Instruction Manual

Volkswagen LT

We thank you for the confidence you have placed in us through the purchase of your new Volkswagen LT.

The Volkswagen LT is a reliable, versatile vehicle.

By virtue of its well-proven technical design, very careful selection of materials, modern manufacturing techniques and the conscientious efforts of everyone concerned the Volkswagen LT also possesses all the virtues typical for Volkswagen such as, economy, quality, reliability and value retention.

Because the Volkswagen Dealers are convinced about the quality of the LT they offer you 1 years warranty against defects – with no mileage limit.

Thanks to modern technology the Volkswagen LT only needs very little maintenance. Normally, an Inspection Service only is required once a year.

It is also reassuring for you to know that one of the largest and most efficient organizations in the world is available to look after your Volkswagen LT: In Europe alone there is a network of more than 8000 Volkswagen Dealerships of which a large number have specialized in repairing/servicing LT vehicