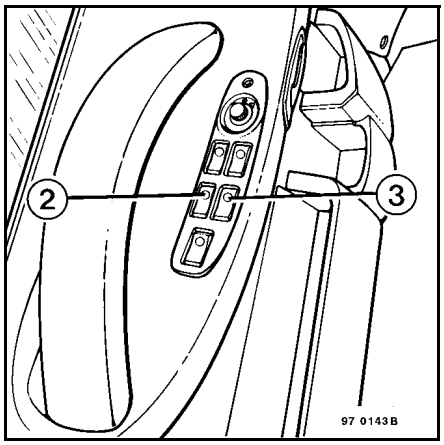
B3-40 Presentation

Sun curtains

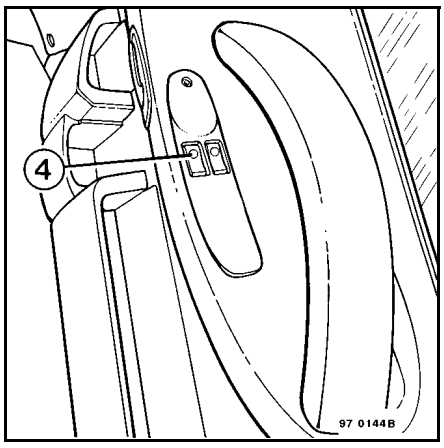
Depending on your vehicle's equipment
Mechanically operated side curtains:
Pull the curtain to the required position.
Actuate control (1) to draw the curtain.



Electrically operated side curtains:
2 - Driver's side left curtain control.
3 - Driver's side right curtain control.



4 - Passenger's side right curtain control.

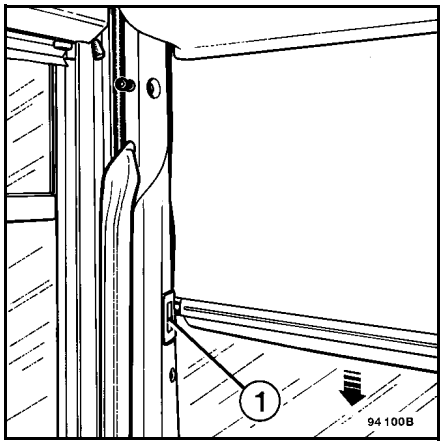


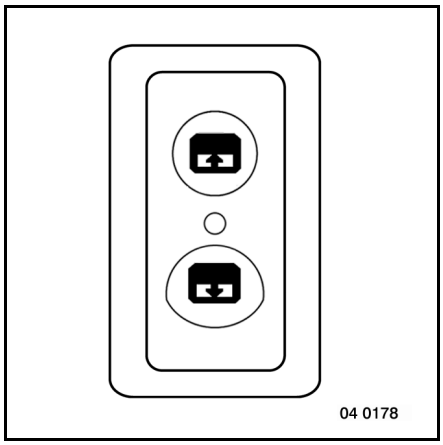
Use of the controls:
Lowering: Press the rear of the control.
Raising: Press the front of the control.

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B3-41 Presentation

Depending on your vehicle's equipment
Electrically operated front curtain:
Lowering: Press the front of the control (C5).
Raising: Press the front of the control (C5).
To fully lower the curtain, operate controls (C5) and (1).





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B3-42 Presentation

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B4-1 Presentation

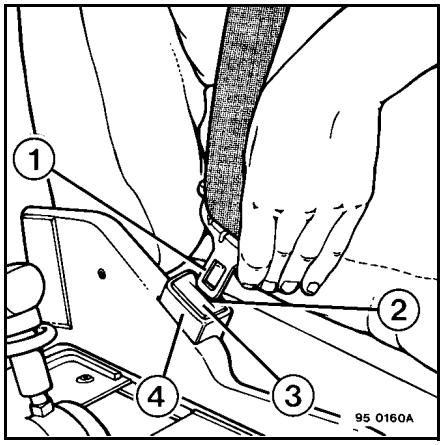
Safety

Seat belts

Inertia reel seat belts
Slowly unwind the strap so as to be able to engage tongue (1) in buckle (2). If the strap jams, pull it back a little then continue unwinding.



Unlocking
Press button (3) on buckle (4); the belt is returned by the inertia reel. Accompany tongue (1) with your hand to facilitate this operation.
Depending on your vehicle's equipment
A buzzer will inform you when you have to attach your seat belt.



TO ENSURE YOUR OWN SAFETY, WEAR YOUR SEAT BELT WHENEVER YOU TAKE THE ROAD.
BEFORE MOVING OFF: FIRST OF ALL REGULATE YOUR DRIVING POSITION, THEN ADJUST YOUR SEAT BELT CORRECTLY.

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B4-2 Presentation



BABIES OR CHILDREN SHOULD IN NO CIRCUMSTANCE BE CARRIED ON THE KNEES OF OCCUPANTS OF THE VEHICLE.
NEVER USE ONE SEAT BELT TO ATTACH TWO PERSONS.



NEVER PASS THE SHOULDER STRAP UNDER YOUR ARM, OR BEHIND YOUR BACK.

Child safety

The use of devices for retaining babies and children is subject to regulations.
In Europe, children under 12 years old, with height below 1.50 metres and weighing less than 36 kilograms, must be attached with a type approved device suitable for the height and weight of the child.
The driver is responsible for correct use of such a device.
We recommend you to use a type approved device according to European regulation ECE 44.



Comply with the laws in force in the country in which you are travelling. They may differ from the indications given herein.



BABIES OR CHILDREN SHOULD IN NO CIRCUMSTANCE BE CARRIED ON THE KNEES OF OCCUPANTS OF THE VEHICLE.
NEVER USE ONE SEAT BELT TO ATTACH TWO PERSONS.

Before installing a child's seat in the front place (if installation is permitted)
If the passenger's seat is so equipped, proceed with the following adjustments:
- Move the passenger's seat as far back as possible.
- Straighten the seat squab as vertically as possible.
- Lower the seat cushion as low as possible.
- Raise the head-rest as high as possible.
- Place the seat belt height control in the low position.

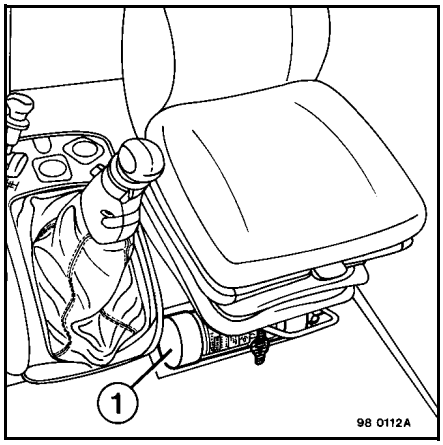
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B4-3 Presentation

Fire extinguisher

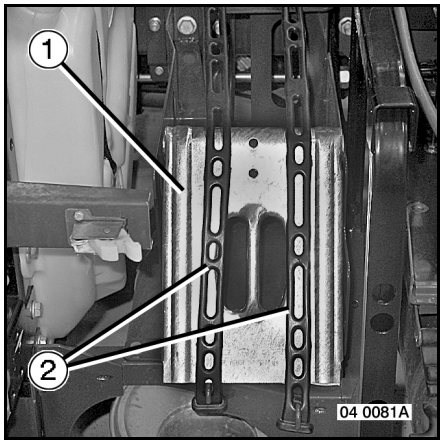
Depending on your vehicle's equipment

There is a fire extinguisher (1) near the driving position. Its exact location varies according to its capacity.
This appliance is subject to regulations. It must be inspected regularly by an approved body.



Wheel chocks

To remove wheel chock (1) unhook the fastening straps (2). Upon fitting, ensure that wheel chock (1) is correctly in position and hook up the fastening straps (2).



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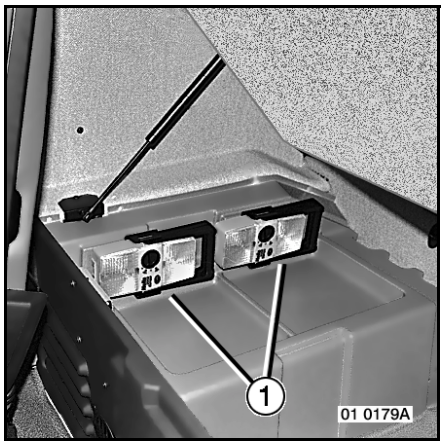
B4-4 Presentation

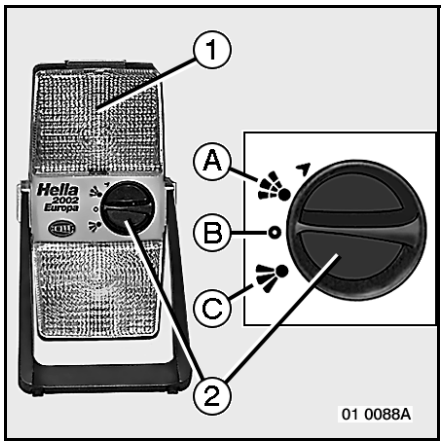
ADR vehicle (transport of dangerous materials)

Depending on your vehicle's equipment

Self-contained lights (1).
Switch (2) features three positions:
A: orange flashing light.
B: off.
C: white steady light.

The self-contained lights are supplied without battery.





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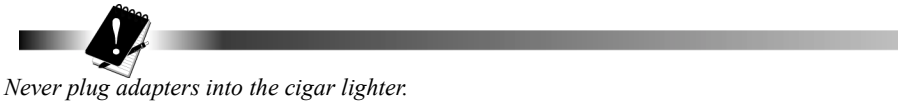
B4-5 Presentation

Life onboard



Comply with the maximum power ratings authorized for cab electrical sockets:

- **12V / 10A = 120W**
- **24V / 15A = 360W**



Never plug adapters into the cigar lighter.



It is strictly forbidden to store inflammable products in the cab.

Cab lighting

When you replace an overhead light bulb, replace it with a bulb with the same power rating and take care to refit the transparent cover without fail.

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B4-6 Presentation

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C1-1 Driving

Special conditions

Running-in

During the running-in period (5 000 km approximately), do not run the engine at maximum revs, except for short distances.
Do not use high engine speeds or allow the engine to labour at low or high speeds.
A careful watch should be kept on the water temperature gauge and the oil level.
The vehicle must be loaded as for normal operation.

Use during the winter or in cold climates

Engine starting

(see "Start-up" page C3-1)

Prior to driving away, allow the engine to run for a few seconds to ensure that oil circulation is established. It is best not to warm up the engine by prolonged running at idle or no-load, but, to drive it slowly using the lower gears until normal running temperature is achieved. Never demand maximum power from your engine until the coolant temperature reaches 80°C.



UNDER NO CIRCUMSTANCES SHOULD RADIATOR BLINDS OR SHUTTERS BE FITTED ON VEHICLES EQUIPPED WITH TURBOCHARGED INTERCOOLED ENGINES. SUCH ACCESSORIES PREVENT COOLING OF THE TURBOCHARGER AIR AND THUS REDUCE ENGINE EFFICIENCY, PERFORMANCE AND SERVICE LIFE.

Engine cooling system

This vehicle is supplied with "ULTRACOOLING PLUS" engine coolant (a Renault Trucks Oils product) conforming to the RENAULT TRUCKS specifications. It gives frost protection down to - 25 or 40 °C C.

Batteries

Keep the batteries fully charged since their resistance to frost depends on their state of charge.

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C1-2 Driving

Use during the summer or in hot climates

Check the battery electrolyte level frequently. Do not labour the engine, change gear as often as necessary to maintain optimum engine speed. Thus, the circulation of water in the cooling system will be improved, keeping the engine temperature within the required specification limits. Frequently clean the exterior of the radiator by blowing compressed air through the core from the engine side, to remove any insects or dust that may restrict the air flow. Ensure that the radiator is in good condition and, if necessary, descale.

Use in dusty atmospheres

It is recommended to carefully inspect the air filter clogging indicator every day.

Air filter

Normal servicing (see page E7-4)

Do not forget that filter fouling depends on engine revs. If low gear ratios are constantly used (mountainous terrain), then the filter should be serviced on a time basis rather than mileage.

A blocked filter can cause serious damage.

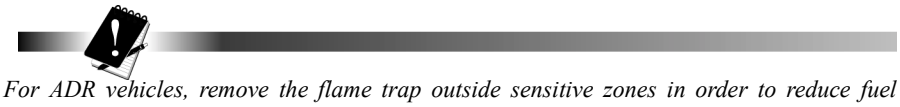
Use at high altitude

The use the vehicle at high altitudes affects engine performance. The reduction in power is in the region of 10% for naturally aspirated engines and around 5% for turbocharged engines for every 1,000 metres increase in altitude. In another connection, bear in mind that the boiling point of water decreases by 3.5°C every 1,000 metres increase in altitude.

Economic driving

To obtain the very best performance from your gearbox, and more particularly lower fuel consumption, observe the following driving rules:

- Always choose the step-down ratio allowing you to use the engine at its best rotating speed. The maximum torque giving the lowest fuel consumption is to be found in that band.
- Choose the gear ratio in terms of the contour of the road.
- Remember that: **Any change in gear entails an increase in fuel consumption.**



For ADR vehicles, remove the flame trap outside sensitive zones in order to reduce fuel consumption.

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C1-3 Driving

Driving a solo tractor

Since the rear wheel grip is reduced because of the lack of load, drive carefully.

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C1-4 Driving

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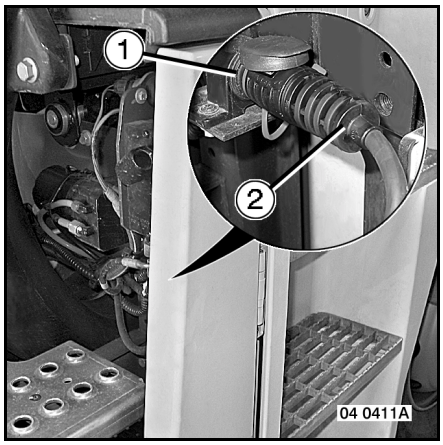
C2-1 Driving

Prior to starting

Preheating the engine cooling system

Depending on your vehicle's equipment

The connector (1) serves to supply power to the cooling system preheater.
With the engine shut down, plug the electrical extension (2) from the onboard kit into the connector (1) to connect up with an external power source of 220 / 240 V 16 A meeting the standards in force.



THERE IS LIVE 220 V CURRENT AT THE COOLING SYSTEM PREHEATER WHEN AN ELECTRICAL CORD IS PLUGGED INTO THE CONNECTOR.

Unplug the electrical extension and stow it away before using the vehicle.

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C2-2 Driving

Prior to getting into the vehicle

Check in particular:

- That there are no traces of oil, coolant or fuel under the vehicle.
- Oil levels:
  - engine
  - power steering
  - clutch
- Coolant level.
- Tyre pressures.
- Air filter clogging indicator.
- That the connections between tractor and trailer have been made correctly.
- Cab locking system.
- Leaks from major units. Should a leak occur, clean the breather.
  A clogged breather allows pressure to build up in the casing and leads to leaks.

APM: Actuate the bleed valves to get rid of all water from the air tanks.
Carry out this operation:

- **Every day**: in winter.
- **Every week**: outside winter.

If not, get the APM checked out (see page E27-1).

Engine immobilizer

Depending on your vehicle's equipment

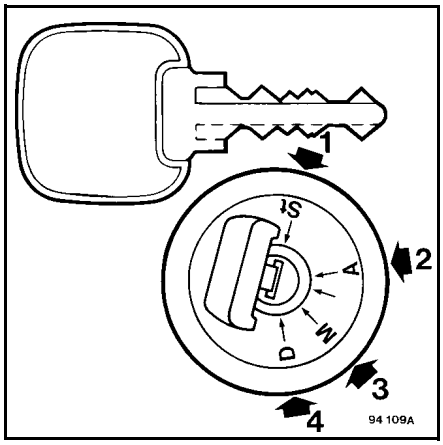
Starting switch with electronic anti-theft device

The vehicle is supplied with coded ignition keys paired up to the electronic anti-theft device.
With the master switch engaged, insert the ignition key and turn it to the "ignition" position (3).
Warning light (G37) comes on for a few seconds, then goes out.
The system has recognized the key code number and authorizes engine start-up (key in "starting" position (4)).

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C2-3 Driving

Starting the engine with the PIN code
In the event of transponder malfunction, it is still possible to start the engine.
Switch on the ignition, turning the ignition key to position (3).
The message **"Starting impossible"** is shown on the information display.
In the **"Diagnostic"** menu on the information display (see page B-2-37), select the **"Transponder"** sub-menu and enter the 6-figure code issued by the **Hotline**.
Confirm.



The following messages may be shown:
- "Code correct": the engine can be started.
- "Code incorrect": switch off the ignition and begin the procedure again
- "Anti-scanning": You have made 3 consecutive code entry errors, the system locks up for 15 minutes - leave the ignition switched on and try again 15 minutes later.

Once the right code has been entered, switch off the ignition, switch it on again and start the engine

ANY FRAUDULENT ACTION ON THE ELECTRONIC IGNITION CUT-OFF SYSTEM WILL LEAD TO MALFUNCTION AND THIS REPRESENTS A REAL DANGER WHEN USING THE VEHICLE.

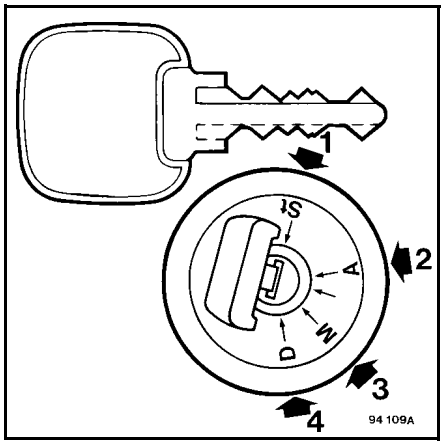
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C2-4 Driving

Ignition switch

Ignition switch / steering lock

- "Engine stop and column lock" position (1): take out the ignition key and turn the steering wheel until the steering lock clicks.
- "Comfort accessories power supply" position (2): engine stopped, steering wheel free.
- "Ignition" position (3).
- "Starting" position (4).



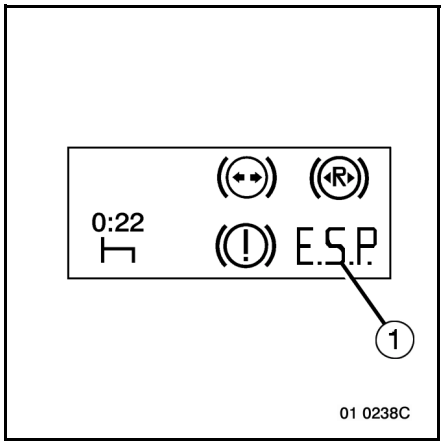
To stop the engine, move the ignition key from position (3) to position (1).
If the key remains jammed, do not force it, but call in an electrician.

Display test

When the ignition is switched on, an auto-test runs for 4 seconds.
This test serves to check all the instrument panel indicators for correct operation.

Regulatory test display

After the display test, the "regulatory" test mode is activated .
Depending on your vehicle's equipment, the pictograms (G10 – G11 – G12) for the functions to be tested together with warning pictogram (1) (G20) are illuminated for about 3 seconds.

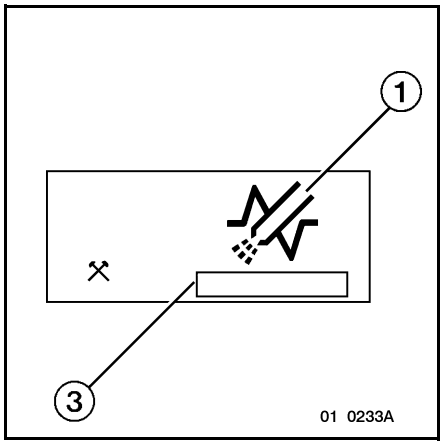


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C2-5 Driving

Fault display

If there are any faults, one or several warning pictograms (1) are displayed on the instrument panel. In such case, the warning light (STOP or SERVICE) comes on simultaneously to specify the level of importance of the fault(s).

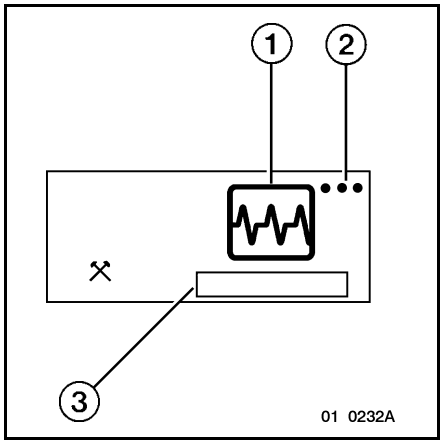


There are 2 possible cases:

- If the SERVICE warning light (J) comes on: you must, if possible, identify the problem and get it remedied or make your way to the nearest RENAULT TRUCKS service point or dealer.
- If the STOP (H) comes on: you must, if possible, identify the problem and, where applicable, consult the nearest RENAULT TRUCKS service point or dealer.

  If the warning pictogram (G10) is displayed, start the engine so as to pressurize the compressed air circuit to see if it disappears. If it stays displayed, it may involve an EBS fault or a compressed air system problem.

  If different faults are present (STOP and SERVICE), only STOP warning light (H) comes on.



When several faults are present, points of suspension (2) appear and the warning pictograms (1) (that depend on the nature of the fault) are displayed every 3 seconds in succession.
A text (3), showing the steps to take or information on the fault, is displayed below the pictogram (1).

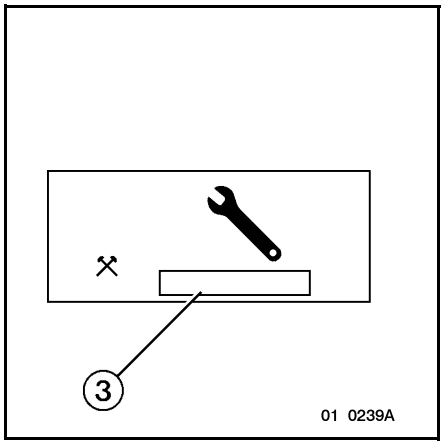
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C2-6 Driving

Maintenance display

The maintenance pictogram (G29) may be displayed in 2 possible cases:

- The warning pictogram (G29) is displayed, as pre-alert, about 30 seconds after the regulatory test. Consult the maintenance menu (see page B-2-31).
- The warning pictogram (G29) is displayed, as alert, and the warning light (J) comes on. Consult the maintenance menu (see page B-2-31) and make your way to the nearest RENAULT TRUCKS service point or dealer to get the maintenance carried out.



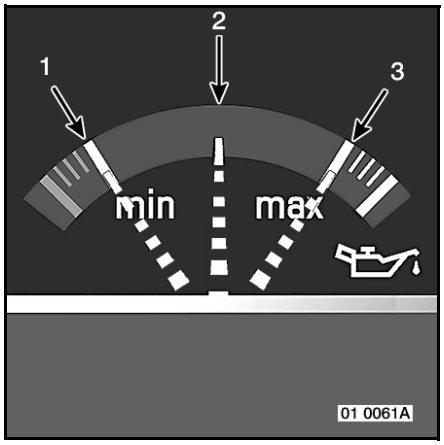
Engine oil level and pressure gauge

Engine shut-down: Oil level gauge

Switch on the ignition and wait for the pointer to stabilize:

1– Danger (top up with oil).
2– Medium level (top up with oil as soon as possible).
3– Maximum level.

For a more accurate reading, always make the reading on flat horizontal ground 5 minutes after the engine has been shut down.



Engine running: Oil pressure gauge

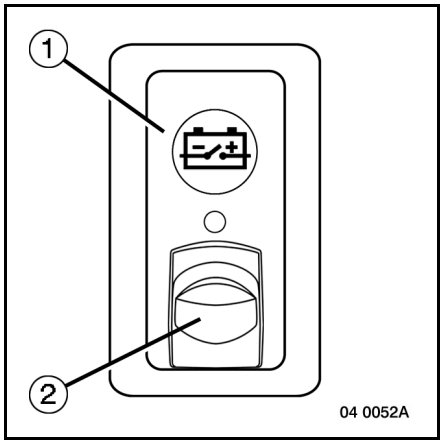
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C3-1 Driving

Start-up

Starting the engine

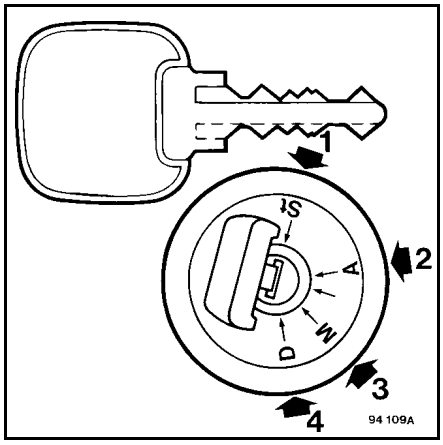
Depending on your vehicle's equipment, check that the engine cooling system preheater is disconnected. Do not start the engine if the preheater is connected for you run the risk of destroying the preheater resistor.



Make sure the parking brake is released.
Make sure the gear lever is in neutral.
Override the "Emergency stop" control (A1) by pushing tab (2) and pressing switch (1) (case of ADR vehicles).

Engine starting
Actuate the starter, without accelerating.
Temperatures below 5°C: see page B-3-7 (Warm hold feature).
Temperatures above 5°C: the engine speed varies according to engine temperature.

Temperatures below 0°C: Move the ignition key to position (3) (preheating), wait for warning light (E) to go out, turn the key to position (4) to actuate the starter and release the key as soon as the engine fires.
In all cases, the engine speed varies according to engine temperature.



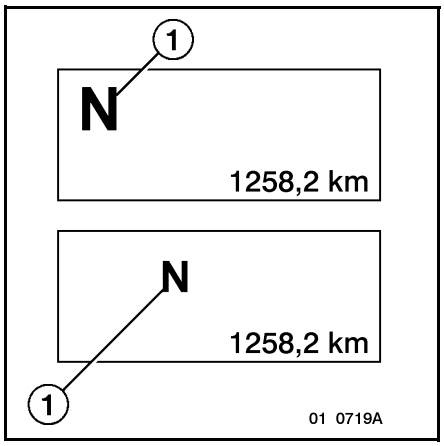
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C3-2 Driving

The use of "Start pilote" type products (ether) for starting the engine is strictly forbidden (serious risk of spontaneous combustion or explosion).

Do not move away until:

- Brakes air pressure warning pictogram (G10) has disappeared and all circuits are operating correctly.
- You are certain that warning light (B) goes out when the parking brake lever is moved to the "road" position.



If the vehicle is equipped with a lift-up axle, warning light (AB) stays on for as long as the axle is raised.

Depending on your vehicle's equipment
Check that there is no fault warning pictogram displayed on the multi-function display (G).
The symbol (N) (1) means that the gearbox is in neutral.
Depending on your vehicle's equipment

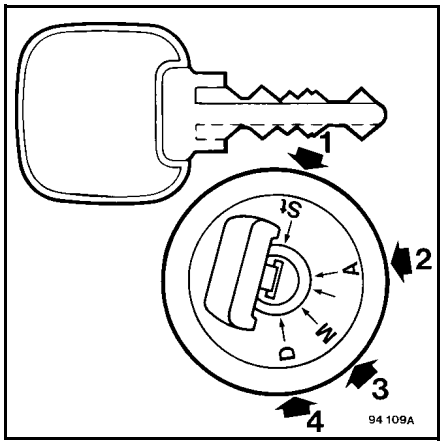
Vehicle equipped with an electric fuel preheater
Fuel preheating is controlled automatically according to the temperature of the fuel.

https://truckmanualshub.com/

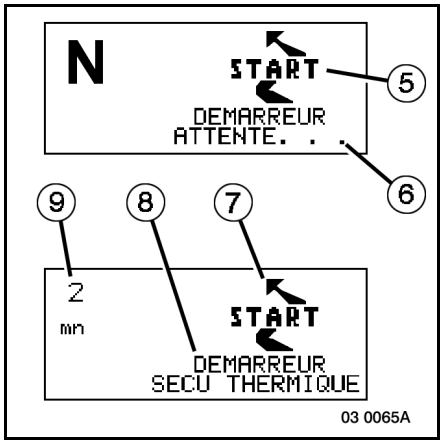
C3-3 Driving

Engine starting with pilot-controlled starter feature

Normal use:
Without accelerating, turn the key to position (4) and hold it there so that the starter drives the engine. Release the key in position (3) as soon as the engine fires.

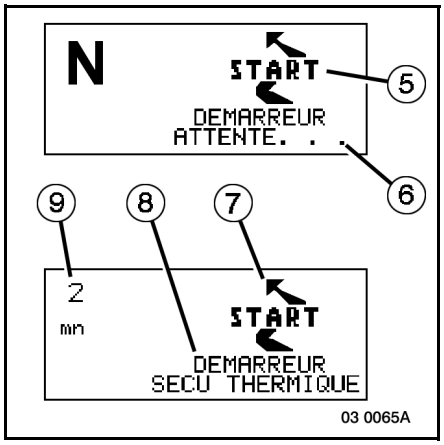


However, if the starter driving phase is interrupted before the engine starts and you want to re-activate the starter immediately, pictogram (5), accompanied by a text (6), requesting you to lease wait, is displayed. In this case, hold the key for 3 seconds in position (4) so that the starter again drives the engine. Release key in position (3) as soon as the engine fires.



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C3-4 Driving



Prolonged use

The "pilot-controlled starter" feature works according to an operating logic that prevents overheating of the starter, therefore avoids causing it serious damage.

The starter can drive the engine for 10 10 seconds followed by a 3 seconds break. Pictogram (5), accompanied by a text (6), is displayed for 3 seconds. This cycle can be repeated 4 to 5 times in succession by releasing the key in position (3) each time. After 4 to 5 cycles, the starter enters into thermal protection mode - pictogram (7), accompanied by a text (8) informing you that the starter is in thermal safety mode and countdown (9), are displayed.

As soon as information items (7 - 8 - 9) disappear, it is possible to repeat 2 cycles. The starter then reverts to thermal protection mode and so on.

Forced running

The used of starter forced running is only permitted in case of danger (vehicle immobile on a level crossing, etc...). To do this, move the ignition key 3 time in less than 2.5 seconds from position 3 to position 4. This operation is kept in the memory and can be viewed using the RENAULT TRUCKS test tool.

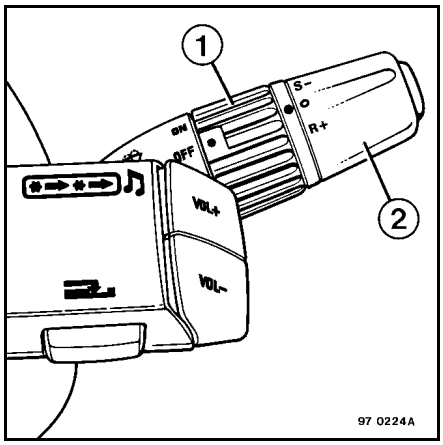
IF YOUR VEHICLE IS EQUIPPED WITH A ZF GEARBOX, THE USE OF STARTER FORCED RUNNING INHIBITS THE "NEUTRAL" SAFETY FEATURE - MAKE SURE THE GEARBOX IS IN "NEUTRAL" OR RELEASE THE CLUTCH BEFORE ACTUATING THE STARTER.

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C3-5 Driving

Engine idling speed adjustment device

Depending on your vehicle's equipment



This device serves to adjust the engine idling speed in a band lying between 700 and 750 rpm.

Use

With the vehicle stationary, parking brake engaged, engine idling, turn ring (1) from "OFF" to "ON" three times in less than 2 seconds (OFF -> ON -> OFF -> ON -> OFF -> ON).

With ring (1) in the "ON" position, adjust the idling speed again:

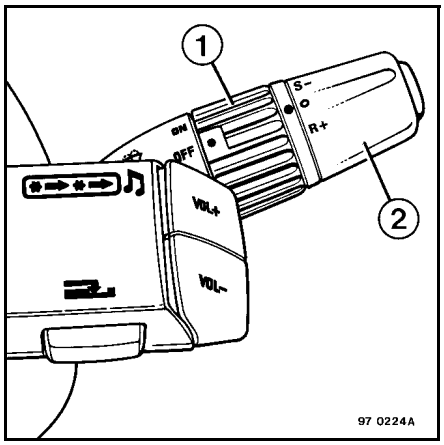
- Turn ring (2) to bring "R+" opposite the mark to increase the speed.
- Turn ring (2) to bring "S-" opposite the mark to reduce the speed.

Once you have defined the engine idling speed, depress the clutch pedal or the brake pedal and release it, to memorize the new engine speed and quit the adjustment mode.

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C3-6 Driving

Fast idling device



This device serves to control the engine idling speed when the vehicle is stationary.

Use

With the parking brake applied, gearbox in neutral, move ring (1) to the "ON" position and turn ring (2) to bring "R+" or "S-" opposite the mark, then release.

Bring the engine to the required speed, using the accelerator pedal, and in that position, turn ring (2) to bring "S-" opposite the mark to memorize the engine speed, then release.

Release the accelerator pedal.

To fine tune the engine speed:

- Turn ring (2) to bring "R+" opposite the mark to increase the engine speed.
- Turn ring (2) to bring "S-" opposite the mark to reduce the engine speed.

Any action on the brake pedal, any gear changing or any movement of ring (1) to the "OFF" position cancels out the feature.

Vehicle equipped with power take-off(s)

When at least one PTO is in operation, the first action on ring (2) ("S-" or "R+") calls up the engine speed preset in the works (1000 rpm).

This engine speed can be adjusted but is limited to 1500 rpm (see page D1-16).

Depending on the equipment fitted by the equipment manufacturer, the entry conditions for this engine speed can be modified using the RENAULT TRUCKS test tool.

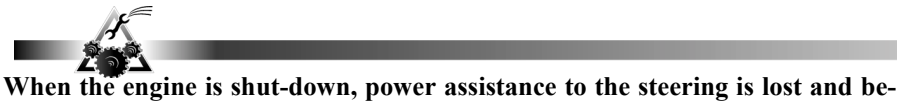
Avoid touching the accelerator pedal during use of the fast idling feature.

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C4-1 Driving

On the road

Hydraulic power-assisted steering



When the engine is shut-down, power assistance to the steering is lost and between 5 and 7 times as much effort is needed to turn the steering wheel. In general, if loss of assistance is experienced, proceed as follows: Check the fluid level in the reservoir, check for leaks from hose and pipe unions and rectify if possible (tighten the unions or change the hoses). Top up the reservoir with clean fluid to the recommended specification. Restart the engine and check that the pump performs normally. Test at low engine and road speed.
If any doubt remains concerning the pump's efficiency, the unit must be inspected by an approved specialist.

Under no circumstances must hydraulic components be removed or their initial settings altered. This work must be carried out by a specialist.
A hydraulic system can only operate efficiently if it is kept perfectly clean. Great care must therefore be taken to ensure that no dirt enters the system when the above operations are carried out.

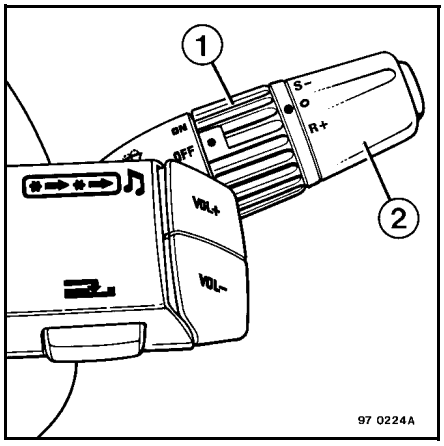
Engine operating speed

Always choose the step-down ratio allowing you to use the engine at its best operating speed, in the green zone on the rev counter (L).

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C4-2 Driving

Cruise control



DO NOT USE THE CRUISE CONTROL ON SLIPPERY ROAD SURFACES

Above a speed of 30 km/h, this feature serves to travel at a steady speed without suing the accelerator pedal.

Depending on your vehicle's equipment
When travelling downhill, the cruise control automatically pilots the different retarders, if necessary, if switch (C2) is placed in position "B", in order to maintain the memorized speed.
The various warning lights (C - U - T) come on according to the level of retardation (see page C4-6).
If the retarders cannot maintain the set-point speed, the memorized speed flashes - use of the brakes is necessary.

In this case, you are advised to memorize a lower speed and/or change down through the gears.

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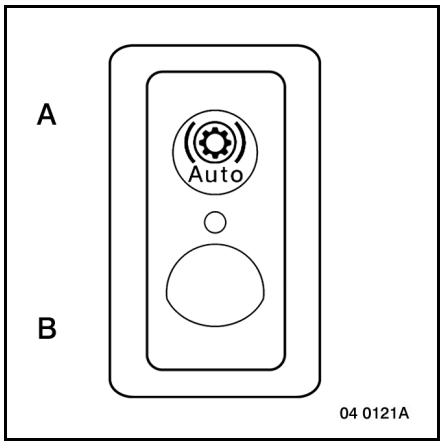
Driving

Use

– Bring the vehicle to the desired road speed, using accelerator pedal, retarder control or service brake.

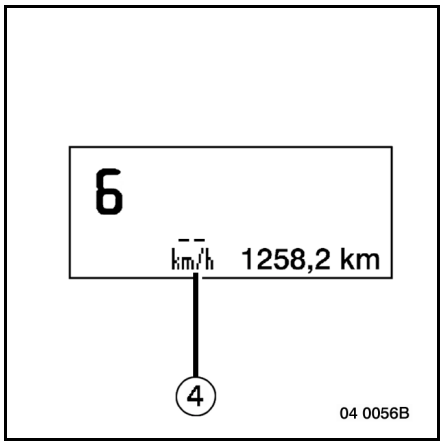
Depending on your vehicle's equipment

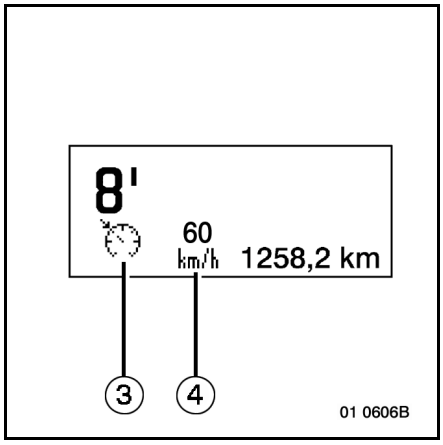
– Move switch (C2) to position "B" (vehicle with EBS and 2 to 5 position retarder control, to couple up with the retarders.
– Move ring (1) to the "ON" position .



The memorized speed (4) is displayed (by default, – – km/h).

– Turn ring (2) to bring "S-" opposite the mark to memorize the speed.





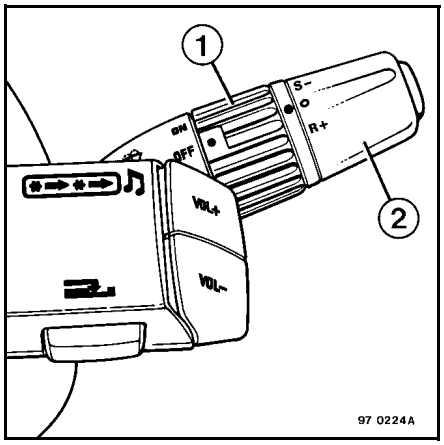
https://truckmanualshub.com/

C4-4 Driving

To adjust your cruising speed:

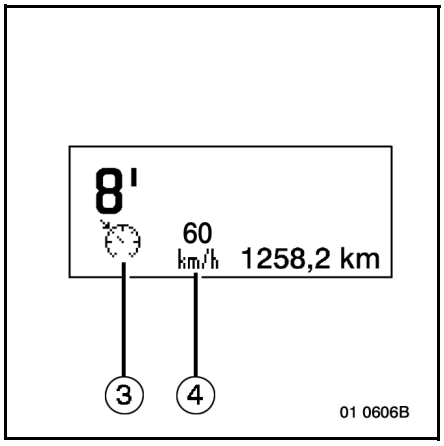
- Turn ring (2) to bring "R+" opposite the mark to increase the speed .
- Turn ring (2) to bring "S-" opposite the mark to reduce the speed.
- A dab on (R+/S-) modifies the speed by 1 km/h.

Holding the ring (2) in one of the positions (R+/S-) varies the speed until the ring is released.
Prolonged action on (S-) activates the retarder to slow the vehicle down faster.
At any moment, any action on the accelerator pedal serves to momentarily overstep the set speed.

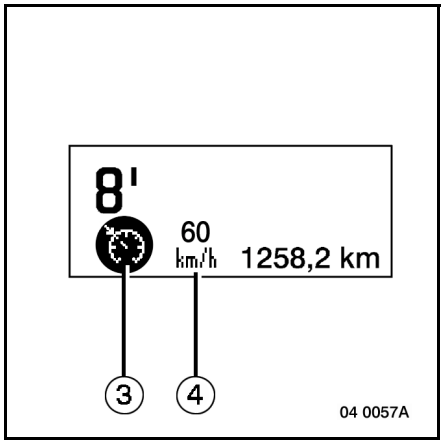


Any action on the brake pedal momentarily overrides the feature. Release the clutch pedal and the cruise control features resumes automatically.
The feature is cancelled, pictogram (G41) (3) disappears and the memorized speed (4) remains displayed if:

- The road speed is less than 15 km/h ;
- You actuate the brake pedal or the retarder control, except on downhill sections, if the road speed remains less than 2 km/h higher than the cruise control speed.



In the event of slowing down within ± 2 km/h of the memorized speed, pictogram (G41) (3) flashes black.
To return to the memorized road speed, turn ring (2) to bring "R+" opposite the mark.
Moving ring (1) to the "OFF" position cancels the feature.



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Driving

The cruise control is not a speed limiter and cannot be used as such.

Electronic speed limiter

Speed limitation is managed by the electronic fuel-injection system. In the event of malfunction, only RENAULT TRUCKS service points or dealers are empowered to take action.

Accelerator pedal

Depending on your vehicle's equipment

Vehicle equipped with "Optidriver 2" gearbox

By kicking through the slight hard spot at the end of the accelerator pedal travel, gearshifting management can be modified (activation of **"Power"**) feature to obtain optimal mobility from your vehicle.
(See page C4-31).

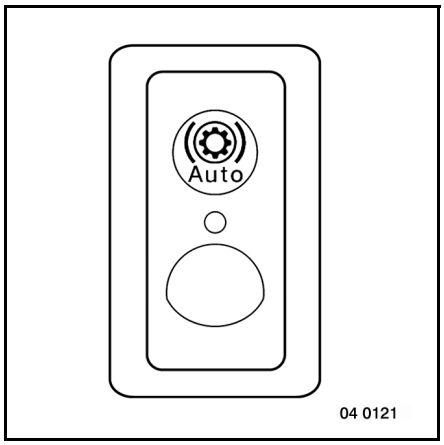
The "Power" feature accentuates fuel consumption.

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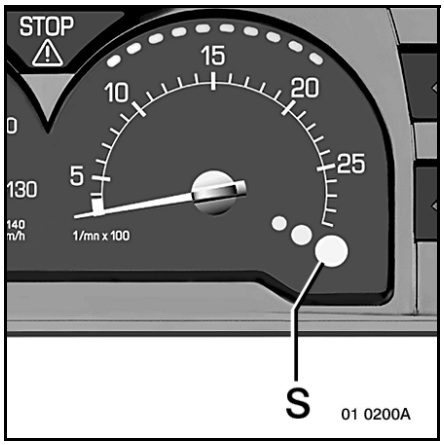
C4-6 Driving

Retarder

Choose the step-down ratio allowing you to use the engine at its best speed. On hilly runs, use the retarder, if necessary.
Never drive downhill in neutral.
Do not use the retarder on slippery surfaces. Actuate switch (C2) to disable automatic operation.



When warning light (S) is on, it indicates maximum working speed of the engine-brake retarder (engine overspeed).



The engine-brake and propeller shaft retarder features are inhibited in the ABS and ESP phase.
A single control under the steering wheel serves to activate the different retarders.

Four possible options:

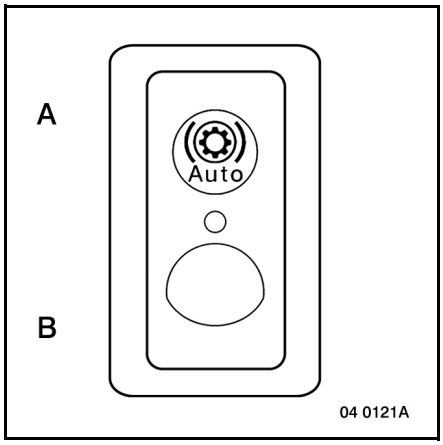
- Control with 1 active position: (see page C4-8).
  This serves to actuate the exhaust brake **(EPG)** (with manual gearbox).
- Control with 2 active positions: (see page C4-9).
  This serves to actuate the exhaust brake and the engine brake **(VEB)** (with manual gearbox).
- Control with 3 active positions: (see page C4-10).
  This serves to actuate the exhaust brake and the engine brake **(VEB)** (with Optidriver 2 gearbox).
- Control with 5 active positions: (see page C4-12).
  This serves to actuate the exhaust brake, the engine brake and the hydraulic retarder.

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Driving

Switch (C2)
A = Not activated:
– manual operation (see page C4-6).
B = Activated:
– Retarder coupling to foot brake (main brake).

The exhaust brake, engine brake and prop shaft retarder feature is activated whenever the foot brake pedal is actuated, if the retarder control lever (1) is in position 0.



The feature is inhibited for the first 5 times the brake pedal is depressed after the ignition is switched on.

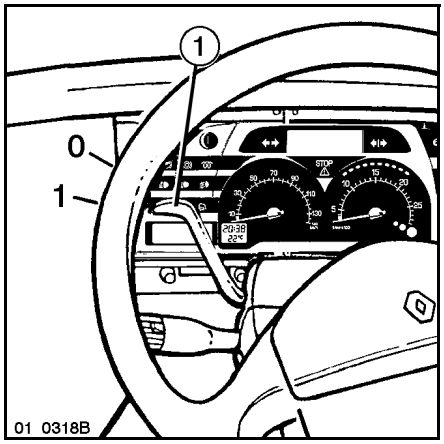
The retardation power is modulated according to the vehicle load and the pressure exerted on the brake pedal. Warning light (C) is out.
Retarder coupling with cruise control (steady speed)
Warning light (C) comes on if the prop shaft retarder feature is active.
Warning lights (C - U -T) come on if the engine brake and prop shaft retarder features are active (see page C4-2).

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C4-8 Driving

Exhaust brake (EPG) (with manual gearbox)

Depending on your vehicle's equipment



Use the gear combinations to choose the downhill speed according to the gradient. To slow the vehicle, release the accelerator pedal and move control lever (1) to:

– **Position 0:**

The feature is not active: the warning lights are off.

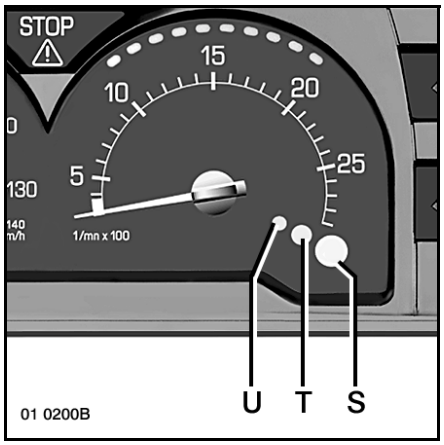
– **Position 1 with action on the accelerator pedal:**

The engine brake feature is preselected but is not active: warning light (U) is on.

– **Position 1 without action on the accelerator pedal:**

Above a speed of 900 rpm, the engine brake feature is active but with lesser torque efficiency: warning light (U) is on. When the retarder feature is active with optimal efficiency, warning lights (U - T) are on.

Do not drive with warning light (S) on (engine overspeed).

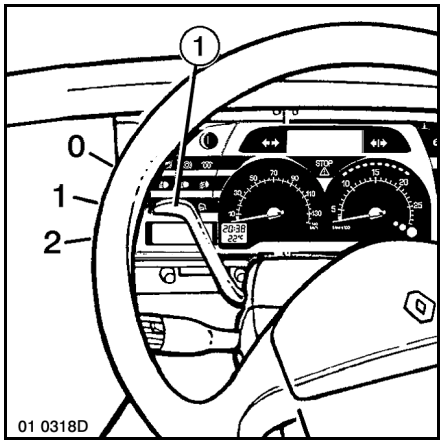


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Driving

Exhaust brake plus engine brake (VEB) (with manual gearbox)

Depending on your vehicle's equipment



Use the gear combinations to choose the downhill speed according to the gradient. To slow the vehicle, release the accelerator pedal and move control lever (1) to:

– **Position 0:**

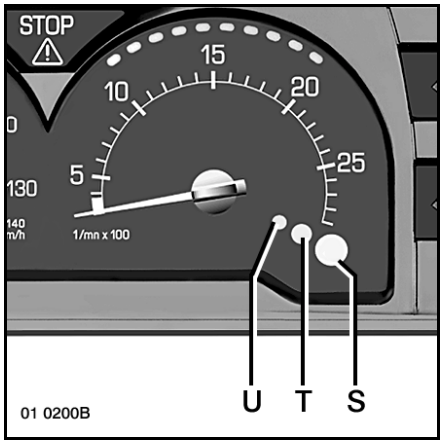
The feature is not active: the warning lights are off.

– **Position 1 with action on the accelerator pedal:**

The engine brake feature is preselected but is not active: warning light (U) is on.

– **Position 1 without action on the accelerator pedal:**

The exhaust brake plus engine brake feature is active at about 50% torque efficiency depending on the vehicle load: warning light (U) is on.



– **Position 2 with action on the accelerator pedal:**

The exhaust brake plus engine brake feature is preselected but is not active: warning light (U) is on.

– **Position 2 without action on the accelerator pedal:**

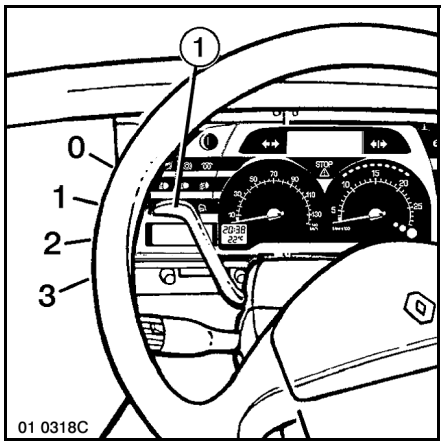
The exhaust brake plus engine brake feature is active at 100% torque efficiency: warning light (U) is on. When the retarder feature is active with optimal efficiency, warning lights (U - T) are on.

Do not drive with warning light (S) on (engine overspeed).

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Exhaust brake plus engine brake (VEB) (with Optidriver 2 gearbox)

Depending on your vehicle's equipment



Use the gear combinations to choose the downhill speed according to the gradient. To slow the vehicle, release the accelerator pedal and move control lever (1) to:

– **Position 0:**

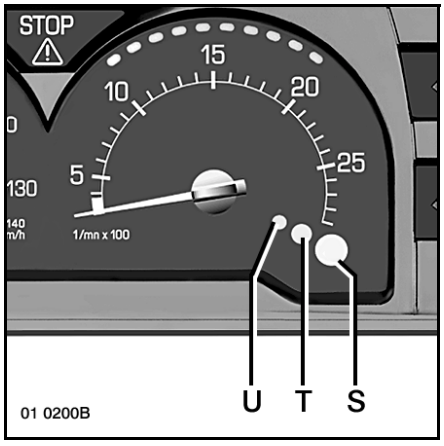
The feature is not active: the warning lights are off.

– **Position 1 with action on the accelerator pedal:**

The exhaust brake plus engine brake feature is preselected but is not active: warning light (U) is on.

– **Position 1 without action on the accelerator pedal:**

The exhaust brake plus engine brake feature is active at about 50% torque efficiency depending on the vehicle load: warning light (U) is on.



– **Position 2 with action on the accelerator pedal:**

The exhaust brake plus engine brake feature is preselected but is not active: warning light (U) is on.

– **Position 2 without action on the accelerator pedal:**

The exhaust brake plus engine brake feature is active at 100% torque efficiency: warning light (U) is on. When the retarder feature is active with optimal efficiency, warning lights (U - T) are on.

– **Position 3 (MAX mode activated) with action on the accelerator pedal:**

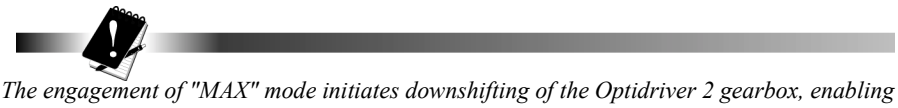
The exhaust brake plus engine brake feature is preselected but is not active: warning light (U) is on.

– **Position 3 (MAX mode activated) without action on the accelerator pedal:**

The exhaust brake plus engine brake feature is active at 100% torque efficiency: warning light (U) is on. When the retarder feature is active with optimal efficiency, warning lights (U - T) are on.

Do not drive with warning light (S) on (engine overspeed).

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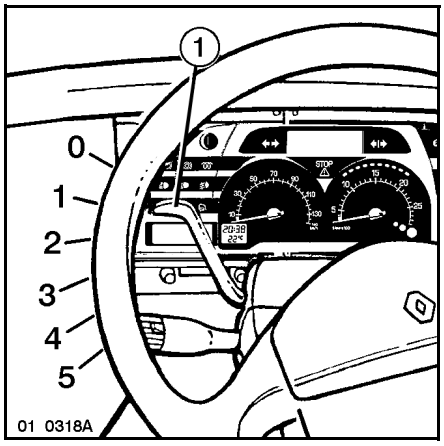


The engagement of "MAX" mode initiates downshifting of the Optidriver 2 gearbox, enabling the engine speed to be raised and thus increase retardation. This position is unstable.

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Exhaust brake plus engine brake coupled to a VOITH hydraulic retarder (with Optidriver 2 gearbox)

Depending on your vehicle's equipment



Use the gear combinations to choose the downhill speed according to the gradient. To slow the vehicle, release the accelerator pedal and move control lever (1).
5-position control: except in case of absolute need, never move control (1) directly from position 0 to position 5.

– **Position 0:**

The feature is not active, warning lights are off.

– **Position 1 with action on accelerator pedal:**

The exhaust brake, engine brake plus prop shaft retarder feature is preselected but is not active: warning light (U) is on.

– **Position 1 without action on accelerator pedal:**

The exhaust brake, engine brake plus prop shaft retarder feature is active at about 25% torque efficiency depending on the vehicle load: warning lights (C - U) are on.

– **Position 2 with action on accelerator pedal:**

The exhaust brake, engine brake plus prop shaft retarder feature is preselected but is not active: warning light (U) is on.

– **Position 2 without action on accelerator pedal:**

The exhaust brake, engine brake plus prop shaft retarder feature is active at about 50% torque efficiency depending on the vehicle load: warning lights (C - U) are on.

– **Position 3 with action on accelerator pedal:**

The exhaust brake, engine brake plus prop shaft retarder feature is preselected but is not active: warning light (U) is on.

– **Position 3 without action on accelerator pedal:**

The exhaust brake, engine brake plus prop shaft retarder feature is active at about 75% torque efficiency depending on the vehicle load: warning lights (C - U) are on.

– **Position 4 with action on accelerator pedal:**

The exhaust brake, engine brake plus prop shaft retarder feature is preselected but is not active: warning light (C) is on.

– **Position 4 without action on accelerator pedal:**

The exhaust brake, engine brake plus prop shaft retarder feature is active at 100% torque efficiency: warning lights (C - U) are on.

– **Position 5 (MAX mode activated) with action on accelerator pedal:**

The exhaust brake, engine brake plus prop shaft retarder feature is preselected but is not active: warning light (U) is on.

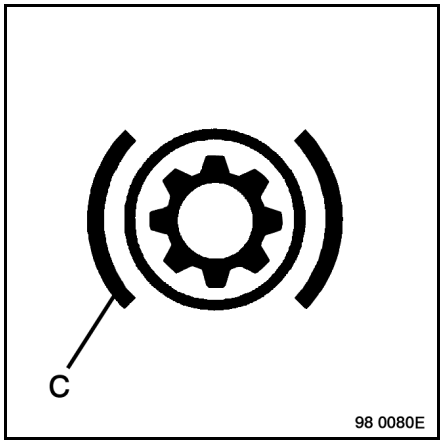
https://truckmanualshub.com/

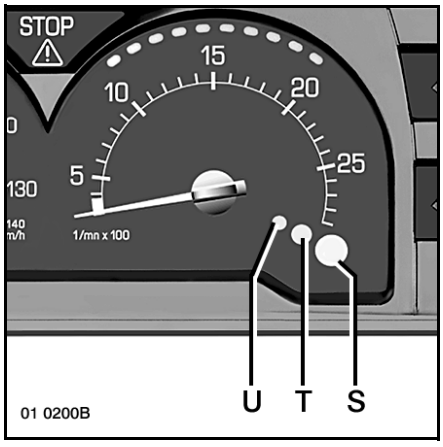
– **Position 5 (MAX mode activated) without action on the accelerator pedal:**

The exhaust brake, engine brake plus prop shaft retarder feature is active at 100% torque efficiency: warning lights (C - U) are on. When the retarder feature is active with optimal efficiency, warning lights (C - U - T) are on.

Do not drive with warning light (S) on (engine overspeed).

The engagement of "MAX" mode initiates downshifting of the Optidriver 2 gearbox, enabling the engine speed to be raised and thus increase retardation. This position is unstable.





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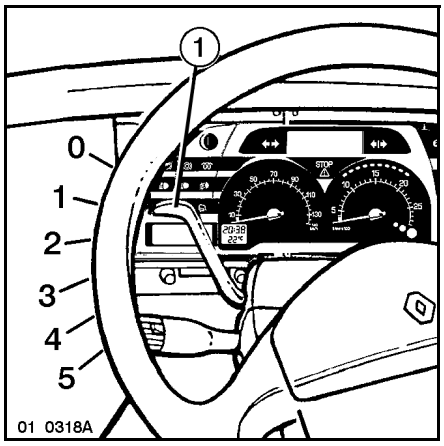
Exhaust brake with or without engine brake coupled to a ZF hydraulic retarder (with ZF gearbox)

Depending on your vehicle's equipment

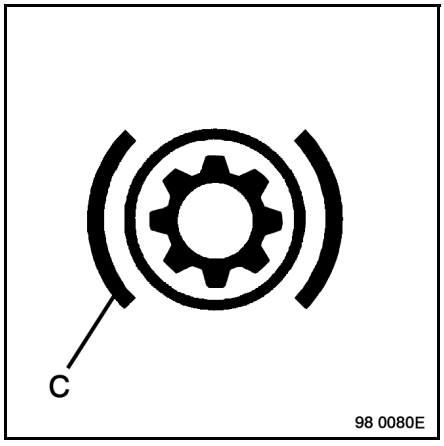
Exhaust brake with or without engine brake coupled to a ZF hydraulic retarder (with ZF gearbox

Use the gear combinations to choose the downhill speed according to the gradient. To slow the vehicle, release the accelerator pedal and progressively operate control lever (1).

5-position control: except in case of absolute need, never move control (1) directly from position 0 to position 5.



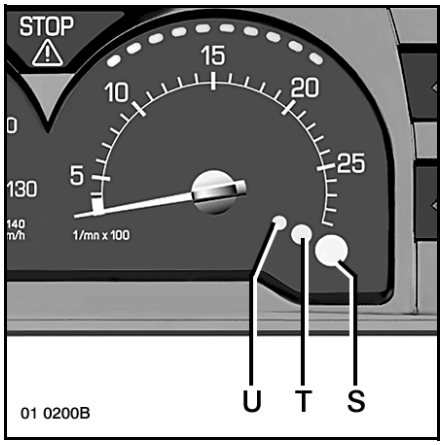
- **Position 0:**
  The feature is not active: warning lights (C - U) are out.
- **Positions 1 to 5 with action on the accelerator pedal:**
  The exhaust brake, engine brake and prop shaft retarder feature is pre-selected but not active: warning lights (C - U) are out.
- **Positions 1 to 5 without action on accelerator pedal:**
  The prop shaft plus engine brake retarder feature is active with a progressive increase in power according to the position of control (1): warning lights (C - U) are on.



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C4-15 Driving

When the retarder feature is active with optimal efficiency, warning lights (C - U - T) are on.
To optimize cooling of the hydraulic retarder on steep downhill runs, keep the engine speed above 1500 rpm.
Do not drive while warning light (S) is on (engine overspeed).



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C4-16 Driving

Driving Monitoring System

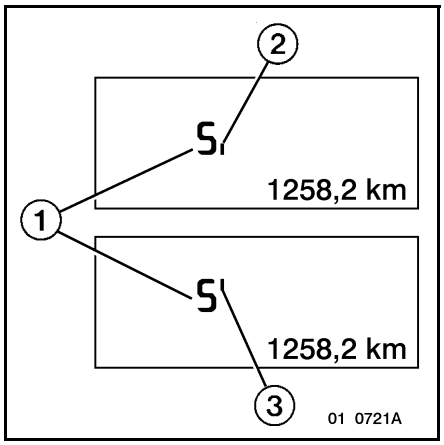
For vehicles equipped with a ZF 16S 181 or ZF 16S 221 gearbox, a device called "Driving Monitoring System" determines then suggests the best gear to be engaged in order to optimize the use of your engine and gearbox. Several information items appear on the display (G) to guide you while driving. The "DMS" suggestions take into account vehicle load, road gradient and accelerator pedal position. In such case, favour the "DMS" suggestion over use of the rev counter green zone (L).

The "DMS" system cannot anticipate the contour of the road (approaching a slope, downhill section, etc...). In such case, it is advisable to not follow the "DMS" suggestion unerringly.

Operation

Since the gear engaged is higher than 2nd low, the "gear engaged" information (1) and the position of the splitter (low range warning light (2) or high range warning light (3)) are displayed only when:

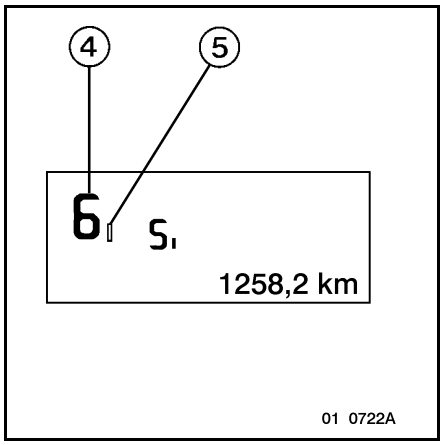
- the vehicle is running, accelerator pedal depressed;
- a retarder is in service and there is no action on the accelerator pedal;
- there is no action (even slight) on the clutch pedal.



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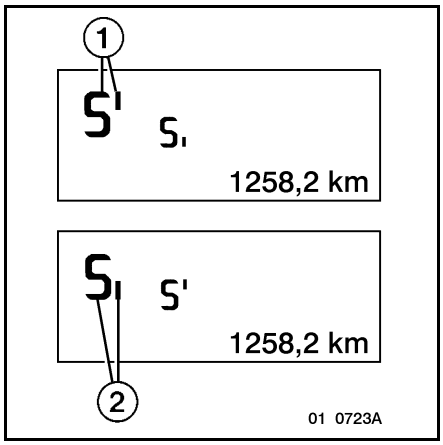
Driving

When it is necessary to change gear and/or shift the splitter, the "recommended gear" (4) information and the recommended splitter position light (5) are displayed. Only during changing up does a "bleeper" sound accompany the display of this information. This bleeping sound avoids you having to permanently keep an eye on the display for notification of a new recommendation, but it does not sound when a second recommendation is displayed if the first recommendation has not been followed.
Several combinations of recommendations are possible (see page C-4-17).



Suggestion (1)
Shift the splitter to high range without changing gear.

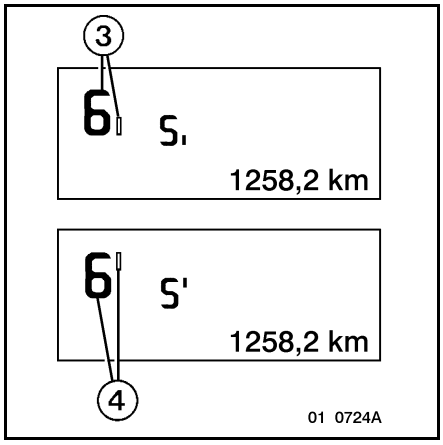
Suggestion (2)
Shift the splitter to low range without changing gear.



Suggestion (3)
Engage the gear shown while leaving the splitter in low range.

Suggestion (4)
Engage the gear shown while leaving the splitter in high range.

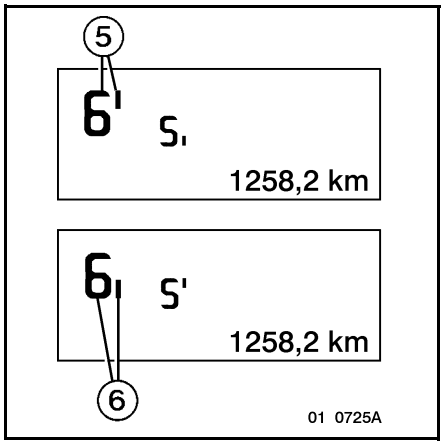
Splitter light (3 - 4) empty: no change in splitter position. Splitter light (5 - 6) full: change in splitter position.



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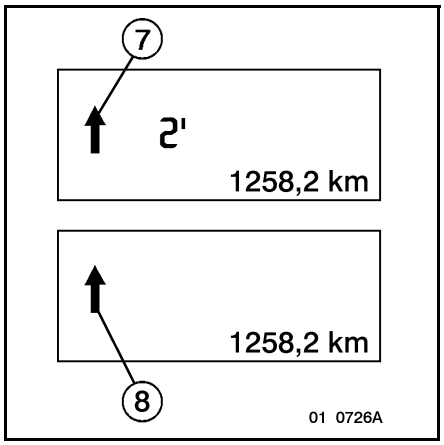
Suggestion (5)
Engage the gear shown and shift the splitter to high range.

Suggestion (6)
Engage the gear shown and shift the splitter to low range.



Suggestions (7 - 8)
Engage a suitable higher gear.

Modification of parameter definitions
On leaving the works, the beeper is activated by default. It is possible to adjust the sound volume (see page B-2-39).
You can activate or inhibit the beeper according to the information display menu procedure (see page B-2-39).



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C4-19 Driving

ZF 16S 181 / 16S 221 gearbox

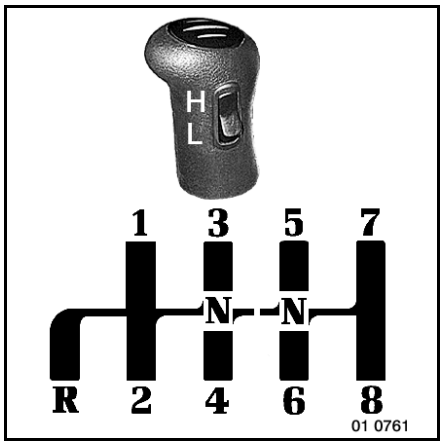
Depending on your vehicle's equipment

The gearboxes are fitted with an oil pump for lubrication, therefore coasting downhill in neutral (free-wheeling) will cause rapid damage to the gearbox (for towing, see page F-7).

Always start off in first gear, then change through the gears in a regular sequence to prevent premature wear of the clutch.

Changing gear
Gear pattern

Gearbox
Driving
Since the gearbox is synchronized, gear changes should be made without double-declutching



The gear lever is spring loaded in the neutral gate to the 3rd/4th gear plane in low range and to the 5th/6th gear plane in high range, which in effect gives two neutral positions. It is therefore necessary to overcome this bias when selecting 1st/2nd and 7th/8th gears. The shift from low to high range and vice versa is activated pneumatically when the gear lever passes over a detent mechanism situated between the 3rd/4th and 5th/6th gear planes. This mechanism is easily negotiated and the range changed by sharply tapping the gear lever through the central portion of the neutral gate with the palm of your hand.
Do not change from 3rd to 4th gear at speeds in excess of 30 km/h.

This gearbox is equipped with an oil lubrication pump, therefore coasting downhill in neutral (free-wheeling) will cause rapid damage to the gearbox (for towing, see "Towing" paragraph).

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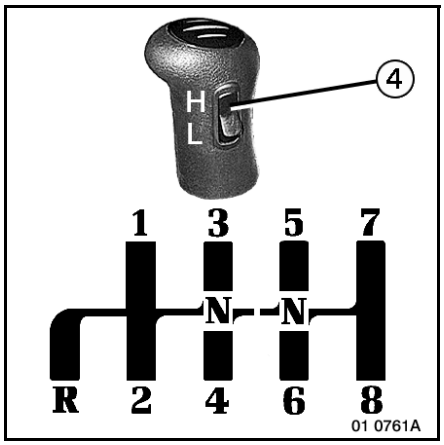
Driving

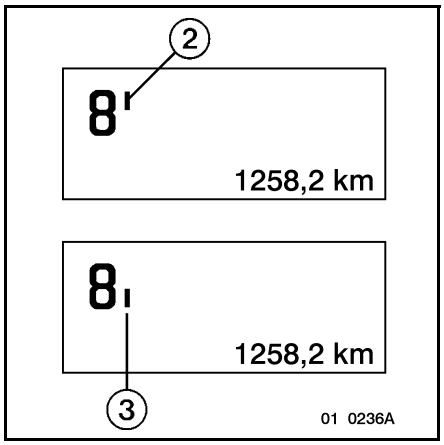
Depending on your vehicle's equipment

The splitter can be shifted from "low/high" range and vice versa at all speeds and to do so, proceed as follows:

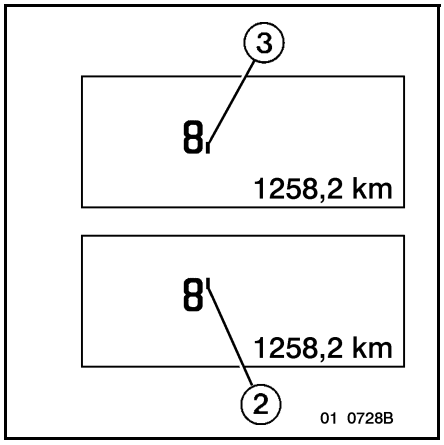
Flip the gear lever switch (4) to position "H", fully depress the clutch pedal, release the clutch pedal: splitter high range is engaged and warning indication (2) is displayed while it is in use.

To engage splitter low range, flip the gear lever switch (4) to position "L", fully depress the clutch pedal, release the clutch pedal: splitter high range is engaged and warning indication (3) is displayed while it is in use.





Pre-select splitter "low/high" range: the splitter changes from low to high range, and vice versa, only when the clutch is depressed.



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C4-21 Driving

Optidriver 2 gearbox

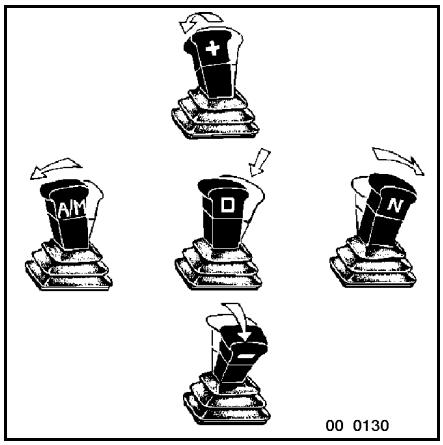
Depending on your vehicle's equipment

The gearboxes are fitted with an oil pump for lubrication, therefore coasting downhill in neutral (free-wheeling) will cause rapid damage to the gearbox (for towing, see page F-7).

"Optidriver 2" system

The "Optidriver" system makes it possible to automatically determine, then engage a gear suited to vehicle load, road contour, accelerator pedal position and activation or not of the retarders. It improves driving smoothness and safety by reducing driver fatigue, as he no longer has to concentrate on traffic conditions.

The **Optidriver 2** system can be used in 2 different ways: in integral automatic mode or in manual mode. You are strongly advised to use the integral automatic mode in order to benefit from optimum management of the powertrain. In the event of system trouble, you can benefit from a fall-back (limp home) mode.



First contact with Optidriver 2

Start-up

Gear lever in neutral.
Start the engine.
Parking brake engaged, press the gear selector to move it from position "N" to position (D).
The moving off gear is engaged.
Depress the brake pedal and apply the parking brake.
Release the brake pedal and depress the accelerator pedal: the vehicle moves forwards.

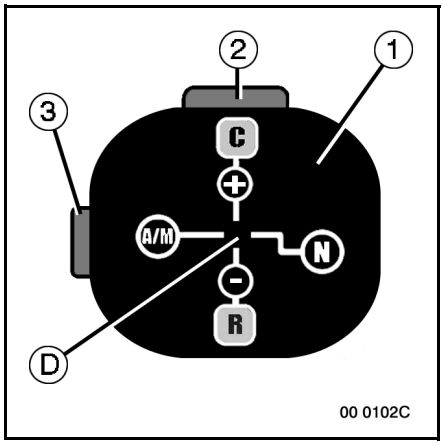
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Driving

RH drive vehicle: Button (3) is located on side "N".

It is recommended to not change the position of the accelerator pedal when changing gear.

The system refuses to engage gears that may lead to overspeed.



Manoeuvring

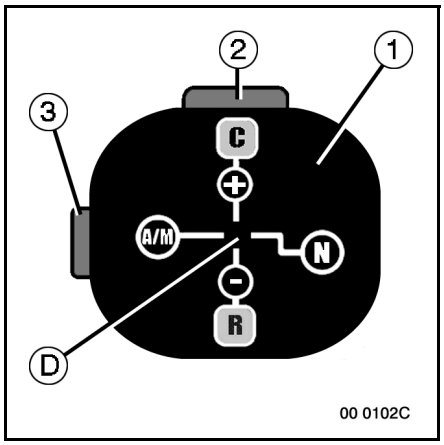
Changing to 1st low

With the vehicle at a standstill: nudge the selector forwards (+) while simultaneously pressing button (2).

Changing to reverse

With the vehicle at a standstill: nudge the selector rearwards (-) while simultaneously pressing button (2).

The system engages reverse low range reverse R1. With reverse gear engaged: nudge the selector rearwards (-) to shift from R1 to R2 (or from R2 to R3) and forwards (+) to shift from R2 to R1 or from R3 to R2.



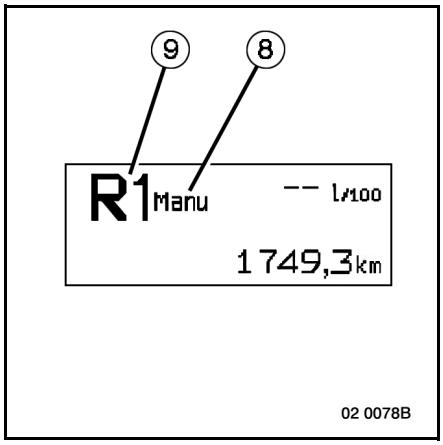
Shifting from R4 to R3 or from R2 to R1 can be carried out while the vehicle is moving.

High range reverse gears R3 and R4 should not be used for manoeuvring. It is recommended to not move off in R4.

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Driving

When you change to reverse gear, the information ***"Manu" (8)*** *and* ***"R" (9)*** *are displayed. Conduct your manoeuvre and move the gear selector (1) in the direction of mark* ***"AM"*** *to change over to integral automatic mode.*



Manoeuvring mode

To easily couple or uncouple a semi-trailer, adjust the trailer landing legs so that the load on the tractor fifth wheel is minimal
(see page D1-2).

Stopping

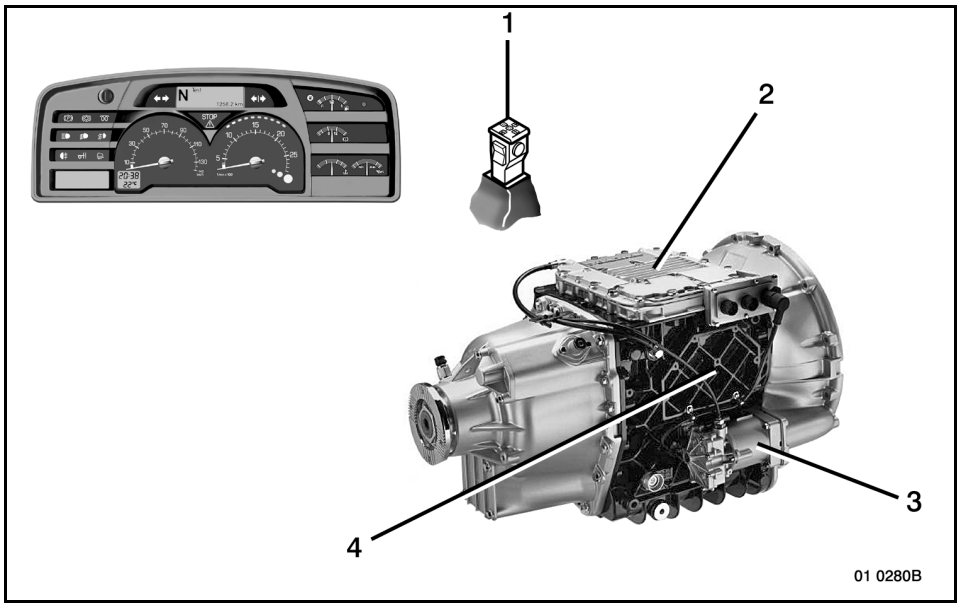
Lock the selector in neutral before and apply the parking brake before leaving the vehicle.

When the engine is shut-down, the gearbox is in neutral, so it is impossible to change gears.

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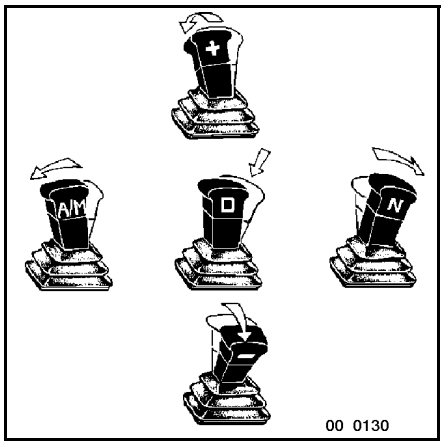
C4-24 Driving

Description of Optidriver 2



Optidriver 2 consists of 4 major components:
- A manual gearbox incorporating dog clutches (4),
- A gear control module (2) with integrated ECU,
- A clutch control device (3),
- A gear selector (1) with integrated ECU.

Gear selector
Right-hand drive vehicles: Button (3) is located on side **"N"**.
The selector can be moved in 4 directions starting from the central position (D):
Right side: position "N"
The gearbox is in neutral. Press the selector to unlock and move it to the central position (D).
Forwards: position "C/+"
Serves to correct the automatic driving mode by changing into higher gears.
Rearwards: position "R/-"
Serves to correct the automatic driving mode by changing into lower gears

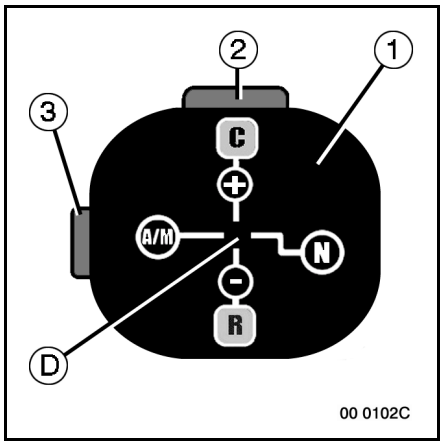


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Driving

Left side: position "A/M"
Nudge the selector to change over from automatic mode to full-time manual mode and vice versa.

*The selector locks only in position **"N"**. For each of the other manipulations, it returns automatically to the central position (D).*



Moving off gear
Move the selector from position **"N"** to position (D).
In automatic made, the system engages the optimal gear in relation to vehicle load and road contour.

The system serves to select moving off gears only as high as 6th low.

It is possible to change the moving off gear, but the use of an unsuitable higher gear may lead to premature clutch wear.

Start-up
Gear lever in neutral.
Start the engine.
Parking brake engaged, press the gear selector to move it from position "N" to position (D).
The moving off gear is engaged.
Depress the brake pedal and apply the parking brake.
Release the brake pedal and depress the accelerator pedal: the vehicle moves forwards.

If the accelerator pedal is not depressed after the parking brake is released, the vehicle may move forwards: use the brake pedal to hold it on the service brake.

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Moving away uphill
Start the engine; the correct moving off gear will be engaged upon changeover to mode (D).
Depress the brake pedal and release the parking brake.
The vehicle moves forward.

YOUR VEHICLE MAY BE EQUIPPED WITH A "MOVING AWAY UPHILL" AID TO HELP IN MOVING AWAY ON UPHILL GRADIENTS. WHEN THIS FEATURE IS ACTIVATED (SWITCH (B2)), THE BRAKES ARE KEPT APPLIED FOR 1 SECOND AFTER THE BRAKE PEDAL IS RELEASED. IF NO ACTION IS TAKEN BEFORE THIS PERIOD ELAPSES (ACCELERATION, BRAKE PEDAL APPLIED AGAIN), THE BRAKES WILL NO LONGER BE KEPT APPLIED AND THE VEHICLE WILL START TO ROLL BACKWARDS.

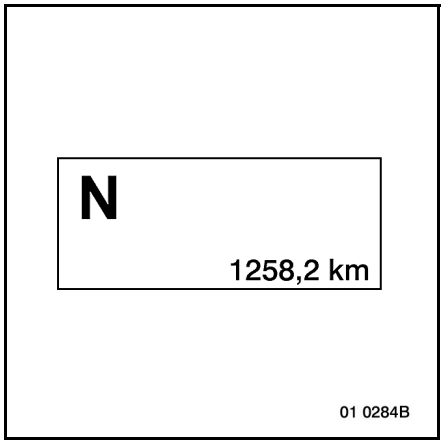
See page C-4-38

Moving away downhill
Start the engine and release the parking brake.
the vehicle moves forward (the clutch engages

*If you move the selector from position **"N"** to position (D) while the vehicle is moving forwards: the system chooses a gear suited to the travelling speed and the clutch engages.*

It is forbidden to let the vehicle move backwards with the gear selector in neutral.

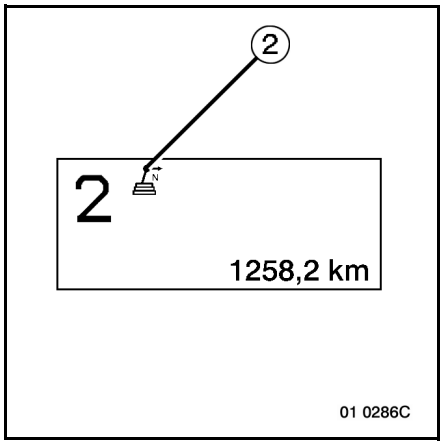
Changing into neutral
The gearbox changes automatically into neutral when the ignition is switched on or switched off (engine shut-down).



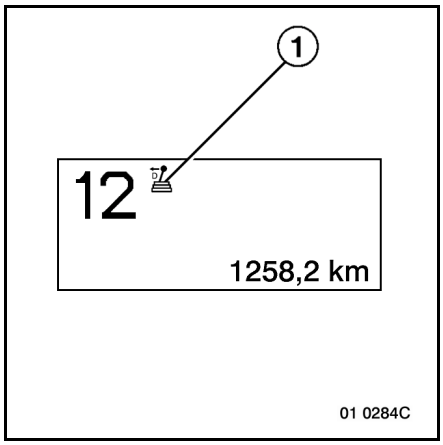
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Driving

It is possible to start the engine with the gear selector in position (D). However, it is essential to move the gear selector to position "N" then back to position (D) in order to engage a gear.



When driving at a speed above 90 km/h, any changing into neutral is forbidden. The gear engaged remains engaged, a buzzer sounds and a pictogram (1) is displayed to invite the driver to move the gear selector to position (D).



Engine brake

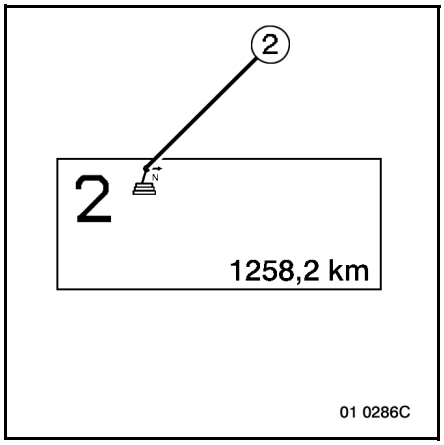
It is not necessary to disable the engine brake when you change gear. The system disables it automatically, then re-activates it after the gear has changed.

The engine brake is activated by the system during certain gear changes to improve the gear change time.

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Driving

Stopping



With the engine running, before leaving the vehicle:

- **Move the gear selector to position "N".**
- **Engage the parking brake.**

Opening of the driver's door with the gear selector in position (D) is signalled by a buzzer sounding and display of a pictogram (2) inviting the driver to put the gear selector back to position **"N"**.

Final stopping of the vehicle

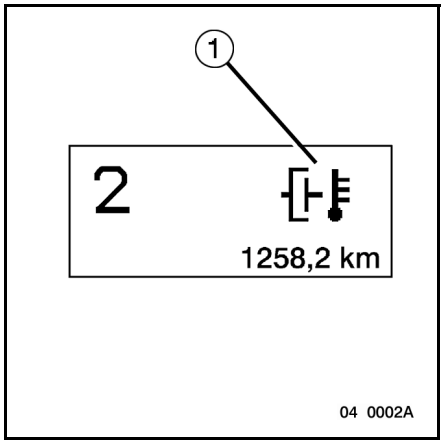
When the vehicle has come to a complete halt, engage the parking brake, lock the gear selector in position **"N"** and stop the engine with the ignition key.

Protection of the clutch

For the most part in manoeuvring mode, any overheating of the clutch is signalled by the display of a warning pictogram (1) and a message "CLUTCH OVERHEATING".

Excessive use of slipping the clutch is no longer possible:

- Upon acceleration, the clutch is engaged and may cause the engine to stall.
- If you release the accelerator pedal, the clutch is released.



To void clutch wear:

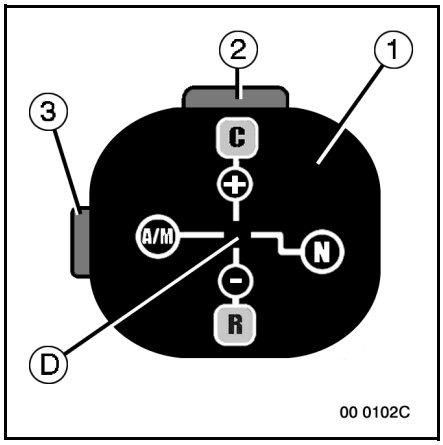
- *Accelerate freely to move away.*
- *Move the gear selector to position **"N"** if you stop for more than a minute.*

Protection against overspeed

The system prevents gears from being engaged that could lead to engine overspeed.

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Driving



Roller bench mode (2 wheels)
After the vehicle has been put into place on the rollers
Vehicle stationary, engine running:

- Move gear selector (1) deform position "N" to position (D).
- Accelerate fully.

The engine will accelerate to its maximum speed. After a few seconds, the gears will be changed automatically.
The gearbox has changed over to "roller bench" mode.
Information:

- Upshifting: The gears change 2 by 2 at around 1700 rpm.
- Downshifting: upon deceleration, the gears change at around 1100 rpm.

The gear changes are not optimal. The roller bench mode does not allow the application of fuel consumption saving measures.

Quitting roller bench mode
The system quits roller bench mode as soon as the front wheel of the vehicle rotate. The normal gear changing mode is re-initialized.

Setting into service at low temperature
Obey the following instructions:

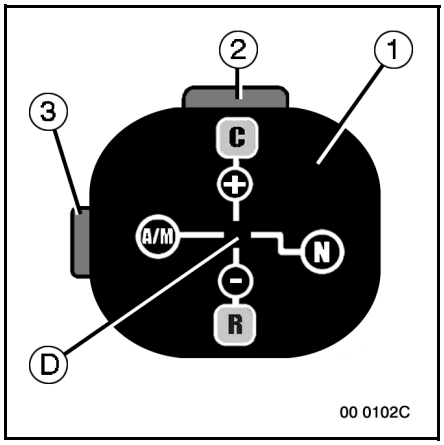
- At temperatures below - 20°C, let the engine run for 10 minutes in order to reach the gearbox operating temperature.

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C4-30 Driving

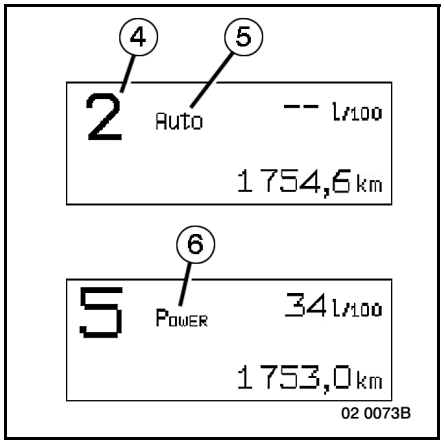
Integral automatic mode

Whenever the engine has been started, when you move the gear selector from position "N" to position (D), the appropriate moving off gear (4) and the information **"Auto"** (5) are displayed by default.



The gearbox shifts through one or several gears automatically, according to the position of the accelerator pedal.

On uphill runs, let gear changing be managed by the system even though the engine speed seems too low to you.

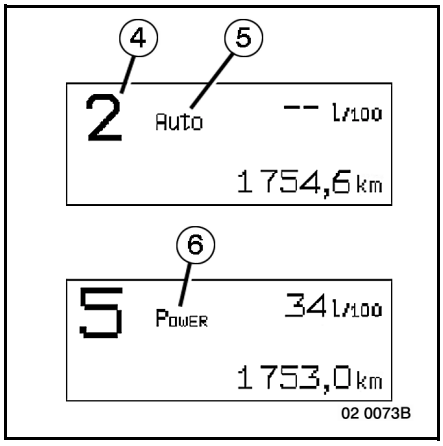


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Activation of the "Power" feature

When you wish to overtake and get more power to obtain maximum vehicle mobility, depress the accelerator pedal: the information **"Power"** (6) is displayed.

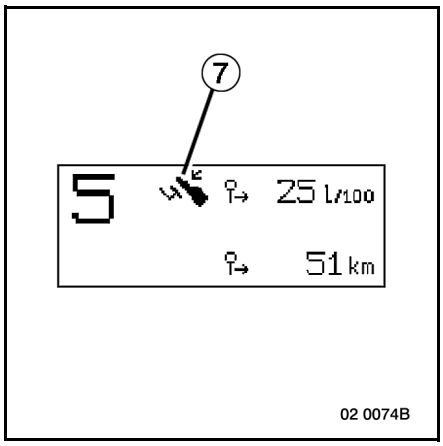
De-activation of the "Power" feature
Gently release the accelerator pedal: the information **"Power"** (6) is erased.



*The **"Power"** feature accentuates fuel consumption.*

Use on downhill runs

In slowing down phase (brakes or retarder(s) activated), if you are negotiating a steep downhill section with the engine speed high (close to engine overspeed) and with the accelerator pedal fully released, no gear is changed automatically. This serves to hold back the vehicle. In this case, warning pictogram (7) is displayed meaning that the vehicle must be slowed down using the brakes or the retarder(s).



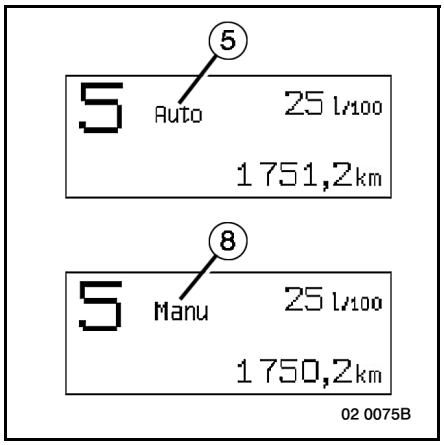
With the retarder(s) inactive and the brakes not applied, if you are negotiating a steep downhill section, the system will automatically change down the gears to protect the engine against overspeed.

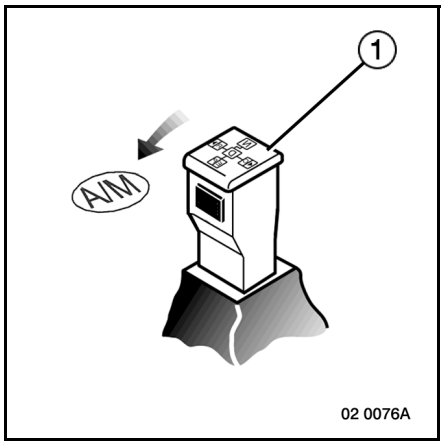
If you press hard down on the accelerator pedal, maximum mobility is demanded and the gearbox will change up through several undesired gears.

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Full-time manual mode

To change over from automatic mode (information **"Auto" (5)** displayed) to full-time manual mode (information **"Manu" (8)** displayed) or vice versa, move gear selector (1) in the direction of position **"A/M"**. This changeover can be made with the vehicle stationary or moving.





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Driving

Changing gear

Changing 1 gear:

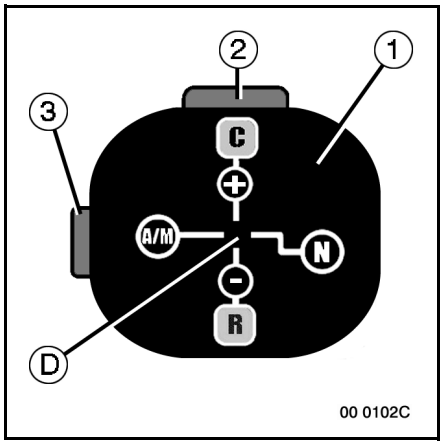
- To change up 1 gear, move the gear selector (1) forwards in the direction of (C/+), while pressing button (3).

Changing 2 gears:

- To change up 2 gears, move the gear selector (1) forwards in the direction of (C/+).

Changing 3 gears:

- To change up 3 gears, move the gear selector (1) forwards in the direction of (C/+) and hold it there for a minimum time of un temps minima 1 second.



Changing down

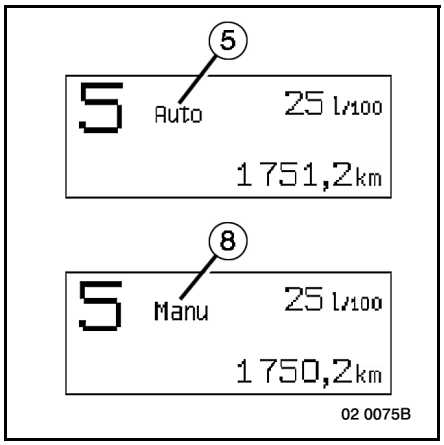
To change down 1 or more gears, proceed in the same way as for changing up, by moving gear selector (1) rearwards in the direction of (R/–).

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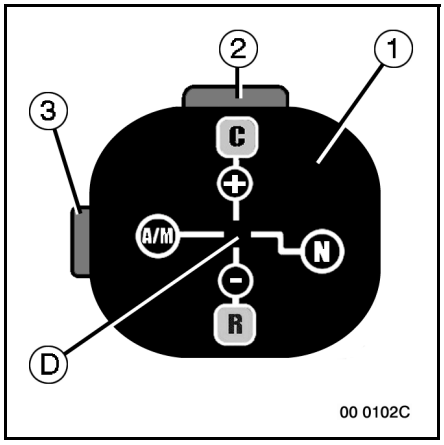
Part-time manual mode

The vehicle is moving, you are in **"Auto"** mode, information (5) is displayed. If you wish to change the gear engaged by the system, to anticipate a change in the road contour, you can push the gear selector (1) in the direction of **(C/+)** or **(R/-)**. The information **"Manu" (8)** flashes: you are in part-time manual mode. To change back to **"Auto"** mode, you have several courses of action:

- Fully release the accelerator pedal and then depress it again.
- Actuate the **"cruise control"** feature.
- Push the gear selector (1) in the direction **"A/M"**.



Stopping of the vehicle causes return to automatic mode.



Fall-back mode (lever disconnected)

You can change into neutral by applying the parking brake.
You can engage the moving off gear by releasing the parking brake then depressing the brake pedal.
In both cases, you can make your way to the nearest RENAULT TRUCKS service point or dealer.

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Driving

Reversing buzzer

Depending on your vehicle's equipment

When you change into reverse gear, a buzzer sounds to warn other road users and passers-by that the vehicle is reversing.

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"EBS" braking system

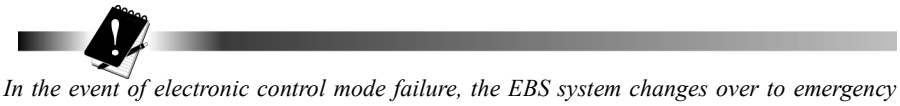
The "EBS" system manages vehicle braking and assures anti-lock braking (ABS) and anti-slip regulator (ASR) features.

Anti-lock braking system "ABS"

This system prevents the roadwheels from locking when you apply the brakes sharply.

- Vehicle coupled to a trailer with ABS system: below the threshold, variable from 5 to 15 km/h, depending on the system installed, warning pictogram (G11) should be displayed. Above the limit, it should disappear.
- Vehicle coupled to a trailer without ABS system: warning pictogram (G11) is not displayed.

In the event of system trouble or malfunction (warning pictogram(s) (G11 - G12) are displayed, its action is overridden and the vehicle reverts to conventional braking. Quickly make your way to a RENAULT TRUCKS service point or dealer to get the system overhauled .



In the event of electronic control mode failure, the EBS system changes over to emergency compressed air mode and a loss of feel may be experienced when your depress the brake pedal. The maximum braking power is still available when you fully depress the brake pedal.

Anti-slip regulator "ASR"

When you move off or during acceleration, this system prevents the roadwheels from slipping, whatever the condition of the road surface.

The system enters into action:

- If a roadwheel spins, it applies the brakes to that wheel to lower its speed to that of the other wheel on the same axle.
- If both roadwheels on the same axle spin, it limits the engine speed, then applies the brakes to the wheel that is still spinning to lower its speed to that of the other wheel.

On the road

During operation of the ASR system, warning pictogram (G45) is displayed.

On surfaces giving poor wheel grip (snow, ice, gravel...), it is possible to push back the operating threshold of the ASR system by actuating switch (C1). Warning pictogram (G45) is displayed.

Emergency braking aid

The system serves to detect an emergency braking situation by measuring the speed of depression of the brake pedal.

In such case, the braking pressures are scaled down in order to obtain more efficient braking. This feature ensures having maximum power available for emergency braking.

When emergency braking is detected, the hazard lights are automatically switched on. To stop them, actuate switch (B1) twice.

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Brakes temperature alert
If the temperature of the brakes is too high, warning pictogram (G14) appears on the information display (G).
It is then necessary to adapt the road speed and your style of driving. Use the retarder(s) if the vehicle is thus equipped.

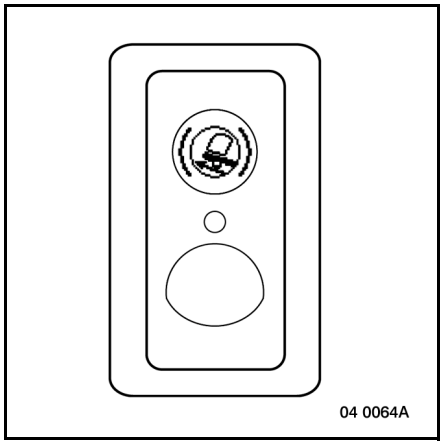
Reduced braking performance alert
If the system detects a significant drop in braking performance of the road combination, warning pictogram (G12) appears on the information display (G). It works together with warning light (J).
Get the condition of the tractor and trailer braking system checked out by a RENAULT TRUCKS service point or dealer (brake-testing bench test).

Defective brakes alert
If the system detects a significant drop in braking performance on one of the tractor roadwheels, warning pictogram (G12) appears on the information display (G). It works together with warning light (J).
Get the condition of the roadwheel braking system concerned checked out by a RENAULT TRUCKS service point or dealer (brake-testing bench test).

Moving away uphill aid
This feature serves to simplify uphill moving off manoeuvres by keeping the vehicle brakes applied during the moving off phase.

Use this feature only when moving away uphill.
This feature is not a parking system and should not be used as such.

Vehicle with manual gearbox

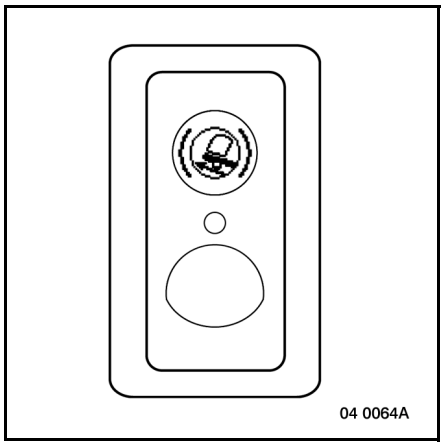


1– Keep the vehicle stationary by holding it on the brakes.
2– Keep the clutch pedal depressed.
3– Select a suitable gear for moving away.
4– Press switch (B2); the switch warning light comes on.
5– Release the brake pedal; the vehicle is held automatically on the brakes. Warning pictogram (G21) appears on the information display (G) for as long as the vehicle is held automatically on the brakes.
6– Move away while accelerating and releasing the clutch pedal. The brakes are released automatically when the engine torque is sufficient or when the clutch pedal is fully released.
7– Press the switch again to disable the feature; the switch warning light goes out.

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The feature is automatically disabled if the road speed exceeds 30 km/h or if the ignition is switched off with the ignition key.

Vehicle with Optidriver 2 gearbox



1– Keep the vehicle stationary by holding it on the brakes.
2– Press switch (B2), the switch warning light comes on.
3– Release the brake pedal; **the vehicle is held automatically on the brakes for 1 second**. Warning pictogram (G21) appears on the information display (G) and a buzzer sounds for as long as the vehicle is held automatically on the brakes.
4– Move away while accelerating and releasing the clutch pedal. The brakes are released automatically when the engine torque is sufficient or when the clutch pedal is fully released.
5– Press switch (B2) again to disable the feature; the switch warning light goes out.

The feature is automatically disabled if the road speed exceeds 30 km/h or if the ignition is switched off with the ignition key.

WHEN THE "MOVING AWAY UPHILL" FEATURE IS ACTIVATED (SWITCH (B2)), THE BRAKES ARE KEPT APPLIED FOR 1 SECOND AFTER THE BRAKE PEDAL IS RELEASED. IF NO ACTION IS TAKEN BEFORE THIS PERIOD ELAPSES (ACCELERATION, BRAKE PEDAL APPLIED AGAIN), THE BRAKES WILL NO LONGER BE KEPT APPLIED AND THE VEHICLE WILL START TO ROLL BACKWARDS.

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Once selected with switch (B2), the feature will be active whenever the vehicle stops as long as it is not disabled by pressing switch (B2) again or by switching off the ignition with the ignition key.

Roller bench testing

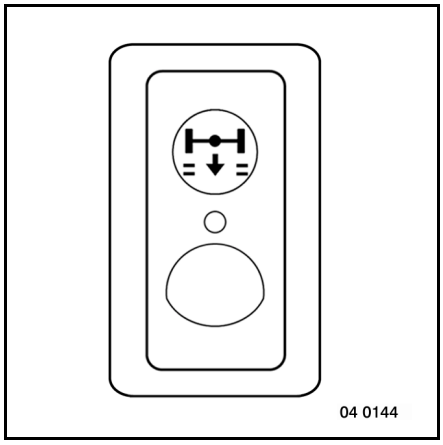
When the vehicle is to be tested on a roller bench, it is necessary to disable certain monitoring checks made by the EBS system on roadwheel speeds.

Activation of the mode:

- By pressing ASR switch (A3) for more than 5 seconds. Warning pictogram (G46) appears on the information display (G).

De-activation of the mode:

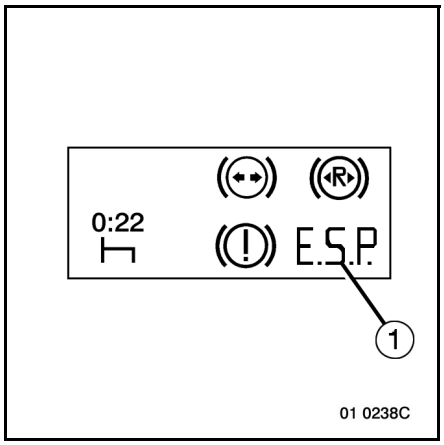
- When the ignition is switched off with the ignition key.
- By pressing ASR switch (A3) again.
- Automatically, when the front roadwheels speed exceeds 12 km/h.



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"ESP" (electronic stability program) system

Depending on your vehicle's equipment



Warning pictogram (1) (G20) is displayed for 3 seconds when the ignition is switched on to indicate that the vehicle is equipped with the ESP system.

"ESP": trajectory monitoring

This is a stability monitoring system to reduce risks of skidding and tip-over.

If the system detects skidding, the acceleration is reduced and the brakes are automatically applied on all the roadwheels to enable the vehicle to maintain its trajectory.

Active retarders are automatically inhibited in the ESP phase.

Warning pictogram (G18) is illuminated during the ESP phase.

"ESP": anti tip-over

If the system detects a risk of tip-over, the acceleration is reduced. If such reduction is insufficient, the system automatically applies the vehicle brakes to reduce the road speed.

The feature is optimized when it is combined with a trailer equipped with ABS or EBS.

Warning pictogram (G19) appears on the information display (G) during the ESP phase and disappears 5 seconds after it has finished.

Use the vehicle in the same way as a vehicle without ESP.

ESP reduces risks of tip-over and skidding. However, a vehicle may tip over if the load features a very high centre of gravity, if it hits a kerb at high speed or if the driving style is inappropriate.

The vehicle can also skid on icy roads in spite of it being equipped with ESP.

DO NOT USE A VEHICLE EQUIPPED WITH ESP ON TRACKS WITH VERY HIGH RAISED EDGES (TEST CIRCUIT TYPE).

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Driving



USING A VEHICLE ON ROADS WITH VERY HIGH RAISED EDGES MAY LEAD THE ESP TO ENTER INTO ACTION WITH DANGEROUS CONSEQUENCES. IF THE VEHICLE HAS TO BE USED ON THIS TYPE OF ROAD, CONSULT A RENAULT TRUCKS SERVICE POINT OR DEALER TO INHIBIT THE ESP FEATURE.



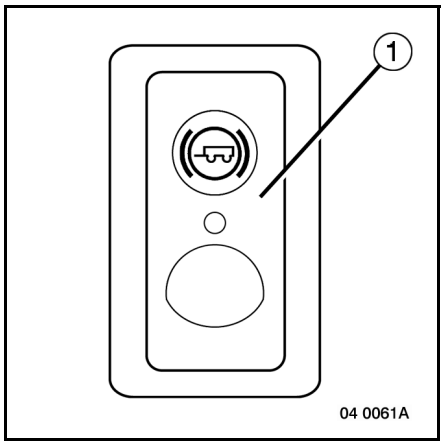
This feature is a supplementary aid for critical driving.
However, it does not push back the limits of the vehicle.
It should not incite the driver to drive faster. It should in no way replace the vigilance or responsibility of the driver during manoeuvres (the driver must always be attentive to sudden events that may arise during driving).

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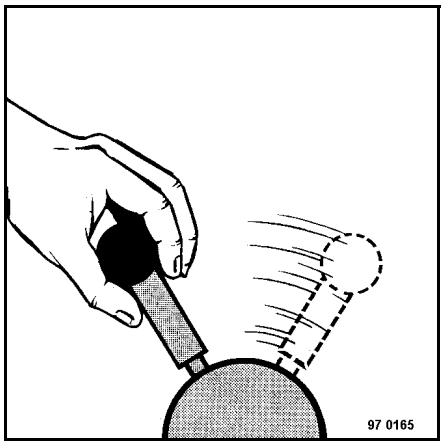
Trailer brake

Depending on your vehicle's equipment

Static trailer brake
Keep switch (1) pressed to apply the trailer brakes.
The brakes will only be applied if the road speed is below 4 km/h .
The brakes will be release if the road speed exceeds 7 km/h or if the switch is released.



Trailer brake valve
If the tractor is equipped with a lever actuating the trailer brake valve and thus enabling the tractor-trailer unit to be braked by the towed trailer, only use this facility under exceptional circumstances.
Application
Pull the lever.
Release
Release the lever, it automatically returns to its initial position.



Emergency brake

In the event of failure of the service brakes on an axle, the other axle ensures the efficiency of emergency braking.

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Driving

Parking brake

The parking brake valve acts simultaneously on the rear axle of the tractor and on the trailer.

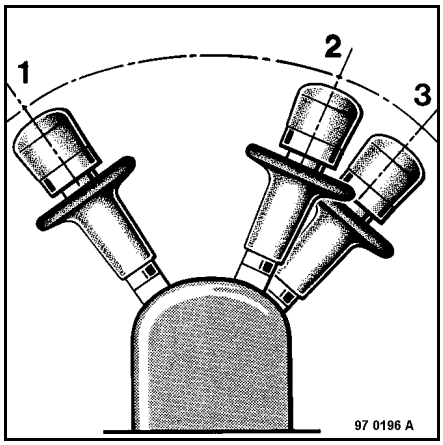


Release

Lift up the locking sleeve and move lever (4) from position (2) to position (1).
Warning light (B) goes out.

Application

Move lever (4) from position (1) to position (2) (negotiate the hard spot).
Make sure the lever is correctly locked in position (2).
Warning light (B) comes on.
Before leaving the vehicle, move the lever to the **"Test"** position to verify the efficiency of the parking brake.



Testing

Press the lever and move it from position (2) to position (3). This position releases the trailer brakes and the road combination is immobilized by the tractor alone. This position also serves to check that the tractor brakes alone are capable of immobilizing the combination. Hold this position for 30 seconds.
As soon as the lever is released, it automatically returns to the "Parking" position (2).

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Driving

Depending on your vehicle's equipment

Parking brake with safety device (Scandinavian brakes)
Release
Lift up the locking sleeve and move lever (4) from position (2) to position (1).
Warning pictogram (G26) is displayed, inviting you to depress the brake pedal or the accelerator pedal.
Warning light (B) goes out.
Moving away on hills
To make for easy moving away on hills, you can use the parking brake until it reaches the hard spot, without pulling past it. As soon as the lever is released, it automatically returns to position (1).



If warning light (B) stays on during release of the parking brake, it may be due to lack of circuit air pressure.
A buzzer sounds and pictogram (G16) is illuminated on the information display to warn the driver that the driver's side door is open or 5 seconds after the ignition has been switched off that the parking brake has not been locked.

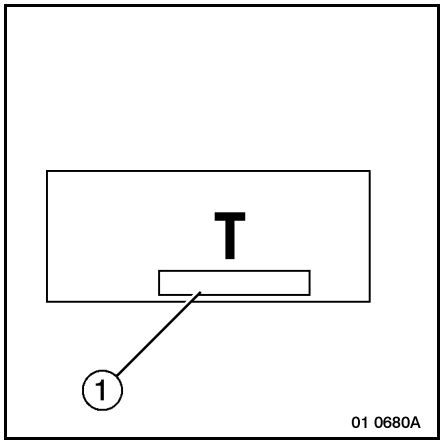
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C5-1 Driving

Stopping

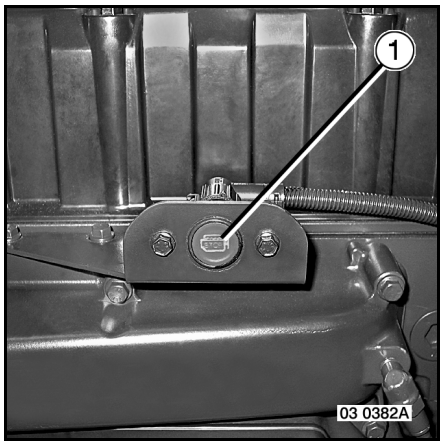
Stopping the engine

Apply the parking brake and move the gear lever into neutral. Always wait for the engine to return to idling speed before actuating the shut-down control.
To stop the engine, switch off the ignition.
Disengage the master switch to cut the current.
Never turn off the master switch while the engine is running to avoid damage to the alternator and the vehicle's electronic components.
If the tachograph tray is open when the ignition is switched off, the buzzer sounds and the message (1) "tachograph tray open" is displayed for around 6 seconds. Close the tachograph tray before getting out of the vehicle.



If the vehicle is to be laid up for a prolonged period of time (more than 10 days), disconnect the circuit by means of the circuit-breaker or remove the fuse (F7) to avoid discharging the batteries through the tachograph.

Engine stop control (cab tilted (1)).



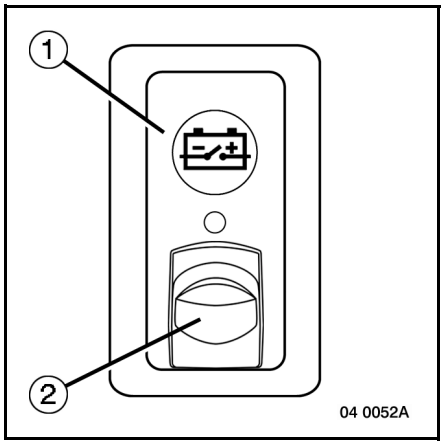
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C5-2 Driving

ADR vehicle (transport of dangerous materials)

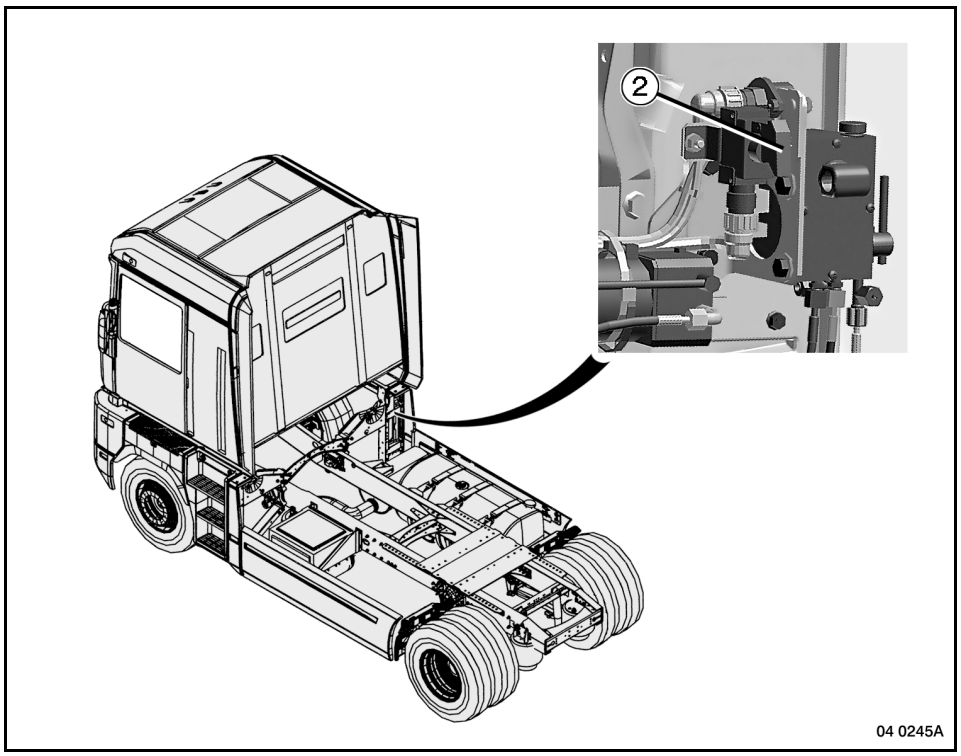
It is essential to obey engine stopping instructions according to the situation in which you find yourself. Any other procedure may prove to be dangerous.

Switch (A1) inside the vehicle
Unlock switch (1) by pushing tab (2). Press switch (1). The "ADR" cut-out cuts off the vehicle's electrical power supply.



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C5-3 Driving



Control outside the vehicle
Lift up guard cover (2), lower the control; the engine stops. The "ADR" cut-out cuts off the vehicle's electrical power supply.
(see page(s) B1-23).

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C5-4 Driving

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C6-1 Driving

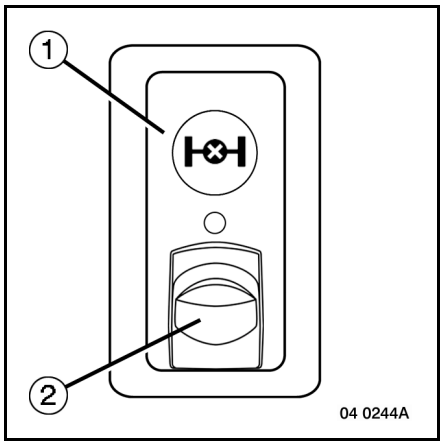
Driving on difficult terrain

"Rear drive axle(s)" diff. lock

Depending on your vehicle's equipment

Do not use:

- On ground giving a firm grip (roads, dry or rocky ground).
- On bends.
- When the vehicle is equipped with anti-skid device (snow chains, etc...).



Engagement

On ground giving poor grip or when approaching a slippery section of the roadway (while driving, without altering your driving speed), push tab (2), press switch (1) (D2); warning pictogram (G44) is displayed.

Never engage the diff. lock when one of the drive wheels is slipping. In such case: release the clutch and operate the switch.

Engage the clutch and do not accelerate until the warning light comes on.

Disengagement

Push tab (2), press switch (1) (D2). Warning pictogram (G44) should disappear. If it does not, gently lock the steering over to the right and to the left, while driving very slowly, to enable release of the dog clutch and put out the warning light(s).

Avoid engaging the inter-wheel diff. lock at speeds above 30 km/h.

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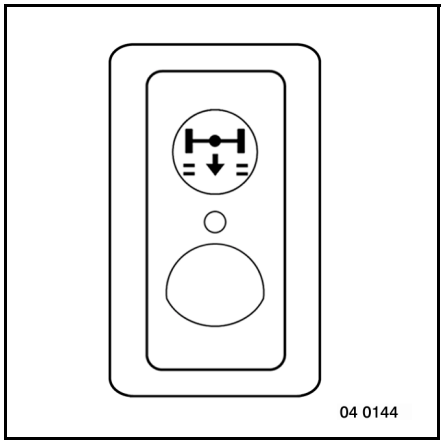
Anti-slip regulator (ASR)

When you move off or during acceleration, this system prevents the roadwheels from slipping, whatever the condition of the road surface.
The system enters into action:

- If a roadwheel spins, it applies the brakes to that wheel to lower its speed to that of the other wheel on the same axle.
- If both roadwheels on the same axle spin, it limits the engine speed, then applies the brakes to the wheel that is still spinning to lower its speed to that of the other wheel.

On the road

- During operation of the ASR system, warning pictogram (G45) is displayed.
- On surfaces giving poor wheel grip (snow, ice, gravel...), it is possible to push back the operating threshold of the ASR system by actuating switch (C1). Warning pictogram (G45) flashes.



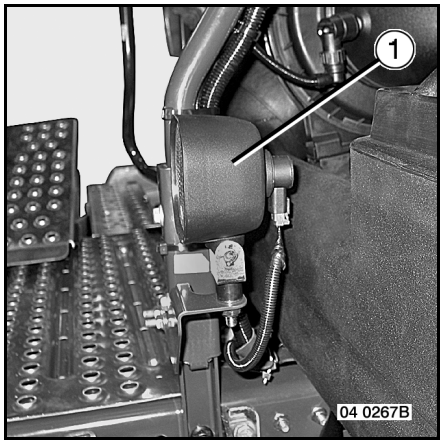
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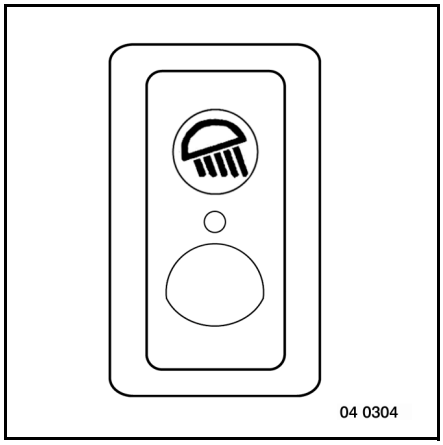
D1-1 Use of the equipment

Trade equipment

Working spotlight (tractor)

To switch on the working spotlight (1), press switch (D1). Warning pictogram (G47) is displayed.





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D1-2 Use of the equipment

Fifth wheel coupling



Only fifth wheels mounted by RENAULT TRUCKS are covered in this document.
For using fifth wheels mounted as adaptation, refer to the manufacturer's brochure.
These instructions are only a reminder as they form part of the rules of the road haulage profession. Use of the locking handle and safety system: see pages D1-4 - D1-7).

Hitching

Prior to hitching the trailer, check that:

- the fifth wheel locking system is open;
- the support face of the semi-trailer is slightly below the fifth wheel skid plate (about 5 cm). If necessary, adjust the height of the semi-trailer or of the tractor if it is equipped with air suspension;
- the skid plate, the locking system and the kingpin are plentifully greased;
- there is no foreign matter on the friction surfaces;
- the trailer is immobilized by its parking brake or by wheel chocks.

Reverse the tractor slowly into the alignment of the semi-trailer until the skid plate comes into contact with the semi-trailer. Engage the vehicle under the semi-trailer until the fifth wheel locks automatically.

Visually ensure that:

- the fifth wheel is properly locked and in particular that the unlocking prevention system (snap-hook, lock pin, safety lever or catch) is engaged (see pages D1-4 - D1-7).
- the semi-trailer is applied over the full extent of the skid plate.

Carry out a pulling test (with the semi-trailer brake applied, begin to move away gently to ensure that the kingpin is correctly locked in the fifth wheel: the tractor must be held by the trailer).

Connect the yellow brake line, then the red brake line, in sequence.

Connect the hydraulic and electric pipes and lines.

Release the semi-trailer parking brake, according to the assembly.

Raise the landing legs and return the suspension to the "normal" position.

The vehicle is ready to move off.

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D1-3 Use of the equipment



If the fifth wheel is provided with an instruction plate, scrupulously follow the directives it contains.
Checks on correct locking (visual and towing test) are vital. They avoid inadvertent unhitching of the semi-trailer and all serious consequences that may entail. If the coupling has not been performed correctly, repeat the hitching operation in full.
Vehicles equipped with double pivots: free the double pivot system when driving on hilly ground.

Unhitching
Immobilize the semi-trailer on flat and stable ground.
Apply the parking brake and scotch the semi-trailer wheels with chocks.
Lower the landing legs and raise the semi-trailer to the coupling level.
Disconnect the red brake line, then the yellow brake line, in sequence.
Disconnect the electric and hydraulic lines and pipes.
Take the strain off the coupling by reversing the tractor very slightly and operate the handle in the direction of "unlocking".
Move the tractor forwards.



Vehicles with air suspension: see page D1-8.

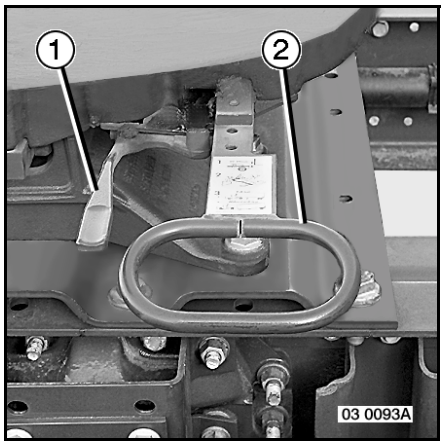
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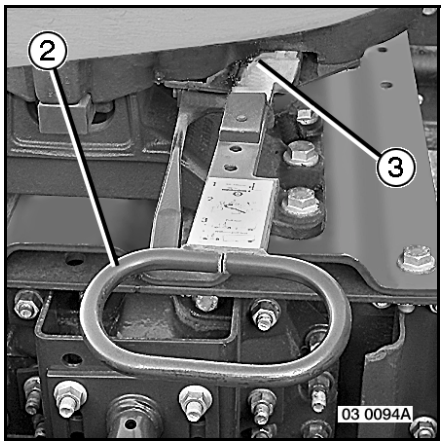
D1-4 Use of the equipment

"GEORG FISCHER" fifth wheel coupling

Unlocking
Press down on lever (1). Pull handle (2) towards yourself to the left. Hook handle (2) on the edge (3) of the skid plate.

Locking
Locking takes place automatically when the lever (2) is returned to its initial position during the hitching phase.

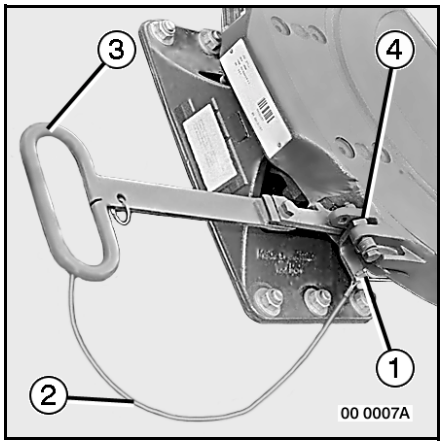




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D1-5 Use of the equipment

"JOST" fifth wheel coupling



"JOST" fifth wheel couplings - all models except "JOST 42"
Unlocking
Lift up the bolt (1) by pulling cable (2).
Swing lever (3) forwards and pull it fully outwards. The lever (3) immobilizes in the "unlocking" position.

Locking
Locking takes place automatically when the lever (3) is returned to its initial position during the hitching phase.

Checking locking
Make sure the bolt (1), back in the "locking" position, forbids any forward movement of the lever (3).
The opening (4) can be used to place a safety snap-hook in position.

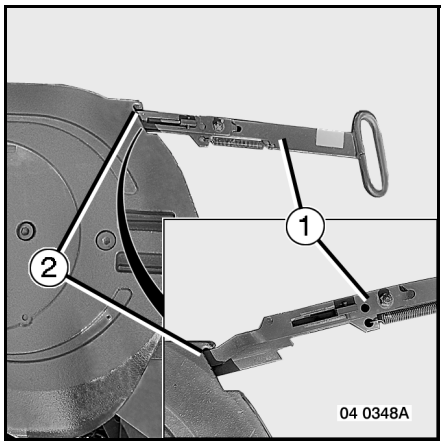
Fifth wheel coupling "JSK 38" is not provided with a cable (2). Lift up the bolt (1) by hand.

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D1-6 Use of the equipment

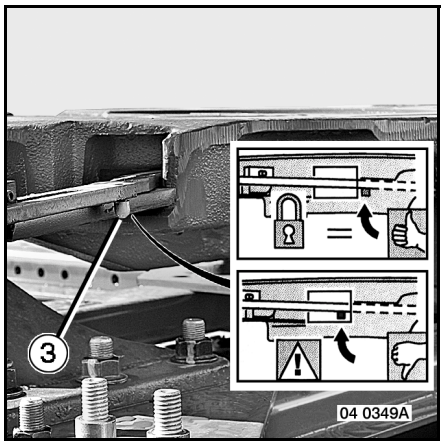
"JOST" 42 fifth wheel coupling

Unlocking
Swing the lever (1) forwards and pull it fully outwards. Hook the lever (1) over the edge of the fifth wheel coupling (2).



Locking
Locking takes place automatically when the lever (1) is returned to its initial position during the hitching phase.

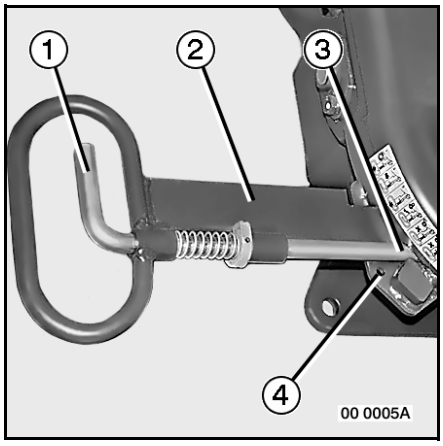
Checking locking
Make sure the lever (1) is sufficiently engaged in the fifth wheel coupling (the red marked catch (3) should no longer be visible).



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D1-7 Use of the equipment

"VBG" fifth wheel coupling



Unlocking
Pull the handle (1). Swing the lever (2) forwards and pull it fully outwards. The lever (2) immobilizes in the "unlocking" position.

Locking
Locking takes place automatically when the lever (2) is returned to its initial position during the hitching phase.

Checking locking
Make sure the bevelled end (3) of the handle (1) is engaged in its housing.
The opening (4) must be fully uncovered. It can be used to place a snap-hook in position.

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D1-8 Use of the equipment

Rear suspension

Depending on your vehicle's equipment

Electronic air suspension

This is an air suspension system controlled and monitored by an electronic microprocessor based device. On top of the advantages of a conventional air suspension system, it contributes the following benefits:

- optimization of loading bay services and memorizing of the last level setting (even after a power cut).
- automatic level correction to bring the suspension parallel with the centre-line of the vehicle (even if the load is poorly distributed).
- savings on tyre wear (with lift-up axle option).
- operations piloted by one remote control box.
- reduced number of air lines.
- speedy adjustment of level and low air consumption.
- built-in safety systems (alarm, fall-back operation).
- system programming depending on the vehicle and legislation in the country of use.
- above 10 km/h, return of the chassis to the normal level.

Operation

- **Automatic mode**
  The system keeps the suspension at a normal level, defined by programming.
- **Manual mode**
  Manual mode is programmed, but operation in manual mode is only possible at speeds below 10 km/h.
  The manual mode allows the height of the chassis to be adjusted to the required level.
  To return to automatic mode, press button on the remote control (normal level) or when the road speed is above 10 km/h.
- **Information light (AB)**
  This light comes on when the vehicle level is different from the normal level.
- **Alert warning pictogram (G30)**
  This pictogram is displayed as soon as a fault is identified. The electronic box safety device automatically neutralizes the control system, partly or in full.

On the road

If warning pictogram (G30) is displayed or warning light (AB) comes on, a suspension malfunction has been detected.

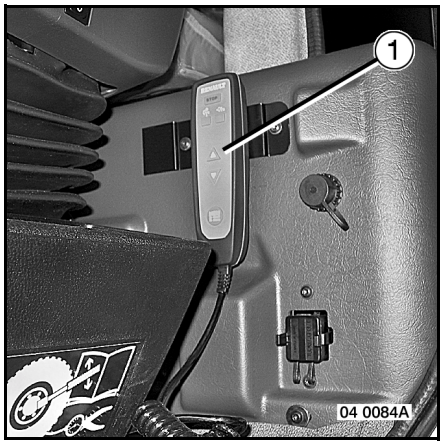
When stationary

Warning pictogram (G30) is displayed when a suspension malfunction is detected. Run a test (see page D1-15).

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D1-9 Use of the equipment

Remote control box



For each suspension model, there is a corresponding control box type.
Location of remote control box (1) in cab.

Hitching/unhitching a semi-trailer on a vehicle equipped with air suspension

To unhitch the semi-trailer:

- Raise the suspension to the "up" position.
- Lower the trailer landing legs.
- Unlock the fifth wheel coupling.
- Move the vehicle forwards slightly to disengage the kingpin.
- Lower the vehicle slightly to dislodge the fifth wheel coupling.
- Disengage the tractor, then lower the suspension to the 'road' position before moving away.

To hitch the semi-trailer:

- Adjust the height of the fifth wheel coupling before engaging the vehicle.
- Perform a pulling test (see page D1-2).
- When hitching is finished, move the suspension to the 'up' position.
- Raise the trailer landing legs.
- Return the suspension to the 'road' position before moving away.

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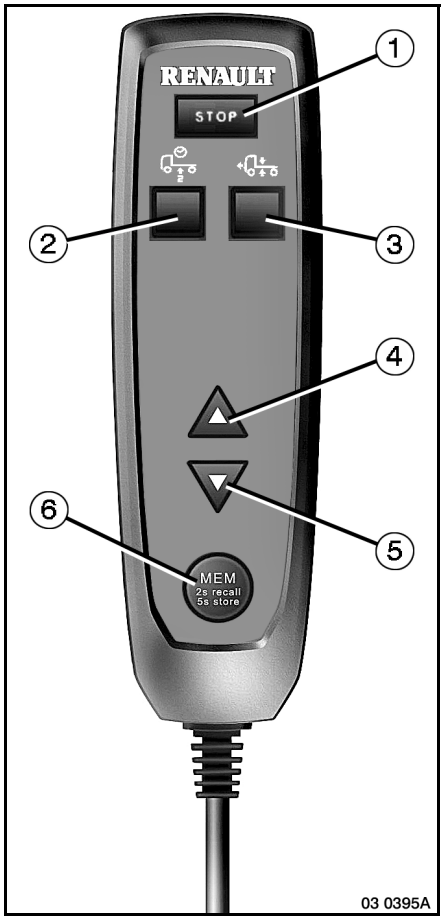
D1-10 Use of the equipment

4x2 vehicle with adjustable rear suspension

The remote control serves to raise and lower the rear suspension and return to the "road" position.
It is connected to the ECS electronic box, which provides power supply to the internal electronics system.
The ECS system does not take account of controls transmitted by the remote control if the air pressure is more than 8 bars and if the road speed is less than 10 km/h.

Controls available:

- "STOP" control (1).
- "Standby" control (2).
- "Return to road position" control (3).
- "Up" control (4).
- "Down" control (5).
- "Memorize" control (6).



Using the remote control box
Engage the master switch.
Switch on the ignition (if the air pressure is too low, start the engine).
To activate a feature
Press the button corresponding to the manoeuvre required.
"Raise" feature
To raise the suspension, press control button (4). When the suspension reaches its top abutment height, the system no longer takes account of control button (4).
"Lower" feature
To lower the suspension, press control button (5). When the suspension reaches its bottom abutment height, the system no longer takes account of control button (5).

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D1-11 Use of the equipment

Memorizing a level
To memorize a level, the suspension must have previously been set to that level by means of control buttons (4) and (5).
Once the required height is reached, press control button (6) for at least 5 seconds, then release it.
The required height is memorized.
To recall this height, just press control button (6) for at least 2 seconds, but no longer than 5 seconds.
Return to road level
To recall the road level, press control button (3).



IN THE EVENT OF DANGER, IT IS POSSIBLE TO STOP THE MOVEMENT STRAIGHT AWAY BY PRESSING BUTTON (1) ONCE.



If the speed of movement is considered too fast by the electronic system, it limits that speed by cutting the air flow.

Time-delayed stabilization of suspension height (standby, ignition switched off)
Once the required loading bay height is adjusted, either by means of the memory button or by manual adjustment, you can stabilize this height for 1 hour by simultaneously pressing control button (2) and switching off the ignition.

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D1-12 Use of the equipment

4 x 2 - 6 x 2 vehicle with integral suspension

The remote control serves to raise and lower the front and/or rear suspension and return to the 'road' position.
It is connected to the ECS electronic box, which provides power supply to the internal electronics system.
The ECS system does not take account of controls transmitted by the remote control if the air pressure is more than 8 bars and if the road speed is less than 10 km/h.

Controls available:

- "STOP" control (1).
- "Standby" control (2).
- "Return to road position" control (3).
- Selection control: "drive axle and axle(s)" / "memorized heights" (4).
- "Up" control (5).
- "Down" control (6).
- "Memorize" / "Recall memorized setting" control (7).

Use of the remote control box

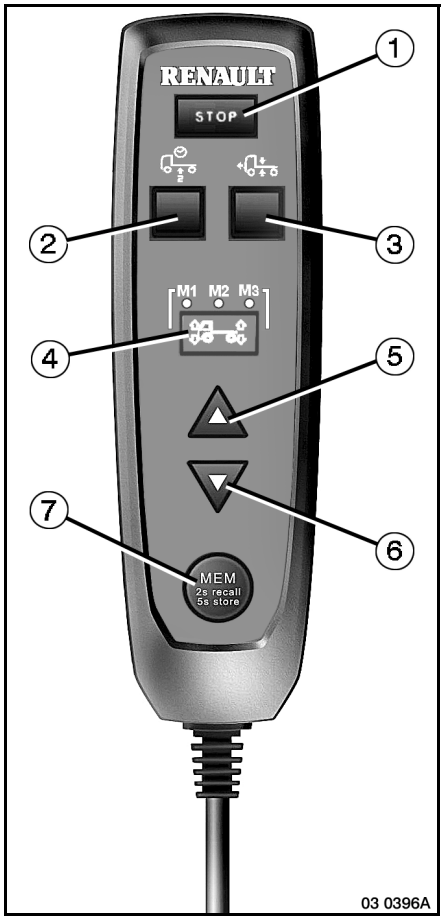
Engage the master switch.
Switch on the ignition (if there is insufficient air pressure, start the engine).

Adjusting the suspension height

Using control (4), select:

- front suspension.
- rear suspension.
- front and rear suspensions.

Without taking action on the selection control (4), any action on the controls "raise" (5) and "lower" (6) act simultaneously on the front and rear suspensions.



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Use of the equipment

"Raise" function
To raise the suspension, press control (5). When the suspension has reached top abutment, the system no longer takes the control (5) into account.
"Lower" function
To lower the suspension, press control (6). When the suspension has reached bottom abutment, the system no longer takes the control (6) into account.
Memorizing a level
To memorize a level, it must have been previously set using controls (5) and (6).
Once the required height is reached, select the required memorized setting with control (4), press control (7) for at least 5 seconds, then release.
The required height is memorized.
To recall this height, just select the corresponding memorized setting with control (4) then press control (7) for at least 2 seconds, but for less than 5 seconds.

Return to road position
To recall the road position, press control (3).



IN CASE OF DANGER, IT IS POSSIBLE TO IMMEDIATELY STOP A MOVEMENT BY GIVING A DAB ON CONTROL (1).



If the speed of movement is considered too fast by the electronic system, it limits that speed by cutting the air flow.

Time-delayed stabilization of suspension height (standby, ignition switched off)
Once the required loading bay height is adjusted, either by memory button or manual adjustment, you can stabilize that height for one hour by simultaneously pressing the stop control button (2) and switching off the ignition.

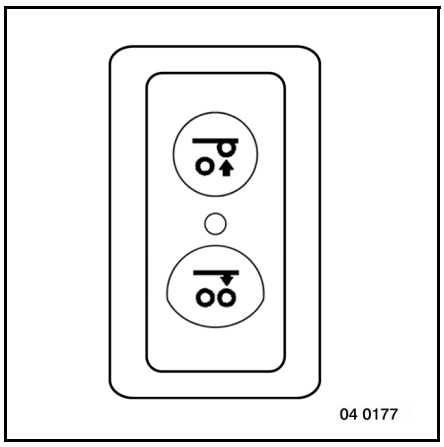
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D1-14 Use of the equipment

Lift-up axle

Depending on your vehicle's equipment

Automatic lowering
Loading of vehicle in progress, axle raised:As soon as the load attains the specified value, the axle is automatically lowered.
A safety device prevents inadvertent lowering of the axle due to movement of the suspension while the vehicle is moving.



Manual control

Lowering the axle
Press the bottom of switch (C4).
In case of danger, reverse the direction of movement of the axle by giving a dab on the top of switch (C4).

Raising the axle
Press the top of switch (C4).

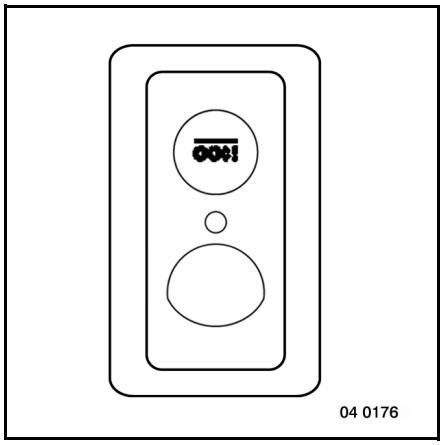
Raising of the axle is only possible if the load on the drive axle does not exceed the maximum authorized load.

In case of danger, reverse the direction of movement of the axle by pressing the bottom of switch (C4).

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D1-15 Use of the equipment

Load shedding time-delay control
If the drive wheels fail to grip when moving off, transfer the load from the lift-up axle to the driving axle. To do this, actuate switch (C3); warning light (AB) flashes.
To finish load transfer, press switch (C3) again or if the road speed is higher than 30 km/h; warning light (AB) goes out.



"Arctic climate" vehicles do not have and end of transfer device when the road speed exceeds 30 km/h.

Test procedure

Disengage then re-engage the master switch (10 seconds interruption).
If alert pictogram (G30) is displayed again, consult the nearest RENAULT TRUCKS service point or dealer.
Drive at low speed (20 km/h max.) and take extra care to maintain ample stopping distances.
If alert pictogram (G30) disappears, the minor fault is has been cleared. Nevertheless, consult the nearest RENAULT TRUCKS service point or dealer.
Fault finding and maintenance is to be carried out using the RENAULT TRUCKS test tool plugged into diagnostic socket (1).



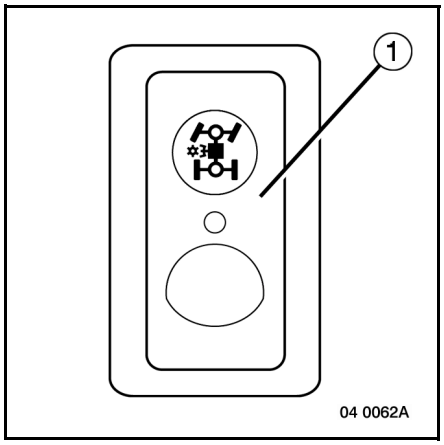
Any work carried out on sensors, linkage or controls, or replacement of the electronic control unit, requires the system parameters to be re-programmed and the system to be re-calibrated. These operations must be carried out by a RENAULT TRUCKS service point or dealer.

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D1-16 Use of the equipment

Power take-off

Depending on your vehicle's equipment



Power take-offs mounted on gearbox (16 S 181 / 221)

With the vehicle stationary, engine idling, gearbox in neutral, parking brake and/or service brake applied, release the clutch.

Press control (1) and keep it depressed: warning pictogram (G1) and "PTO engagement" are displayed.

Once warning pictogram (G42) is displayed, release control (1).

The power take-off turns as from that moment.

Warning pictogram (G1) and "PTO forbidden" are displayed if any condition is not fulfilled .

Disengagement of the PTO

To disengage the PTO, it is necessary to release the clutch and press control (1).

The PTO disengages automatically if the gear lever changes state, if the ignition is switched off or if the engine stalls.

Engine rotating speed

If a hydraulic pump is being driven, do not exceed the engine speed indicated by the equipment manufacturer.

The minimum engine speed is limited to 600 rpm, the maximum engine speed to 1500 rpm and the rated engine speed to 1000 rpm ex works.

Depending on the equipment built by the equipment manufacturer, the engine speed and certain engagement conditions can be modified using the RENAULT TRUCKS bodybuilder test tool.

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D1-17 Use of the equipment

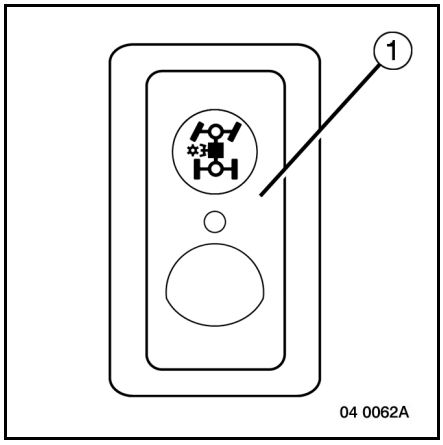
Power take-off

Depending on your vehicle's equipment
Vehicle with power take-off

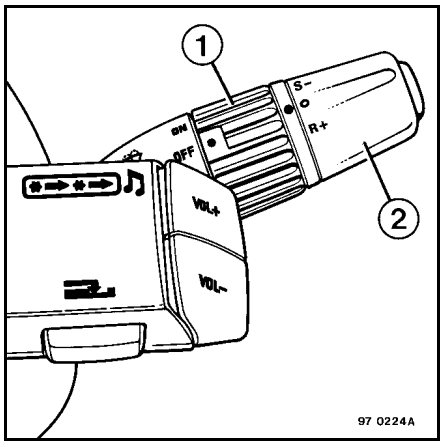
Power take-offs mounted on gearbox (Optidriver 2)
Two possible uses
(when stationary or while moving)
Use while stationary:

- Engine speed < 700 rpm.
- Selector in position **"N"** (gearbox in neutral).
- Parking brake and/or service brake applied.
- Zero road speed.

Press PTO control switch (1) until warning pictogram (G42) is displayed.



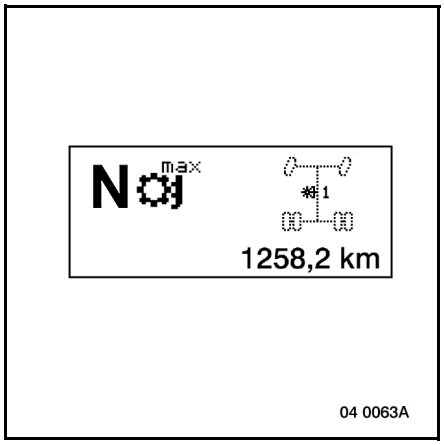
The PTO is engaged if the previously mentioned conditions are fulfilled.
Turn ring (1) from "ON" to "OFF".
Turn ring (2) to bring " R+" opposite the mark to increase the engine speed.
The information display shows (N) and warning pictograms (G42 - G43) are displayed.



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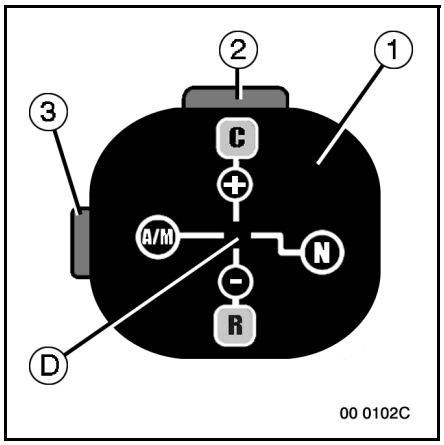
D1-18 Use of the equipment

Two operating speeds for power take-off(s)
When the vehicle is stationary, select the "min." or "max." speed by pressing button (3) on selector (1).



Use while moving:

Feature to be enabled by dealer or by bodybuilder using the RENAULT TRUCKS test tool.



The power take-off is engaged while the vehicle is stationary.

- Engine speed < 700 rpm.
- Parking brake and/or service brake applied.
- Zero road speed.
- Selector in position (D).
- Press PTO control switch (1); warning pictogram (G42) and "PTO engagement" are displayed.

To facilitate engagement of the PTO, release the service brake and gently depress the accelerator pedal .

- The PTO is engaged, warning pictograms (G42 - G43) appear on information display (G).
- Release PTO control switch (1).
- With the vehicle stationary, select the moving away gear suitable for the such use (the first 6 gears are possible).

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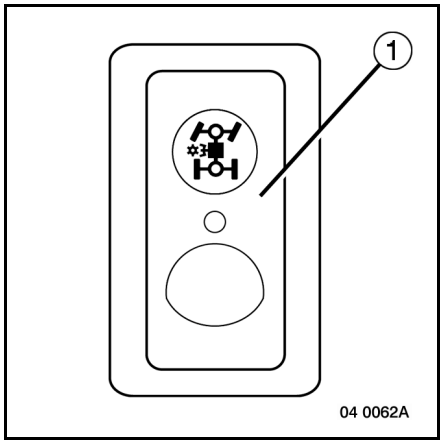
D1-19 Use of the equipment

– *The rotating speed of the PTO depends on the gear engaged:*
  - *1st, 3rd or 5th gear: PTO minimum speed.*
  - *2nd, 4th or 6th gear: PTO maximum speed.*

Depress the accelerator pedal to move the vehicle away; the PTO begins to turn.

Gear changing is no longer possible.

When using the PTO while the vehicle is moving, the cruise control / engine speed regulator will be inoperative for safety reasons. The engine speed is to be modified by using the accelerator pedal.



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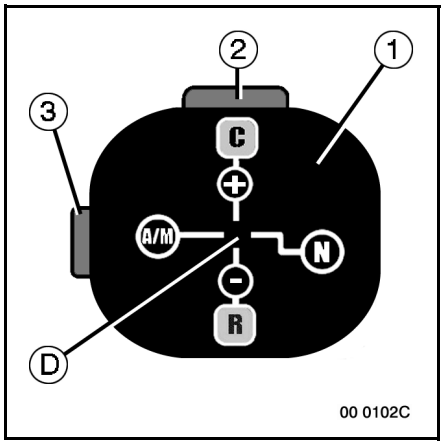
D1-20 Use of the equipment

Disengagement of the PTO

The PTO is disengaged:

- by pressing switch (1).
- if selector (1) is moved back to the neutral position.
- if the engine stalls.

Certain PTO engagement / disengagement and engine speed regulation conditions can be adjusted using the RENAULT TRUCKS bodybuilders software.



PTO rotating speed

For an engine speed of 1000 rpm.

Front splitter in low speed range (PTO minimum speed): gearbox neutral, 1st, 3rd or 5th gear.

- Hydrocar 81: 705 rpm.
- Hydrocar 84: 910 rpm.

Front splitter in high speed range (PTO maximum speed): gearbox neutral, 2nd, 4th or 6th gear.

- Hydrocar 81: 897 rpm.
- Hydrocar 84: 1159 rpm.

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D1-21 Use of the equipment

Roof deflector



Vehicle equipped with refrigerator unit:
If the vehicle is equipped with a roof deflector, ensure that the deflector does not interfere with correct operation of the refrigerator unit (limited cooling of the condenser).

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D1-22 Use of the equipment

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D2-1 Use of the equipment

Monitoring / management equipment

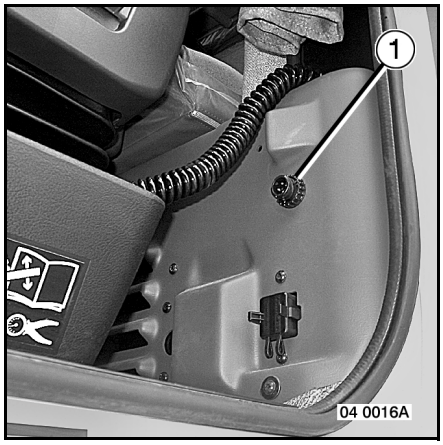
Diagnostic socket

The diagnostic socket (1) is located behind the driver's seat.



Infomax

Depending on your vehicle's equipment
"SAE" socket (1) for plugging in Infomax.



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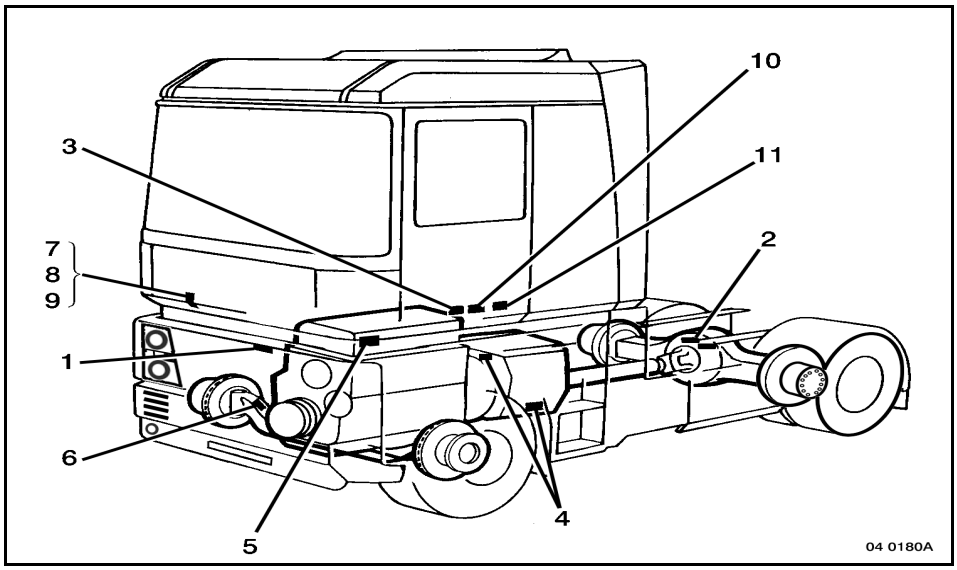
D2-2 Use of the equipment

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E1-1 Features - servicing

Identification

Vehicle identification



Depending on your vehicle's equipment

1– Chassis
2– Drive axle
3– Tachograph plate
4– Gearbox
5– Engine
6– Axle
7– CAM plate N°
8– Paint reference N°
9– Manufacturing N°
10– Manufacturer's plate
11– Conformity plate

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E1-2 Features - servicing

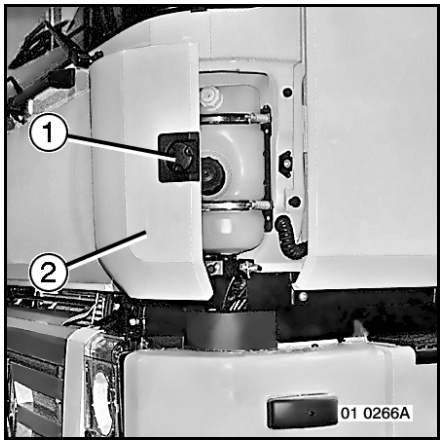
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E2-1 Features - servicing

Daily checks

Clutch fluid level

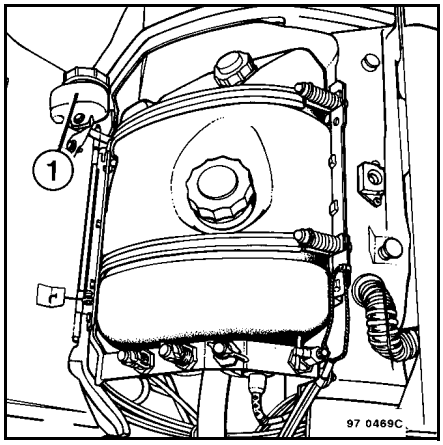
Access to fluid reservoir
Left-hand side (LH drive)
Right-hand side (RH drive)
Opening the cover
Unscrew captive button (1) and pull the cover (2) outwards.
Closing:
Push in the cover and screw up captive button while exerting light pressure on the cover.



Hydraulic system

– Check the fluid level in reservoir (1).

The fluid level should be between the "MIN." and "MAX." marks. Top up, if necessary.



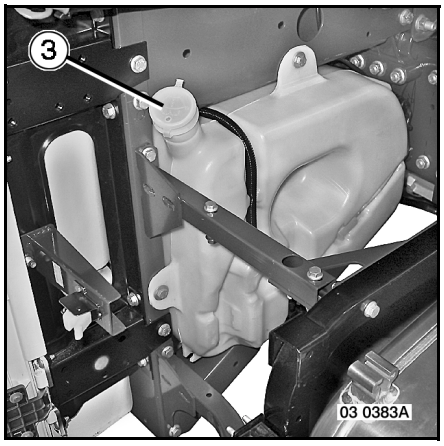
Exclusively use the recommended clutch fluid

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E2-2 Features - servicing

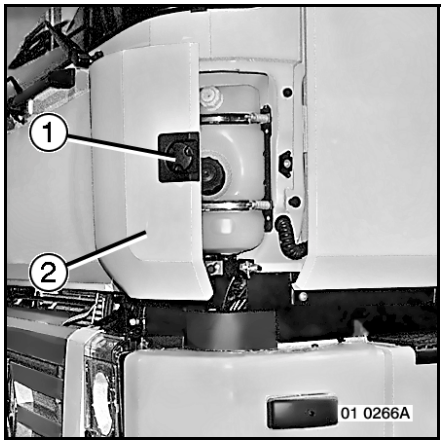
Windscreen wash reservoir level

Regularly check the level in reservoir (3). Top up, if necessary. To avoid scale deposits and pipe obstruction, it is advised to add a screen wash additive (RENAULT TRUCKS product). This product also serves as anti-freeze. It can be left in all the year round, if necessary.



Coolant level

Access to expansion chamber
Left-hand side (LH drive)
Right-hand side (RH drive)
Opening the cover
Unscrew captive button and pull the cover outwards.
Closing:
Push in the cover and screw up captive button while exerting light pressure on the cover.



Coolant
The expansion chamber is transparent so that the coolant level is visible for checking.
The coolant level should be flush with the filler port. Top up, if necessary.

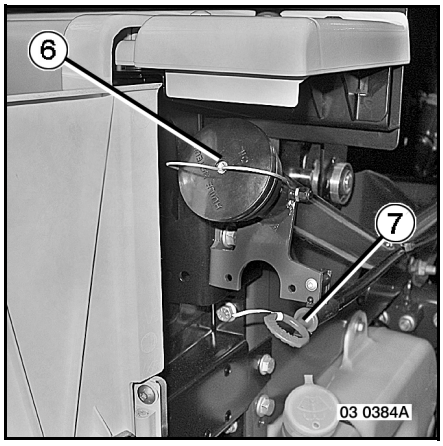
IF YOU HAVE TO TOP UP WITH COOLANT, IT IS VITAL TO FOLLOW THE INSTRUCTIONS SHOWN ON THE FILLER CAP AND USE ONLY THE RECOMMENDED COOLANT.

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E2-3 Features - servicing

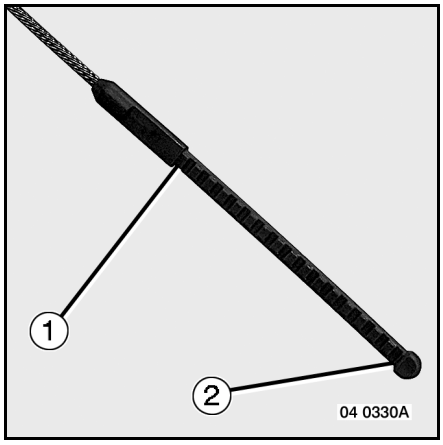
Engine oil level

Check the oil level with dipstick (7).



Reading the oil dipstick:
1– Maximum level
2– Minimum level

Top up with oil to level through filler cap (6), if necessary.



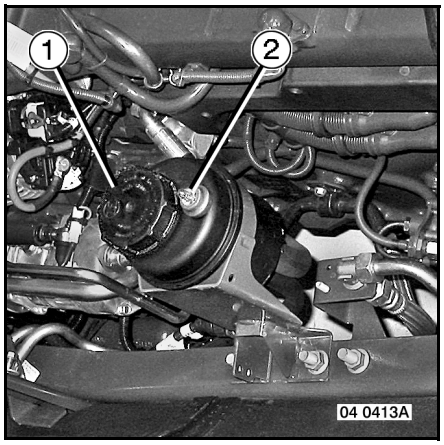
Always check the oil level on flat ground.

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E2-4 Features - servicing

Steering oil level

Tilt the cab.
Check the steering oil level (2).
Top up with oil to level through filler cap (1), if necessary.



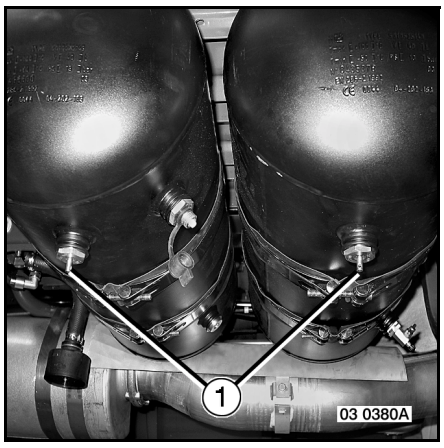
Tyres

Tyre pressures (see page E21-3).

Air tanks

Actuate bleed valves (1) to get rid of all water from the air tanks.
Carry out this operation:
- Every day (in winter).
- Every week (outside winter).

If not drain the air tanks.
Get the APM checked out by a RENAULT TRUCKS service point or dealer and replace the cartridge (see page E27-1).



AS SAFETY PRECAUTION, MOVE THE GEAR LEVER TO NEUTRAL BEFORE DRAINING THE AIR TANKS.

E3-1 Features - servicing

Routine servicing

Bulbs

If a bulb has to be changed, always replace it with a bulb of the same wattage and type.

Table of bulbs

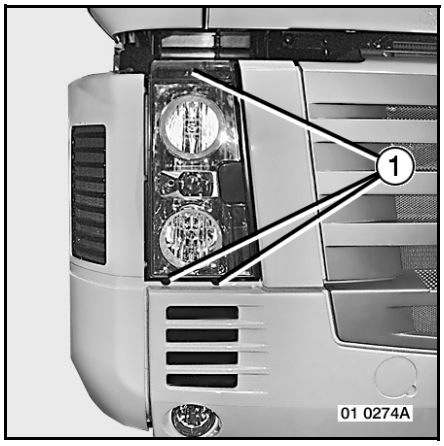
Assignment	Wattage
Front side/parking lights	5**W**
Lateral side/parking lights	3**W**
Rear side/parking lights	2x5**W**
Front flashing lights	21**W**
Side flashing lights	21**W**
Rear flashing lights	21**W**
Dipped beam headlights	70**W**
Main beam headlights	70**W**
Fog driving lights	70**W**
Marker lights	5**W**
Registration plate light	10**W**
Stop lights	21**W**
Fog light(s)	21**W**
Reversing lights	21**W**
Stepwell lights	5**W**
Cab overhead light	10**W**
Bunk overhead light	10**W**
Map reader	10**W**
Working spotlights (tractor)	21**W**
Working spotlights (tractor)	70**W**

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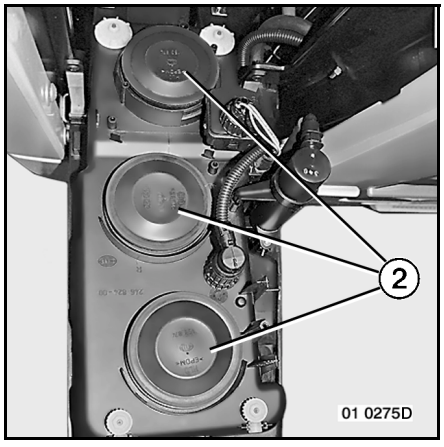
E3-2 Features - servicing

Replacing bulbs

To gain access to the bulbs, unscrew screws (1) and tilt the headlamp insert downwards.



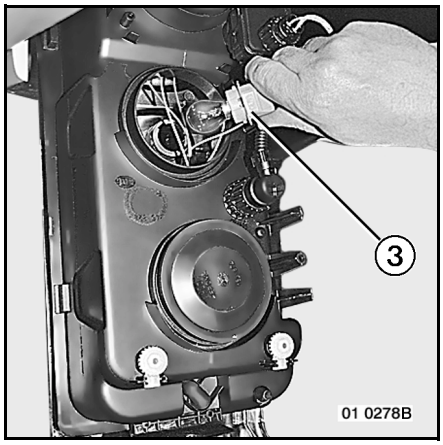
Withdraw rubber covers (2).



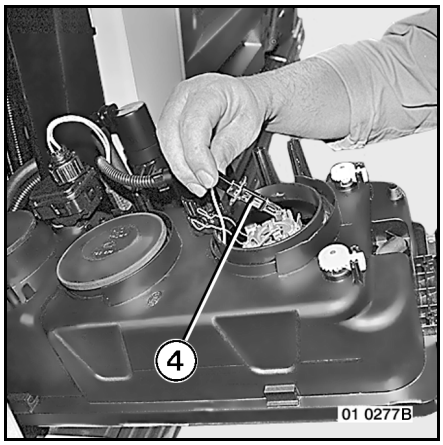
https://truckmanualshub.com/

E3-3 Features - servicing

Front flashing lamps
Take out socket (3).

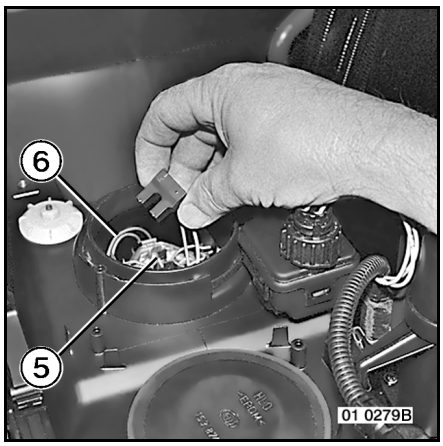


Headlamps
Main beam headlamps (4).



Dipped beam headlamps (5).
Front side/parking lamps (6).

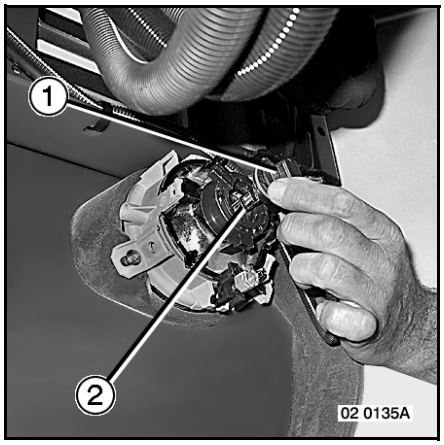
When changing a bulb, carefully put back the rubber or plastic blanking plug to ensure perfect sealing of the headlamp insert unit.



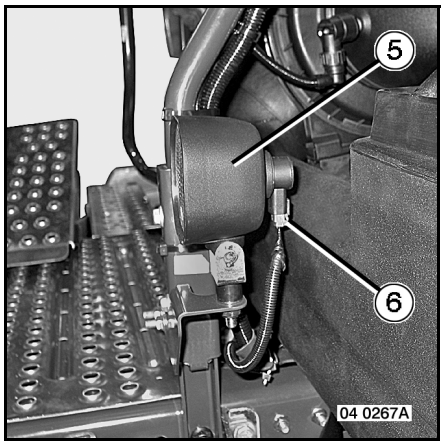
https://truckmanualshub.com/

E3-4 Features - servicing

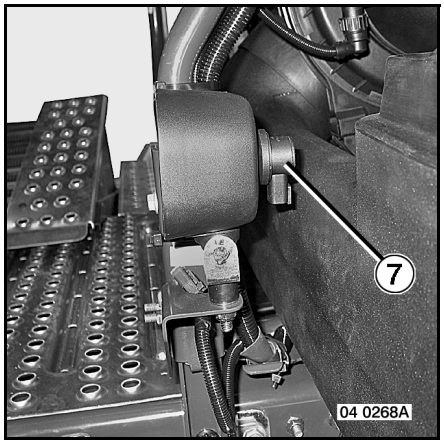
Fog driving lamps
Turn socket (1) anti-clockwise as far as abutment, then take it out.
Remove bulb (2).



Working spotlight (5)
Unplug connector (6).

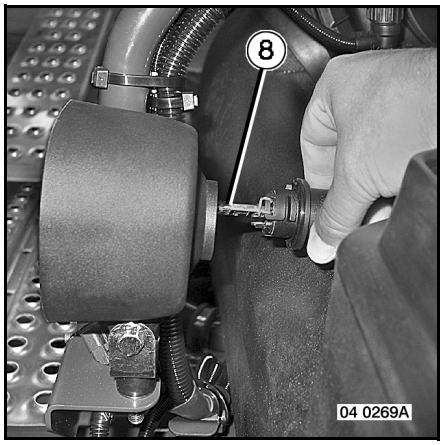


Turn bulb-holder (7) anti-clockwise through 1/4 of a turn.



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Remove bulb (8).



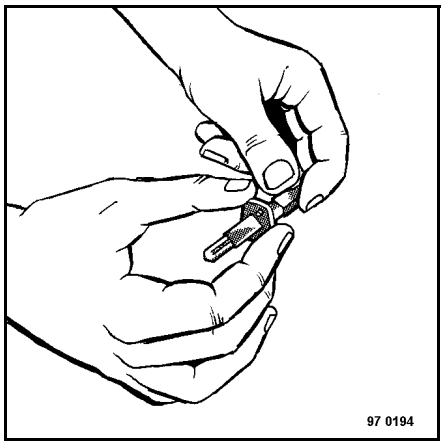
Map reader
Replacing the bulb
To gain access to the bulb, withdraw the diffuser.



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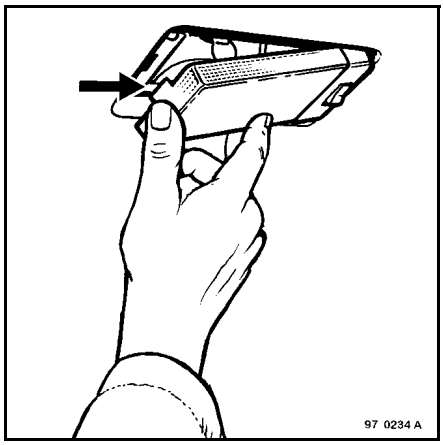
E3-6 Features - servicing

Quartz-iodine bulbs



To fit these bulbs, preferably hold them by their metal end-piece. If you have to take hold of them on the glass side, use a cloth or clean paper. The least trace of a fingermark or grease risks making the bulb ineffective when lighting up. If you are not sure whether the bulb is clean before fitting, clean with methylated spirits. Before removing a bulb, and if it has been previously lit, wait for a few minutes for it to cool down sufficiently to avoid the risk of being seriously burnt.

Cab overhead lamp.
Bunk overhead lamp.
Stepwell lamp.

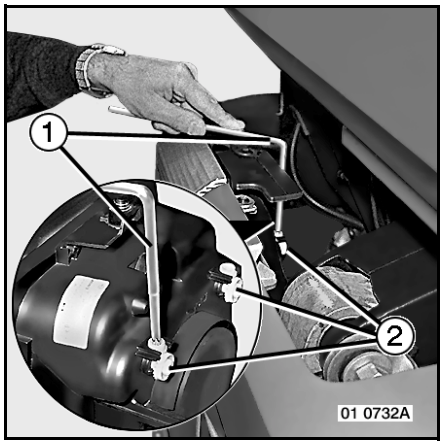


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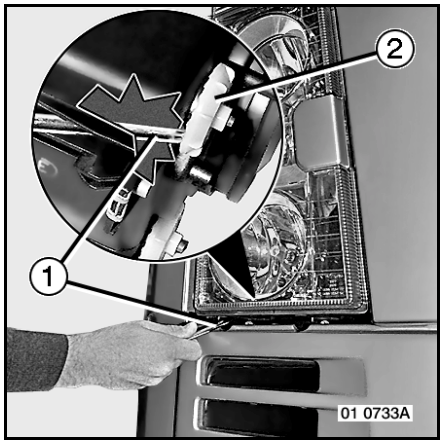
E3-7 Features - servicing

Headlights adjustment

Adjust the headlights using the specific offset screwdriver (1) from the onboard kit.
The headlamp beams are adjusted by turning the adjusting thumbwheels (2).



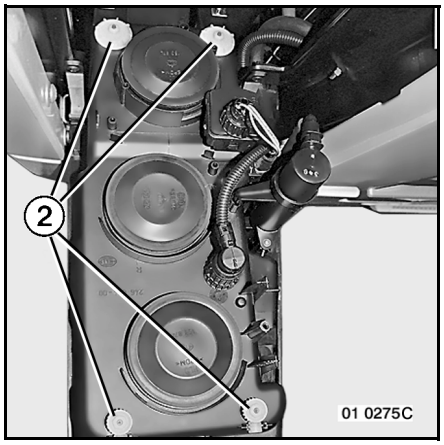
Any headlamp adjustment work must be carried out in a specialized workshop.



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E3-8 Features - servicing

It is essential to use the specific offset screwdriver (1) from the onboard tool kit to avoid damaging the adjusting thumbwheels (2).



Cab interior control
The headlights are adjusted by a hand-operated control (3) inside the cab (see page B2-48).



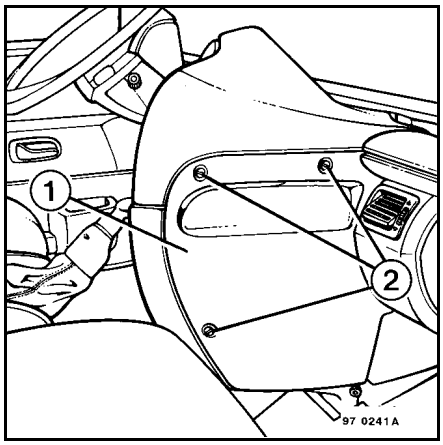
https://truckmanualshub.com/

E3-9 Features - servicing

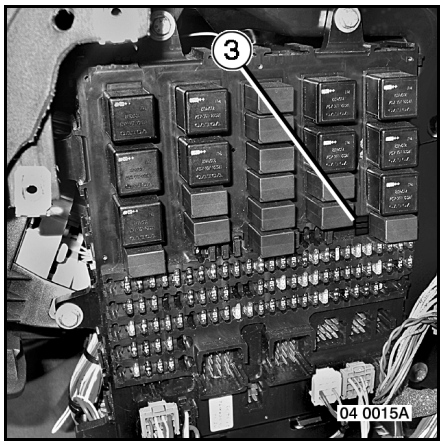
Fuses

To gain access to the fuses:
- Take out screws (2).
- Remove cover (1).

After changing the fuse(s), refit cover (1) and tighten screws (2) by hand.

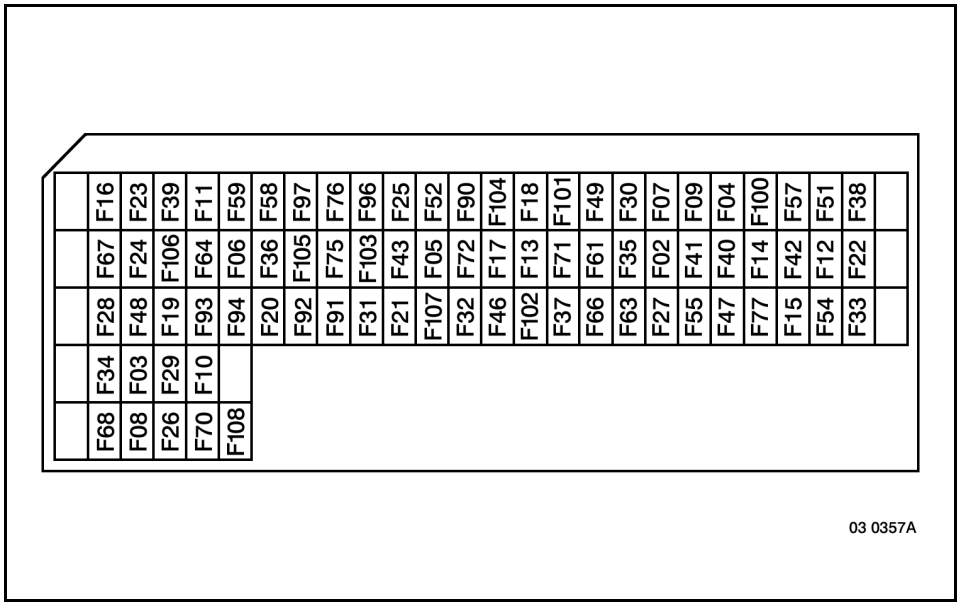


Replace faulty fuses using tweezers (3).



E3-10 Features - servicing

Table of fuses on electrical distributing box



Always replace a fuse by another fuse with the same rating.

Depending on your vehicle's equipment

Assignment	Item	Amperage
Electric curtains	F2	10
Cab tilting	F3	7.5
Accessories (reversing camera, electronically managed fifth wheel...)	F3	7.5
Information display	F4	5
Windscreen wash pump and relay, headlamp wash motor	F5	30
Information display	F6	5
Independent heater timer	F6	5
Vehicle master ECU	F7	5
Tachograph	F7	5
Alarm	F8	5

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E3-11 Features - servicing

Assignment	Item	Amperage
Transponder	F8	5
Information display	F8	5
Centralized air management (auxiliary equipment, service...)	F8	5
Central closing	F8	5
Bodybuilder electronic box power supply (BBM)	F9	5
Air conditioning	F10	30
"ZF" retarder	F11	10
"Optidriver 2" gearbox	F12	10
Windscreen wiper motor	F13	20
Cigar lighter	F14	15
Diagnostic socket	F15	5
"INFOMAX" socket	F15	5
Diff. lock	F16	10
Power take-off	F16	10
RH main beam headlamp	F17	10
Horn	F18	10
Air conditioning	F19	5
Onboard radio	F20	10
Doors central locking	F20	10
Alarm	F20	10
"EBS" trailer socket	F21	20
Cab lighting	F22	10
Suspension ECU	F23	5
Fuel preheater	F24	20
Bodybuilder pre-arrangements (van lighting, machine control)	F25	10
Chassis pre-arrangement	F26	15
Windscreen wash motors	F27	20
"EBS" ECU	F28	20

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E3-12 Features - servicing

Assignment	Item	Amperage
Onboard management	F29	10
Dipped beam headlamps	F30	30
Cab overhead lamp(s)	F30	30
Doors remote control box	F30	30
Windscreen wiper speed controller	F30	30
Cab heating	F31	20
Ledge pre-arrangements	F32	10
Cab tilting pump	F33	30
Onboard management	F34	3
Not used	F35*	20
Flasher unit	F36	10
Hazard lights control	F36	10
Onboard radio	F37	10
CD loader	F37	10
Hands-free kit	F37	10
Working spotlight	F38	10
Swivelling defrosting rearview mirrors	F39	15
Engine master ECU	F40	30
Engine master ECU	F41	15
Engine preheating relay	F42	10
Engine fan relay	F42	10
Comfort sockets 12/24V	F43	15
Not used	F46	15
Centralized air management (auxiliary equipment, service...)	F47	7.5
"EBS" ECU	F48	3
Suspension ECU	F49	5
Piloted steering axle ECU	F51	5
Ignition switch	F52	10

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E3-13 Features - servicing

Assignment	Item	Amperage
Transponder	F52	10
Onboard management	F54	10
Not used	F55	5
Hydraulic retarder control	F57	10
Alternator	F58	3
ADR	F58	3
Reversing lamp(s)	F59	10
Onboard management	F59	10
Headlights adjustment	F61	15
Ledge pre-arrangements	F63	15
Trailer socket	F64	10
Sun-roof	F66	10
Headlights adjustment	F66	10
"Optidriver 2" gearbox	F67	10
Refrigerator socket 24V	F68	20
Office pack socket 12V	F68	20
Trailer "ABS" socket	F70	10
Cab pre-arrangements	F71	15
LH main beam headlamp	F72	10
Heated seat	F75	15
Bodybuilder pre-arrangements box (engine running)	F75	15
Refrigerated compartment	F75	15
"Seat belt not buckled" warning buzzer	F75	15
Air/water independent heating	F76	10
Customer pre-arrangements	F77	15
Combined lights switch	F90	3
LH side/parking lamps	F91	10
RH side/parking lamps	F92	10
Trailer side/parking lamps	F93	10

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E3-14 Features - servicing

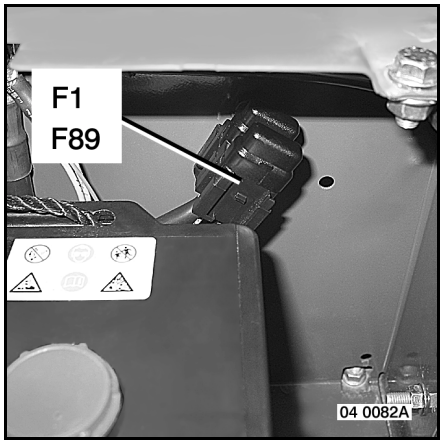
Assignment	Item	Amperage
Bodybuilder pre-arrangement (parking lamps)	F93	10
Trailer side/parking lamps	F94	10
Bodybuilder pre-arrangement (parking lamps)	F94	10
Instrument panel warning lights night lighting	F96	3
Customer pre-arrangements in cab	F97	5
Fog driving lamps	F100	15
Fog lamp(s)	F101	10
"Optidriver 2" gear selector	F102	10
Reversing lamp(s)	F103	10
Stop lamps	F104	10
Option future	F105	10
Option future	F106	10
"Euro 4" engine ECU	F107	10
Independent heating	F108	20

* Unused fuse 20 **A** capable of serving as a spare.

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E3-15 Features - servicing

Fuses located in battery compartment

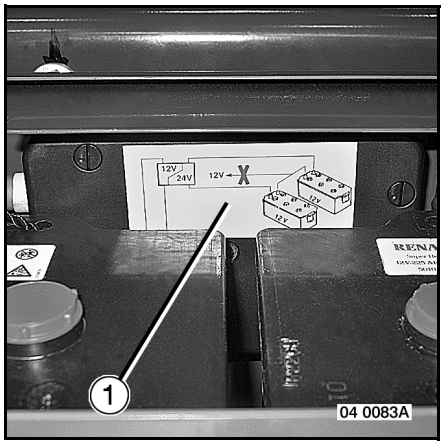


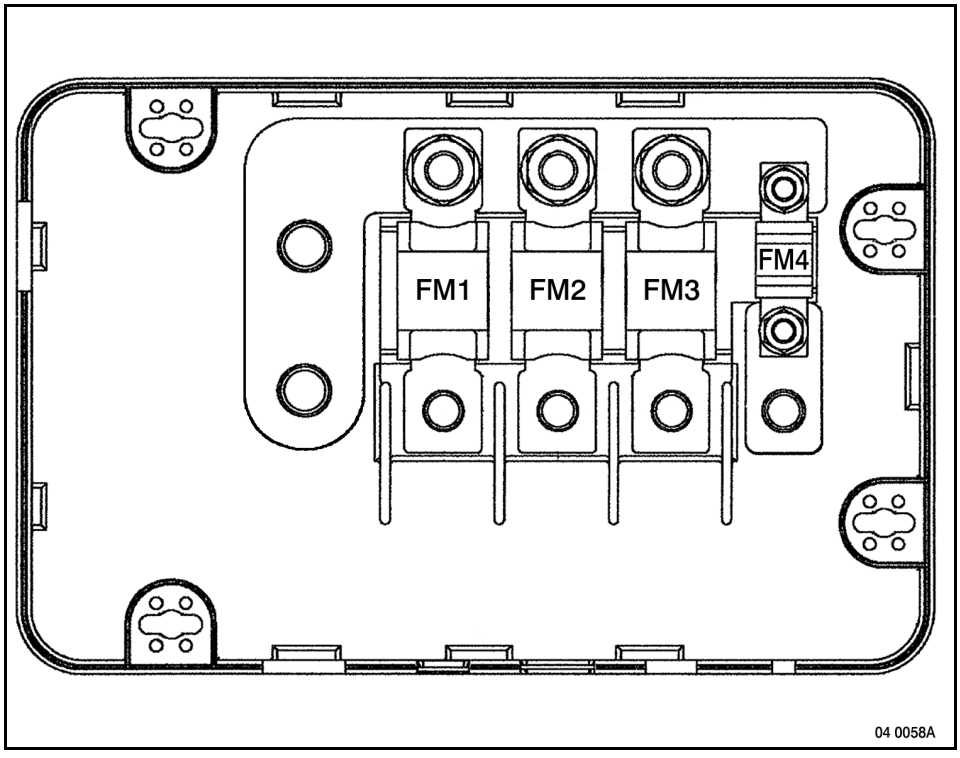
Assignment	Item	Amperage
Flasher unit	F1	25
Independent heating	F1	25
Onboard radio	F1	25
Alarm	F1	25
Central closing	F1	25
Tachograph (non ADR)	F89	5
Tachograph (ADR)	F89	1

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E3-16 Features - servicing

Fuses in fuse box (1) located in battery compartment





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E3-17 Features - servicing

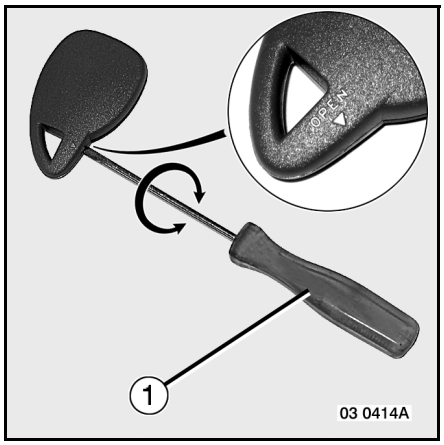
Assignment	Item	Amperage
Cab power supply	FM1	125
Electric tail-lift	FM2	200
Engine intake air preheating	FM3	125
Not used	FM4	40

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E3-18 Features - servicing

Remote control battery

Replacing the battery
Using a screwdriver (1), open the casing in the place marked.
Replace battery (2) complying with the polarity engraved on the cover.
Use an alkaline type battery: **CR 2032-3V**.
The battery service life is about 3 years.





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E4-1 Features - servicing

Maintenance instructions

Warranty

Servicing is the prime guarantee.
Recommended inspection and servicing intervals are given as a guide and are intended for vehicles operating under normal road conditions. The tougher the operating conditions, the shorter the service and inspection intervals. In some cases it will be necessary to consider servicing and inspection in terms of hours rather than mileage. The manufacturer cannot be held responsible for damage caused by driving errors, or failure to comply with the recommendations made in this handbook, particularly regarding the use of lubricants that are not in conformity with the performance specifications given.
Topping up engine oil



The engine is to be topped up with RENAULT TRUCKS RLD-2 grade oil until the first service is performed. Subsequently, the choice of oil to be used is defined by the customer according to use of the vehicle.

Implementation of the above checks is essential for the validity of the vehicle warranty.
To obtain these inspections, consult your normal RENAULT TRUCKS dealer and give him the warranty certificate you received when the vehicle was supplied.
Lubrication
The manufacturer specifies the performance levels of the lubricants required for the correct operation of the vehicles supplied, and also defines the lubrication intervals.
These recommendations must be strictly followed
Their observance will increase the service life of the equipment and components. Failure to comply can invalidate the warranty offered.



Draining major units: always drain the oils on level ground with the oils hot to aid the flow.
When refitting the drain plugs, fit new gaskets.

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E4-2 Features - servicing

Checking the oil levels (all major units).
Oil levels must always be checked on flat ground and conditions should always be identical (i.e. vehicle empty or laden). Wait for 5 minutes after the vehicle has stopped before carrying out the check.



Engine oil level: *for a more accurate reading, the oil level should be checked when the engine is cold, after prolonged shutdown (2 hours minimum), in the morning, prior to start-up, for example:*

- *Vehicle with mechanical suspension: check the level with the vehicle unladen.*
- *Vehicle with air suspension: check the level with the suspension in the 'road' position.*

Road tests
After the warranty inspection, the vehicle manufacturer should make sure that the user clearly understands all the driving and servicing instructions in the handbook.

Fuel

Diesel fuel
If the fixed engine oil change interval is chosen (see page E5-3), it should be halved if the sulphur content is more than 0.3 %.



Use only commercially available diesel fuel for motor vehicles (to standard EN 590).You are advised against using diesel fuel containing additives.
The use of "biodiesel" (with rapeseed oil base) is authorized at a maximum rate of 5% on condition that it meets the requirements of standard EN 590.
You are advised against using diesel fuel containing additives.
The use of diesel fuel containing additives might invalidate the vehicle warranty.
Storage of diesel fuel in drums or jerry cans might allow the ingress of impurities capable of causing fuel supply system malfunction. In such case, it is necessary to filter the diesel fuel before pouring it into the fuel tank.
The use of "aquazole" is strictly forbidden".



IF YOUR VEHICLE IS EQUIPPED WITH A FUEL PREHEATER: THE INCORPORATION OF ADDITIVES (PARAFFIN OR KEROSENE) IS STRICTLY FORBIDDEN.

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E4-3 Features - servicing

Lubricants

Adapt the viscosity of the oil used to the climatic conditions of the region in which you use your vehicle.
The use of lower grade oil calls for more frequent oil changes. Your RENAULT TRUCKS service point or dealer is at your disposal to advise you.
For the choice of lubricants according to operating temperatures, see pages E4-6 - E4-8.

Engine oil filter cartridge(s)
For correct operation and long engine service life, use original filters only, where the filtration threshold and filtering area have been designed by the manufacturer.

Engine oil(s)

Renault Trucks Oils	RENAULT TRUCKS specifications
Maxima RD Eco 15 W 30	**RD-2**
Maxima RD 15 W 40	**RD-2**
Maxima RLD Eco 15 W 30 (1)	**RLD-2**
Maxima RLD 15 W 40	**RLD-2**

(1) Original fitment oil.
RD-2: Specification for RENAULT TRUCKS lubricant to level ACEA E3+VDS-2.
RLD-2: Specification for RENAULT TRUCKS lubricant to level ACEA E7+VDS-3.

ZF gearbox (+ Intarder) oil(s)

Renault Trucks Oils	API standards
Prexima 40	**CF- 4 / SF**
Longevia Eco 75 W 80 (1)	**GL4***
Longevia BXI Eco 75 W 80 * **	**GL4***

(1) Original fitment oil.
75 W 80 (GL4*): Synthetic oil conforming to ZF specification: **TE-ML 02D**
*** **Longevia BXI Eco**: meeting RT POWERTRAIN standard **97307**

E4-4 Features - servicing

Optidriver 2 gearbox oil(s)

Renault Trucks Oils	API standards
Prexima 40	**CF- 4 / SF**
Longevia BXI Eco 75 W 80 * (1)**	**GL4***

(1) Original fitment oil.
*** **Longevia BXI Eco**: meeting RT POWERTRAIN standard **97307**
75 W 80 (GL4*): Synthetic oil conforming to ZF specification: **TE-ML 02D**

VOITH retarder oil(s)

Renault Trucks Oils	RENAULT TRUCKS specifications
Extensia RXD 10 W 40	**RXD**
Extensia RXD Eco 5W30	**RXD**
Longevia BXI Eco 75 W 80 * **	**GL4***
Prexima 30 (1)	**CF / SF**

(1) Original fitment oil.
RXD: Specification for RENAULT TRUCKS lubricant to level ACEA 99-E4 and meeting the requirements of test MACK T9 according to specification MACK EO-M PLUS.
*** **Longevia BXI Eco**: meeting RT POWERTRAIN standard **97307**
75 W 80 (GL4*): Synthetic oil conforming to ZF specification: **TE-ML 02D**

Drive axle P 1395

Renault Trucks Oils	API standards
HD 80 W 90	**GL5****
HD Eco 80 W 90	**GL5****
Longevia P Eco 80 W 90 (1)	**GL5****
Longevia PM Eco 75W90**	**GL5****
Longevia PXD 75 W 90	**GL5****

(1) Original fitment oil.
(GL5) High temperature extreme pressure oil conforming to oxidation test N° CEC L48A95 at 140° C.**
**** **Longevia PM Eco**: meeting RT POWERTRAIN standard **97312**

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E4-5 Features - servicing

Drive axle MS 13170

Renault Trucks Oils	API standards
HD 85W140	GL5**
HD Eco 85W140	GL5**
Longevia P Eco 80W140	GL5**
Longevia PM Eco 75W90**** (1)	GL5**

(1) Original fitment oil.

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E4-6 Features - servicing

International standards

Choice of lubricants according to operating temperature

Engine

Oil	Operating temperature
SAE 15 W 30	- 15°C → + 30°C
SAE 15 W 40	- 15°C → + 50°C

ZF gearbox (+ Intarder)

Power take-off

Oil	Mil-L	API	Operating temperature
SAE 40	2104 E	CE / SF	- 10°C → + 40°C
SAE 75 W 80	2105	GL4*	- 25°C → + 40°C

75W80 (GL4)*: Synthetic oil conforming to ZF specification: TE-ML 02 (ZFN 13010)

Optidriver 2 gearbox

Oil	Mil-L	API	Operating temperature
SAE 40	2104 E	CE / SF	- 10°C → + 40°C
SAE 75 W 80	-	GL 4	- 25°C → + 40°C

VOITH retarder

Oil		Operating temperature	
SAE 5 W 30	-	GL 5	- 25°C → + 40°C
SAE 75 W 80	-	GL 4	- 25°C → + 40°C
SAE 10 W 40	2104 E	CF	- 25°C → + 40°C
SAE 30	2104 E	CE / SF	- 25°C → + 40°C

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E4-7 Features - servicing

Rear drive axle(s) P 1395

Wheel hubs

Oil	Mil-L	API	Operating temperature
SAE 80 W 90	2105 D	GL5	- 25°C → + 30°C
SAE 80 W 90	2105 D	GL5**	- 25°C → + 50°C
SAE 75 W 90	-	GL5	- 35°C → + 40°C

(GL5) High temperature extreme pressure oil conforming to oxidation test N° CEC L48A95 at 140° C.**

Rear drive axle(s) MS 13170

Oil	Mil-L	API	Operating temperature
SAE 75 W 90	-	GL5	- 35°C → + 40°C
SAE 80 W 140	-	GL5	- 20°C + 40°C
SAE 85 W 140	-	GL5	- 15°C → + 40°C

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E4-8 Features - servicing

We recommend Renault Trucks Oils.

Choice of lubricants according to operating temperature

Engine

Oil	Operating temperature
Maxima RD 15 W 40	- 15°C → + 50°C
Maxima RD ECO 15 W 30	- 15°C → + 30°C
Maxima RLD 15 W 40	- 15°C → + 30°C
Maxima RLD Eco 15 W 30 (1)	- 20°C → + 30°C

(1) Original fitment oil.

ZF gearbox (+ Intarder)

Power take-off

Oil	Operating temperature
Prexima 40	- 10°C → + 40°C
Longevia Eco 75 W 80 (1)	- 25°C → + 40°C
Longevia BXI Eco 75 W 80	- 25°C -> + 40°C

(1) Original fitment oil.

Optidriver 2 gearbox

Oil	Operating temperature
Prexima 40	- 10°C → + 40°C
Longevia BXI Eco 75 W 80 (1)	- 25°C → + 40°C

(1) Original fitment oil.

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E4-9 Features - servicing

VOITH retarder

Oil	Operating temperature
Extensia RXD 10 W 40	- 25°C → + 40°C
Extensia RXD Eco 5 W 30	- 25°C -> + 40°C
Longevia BXI Eco 75 W 80	- 25°C -> + 40°C
Prexima 30 (1)	- 25°C → + 40°C

(1) Original fitment oil.

Rear drive axle(s) P 1395

Oil	Operating temperature
HD 80 W 90	- 25°C → + 30°C
HD ECO 80 W 90	- 25°C → + 30°C
Longevia P Eco 80 W 90 (1)	- 25°C → + 40°C
Longevia PM Eco 75W90	- 35°C → + 40°C
Longevia PXD Eco 75 W 90	- 35°C → + 40°C

(1) Original fitment oil.

Rear drive axle(s) MS 13170

Oil	Operating temperature
HD 85 W 140	- 15°C → + 40°C
HD Eco 85 W 140	- 15°C → + 40°C
Longevia P Eco 80 W 140	- 20°C → + 40°C
Longevia PM Eco 75 W 90 (1)	- 35°C → + 40°C

(1) Original fitment oil.

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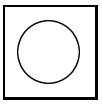
E4-10 Features - servicing

Hydraulic system(s)

Circuit	Renault Trucks Oils	Standards
Steering	Starmatic 3	ATF DEXRON III
Clutch	Fluid FE 4	SAE J 1703 F / DOT4
Cab tilting T>-15°C	Starmatic 3	ATF DEXRON III
Cab tilting T<-15°C	ST 15M	HV ISO 15
Cab tilting T<-37°C	HGF 26	HV ISO 15
Engine coolant	Ultracooling Plus	RENAULT Type D*
Engine cooling system anti-freeze	Maxigel Plus	RENAULT Type D*

*: Organic

Grease

Symbols	Renault Trucks Oils	Standards
	Superol HP2	NLGI 2 lithium soap grease with lead-free calcium EP additive

Greasing



With grease nipples



Without grease nipples

Location on chassis



2 grease nipples on left



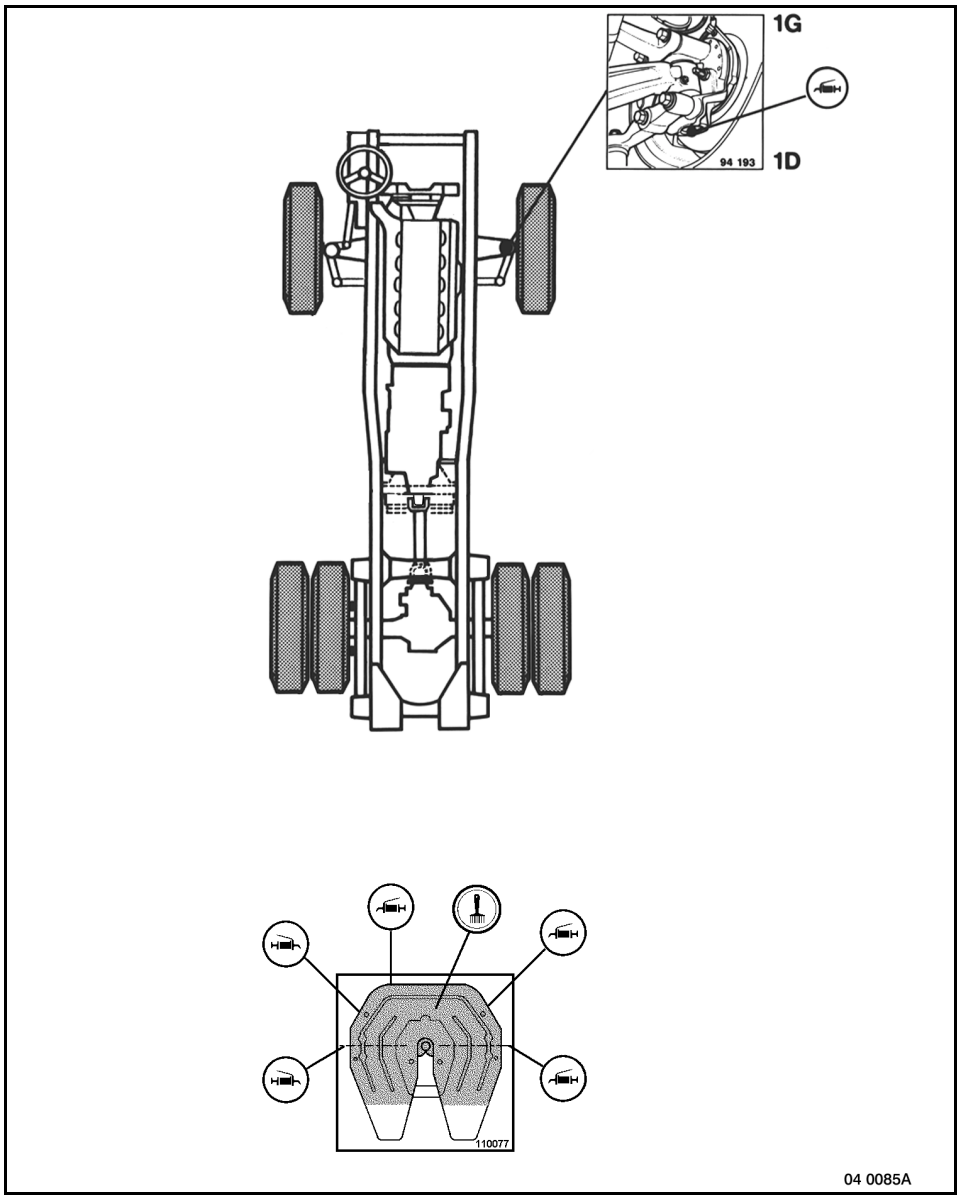
1 grease nipple on right

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E4-11 Features - servicing

Lubrication diagram(s)

Tractor 4 X 2



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E4-12 Features - servicing

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E5-1 Features - servicing

Servicing intervals

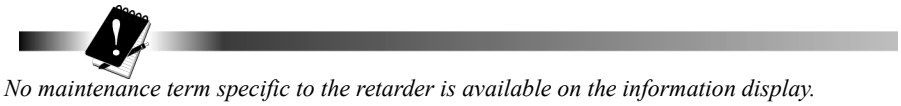
Servicing frequencies

Your vehicle is equipped with a system for optimizing servicing intervals in relation to its use.

Maintenance alert warning pictogram is displayed on the instrument panel to warn the driver that the term for a maintenance operation is close or due, based on the works parameter definitions.

If the pictogram is displayed, with the vehicle at a standstill, consult the maintenance menu on the display (see page B-2-31) to visualize the term and the maintenance operations concerned.

The display is shown in kilometres, date or engine operating time depending on which term is closest.



No maintenance term specific to the retarder is available on the information display.
The maintenance term for the ZF Intarder is attached to that of the gearbox.
The maintenance term for the VOITH retarder cannot be followed up on the information display.

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E5-2 Features - servicing

Table of maintenance features consultable on the dashboard information display in relation to parameter definitions

Component	Fixed	Predictive	km	Date	Time
Engine oil	X*	X	X		
Gearbox oil	X		X	X	X
Drive axle(s) oil	X		X	X	X
Coolant	X		X	X	X
Brake linings	X*	X	X	X	X
Drive belts	X		X	X	X
Air filter	X		X	X	X
APM	X		X	X	X
Regulatory inspection	X			X	
Tachograph test	X			X	

x*: Fixed until first maintenance.
New vehicle: only engine and APM maintenance features are actives. At the time of the first maintenance operation, it is possible to initialise other components together with the type of maintenance best suited to the usage of your vehicle (predictive or fixed), using the INFO-MAX software or the RENAULT TRUCKS test tool. For that, consult a RENAULT TRUCKS service point or dealer.

Predictive maintenance: means that the terms are formulated by the onboard electronic boxes and vary according to vehicle use.

Fixed maintenance: means that the terms are predetermined and invariable.

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E5-3 Features - servicing

Maximum intervals (first term reached)

Unit	Renault Trucks Oils	km	
		All uses	
		Predictive maintenance	Fixed maintenance
Engine DXi 12	Maxima RD Maxima RD Eco Maxima RLD Maxima RLD Eco (1)	Term calculated according to use.	45 000 or 2 years

(1) Original fitment oil.

Unit (s)	Renault Trucks Oils	km	
		Fixed maintenance	
		Harsh use	Standard use
ZF gearbox 16 S 181 16 S 221 + Intarder Power take-off	Prexima 40	90 000 or 2 years	160 000 or 2 years
	Longevia Eco 75W80 (1)	200 000 or 2 years	300 000 or 2 years
	Longevia BXI Eco 75W80	200 000 or 2 years	300 000 or 2 years

(1) Original fitment oil.

Unit (s)	Renault Trucks Oils	km	
		Fixed maintenance	
		Harsh use	Standard use
Gearbox Optidriver 2	Prexima 40	90 000 or 2 years	120 000 or 2 years
	Longevia BXI Eco 75W80 (1)	400 000 or 3 years	

(1) Original fitment oil.

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E5-4 Features - servicing

Unit (s)	Renault Trucks Oils	km	
		Fixed maintenance	
		Harsh use	Standard use
VOITH retarder	Extensia RXD Eco 5W30	160 000 or 2 years	
	Longevia BXI Eco 75W80	180 000 or 2 years	
	Extensia RXD 10W40	135 000 or 2 years	
	Prexima 30 (1)	120 000 or 2 years	

(1) Original fitment oil.

Unit (s)	Renault Trucks Oils	km	
		Fixed maintenance	
		Harsh use	Standard use
Drive axle(s) P 1395	HD 80W90	80 000 or 2 years	120 000 or 2 years
	HD Eco 80W90	80 000 or 2 years	120 000 or 2 years
	Longevia P Eco 80W90 (1)	120 000 or 2 years	240 000 or 2 years
	Longevia PM Eco 75W90	240 000 or 2 years	400 000 or 3 years
	Longevia PXD 75W90	240 000 or 2 years	400 000 or 3 years

(1) Original fitment oil.

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E5-5 Features - servicing

Unit (s)	Renault Trucks Oils	km	
		Fixed maintenance	
		Harsh use	Standard use
Drive axle(s) 13170	HD 85W140	Forbidden	120 000 or 2 years
	HD Eco 85W140	Forbidden	120 000 or 2 years
	Longevia P Eco 80W140	90 000 or 2 years	120 000 or 2 years
	Longevia PM Eco 75W90 (1)	120 000 or 2 years	240 000 or 2 years

(1) Original fitment oil.



1 hour's operation = 50 km.
Every 10 000 km: Grease the fifth wheel locking mechanism and the towing hook.

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E5-6 Features - servicing

Engine maintenance operations

M1: At the time of each engine oil change
M3: Every year
MP: Special maintenance (first term reached)
A: Every 800 000 km
B: Every 3 years or 400 000 km
C: Every 3 years or 300 000 km
D: Every 2 years or 400 000 km
E: Every 240 000 km

MAINTENANCE		M1	M3	MP
Drain and refill:				
Engine **(see page E7-2)**		X		
Engine cooling system and replace pressure/vacuum cap				B
Carry out:				
Replace engine oil filter cartridge(s)		X		
Replace fuel filter cartridge(s)		X		
Replace air filter and clean sediment bowl			X	
Replace drive belt(s)				C
Replace alternator tensioner roller				A
Bleed fuel prefilter		X		
Clean:				
Radiator mosquito net by blowing through with low pressure compressed air (or hot water) (**Perform this operation early in spring or summer**).			X	
Radiators by blowing low pressure compressed air (or hot water) through the core from the engine side (**Perform this operation early in spring or summer**)			X	
Fuel prefilter(s) gauze and sediment bowl		X		

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E5-7 Features - servicing

MAINTENANCE		M1	M3	MP
Check:				
Air supply system for leaks (position of hoses, tightness of clamps...)		X		
Air filter clogging indicator operation		X	X	
Engine for leaks (oil, coolant, fuel)		X		
All levels		X		
Maximum no-load engine speed				E
Condition and tension of drive belts		X		
Air filter inlet grille (clean if necessary)			X	
External cleanliness of radiator cores		X		
Valve clearances				D
Adjustment of "VCB" compression brake				D
Condition and security of fastening of engine cooling system preheater wiring harnesses, connections and gaskets		X		
Condition and secure tightening of engine and radiator rubber sandwich mountings			X	
Degree of protection of cooling system			X	

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E5-8 Features - servicing

Clutch, gearbox, power take-off maintenance operations

M1: At the time of each engine oil change
M3: Every year
MP: Special maintenance (first term reached)
F: at the time of each gearbox oil change

MAINTENANCE		M1	M3	MP
Drain and refill:				
Gearbox **(see page(s) E11-2 E11-5)**				X
Power take-off				F
Hydraulic retarder **(see page(s) E11-6 E11-8)**				X
Clutch hydraulic system			X	
Carry out:				
Replace gearbox oil filter				F
Check:				
All levels		X		
Gearbox for leaks (oil and air)		X		
Hydraulic retarder for leaks		X		
Power take-off for leaks		X		
Clutch hydraulic system for leaks		X		
Clutch servo master cylinder push-rod clearance, slave cylinder travel			X	
Clutch wear indicators		X		
Condition and secure tightening of gearbox rubber sandwich mountings			X	

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E5-9 Features - servicing

Drive axle, prop shaft maintenance operations

M1: At the time of each engine oil change
M3: Every year
MP: Special maintenance (first term reached)

MAINTENANCE		M1	M3	MP
Drain and refill:				
Rear drive axle(s) (**see page E16-1**)				X
Check:				
All levels		X		
Drive axle(s), hub reduction units for leaks (oil)		X		
Prop shaft(s) play		X		
Secure tightening of universal joint nuts and bolts (prop shaft)			X	

Axle, steering maintenance operations

M1: At the time of each engine oil change
M3: Every year
MP: Special maintenance (first term reached)

MAINTENANCE		M1	M3	MP
Carry out:				
Replace steering fluid reservoir filter cartridge			X	
Check:				
All levels		X		
Hydraulic steering system for leaks		X		
Condition of steering components (hub/swivel play)		X		
Condition of ball-joints and rubber protective bellows seals			X	
Condition and security of attachment of steering lines and flexible pipes			X	
Operation of the steering		X		

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E5-10 Features - servicing

Suspension maintenance operations

M1: At the time of each engine oil change
M3: Every year
MP: Special maintenance (first term reached)

MAINTENANCE		M1	M3	MP
Check:				
Condition of suspension springs, pads, front and rear anti-roll bars		X		
Security of attachment and condition of shock absorbers		X		
Air suspension and remote control		X		
Atmospheric venting of electronically managed air suspension pressure sensor connectors		X		

Brakes maintenance operations

M1: At the time of each engine oil change
M3: Every year
MP: Special maintenance (first term reached)
G: Every years or 80 000 km

MAINTENANCE		M1	M3	MP
Carry out:				
Replace APM cartridge				G
Drain water from air tanks		X		
Check:				
Condition of brake pads and discs		X		
Condition and security of attachment of brake lines and flexible pipes			X	
Braking reaction and directional stability		X		
Visually, connection of brake wear sensors		X		

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E5-11 Features - servicing

Chassis, cab, electrics maintenance operations

M1: At the time of each engine oil change
M3: Every year
MP: Special maintenance (first term reached)

MAINTENANCE		M1	M3	MP
Carry out:				
Grease all points		X		
Grease all points without grease nipples: door hinges, locks, cab locking, etc...			X	
Fuel tank(s) (drain water)			X	
Check:				
General condition of bodywork (doors, locks, remote control)		X		
Presence and positioning of soundproofing screens and heat shields		X		
Security of mounting of cab (stability, air suspension)		X		
Cab tilting hydraulic system for leaks		X		
Cab locking mechanism operation by a RENAULT TRUCKS service point or dealer		X	X	
Condition of wiring harnesses, supports, pipes		X		
Operation of dashboard instrumentation (warning lights, pressure gauges, heating controls)		X		
Operation of signalling devices (lighting, headlights, marker lights, stop lights, reversing lights, overhead lights, windscreen wiper, horn, etc...)		X		
Operation of warning lights		X		
Security of attachment of batteries and operation of master switch		X		
Operation of locking and security of attachment of fifth wheel coupling (tractor)		X		
Operation of locking and safety of towing hook locking mechanism (rigid)		X		

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E5-12 Features - servicing

MAINTENANCE		M1	M3	MP
Check:				
Clearance between fifth wheel coupling and semi-trailer (**see page E28-1**)		X		
All circuits for leaks (fuel, braking, auxiliary equipment, steering, engine cooling)		X		
Atmospheric venting of fuel tank(s)		X		

Heating, air conditioning maintenance operations

M1: At the time of each engine oil change
M3: Every year
MP: Special maintenance (first term reached)
B: Every 3 years or 400 000 km

MAINTENANCE		M1	M3	MP
Clean:				
Air conditioning filter		X		
Carry out:				
Replace chilling fluid and dehydrator filter				B
Clean:				
Air conditioner condenser by blowing low pressure compressed air (or hot water) through the core from the rear of the condenser (**Perform this operation early in spring or summer**).			X	
Check:				
Operation of heater(s) and check for leaks		X		
Independent heater operation			X	

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E5-13 Features - servicing

Wheels, tyres maintenance operations

M1: At the time of each engine oil change
M3: Every year
MP: Special maintenance (first term reached)
H: Every 6 months

MAINTENANCE		M1	M3	MP
Check:				
Condition and wear of tyres, spare wheel and security of attachment		X		
Secure tightening of wheel nuts				H
Inflation pressures of tyres and spare wheel		X		

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E5-14 Features - servicing

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E6-1 Features - servicing

Soundproofing screens

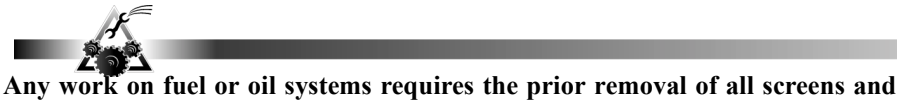
Soundproofing screens and heat shields

When a vehicle comes into the workshop, ensure that soundproofing screens and heat shields are present and properly fitted.
Failing this, it is absolutely essential to bring the vehicle into compliance.
After any work requiring the removal of soundproofing screens and heat shields, they must without fail be put back into place, in accordance with the original fitment, and making sure that they do not enter into contact with their surrounds.



After removal, only perfectly clean screens should be refitted.
Pay particular attention that inflammable products (oil, grease...) are never used on the protective films of the screens and shields.
No solvents or paints are to be applied at all on either the inner or the outer faces of soundproofing screens and heat shields.
Any soiled or damaged screen is to be replaced.

In the event of on-vehicle welding or the use of a sanding disk, provide efficient protection to the screens and shields.
Overtightening of screen and shield attaching nuts and bolts may lead to damage.

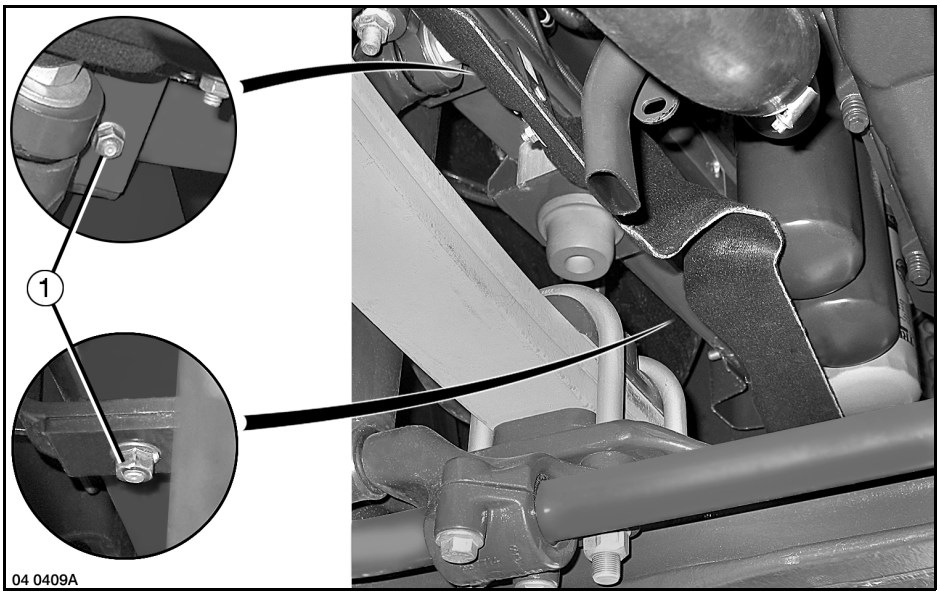


Any work on fuel or oil systems requires the prior removal of all screens and shields liable to be soiled during the operations.
When cleaning the vehicle, limit the jet pressure to 80 bars maximum, the temperature to 80°C and keep the jet at least 80 mm away from all screens and shields.

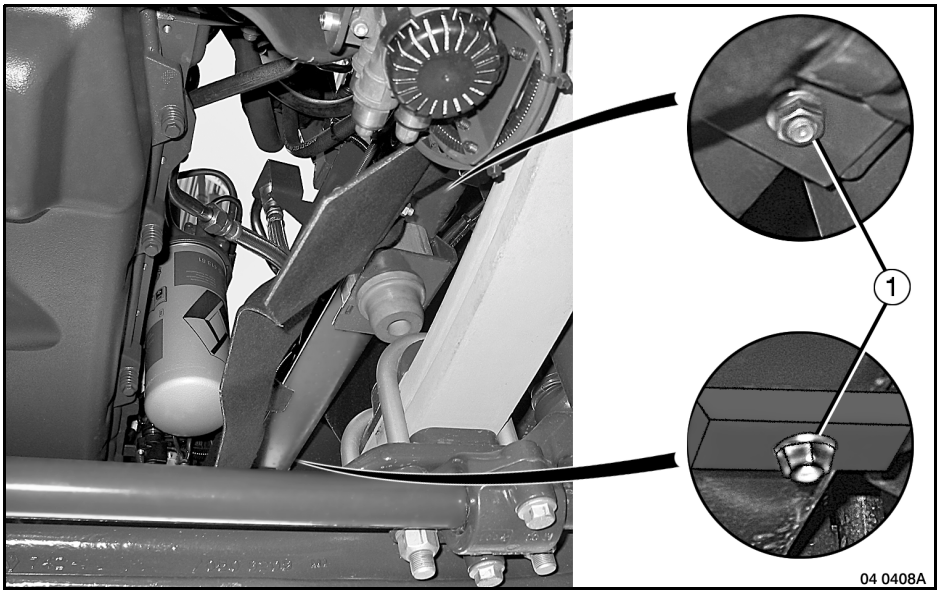
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E6-2 Features - servicing

Removal
To remove soundproofing screens and heat shields, take off nuts (1).



RH side



LH side

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E 7-1 Features - servicing

Engine

DXi 12

Specifications

	DXi 12 440 / 480
Capacity	12 130 cm^3
Bore/stroke	131 / 150 mm
"DELPHI" pump injectors	EUI200 / E1 / C
Injection order	1.5.3.6.2.4
Maximum no-load engine speed	2100 $^{\pm 20}$ rpm
Idling speed	600 $^{+50/-0}$ rpm

Capacities

Oil

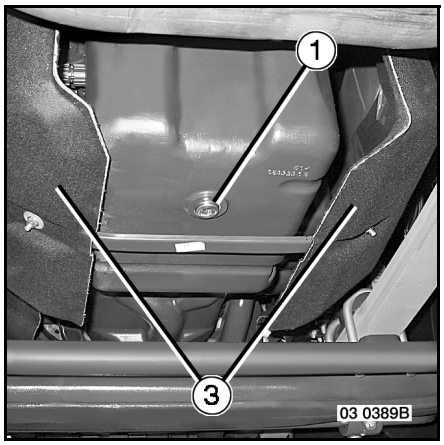
	Litres
Engine dry	
Without filter change	33
With filter change	36

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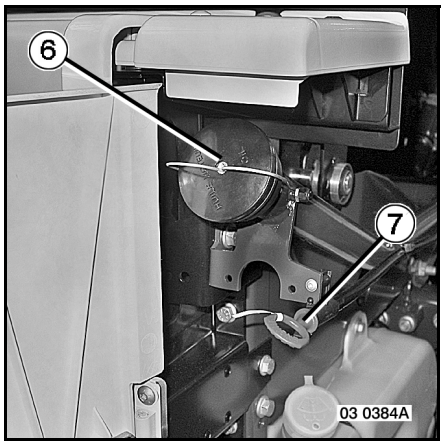
E7-2 Features - servicing

Oil changes

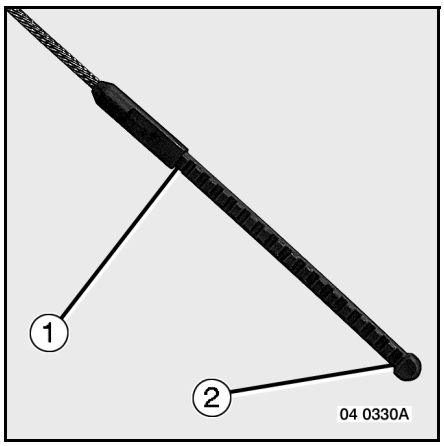
Engine
Remove soundproofing screens (3).
(See page E6-1).
Drain plug (1).
Engine oil drain plug tightening torque:
60 $^{\pm 10}$ Nm.



Filler cap (6).
Check the oil level with dipstick (7).



Reading the oil dipstick:
1– Maximum level
2– Minimum level
When the work is finished, refit the soundproofing screens correctly in place.
(See page E6-1).
After running the engine, check the oil level on dipstick (7).
Top up, if necessary.



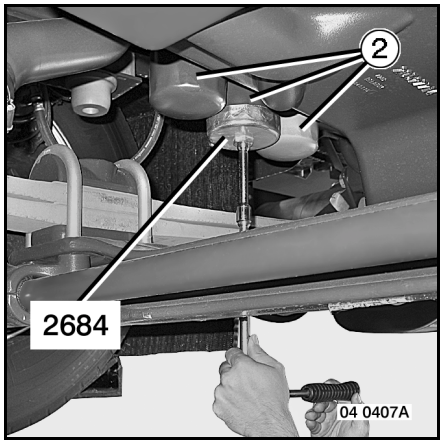
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E7-3 Features - servicing

Oil filters

Remove soundproofing screens.
(See page E6-1).

Throw-away oil filter cartridge(s)
To replace, unscrew oil filter cartridge(s) (2).
Upon refitting:
Replace oil filter cartridge(s) (2).
Oil the gasket(s).
Screw up the oil filter cartridge by hand until it makes contact.



- **Tighten to a torque of $25^{\pm 5}$ Nm.**
- **Use tool N° 50 00 262 684**
- **Use a torque wrench.**

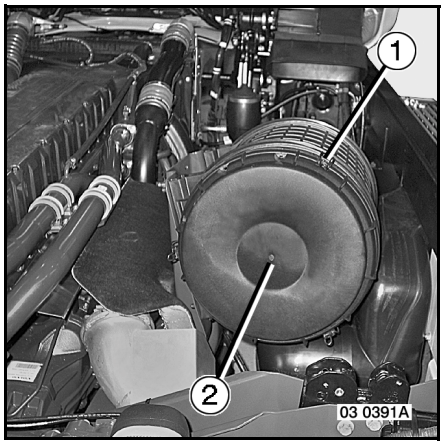
Run the engine and check for leaks.
In the event of leakage, remove the filter cartridge, check the joint face and recommence fitting operations.
When the work is finished, refit the soundproofing screens correctly in place.
(See page E6-1).

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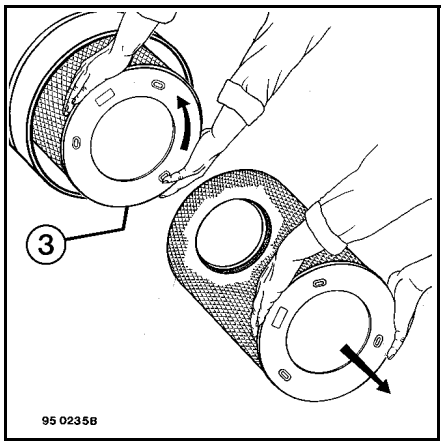
E7-4 Features - servicing

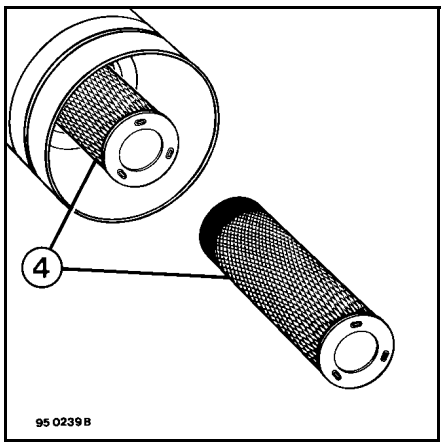
Air filters

Air filter clogging indicator
Check regularly
If warning light (G33) comes on, it means that the air filter cartridge is clogged. Replace the cartridge. At the scheduled intervals, check operation of the clogging indicator by blanking off the filter inlet (with the engine running at 1500 rpm).



Dry element air filter
When the clogging indicator gives the alert, or once a year, replace primary element (3).
Undo clips (1). Withdraw cover (2).
Remove primary element (3). Turn and pull out the element.
Depending on the assembly, the filter is fitted with a safety element (4). Replace safety element (4) every three primary element changes (3) .

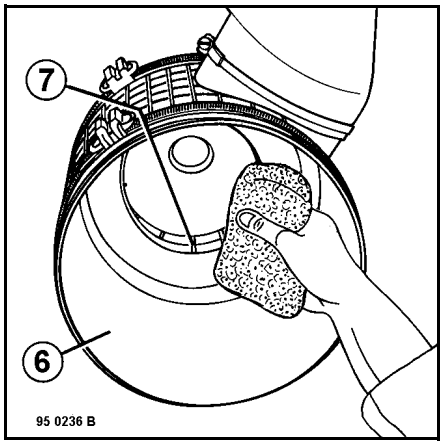


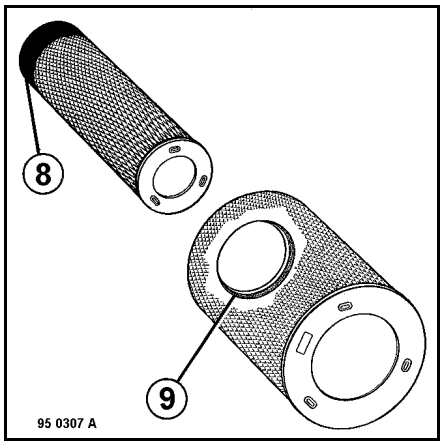


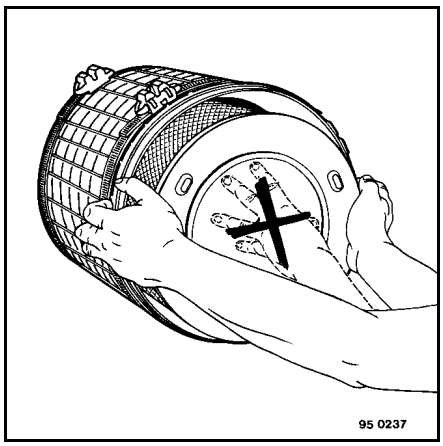
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E7-5 Features - servicing

Before fitting the cartridge(s), clean and carefully inspect bowl (6) and the sealing zone (7). This zone must not be damaged.
New cartridges must be free from any signs of knocks or deformation. Especially inspect the sealing zones (8 – 9).
Upon refitting, ensure correct positioning of the cartridges. Exert firm pressure on their ends.
Position the cover according to the pointer.







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E7-6 Features - servicing

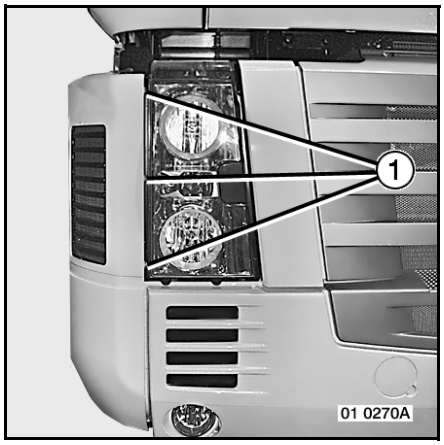
Air filter inlet grille

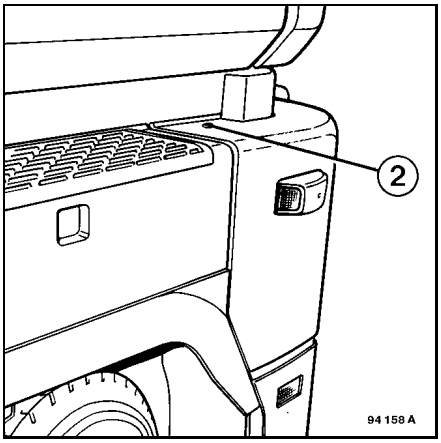
At the scheduled intervals, remove screws (1 - 2 - 3), move the angle panel aside, unplug connector (4) and remove the panel.

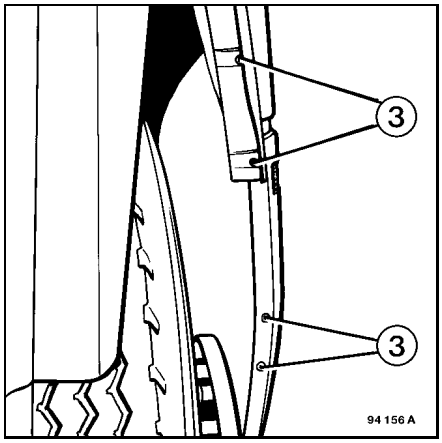
Blow through grille with an air jet, maximum pressure 7 bars, from the inside towards the outside.

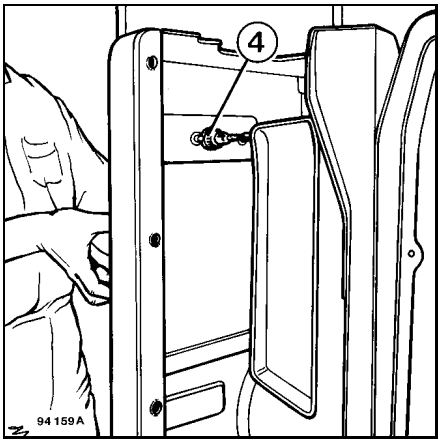
Replace the grille, if necessary.

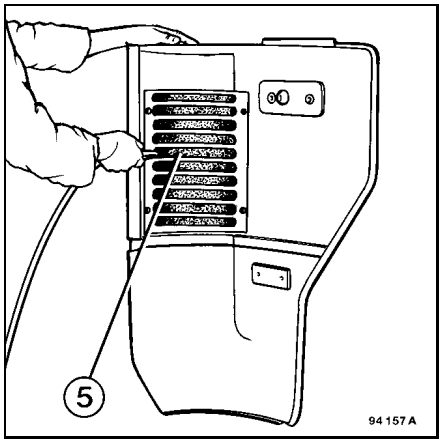
After cleaning, refit the panel and do not forget to plug in connector (4) again.











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E7-7 Features - servicing

Turbocharger

Turbocharger problems

Indications of incorrect turbocharger operation are lack of engine power, strange noise or the ingress of oil into the inlet manifold.
Should this occur, make your way to the nearest RENAULT TRUCKS service point or dealer. On no account must any internal work be carried out on the turbocharger.



It is essential for heat shields to be fitted to the turbocharger to prevent any risk of fire on the vehicle or damage to surrounding components.



All work on the exhaust line and its brackets requires tightening to torque. Call upon a RENAULT TRUCKS service point or dealer.

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E7-8 Features - servicing

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E8-1 Features - servicing

Engine cooling

Coolant

	Litres
Cooling system	38
Cooling system + ZF INTARDER	54
Cooling system + VOITH retarder	52

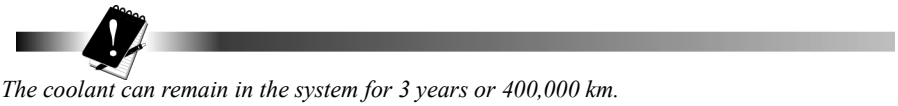
Engine cooling system

Protecting the system throughout the year

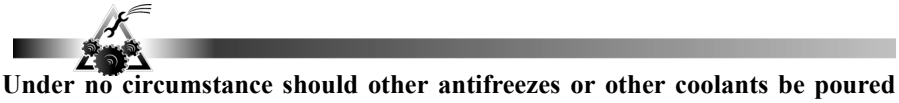
This vehicle is supplied with "ULTRACOOLING PLUS" coolant (a RENAULT TRUCKS OILS product) conforming to RENAULT TRUCKS specifications. Besides its anti-freeze properties, this fluid protects the cooling system against corrosion, scale, etc... It gives frost protection down to - 25°C.

If the temperature drops lower than this, replace a part of the coolant with "MAXIGEL PLUS" antifreeze:

- + 5% "MAXIGEL PLUS" for circuit protection down to - 33°C.
- + 10% "MAXIGEL PLUS" for circuit protection down to - 40°C.



The coolant can remain in the system for 3 years or 400,000 km.
In all countries, whatever the climate or season, exclusively use "ULTRACOOLING PLUS" coolant.
Depending on the destination, the vehicle is delivered with "ULTRACOOLING PLUS -35" coolant (arctic climates). A label affixed to the vehicle indicates this protection.



Under no circumstance should other antifreezes or other coolants be poured into the coolant system. The use of additives is forbidden.

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E8-2 Features - servicing

Radiator(s): external cleaning
Once a year, preferably at the beginning of spring or at the beginning of summer , or if the coolant temperature "DANGER" warning light comes on, clean the exterior of the radiator by blowing compressed air or a high pressure hot water/detergent mixture through the radiator core from the engine side.

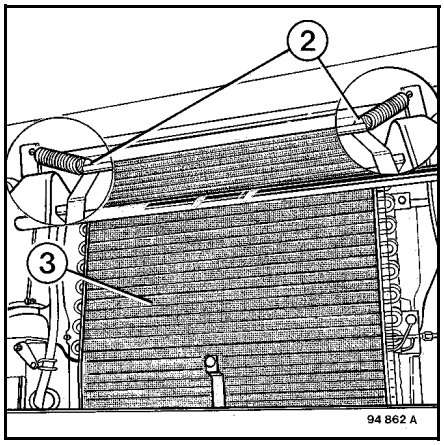
Never use greasy products such as kerosene, paraffin, diesel fuel, etc...

Radiator mosquito net
If your vehicle is equipped with this accessory, see page E8-2 for servicing.

Radiator mosquito net

Disassembly:
Remove front grille (1).
Unhook springs (2) and disengage mosquito net (3). Do not unhook it at the bottom.
Cleaning:
Early in spring or summer, clean radiator mosquito net (3) by blowing through with low pressure compressed air or hot water. Avoid high pressure cleaning jets.
Assembly:
Upon assembly, ensure correct fastening of the mosquito net. Fasten the front grille.





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E8-3 Features - servicing

Variable-drive cooling fan

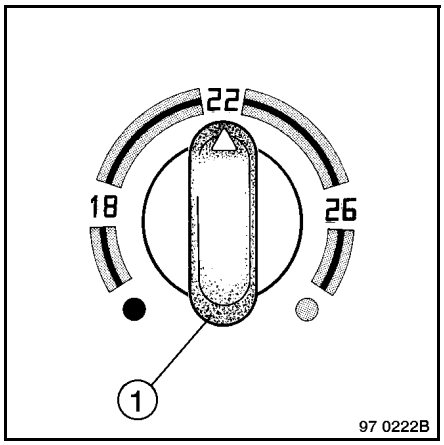
The operation of this fan is managed by the engine electronic system. In the event of cooling fan malfunction, warning pictogram (G9) is displayed on the instrument panel. Get the cooling fan repaired as soon as possible by a RENAULT TRUCKS service point or dealer.

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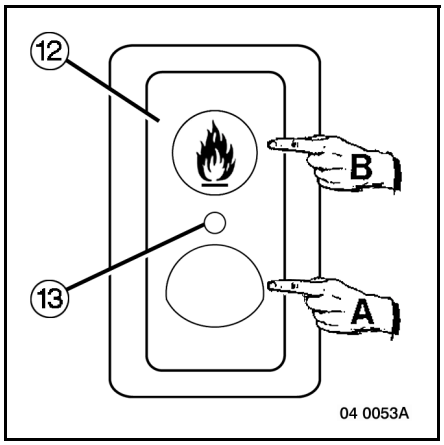
E8-4 Features - servicing

Draining the engine cooling system

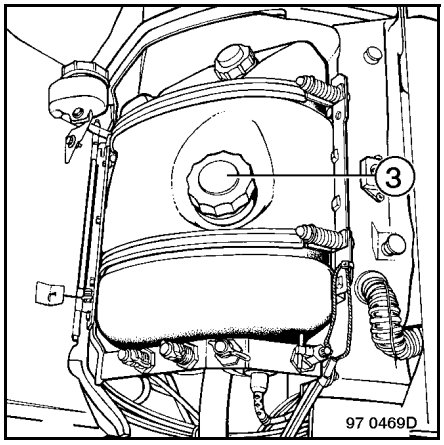
Depending on your vehicle's equipment
Open fan-coil heater valve (1) (max. hot).
Engage the master switch.



Vehicle equipped with air/water independent heater
Move control (12) to position (A).



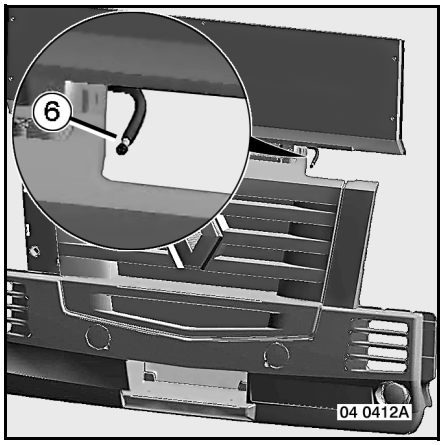
Remove filler cap (3).



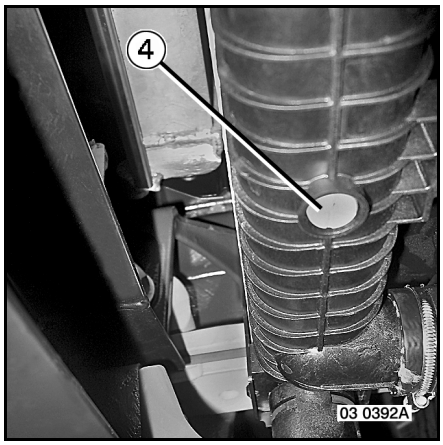
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E8-5 Features - servicing

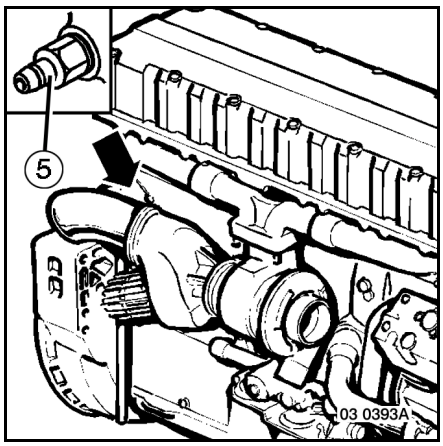
Vehicle equipped with air/water independent heater
Open bleed screw (6).



Remove radiator drain plug (4).
Plug tightening torque: 2 Nm.



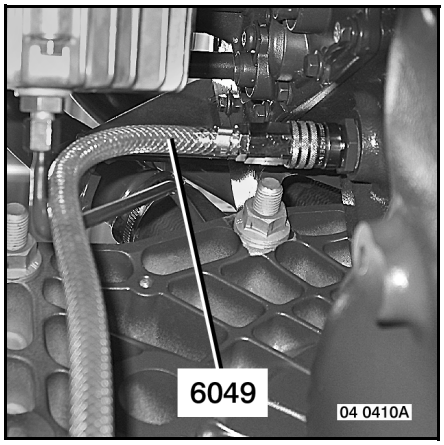
Remove plug (5) from the cylinder block.
Plug tightening torque: 40 Nm.



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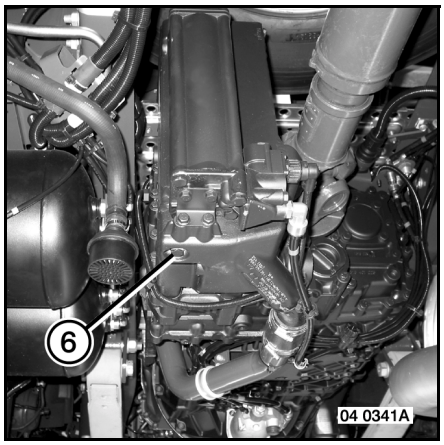
E8-6 Features - servicing

*RENAULT TRUCKS service points and dealers make use of a flexible pipe **74 09 996 049** for draining the cylinder block without having to loosen the plug (5).*

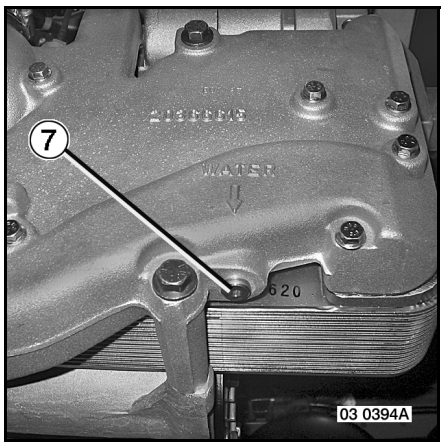


This operation is only possible for vehicles equipped with an air/water independent heater.

Remove plug (6) (with ZF INTARDER).
Plug tightening torque: 36 Nm.



Remove plug (7) (with VOITH retarder).
Plug tightening torque: 25 Nm.



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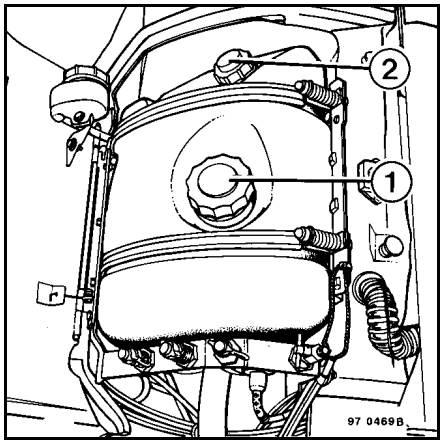
E8-7 Features - servicing

Filling the engine cooling system

Depending on your vehicle's equipment

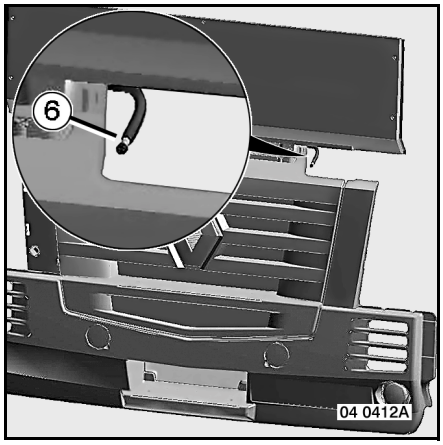
Check that the drain plugs are quite tight.

Fill with coolant through filler cap (1).
Top up with coolant until flush with the port.



Vehicle equipped with air/water independent heater

Close bleed screw (6) as soon as coolant flows through the bleed screw.
Refit filler cap (1).
Start the engine.
Run the engine at a speed of 1200 rpm for 3 minutes, then stop it .
Carefully remove filler cap (1).
Check the coolant level and top up, if necessary. Put back filler cap (1).
Run the engine until it reaches its operating temperature (thermostat open), then stop it.
Let the engine cool down and top up the coolant level, if necessary..



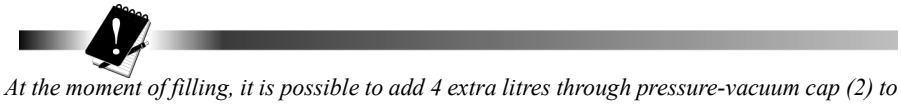
Start up the independent (add-on) heater. If it stops due to cut-out, repeat the cooling system bleeding operation.

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E8-8 Features - servicing



In addition to the dashboard "alert" warning light (G32), the coolant level in the expansion chamber is visible through a transparent wall.
If for some vital reason the coolant has to be topped up while the engine is hot, first of all carefully release the pressure-vacuum cap (2) by 1/4 of a turn to decompress the system.
Retighten the cap immediately. Then remove the filler cap and top up the coolant.



At the moment of filling, it is possible to add 4 extra litres through pressure-vacuum cap (2) to avoid having to top up after pressurization and cooling down of the circuit .
For vehicles equipped with an air/water independent heater, the extra top up will only be 2 litres.

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E9-1 Features - servicing

Fuel system

Fuel tank capacities

Depending on your vehicle's equipment

Steel

	Litres
Fuel tank	415
	505
	610

Aluminium

	Litres
Fuel tank	415
	505
	610
	650
	730

Steel

Aluminium

	Litres
Extra fuel tank	255
	365

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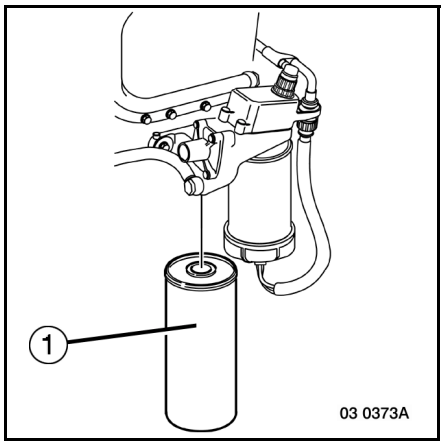
E9-2 Features - servicing

Fuel filter(s)

Fuel filter(s)
Your vehicle is equipped with a high-performance fuel-injection system.
It is vital to use fuel filters provided for that purpose.
The use of poorly adapted filters can be quite harmful.
Since this fuel-injection system is more sensitive to pollution than in-line pump systems, risks of damage are much higher. Therefore it is essential to assemble genuine, original parts guaranteed by the manufacturer.
Do not modify the diesel fuel system without permission from the manufacturer.

Remove all soundproofing screens that may risk becoming soiled.
(See page E6-1).

Replacement of filter cartridge
Unscrew filter cartridges (1).
Clean the filter housing joint face .
Upon fitting, make sure the gasket is impeccably clean. Lubricate the new filter gasket with diesel fuel and tighten the cartridges by hand.



For full reliability, use original filters only.
Do not fill the filter cartridges with fuel before refitting.

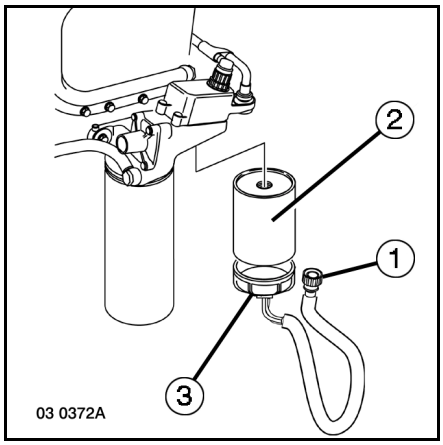
When the work is finished, refit the soundproofing screens correctly in place.
(See page E6-1).

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E9-3 Features - servicing

Fuel prefilter

Depending on your vehicle's equipment



Remove all soundproofing screens that may risk becoming soiled.
(See page E6-1).

Draining the sediment bowl
Unplug connector (1) from the wiring harness.
Remove prefilter (2) from the bracket.
Remove sediment bowl (3) from the prefilter
Cleaning
Clean sediment bowl (3) exclusively with diesel fuel.
Check that the drain holes are not obstructed.
When refitting sediment bowl (3) to prefilter (2), lubricate the new gasket with engine oil.
Lubricate the prefilter gasket and place it on the bracket.
Screw up the prefilter by hand and tighten through 1/2 to 3/4 of a turn.
When the work is finished, refit the soundproofing screens correctly in place.
(See page E6-1).

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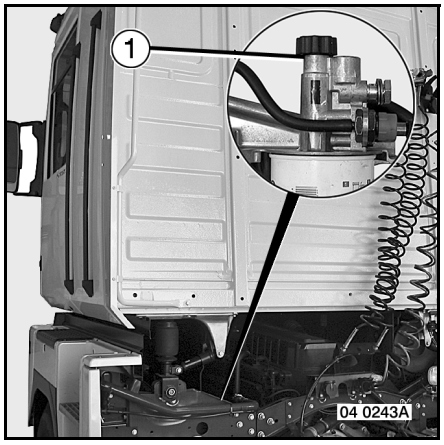
E9-4 Features - servicing

Bleeding the fuel system

Depending on your vehicle's equipment

Mechanical fuel feed pump

Unscrew feed pump plunger (1) then operate it.
Pump until plunger (1) becomes hard.
Screw up feed pump plunger (1).



Electric fuel feed pump

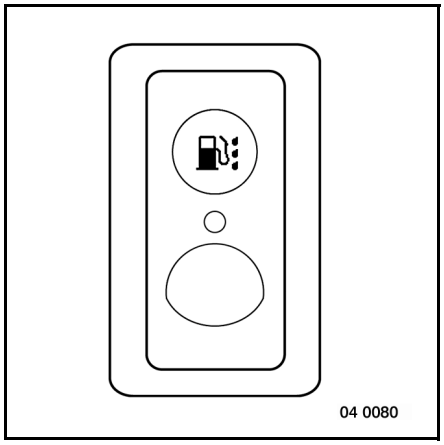
The electric feed pump is used in 2 cases:

- to bleed the fuel supply system, for example when replacing the fuel filter;
- to bleed water from the fuel/water separator.

In both cases, the electric fuel feed pump is activated by dashboard switch (B5).

Bleeding the fuel system

Press switch (B5). The electric feed pump runs for a few minutes.
Bleeding is finished when the fuel supply system is filled and the circuit pressure increases.



Bleeding water from the fuel / water separator

The following conditions must be fulfilled so that water can be drained from the fuel / water separator:

- The fuel / water separator sensor indicates a high water level.
- The vehicle is stationary.
- The engine is shut-down.
- The ignition is switched on.
- The parking brake is applied.

Press switch (B5); the drain valve opens and empties the water.
At the same time, the electric fuel feed pump begins to evacuate the water and prevent air from entering into the fuel supply system.
The water takes only a few seconds to drain.

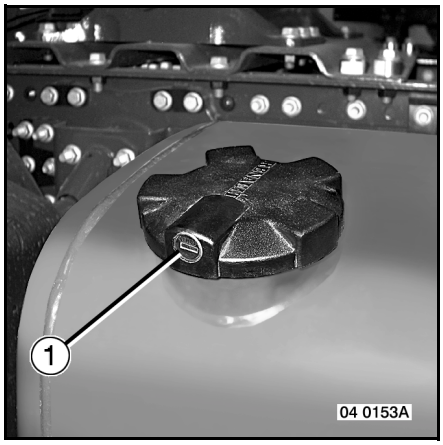
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E9-5 Features - servicing

Fuel tank(s)

Fuel filler cap
The filler cap is locked by a key lock (1).

Vehicle equipped with two fuel tanks without changeover valve



Since there is no fuel gauge switch, fuel level gauge (N) shows the total contents of both fuel tanks.

Depending on your vehicle's equipment

SWITCH OFF THE INDEPENDENT HEATER BEFORE YOU FILL THE FUEL TANK(S).

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E9-6 Features - servicing

Protecting diesel fuel against freezing and additives

Different makes of diesel fuel are commercially available. The quality of the diesel fuel differs according to the period of use (winter or summer). The filterability limit temperature (FLT) varies according to the type of diesel fuel used. At a temperature close to the filterability threshold, paraffin crystals begin to form in diesel fuel and these block the fuel lines and filters.

To improve its properties when cold, it is possible to add kerosene or petrol to the diesel fuel. Outside winter, the addition of products lowering the viscosity of the diesel fuel is strictly forbidden.

- For protection down to **- 15 °C**: use diesel fuel Class "**E**" **(TLF - 15 ° C)**
- For protection down to **- 20 °C**: use diesel fuel Class "**E**" + 20 % kerosene (or paraffin)
- For protection below **- 25 °C**: use diesel fuel Class "**ARTIC 4**" **(TLF - 44 ° C)**



- *a) For maximum efficiency, the additives should be mixed with the fuel at a temperature above 0 °C.*
- *b) In France, do not exceed 30 % paraffin or kerosene (Customs regulations.*
- *c) In other countries, always limit paraffin or kerosene addition to 50 % maximum (check National regulations.*
- *d) However, we recommend that at all times the percentage be kept to the minimum necessary and that paraffin be used in preference to petrol.*



Use only commercially available diesel fuel for automotive vehicles (to standard EN 590.

The use of "biodiesel" (with rapeseed oil base) is authorized at a maximum rate of 5% on condition that it meets the requirements of standard EN 590.

You are advised against using diesel fuel containing additives.

The use of diesel fuel containing additives might invalidate the vehicle warranty.

Storage of diesel fuel in drums or jerry cans might allow the ingress of impurities capable of causing fuel supply system malfunction. In such case, it is necessary to filter the diesel fuel before pouring it into the fuel tank.

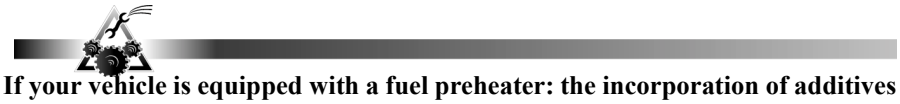
The use of "aquazole" is strictly forbidden.

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E9-7 Features - servicing

Fuel preheater

This equipment serves to lower the filterability limit threshold temperature of the diesel fuel. This filterability limit temperature is different according to the type of diesel fuel used.



If your vehicle is equipped with a fuel preheater: the incorporation of additives (paraffin or kerosene) is strictly forbidden.

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E9-8 Features - servicing

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E10-1 Features - servicing

Clutch

Clutch types

Depending on your vehicle's equipment

VALEO	430 DTE
SACHS	MFZ 430
SACHS	MFZ 2.400

Circuit capacity

	Litres
Clutch release hydraulic circuit	0.5

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E10-2 Features - servicing

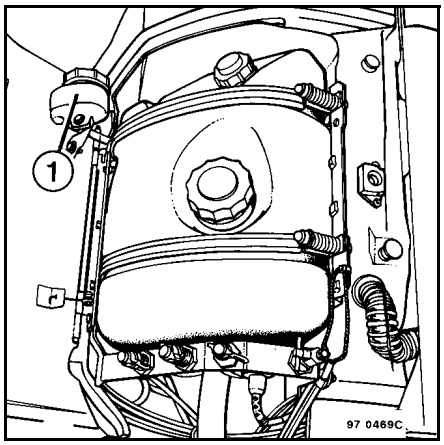
Clutch system

Depending on your vehicle's equipment

Hydraulic system

– Check the fluid level in reservoir (1).

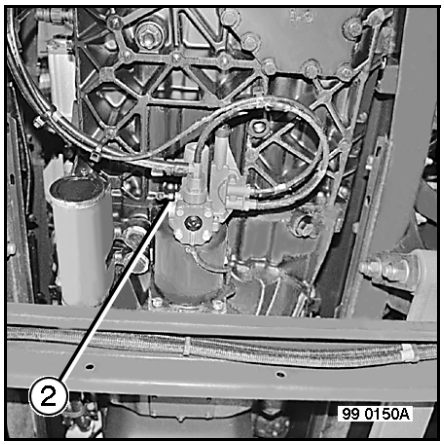
The fluid level should be between the "MIN." and "MAX." marks. Top up, if necessary.



Exclusively use the recommended clutch fluid

Bleeding the clutch system

Using a pressure bleeder, pressurize the reservoir (2 bar approx.). Bleed the clutch slave cylinder by means of bleed screw (2).



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E10-3 Features - servicing

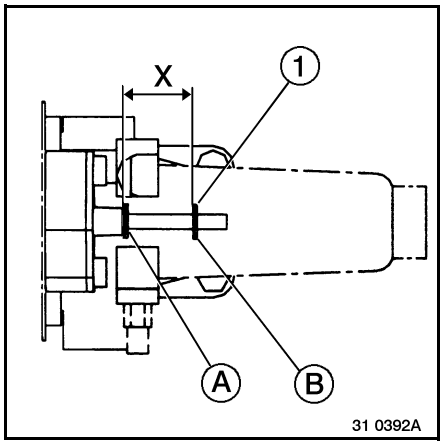
Gearbox ZF

Lining wear indicator (1)
With the engine stopped, check the driven plate wear (with the clutch engaged).

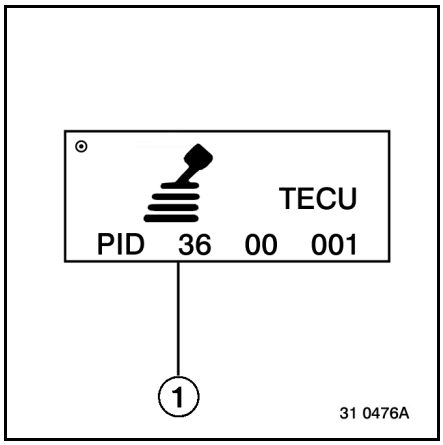
A : new plate.
B : worn plate.

With clutch 430 DTE:
X = 25 ± 1 mm.

With clutch MFZ 2.400:
X = 34 ± 1 mm.



Gearbox Optidriver 2
Diagnostics using the instrument panel information display
The fault code PID 36 00 001 (1) displayed on the instrument panel indicates that the clutch is worn.
To read this fault code (see page C2-5).



https://truckmanualshub.com/

E10-4 Features - servicing

https://truckmanualshub.com/

E11-1 Features - servicing

Gearbox

Gearbox types

Depending on your vehicle's equipment

Gearbox	ZF 16S 181 OD / 16S 2220 TO
	ZF 16S 221 DD / 16S 2220 TD
	Optidriver 2

Gearbox oil capacity

Depending on your vehicle's equipment

Gearbox ZF

	Litres
Normal oil change	10
Sump dry	13
Power take-off	1

Gearbox ZF + intarder

	Litres
Normal oil change	18
Sump dry	21.5
Power take-off	1

Gearbox Optidriver 2

	Litres
Normal oil change	11
Sump dry	13
Power take-off	0.8

VOITH retarder

	Litres
Oil change	6

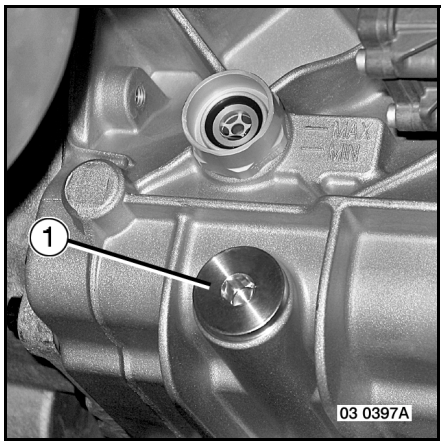
https://truckmanualshub.com/

E11-2 Features - servicing

Optidriver 2 gearbox oil change

Depending on your vehicle's equipment
Remove all soundproofing screens that may risk becoming soiled.
(See page E6-1).
Protect the exhaust line against splashing oil.

Draining
Remove plug (1).



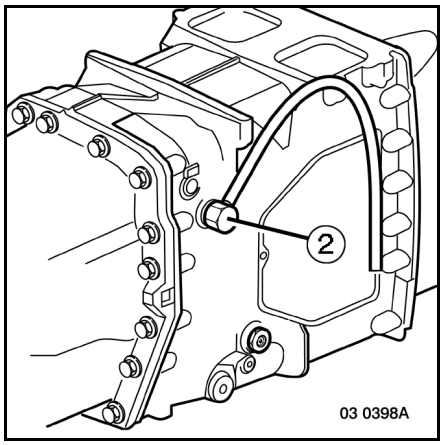
Replace gasket(s) and clean the magnet whenever you change the oil.

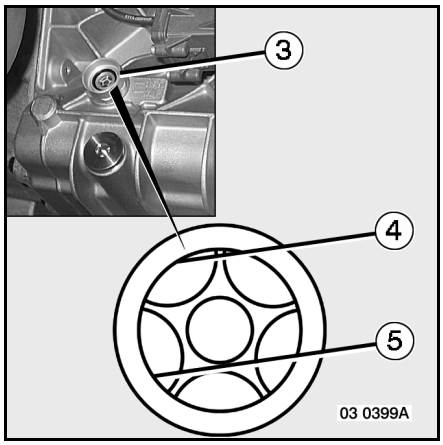
Refit plug (1).
Plug tightening torque (1): 35 ± 5 Nm.

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E11-3 Features - servicing

Filling
Remove plug (2).
Fill with oil through port.
Check the oil level through sight (3).
The oil level should be between marks (4) and (5).
Screw up the plug but do not tighten.
With the vehicle at a standstill, run the engine for 5 minutes. Stop the engine and let it rest for 5 minutes. Check the oil level through sight (3) and top up, if necessary.
Tighten plug (2).

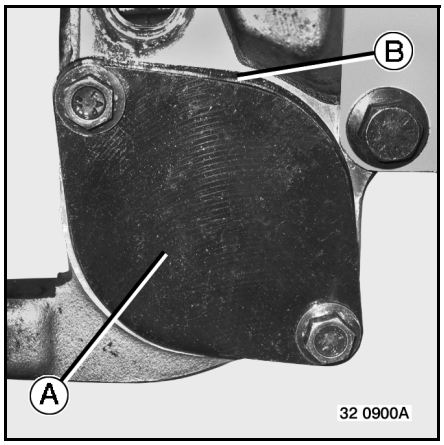




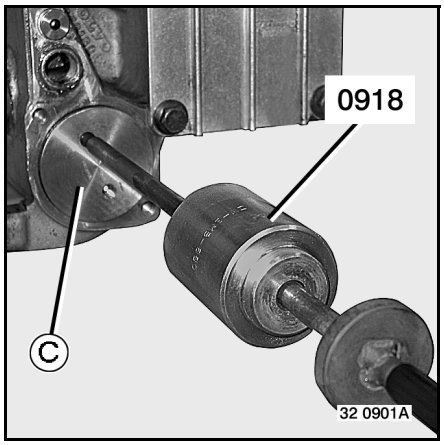
https://truckmanualshub.com/

E11-4 Features - servicing

Replacement of oil filter
Remove the setscrews, withdraw cover (A), withdraw gasket (B), remove filter.

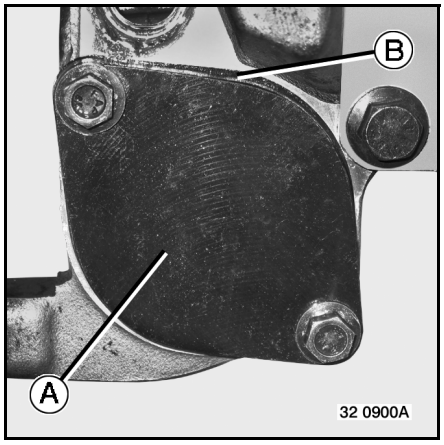


Using inertia tool 0918, remove filter support plate (C).
Clean the cover and gearbox joint face.
Fit a new filter to the shaft.
Replace filter support plate gaskets.



Replace gasket (B).
Fit cover (A). Fit the setscrews.
Tighten the setscrews.

When changing oil and replacing filters on gearboxes with transparent level plugs, fill with oil to the "max." mark. The oil level drops when the oil filter housing fills up.



When the work is finished, refit the soundproofing screens correctly in place.
(See page E6-1).

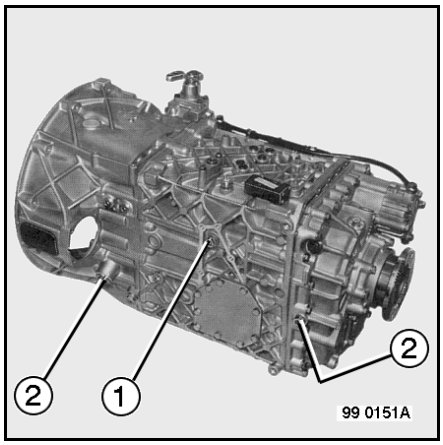
https://truckmanualshub.com/

E11-5 Features - servicing

ZF gearbox

Depending on your vehicle's equipment

Remove all soundproofing screens that may risk becoming soiled.
(See page E6-1).

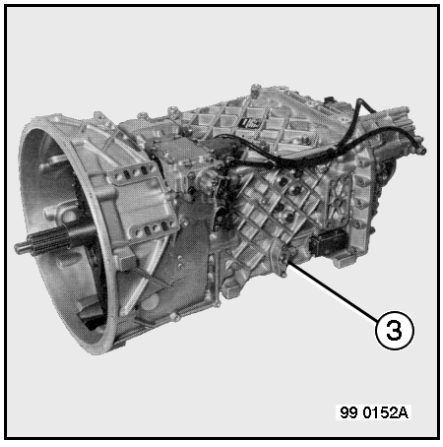


Draining
Remove plug (1 – 2).

Replace gasket(s) and clean the magnet whenever you change the oil.

Filling
Fill with oil through port (3).
As soon as the oil overflows, screw up the plug but do not tighten.
With the vehicle at a standstill, run the engine for 5 minutes. Stop the engine and let it rest for 5 minutes. Remove plug (3) and top up the oil level. Refit the plug.

Plug tightening torque (1 - 2 - 3): 60 Nm.



Breather
Wash the breather in diesel fuel and dry it with compressed air before refitting.
When the work is finished, refit the sound-proofing screens correctly in place.
(See page E6-1).

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E11-6 Features - servicing

ZF gearbox + Intarder oil change

Depending on your vehicle's equipment

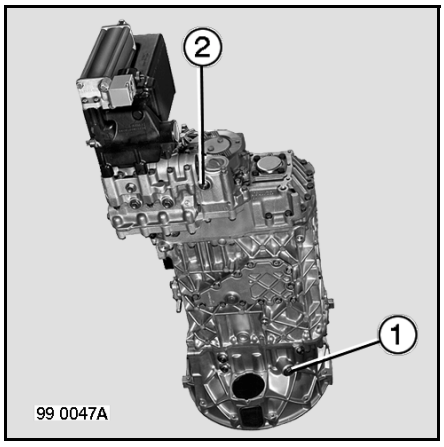
Remove all soundproofing screens that may risk becoming soiled.
(See page E6-1).

Draining

Remove plug (1 – 2).

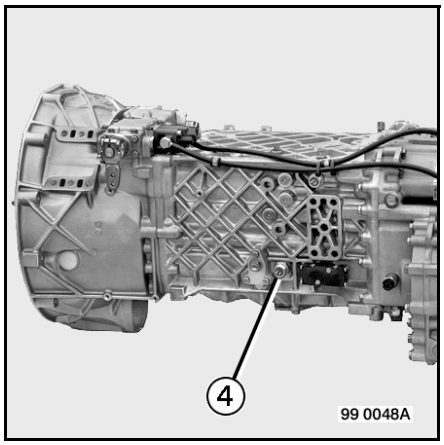
Replace gasket(s) and clean the magnet whenever you change the oil.

Plug tightening torque (1): 120 Nm.
Plug tightening torque (2): 60 Nm.



Filling

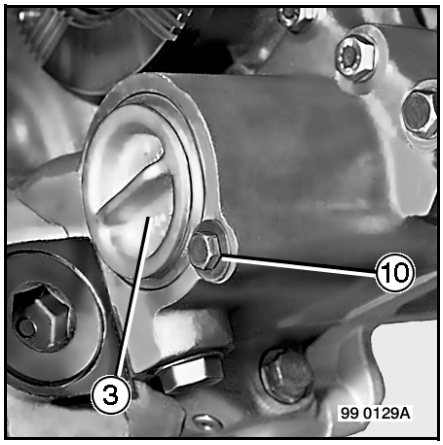
Fill with oil through port (4) until flush with the edge. Screw up plug (4).
Run the vehicle at a speed above 10 km/h for at least 1 minute without actuating the ZF Intarder.
Check the oil level through (4) and tighten the plug to a torque of 60 Nm.



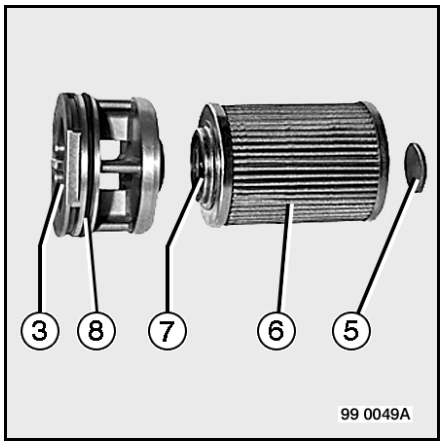
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E11-7 Features - servicing

Retarder oil filter replacement
Remove screw (10), take off cover (3), replace filter (6).
Oil O-rings (7 – 8). Fit filter (6). Inspect O-rings (7 – 8). Replace them, if necessary.
Secure magnet (5) to the new filter.
Fit cover (3). Insert screw (10) (tightening torque: 23 Nm).



Breather
Wash the breather in diesel fuel and dry it with compressed air before refitting.
When the work is finished, refit the sound-proofing screens correctly in place.
(See page E6-1).



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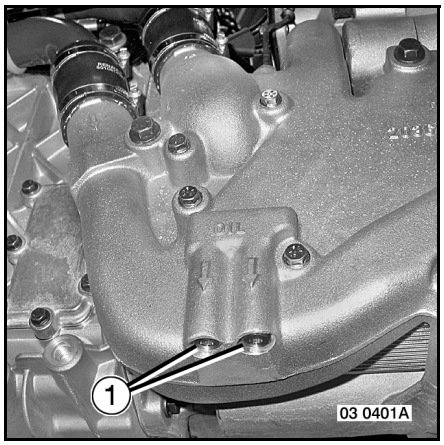
E11-8 Features - servicing

VOITH retarder oil change

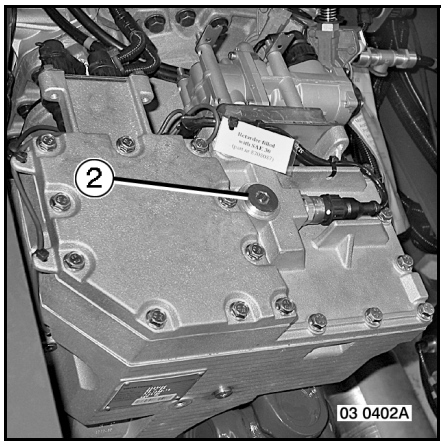
Depending on your vehicle's equipment

Remove all soundproofing screens that may risk becoming soiled.
(See page E6-1).

Draining
Remove plug (1).



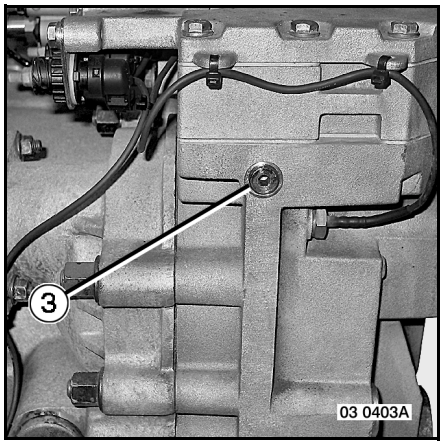
Remove filler plug (2).



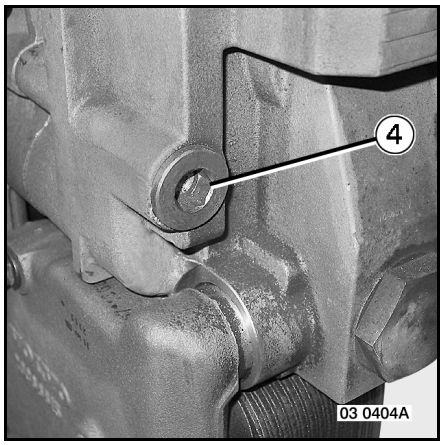
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Features - servicing

Remove venting plug (3).



Remove plug (4).
Remove and clean plug strainer.
Replace he gasket.
Refit plug (4) complete with strainer.
Tighten plug (4) to a torque of 100 Nm.



Filling
Replace the gaskets and put back the drain plugs.
Tighten plug (1) to a torque of 20 Nm
Pour the exact quantity of oil into the retarder.
Replace the gasket and put back filler plug (2).
Tighten plug (2) to a torque of 70 Nm.
Replace the gasket and put back venting plug (3).
Tighten plug (3) to a torque of 20 Nm.
When the work is finished, refit the soundproofing screens correctly in place.
(See page E6-1).

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E11-10 Features - servicing

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E12-1 Features - servicing

Hydraulic retarder

Retarder types

Depending on your vehicle's equipment
ZF "INTARDER" hydrodynamic brake
VOITH hydrodynamic brake

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E12-2 Features - servicing

https://truckmanualshub.com/

E13-1 Features - servicing

Power take-off

Power take-off types

Depending on your vehicle's equipment

N221-10.B/C*
HYDROCAR S81Z1 B/C*
HYDROCAR S81Z2 C*
HYDROCAR S84Z1 B/C**
HYDROCAR S84Z2 C*

*: Full-time service.
**: Part-time service < 30 min (30 minute interval between two periods of use).

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E13-2 Features - servicing

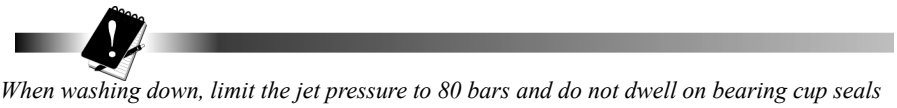
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E14-1 Features - servicing

Prop shaft

Prop shaft types

Tubular shafts fitted with universal joints.



When washing down, limit the jet pressure to 80 bars and do not dwell on bearing cup seals and joints.

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E14-2 Features - servicing

https://truckmanualshub.com/

E15-1 Features - servicing

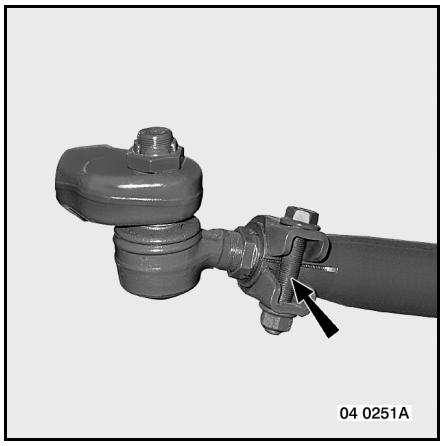
Axle

Front axle types

Axle	E 80

Front axle

To avoid any risk of damage to the steering system, it is essential that the stub axle lock stops be adjusted after any changes to the stub axle, steering arms, track rods, etc... Consult a RENAULT TRUCKS service point or dealer.



Track rod clamps

Whenever you touch the nuts and bolts (e.g. when adjusting wheel alignment), you must systematically replace the track rod clamps.

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E15-2 Features - servicing

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E16-1 Features - servicing

Rear drive axle

Rear drive axle types

Drive axle	13170

Depending on your vehicle's equipment
With inter-wheel diff. lock.

Oil capacity

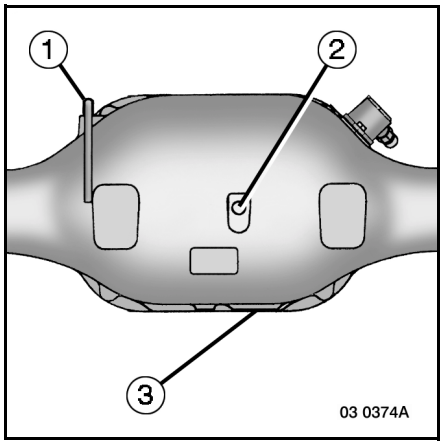
Depending on your vehicle's equipment

	Litres
Drive axle (pan)	17

Drive axle P1395 oil change

Filler and level plug (2).
Drain plug (3).
Plug (2 - 3) tightening torques: 50 $^{\pm 10}$ Nm.

Breather
Remove tube (1) and blow through with compressed air before refitting.

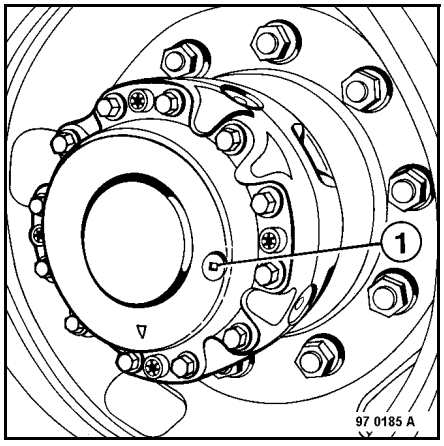


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E16-2 Features - servicing

Depending on your vehicle's equipment

Wheel hub reduction units
Drainage:
Remove plug (1) from the port placed in the downwards position.
Filling:
Plug port (1) placed in the upwards position, pour litres of oil into each hub reduction unit, then refit the plug. Any surplus oil will flow into the drive axle pan where the overall level can be checked.
Plug (1) tightening torque: 30 $\pm$ 6 Nm.
Level:
With the arrow pointing downwards, the oil should be flush with port (1).

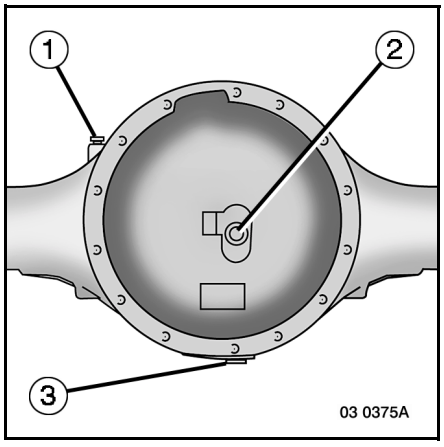


Replace the gasket(s) at the end of each operation and clean the magnet.

Drive axle oil change 13170

Filler plug (2).
Drain plug (3).

Breather
Remove breather (1) and blow through with compressed air before refitting.
If a breather is fitted with a gasket, replace the gasket.



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E17-1 Features - servicing

Suspension systems

Front suspension

Depending on your vehicle's equipment
Leaf springs, hydraulic shock absorbers and anti-roll bars.
Air suspension.

Rear suspension

Air suspension.

Maintenance

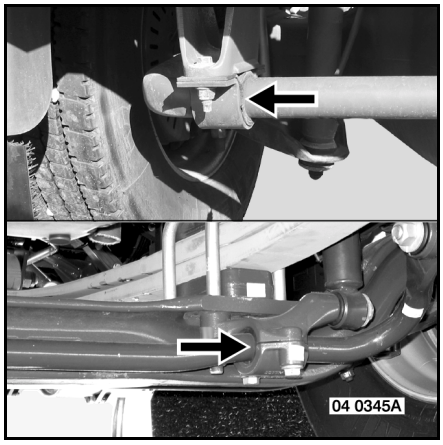
Front suspension

Rear suspension

Suspension components
Shock absorbers do not require any special maintenance. However, at the scheduled intervals, remove them and make sure they are checked by a specialist.

U-bolt tightening torques
Front: 440 Nm.
Rear: 860 Nm.

Anti-roll bar play
At the scheduled intervals, check the play between the bushes and the anti-roll bars.



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E17-2 Features - servicing

Air suspension

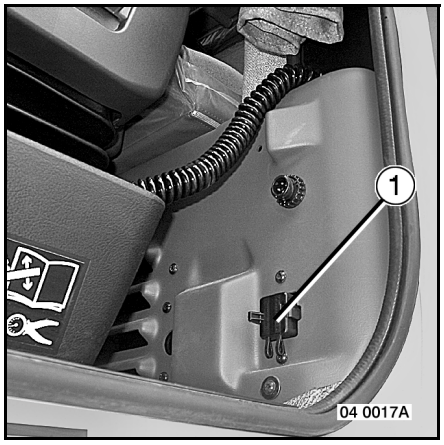
Never spray oil or diesel fuel on the flexible rubber air bellows or pipes. Regularly check the external condition of the air bellows.

Depending on your vehicle's equipment

Electronic air suspension

Any work carried out on sensors, linkages or controls, or replacement of the electronic control unit, requires the system to be recalibrated. Fault finding and maintenance is to be carried out using the RENAULT TRUCKS test tool plugged into diagnostic socket (1).

Testing and programming operations need to be carried out by a RENAULT TRUCKS service point or dealer.



Prior to carrying out any work on the electronic air suspension (other than calibration), place axle stands under the chassis.

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E18-1 Features - servicing

Steering

Steering types

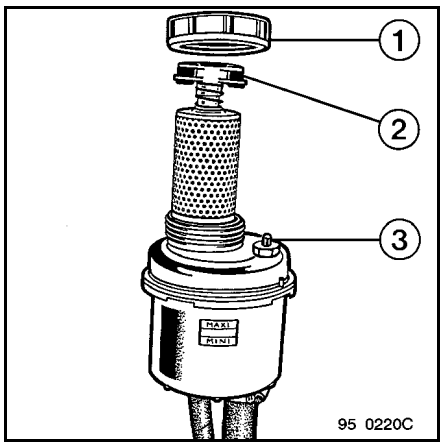
	ZF 8098
Hydraulic power assisted	

System oil capacity

	Litres
Power steering hydraulic system	4.5

Filter cartridge replacement

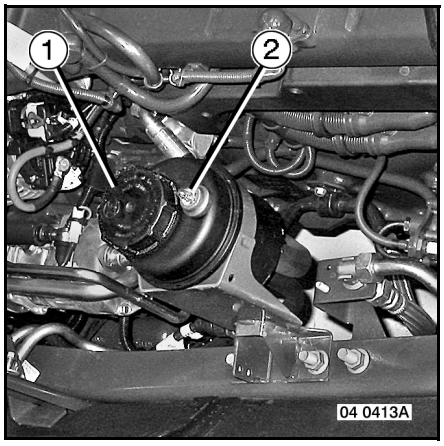
Remove all soundproofing screens that may risk becoming soiled.
(See page E6-1).
Remove filler cap (1). Press and turn handle (2) through 1/4 of a turn.
Withdraw the cartridge unit. Fit a new cartridge, press and turn handle (2) through 1/4 of a turn so as to engage it under the catches on the reservoir. Check oil level (3).
When the work is finished, refit the sound-proofing screens correctly in place.
(See page E6-1).



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E18-2 Features - servicing

Filling the steering system and bleeding



Raise the front end of the vehicle.
Fill the reservoir with oil via filler (1). When the reservoir level stabilizes, operate the starter a few times to turn the pump - top up accordingly. When the level is stabilized once again, start the engine and run at idling speed. Turn the steering wheel from one lock to the other several times so as to bleed the air from the circuit. Keep an eye on the fluid level (2) during this operation and top up, if necessary. This is to be repeated until the oil level remains constant. Stop the engine and top up the level. Lower the roadwheels back onto the ground.
Continue the lockover manoeuvres on the ground until you can no longer hear any flowing noise and the oil in the reservoir has become clear and is no longer emulsified.

A hydraulic circuit can only operate if it is perfectly clean. The utmost care must therefore be taken to ensure that no dirt enters the system when performing the above operations.

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E18-3 Features - servicing

Hydraulic power-assisted steering



The steering will be very hard to turn as the power assistance system is inoperative.
If warning light (J) comes on while you are driving, stop the vehicle and find the cause.
If you experience any trouble, stop the vehicle and find the cause.

- **Check the fluid level in the reservoir.**
- **Check for leaks from hose and pipe unions.**
  Rectify if possible (retighten the unions or change the hoses).

Top up the reservoir with clean fluid to the recommended specification. Restart the engine and check that the pump performs normally. Turn the steering wheel a few times at low engine and road speed.
If warning light (J) comes on, or if any doubt remains concerning the pump's efficiency, the unit must be inspected by a RENAULT TRUCKS service point or dealer.

Under no circumstances must hydraulic components be removed or their initial settings altered. This work must be carried out by a RENAULT TRUCKS service point or dealer.
A hydraulic system can only operate efficiently if it is kept perfectly clean. Great care must therefore be taken to ensure that no dirt enters the system when the above operations are carried out.

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E18-4 Features - servicing

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E19-1 Features - servicing

Cab tilting

Cab tilting system oil capacity

	Litres
Cab tilting hydraulic system	1.5

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E19-2 Features - servicing

https://truckmanualshub.com/

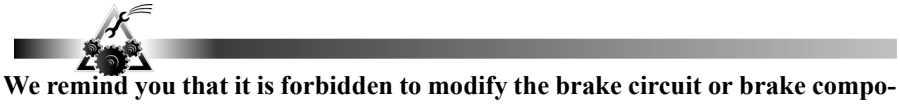
E20-1 Features - servicing

Brakes

Brakes types

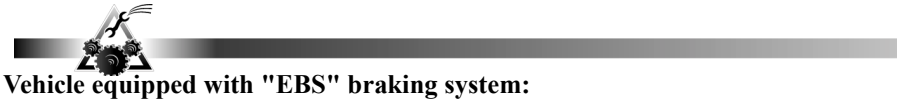
Air
"EBS" braking system

Precautions



We remind you that it is forbidden to modify the brake circuit or brake components. Users are advised that they are fully responsible for ensuring that when any additional pneumatic equipment is connected to the vehicle, all the regulations in force are complied with.

This vehicle is equipped with snap-on sealing couplings. If the air pressure in the air tanks drops rapidly when the vehicle is stationary, get the compressed air system checked out by the nearest RENAULT TRUCKS service point or dealer.



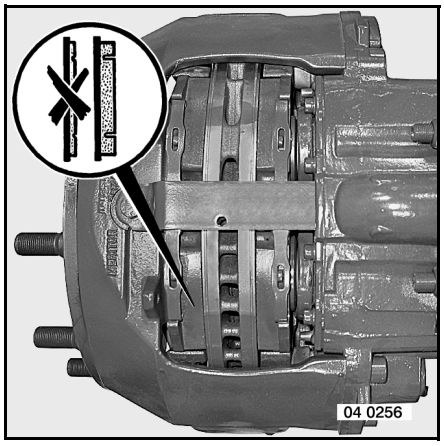
Vehicle equipped with "EBS" braking system:
The alternator and the batteries form part of the system. Their characteristics are integrated in the vehicle type approval dossier. For any modification, contact the nearest RENAULT TRUCKS service point or dealer.

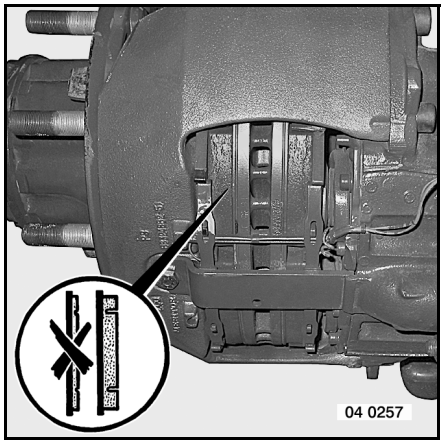
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E20-2 Features - servicing

Brake pads

At the scheduled intervals, or if warning pictogram (G13) is illuminated, check the degree of wear of the brake linings.





Replacement of one brake pad requires replacement of all the pads on the same axle.

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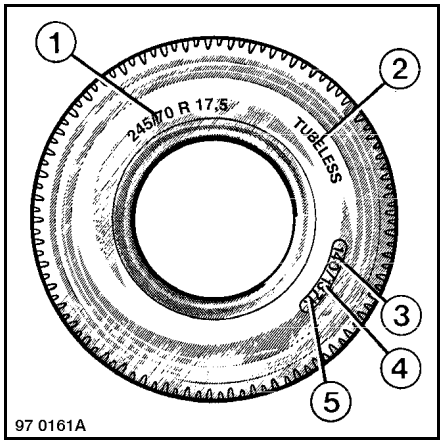
E21-1 Features - servicing

Roadwheels / Tyres

Tyre features

1– Tyre type
2– Tubeless
3– Load index: single fitment
4– Load index: dual fitment
5– Tyre max. speed symbol

For any modification to tyre type, you must re-programme the braking system parameters without fail. Contact the nearest RENAULT TRUCKS service point or dealer.



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E21-2 Features - servicing

Tightening the wheel nuts

Tightening sequence

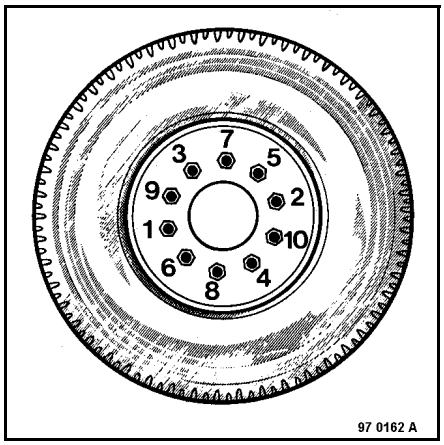
– Disc wheels

Steel wheels

Wheel nuts tightening torque:
$200^{\pm 8}$ Nm.+ $90^{\pm 10}$°

Light alloy wheels

Wheel nuts tightening torque:
$200^{\pm 8}$ Nm. + $90^{\pm 10}$°.
Wheel nuts tightening torque: at least 670 Nm.



CHECK THE TIGHTNESS OF THE WHEEL NUTS AFTER FITTING A NEW WHEEL OR AFTER A WHEEL CHANGE: AFTER 20 TO 30 KM, THEN BETWEEN 150 AND 250 KM.
CHECK THE TIGHTNESS OF THE WHEEL NUTS EVERY 6 MONTHS WHETHER THE WHEEL HAVE BEEN REMOVED OR NOT.
DURING THE CHECK, IF JUST ONE WHEEL NUT HAS NOT BEEN TIGHTENED TO THE MINIMUM TORQUE OF 670 NM, LOOSEN ALL THE WHEEL NUTS AND RETIGHTEN TO THE RECOMMENDED TORQUE AND ANGLE.
FAILURE TO CARRY OUT THESE ELEMENTARY PRECAUTIONS MAY RESULT IN LOOSENING OF THE WHEEL NUTS AND LEAD TO SERIOUS CONSEQUENCES.

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E21-3 Features - servicing

Tyre pressures

Inflation pressures



Follow the tyre manufacturer's recommendations. *Follow the tyre manufacturer's recommendations. If they are not available, temporarily use the following pressures given for guidance purposes. For chassis intended to receive equipment liable to modify loads per axle, refer to the manufacturer's data according to make, type and usage. Comply with the loads/speed index marked on the sidewall of the tyre.*

Depending on your vehicle's equipment

Tyre type: fitting at front only

Tyre type	Load in kg according to fitment		Pressure in bar
	Single	Dual	
385/65 R 22.5	6 500	-	6.5
	7 000	-	7.0
	7 500	-	7.5
	8 000	-	8.0
385/55 R 22.5	6 500	-	6.7
	7 000	-	7.3
	7 500	-	7.8
	8 000	-	8.4
	8 500	-	9.0

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E21-4 Features - servicing

Depending on your vehicle's equipment

Tyre type	Load in kg according to fitment		Pressure in bar
	Single	Dual	
295/60 R 22.5	5 330	9 800	7.0
	5 680	10 420	7.5
	6 020	11 050	8.0
	6 360	11 680	8.5
	6 700	12 300	9.0
315/60 R 22.5	5 560	10 550	7.0
	6 030	11 240	7.5
	6 390	11 920	8.0
	6 760	12 600	8.5
	7 100	-	9.0
305/70 R 22.5	5 660	10 555	7.0
	6 030	11 240	7.5
	6 395	11 920	8.0
	6 760	12 600	8.5
	7 100	-	9.0
	6 700	12 300	8.5**
315/70 R 22.5	5 980	11 225	7.0
	6 370	11 955	7.5
	6 755	12 675	8.0
	7 140	13 400	8.5
	7 500	-	9.0
	7 100	12 600	8.5**
295/80 R 22.5	5 560	9 880	6.5
	5 950	10 560	7.0
	6 330	11 240	7.5
	6 720	11 920	8.0
	7 100	12 600	8.5

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E21-5 Features - servicing

Tyre type	Load in kg according to fitment		Pressure in bar
	Single	Dual	
315/80 R 22.5	6 270	11 090	6.5
	6 700	11 860	7.0
	7 140	12 640	7.5
	7 570	13 400	8.0
	8 000	-	8.5
	7 500	13 400	8.0**

**: according to load index and speed symbol.

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E21-6 Features - servicing

Advice

Roadwheels - Tyres
Changing a roadwheel
Precautions to be taken when fitting wheels on the vehicle:
Before fitting
Carefully clean the wheel naves and hubs. In particular, clean all contacting parts (remove all grease, earth, mud, metal burrs, excess paint, etc...).
Upon fitting
Lightly lubricate the studs and nuts (engine oil). Tighten the nuts gradually using the wheel nut spanner provided in the onboard tool kit. Correct tightening is obtained by pulling the tool lever arm.



Overtightening may cause damage. Do not use tubes, bars or other devices to increase the leverage...

In-service checks
Check the tightness of the wheel nuts after fitting a new wheel or after a wheel change: after 20 to 30 km, then between 150 and 250 km.
Failure to carry out these elementary precautions may result in loosening of the wheel nuts and lead to serious consequences.

Principal causes of premature tyre wear

- Manner of driving (excessive braking, driving through potholes, etc...).
- Overloading of the vehicle or bad distribution of loads.
- Over-inflation or under-inflation
  (inflate to a pressure corresponding to the weight per axle).
- Incorrect pairing
  (always twin tyres of the same size, type and with the same degree of wear).
- Incorrect front axle geometry.

Tyre inflation pressures (vehicle laden)
See "Technical data".

Checking tyre pressures
Frequency
The tyre pressures must be checked regularly.
Method
The tyre pressures must always be checked when the tyres are cold.
It is essential to never deflate hot tyres.

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E21-7 Features - servicing

Safety
In the event of a tyre hitting an obstacle or if it is necessary to stop as the result of a puncture, it is essential to get the tyre immediately checked by a specialist.

Light alloy wheels
Instructions for fitting roadwheels:
To make for subsequent easy removal of the roadwheel, lubricate the hub spigot zone with "FREYLUBE, ROCOL, MG or ESSO MOBY" copper-free grease".



Use only nickel-plated or chromium-plated valves recommended by the Manufacturer. When replacing a valve, lubricate the valve hole and inner seat of the rim with "FREYLUBE, ROCOL, MG or ESSO MOBY" grease.

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E21-8 Features - servicing

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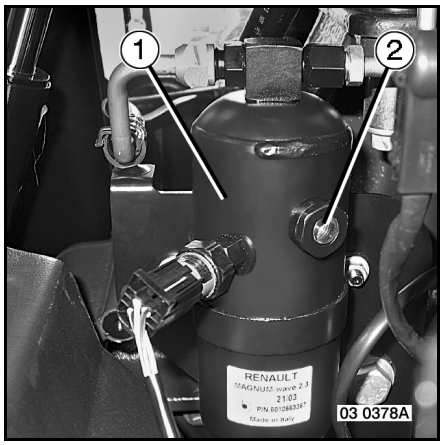
E22-1 Features - servicing

Air conditioning

Maintenance

Depending on your vehicle's equipment

Air conditioner
Dehydrator filter
At the scheduled intervals, get filter (1) replaced.



ANY WORK ON THE CHILLING SYSTEM OR APPLIANCES REQUIRES SPECIAL SAFETY REGULATIONS TO BE MET.
CONSULT A RENAULT TRUCKS SERVICE POINT OR DEALER.

Regularly check the circuit charge and the state of the chilling fluid by keeping an eye on sight (2) fitted on the dehydrator filter.

ANY WORK ON THE CHILLING SYSTEM OR APPLIANCES REQUIRES SPECIAL SAFETY REGULATIONS TO BE MET.
CONSULT A RENAULT TRUCKS SERVICE POINT OR DEALER.

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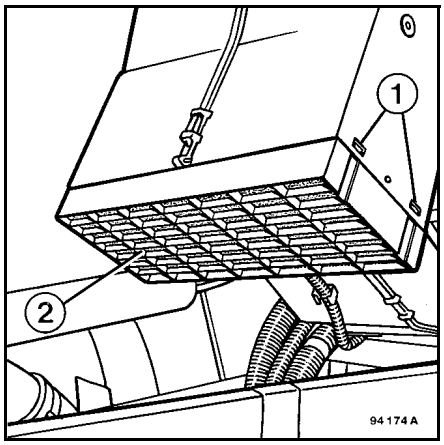
E22-2 Features - servicing

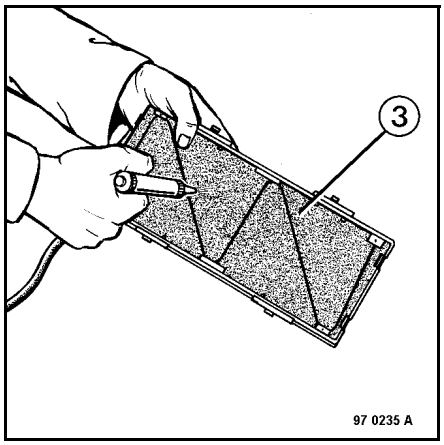
Air conditioner filter

At the scheduled intervals, remove filter unit (2) by pressing the 4 catches (1).

Blow through filter (3) with an air jet, maximum pressure 7 bars, from the inside towards the outside.

Replace the filter, if necessary.





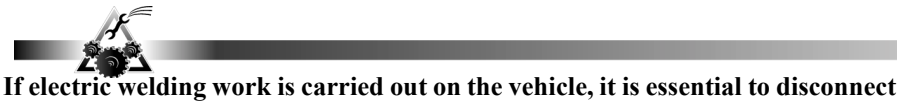
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E23-1 Features - servicing

Independent heating

Servicing

At the scheduled intervals, get the heater serviced by a RENAULT TRUCKS service point or dealer.
Outside the heating period, the heater should be run for 1/4 of an hour every month.
Check the suction and discharge ports and clean, if necessary.



If electric welding work is carried out on the vehicle, it is essential to disconnect the batteries to prevent causing irreparable damage to the electronic control system.

Type "Thermo 90 ST" add-on heater
When renewing the engine coolant, it is important to bleed air from the heater. To do so, run the heater for 15 to 20 seconds and operate the electric water feed pump. Top up with coolant when the heater has stopped.

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E23-2 Features - servicing

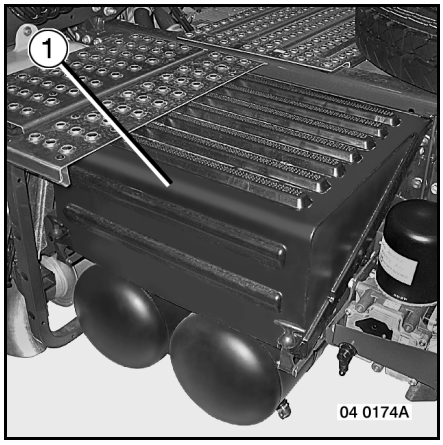
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E24-1 Features - servicing

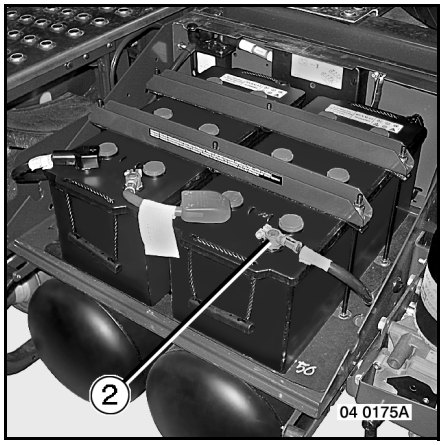
Batteries

Features - servicing

Before working on the electrical system, disconnect the batteries. Always remove the negative (-) terminal first.
Remove plastic cap (1).



Disconnect the battery terminals starting with the negative terminal (2).



Voltage	24 **Volts**
2 batteries:	190 **Ah**
	230 **Ah**

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E24-2 Features - servicing

Measure the voltage across the terminals (battery isolation switch contacts fully open) (see table). This should be slightly higher than the rated voltage. A lower voltage indicates that the battery needs recharging. Check the specific gravity of the electrolyte. Compare the specific gravity of each cell. The difference in specific gravity between cells must not exceed 0.030. To ascertain the exact condition of the battery, use a battery tester. Trickle charge the batteries at $1/10^{th}$ of their capacity for 10 hours. The electrolyte level must stay at 3 cm above the plates. Top up if necessary, using distilled water. Resistance to freezing depends on state of charge.

A battery charged to a specific gravity of:

- **1 115 withstands –7°C approx.**
- **1 160 withstands –15°C approx.**
- **1 210 withstands –30°C approx.**
- **1 250 withstands –45°C approx.**

In addition, the available capacity of a fully charged battery varies with temperature as follows:

- **100% at 27°C**
- **66% at 0°C**
- **41% at –20°C**

Never use a naked flame near the cell vents (risk of explosion).

Maintenance-free batteries

For commercial vehicles, this type of battery does incorporate filler plugs. Take the same precautions as for ordinary batteries. However, the trickle charging current should not exceed 1 Amp.

Before using a charger, disconnect the batteries.

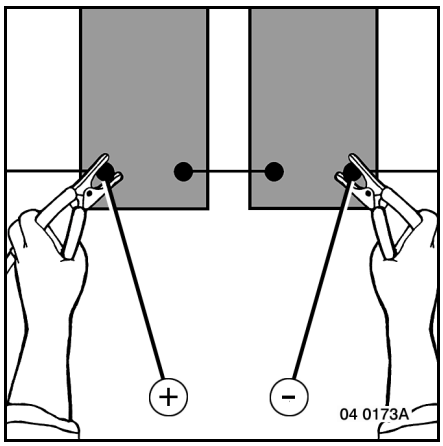
If starting with an auxiliary battery, make sure to connect the (+) terminal of the auxiliary battery to the (+) terminal of the vehicle battery and the (-) terminal of the auxiliary battery to the (-) terminal of the vehicle battery.

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E24-3 Features - servicing

12 Volts power supply

The supply voltage for the installed equipment must be equal to the vehicle's rated voltage.
Any appliance having a 12 Volts rated voltage needs the use of a voltage dropper.
Connection to the mid-point of the two batteries is strictly forbidden.



Overloading the electrical system by adding bulbs or supplementary or more powerful equipment than that for which the system was designed may cause extremely serious damage to all the equipment installed and may produce abnormal discharging of the batteries. Such action will invalidate the manufacturer's warranty.

Incidents involving electrical appliances on tractor vehicles are quite often caused by deficiencies in the electrical installations of trailers. Before hitching up a trailer, carefully check its electrical installation so as to avoid the destruction of fuses, and in particular thee earth link.

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E24-4 Features - servicing

Starting the vehicle using an external power source

If the engine will not start due to discharged batteries, it is possible to use an external power source (battery cart).

Procedure:

- Disengage the master switch.
- Connect up the battery cart, while ensuring correct polarities.
- Engage the master switch.
- Actuate the starter.
- Run the engine at a speed of **1 300 rpm** for about **5 minutes**.
- Switch on the dipped beam headlights then lower the engine speed to idling.
- Let the engine run at idling speed for 1 minute.
- Disconnect the battery cart, starting with the negative terminal.
- Switch off the headlights.



The use of a power charger as starting aid is forbidden (damage to electronic systems).

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E24-5 Features - servicing

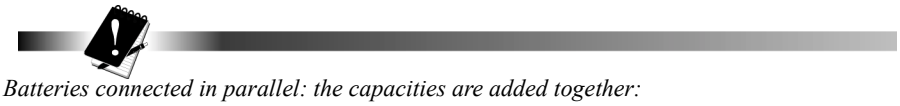
Rational use of batteries

Only fully charged batteries will allow you to start your engine properly.
The original battery / alternator unit enables different electrical equipment to be used and gives optimum battery charging.
Get the charging capacity of your batteries checked regularly. It diminishes in cold weather.
In winter, only use necessary electrical equipment.
If numerous accessories (refrigerator, coffee maker, micro-wave oven, television set, independent heater, etc...) are fitted to the vehicle, it is considered necessary to fit batteries with a higher rated capacity. Take advice from a RENAULT TRUCKS service point or dealer.
The capacity of a battery is expressed in Ampere-hours (A/h).
The consumption of an electrical appliance in amperes (A) is connected with the time of use.
Example: Television set (2A) x 2 hours = 4 Ah
Engine running: The alternator supplies the energy; the batteries compensate, if necessary.
Engine shut-down: Only the batteries supply the energy.
Limit your consumption and realize that a minimum of 50% of the battery capacity is necessary for starting the engine.

Main appliances and their electrical consumption in 1 hour

- Ignition position = 4 A
- Cab overhead light = 2 A
- Side/parking lights = 5 A
- Refrigerator = 3 A
- "Air" type independent heater = 2 A
- Tail-lift = 150 A
- "Air / water" type independent heater = 10 A
- Coffee maker = 10 A

If the forecast calculation reveals a battery discharge of more than 50%, limit the number of appliances or compensate by intermediate charging (engine running at 1500 rpm for at least 1 hour).



Batteries connected in parallel: the capacities are added together:
(2 x 12 V - 230 A/h = 12 V - 460 A/h).
Batteries connected in series: invariable capacity: (2 x 12 V - 230 A/h = 24 V - 230 A/h).

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E24-6 Features - servicing

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E25-1 Features - servicing

Alternator

Alternator types

Depending on your vehicle's equipment

Alternator Bosch NCBI	80 **A**

The voltage regulator may be integral with the alternator, or external to it. Never leave the alternator switched on when the vehicle is stopped (ignition key, master switch). Never break the circuit while the engine is running. Avoid making any connection errors. Never run an engine with batteries disconnected or removed.

Charge indicator

This function is performed by a charge warning lamp (G3).
Charge warning lamp: The charge warning light should remain out when the engine is running. If the light remains on, the charging system is defective.

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E25-2 Features - servicing

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E26-1 Features - servicing

Starter

Starter types

Depending on your vehicle's equipment

Starter	Mitsubishi

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E26-2 Features - servicing

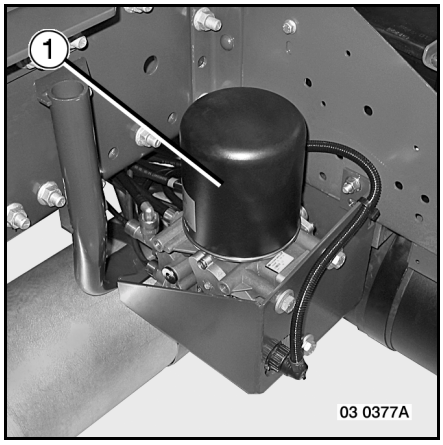
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E27-1 Features - servicing

Compressed air system

APM

At the scheduled intervals, replace the cartridge.
Replacement of cartridge:
Clean the APM and its surrounds.
Fully drain all the air tanks.
Replace cartridge (1). Tighten by hand.



Cartridge with left-hand thread

Get the APM re-initialized by a RENAULT TRUCKS service point or dealer.
Upon assembly, lightly oil the gasket(s).

Spent cartridges are to be considered as special industrial waste and must meet treatment regulations. Take the laws in force into account.

Brake valve

This unit does not require any special maintenance. In the event of malfunction, get it checked out by an approved specialist.

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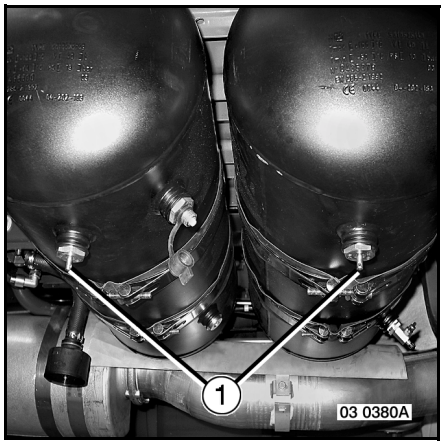
E27-2 Features - servicing

Air tanks

Actuate bleed valves (1) to get rid of all water from the air tanks.
Carry out this operation:
- Every day (in winter).
- Every week (outside winter).

If not, get the APM checked out
(see page E27-1).

As safety precaution, move the gear lever to neutral before draining the air tanks.



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E28-1 Features - servicing

Fifth wheel coupling

Fifth wheel types

Depending on your vehicle's equipment
"GEORG FISCHER" fifth wheel
"JOST" fifth wheel
"VBG" fifth wheel
"ROCKINGER" fifth wheel

Inspection / lubrication

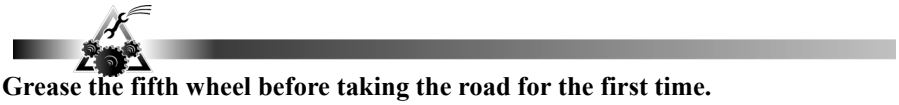
At the recommended intervals, check the clearance between the fifth wheel coupling and the semi-trailer. This clearance should not originate from play in either the locking mechanism or the bearings.

- Play in locking mechanism: Check the kingpin. Adjust locking.
  If adjustment is impossible, replace the locking mechanism.
- Play in bearings: Check bearings for wear. Replace, if necessary.



The fifth wheel is a coupling unit that must meet extreme safety requirements.

Contact your RENAULT TRUCKS service point or dealer, the original equipment manufacturer or an approved specialist to obtain the tools, gauges and parts needed for inspecting and repairing the fifth wheel.



Grease the fifth wheel before taking the road for the first time.
Every 10 000 km: Grease the fifth wheel locking mechanism.

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E28-2 Features - servicing

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E29-1 Features - servicing

Cleaning

Washing the body

To prolong bodywork life and maintain the sparkle of the paintwork, we recommend that your vehicle be washed regularly. We advise against the use of brushes, especially during the first few months of use of the vehicle. Do not use a high temperature steam spray.
Neutral washing products are commercially available which do not dull the paintwork.
To remove grease spots, use cleaning fluid (and not petrol or gasoline for motor vehicles).
If the aluminium components are very dirty, clean them with water to which has been added a small amount of non-alkaline washing product, and rinse with clean water.

Washing the vehicle

To limit any risk of incident, do not apply too much water to:

- electronic boxes, electrical junction boxes and electrical appliances.
- window runner seals.
- hinge pins.
- air inlets to heater, engine intake and air filter.
- compressed air units.
- noise baffles and soundproofing screens.



Stop the engine and disengage the master switch before you wash the vehicle. Limit wash jet pressure to a maximum of 80 bar. For soundproofing screens, limit the temperature to 80°C and keep the jet at least 80 mm away from all screens and shields.



When washing the vehicle, grease all points. More particularly, grease the fifth wheel locking mechanism and the towing hook locking mechanism.

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E29-2 Features - servicing

Cleaning headlamps

Since the headlamps feature plastic lenses, use a soft or cotton cloth.
If this is not sufficient, use a soft (or cotton) cloth lightly soaked with soapy water.
Rinse with a soft or damp cotton cloth, then dry carefully with a soft dry cloth.
Any other products are strictly forbidden.

Cleaning the cockpit

Spray or wipe a cleaning product on with a rag (soapy water, methylated spirits).
Never use petroleum-based or trichlorethylene-based products.
Lightly coat the door and window seals and runners with talc.

Cleaning the fascia panel

Only use soapy water (and no other product whatsoever).

Cleaning the seats

Plastic parts: Use soapy water or an alcohol-based product.
Fabric parts: Clean with a degreasing product (spirits of turpentine, stain-remover, etc.).
Leather parts: To supple and preserve the gloss of the leather, use a damp cloth. For other products, take a visit to the RENAULT TRUCKS boutique.

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F-1 Quick breakdown repair

Starting the vehicle using an external power source

If the engine will not start due to discharged batteries, it is possible to use an external power source (battery cart).

Procedure:

- Disengage the master switch.
- Connect up the battery cart, while ensuring correct polarities.
- Engage the master switch.
- Actuate the starter.
- Run the engine at a speed of**1 300 rpm** for about**5 minutes**.
- Switch on the dipped beam headlights then lower the engine speed to idling.
- Let the engine run at idling speed for 1 minute.
- Disconnect the battery cart, starting with the negative terminal.
- Switch off the headlights.



The use of a power charger as starting aid is forbidden (damage to electronic systems).

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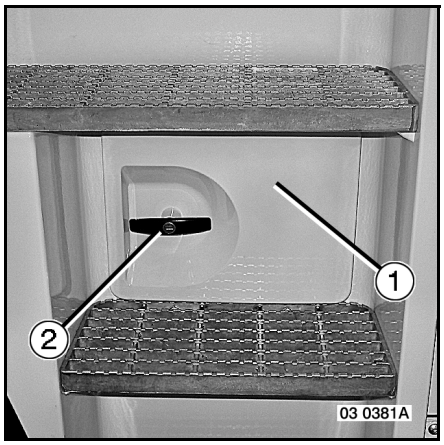
F-2 Quick breakdown repair

Location of jack and onboard kit

Depending on your vehicle's equipment

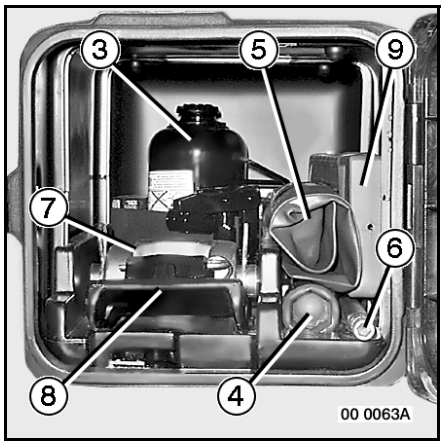
Opening the locker

Turn handle (2) and open locker (1). The locker is provided with a lock.



Arrangement of tools in the locker

- Jack (3)
- Wheel wrench (4)
- Tool kit (5)
- Cab tilt operating bar (6)
- Jack and wheel wrench handle (6)
- Towing yoke (7)
- Jack mounting plate (8)
- Advance warning triangle (9)



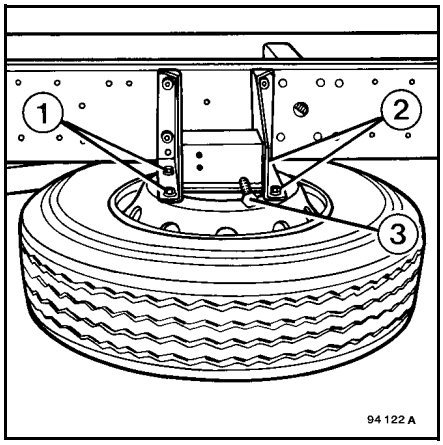
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F-3 Quick breakdown repair

Spare wheel carrier

Removal
Remove the fairing.
Remove the nuts (1 – 2) and turn the winch to lower the wheel (3).

Fitting
Hoist up the wheel using the winch (3) and lock the nuts (1 – 2).
Fit the fairing.



Lock the spare wheel on the spare wheel carrier, then slacken the winch rope.

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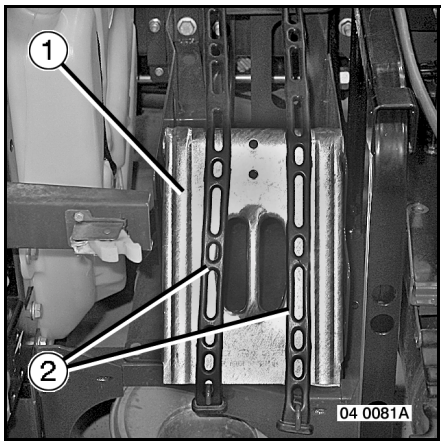
F-4 Quick breakdown repair

Using the jack

Depending on your vehicle's equipment

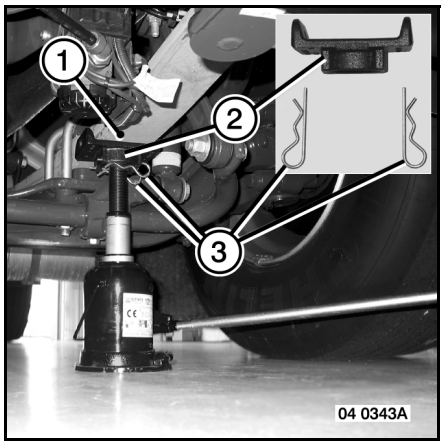
Wheel chocks

To remove wheel chock (1), unhook elastic tightener (2). Upon fitting, ensure that wheel chock (1) is correctly in position and hook up elastic tightener (2).



Front end support points (1)

It is essential to use the adapter (2) by fastening it to the head of the jack with two split pins (3). Place the jack as close as possible to the axle.

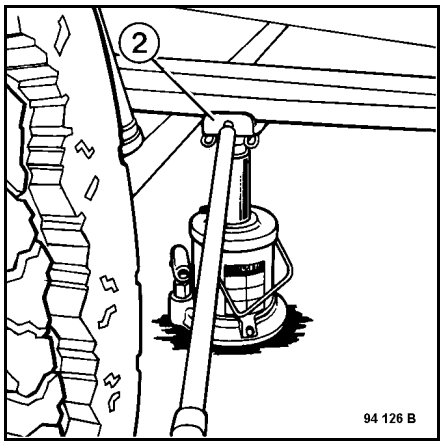


Chock the rear roadwheels.

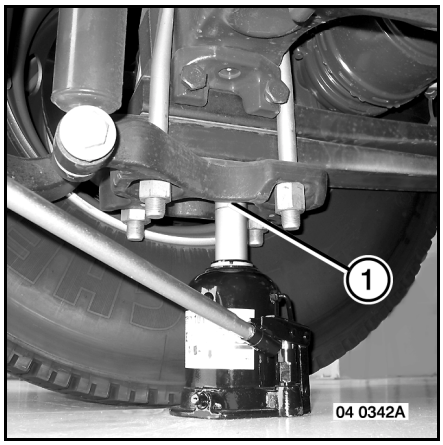
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F-5 Quick breakdown repair

If necessary, use the jack tommy bar to disengage the adapter (2).



Rear end support points (1)





Chock the front roadwheels.
Air suspension: move the suspension to the "down" position.

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F-6 Quick breakdown repair

Tightening the wheel nuts

Tightening sequence

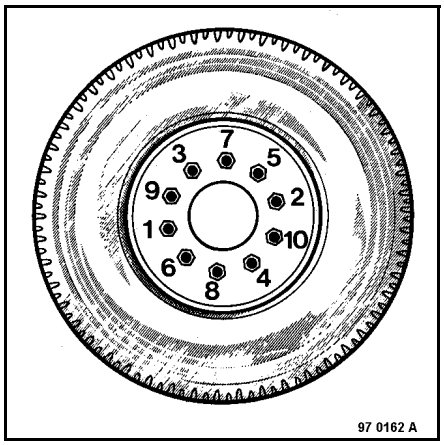
– Disc wheels

Steel wheels

Wheel nuts tightening torque:
$200^{\pm 8}$ Nm.+ $90^{\pm 10}$°

Light alloy wheels

Wheel nuts tightening torque:
$200^{\pm 8}$ Nm. + $90^{\pm 10}$°.
Wheel nuts tightening torque: at least 670 Nm.



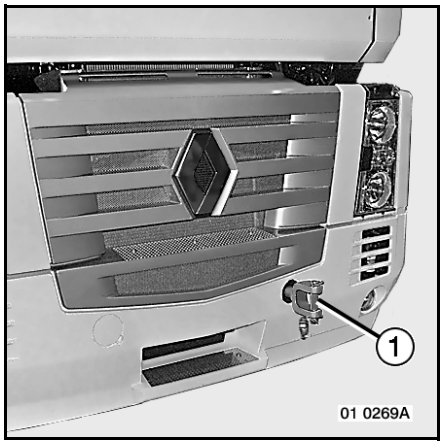
CHECK THE TIGHTNESS OF THE WHEEL NUTS AFTER FITTING A NEW WHEEL OR AFTER A WHEEL CHANGE: AFTER 20 TO 30 KM, THEN BETWEEN 150 AND 250 KM.
CHECK THE TIGHTNESS OF THE WHEEL NUTS EVERY 6 MONTHS WHETHER THE WHEEL HAVE BEEN REMOVED OR NOT.
DURING THE CHECK, IF JUST ONE WHEEL NUT HAS NOT BEEN TIGHTENED TO THE MINIMUM TORQUE OF 670 NM, LOOSEN ALL THE WHEEL NUTS AND RETIGHTEN TO THE RECOMMENDED TORQUE AND ANGLE.
FAILURE TO CARRY OUT THESE ELEMENTARY PRECAUTIONS MAY RESULT IN LOOSENING OF THE WHEEL NUTS AND LEAD TO SERIOUS CONSEQUENCES.

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F-7 Quick breakdown repair

Towing

If your vehicle has to be towed, use towing yoke (1) supplied in the vehicle onboard kit.



The yoke attached to the front cross-member is designed for on-road towing under normal conditions. When pulling bogged down vehicles with spinning drive wheels out of mud or loose soil, it is vital to take the customary precautions.
Proceed with towing only when the engine is running.

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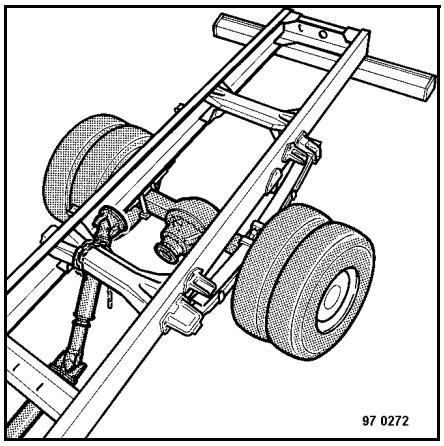
F-8 Quick breakdown repair

In the event of engine breakdown:

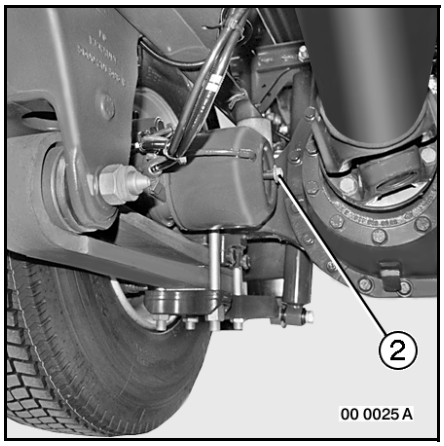
- Mechanically neutralize the brake cylinders if the vehicle has suffered loss of air pressure.
- The steering will be hard to turn as the power assistance system is inoperative.

Type "4 x 2 – 6 x 2"
Put the gear lever into neutral.

- Uncouple the propeller shaft at the drive axle.
- Use the towing yoke.



Releasing the parking brake
In the event of accidental loss of pressure, proceed as follows to move the vehicle (towing). Using a 24 mm wrench, unscrew bolt (2) on each brake chamber until the roadwheels are free.
Putting back into service: Apply an air pressure of approximately 5 bars to the circuit. Bring the bolt (2) into contact with the cylinder and tighten it at a torque of 75 Nm.



Chock the roadwheels.

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G-1 Bodybuilder information

Bodywork

It is essential to obtain 1:20th scale chassis drawings from your dealer when fitting bodywork or special equipment (loading crane, fifth wheel, etc...). For the attachment of this bodywork or equipment and also electrical connections, we ask manufacturers and body builders to comply with the RENAULT TRUCKS specifications and standards drawn up for this purpose.
These are readily available from your dealer.

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G-2 Bodybuilder information

Welding on vehicle

Important precautions to be taken without fail prior to any welding operations

The vehicle is equipped with numerous electronic circuits and numerous ECUs. Prior to carrying out any electric welding work, it is essential to eliminate all potentials by connecting all the ECUs to earth. This can be done quickly by disconnecting the positive (+) cable from the battery terminal and connecting it to earth and then closing the master switch, if fitted. Place the earthing clamp as close as possible to the weld, but never attach it to a rotating part (prop shaft, hub, fan, etc...), nor to any sub-assembly having moving parts (air compressor, turbocharger, etc...). Nearby plastic pipes and electrical cables are to be protected or removed. This also applies for grinding or drilling work. When you reconnect the batteries, When reconnecting the batteries, respect the polarities by always beginning with the positive (+) terminal. If the polarity is reversed, you run the risk of causing irreparable damage to the electronic components.

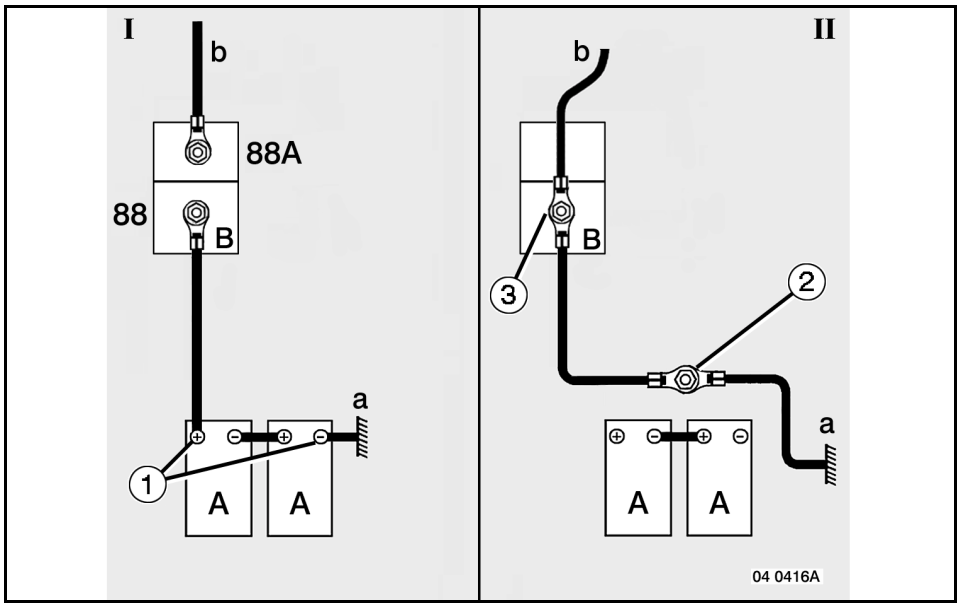
Diagram: vehicle with electrical master switch

- I: Initial state
- II: State before welding
- A: Batteries
- B: Electromagnetic master switch
- a: Battery earth
- b: (+)After master switch positive (+)

(1). Disconnect the positive (+) cable and the negative (-) cable from the batteries.
(2). Connect the positive (+) cable and the negative (-) cable
(earthing of the positive (+) cable)
(3). Connect the two cables together (+) before and after the master switch.

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G-3 Bodybuilder information



After welding, reconnect all the cables finishing with the earth cable (a).

Soundproofing screens

Any damage to the interior protective film of the screen requires replacement of the film.
See that no flammable products are applied to the screen protective films. The screens are to be cleaned using a cloth. If necessary, use soapy water (any other product is strictly forbidden).
The application of any solvent or paint on the inner and outer faces of soundproofing screens is strictly forbidden.

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G-4 Bodybuilder information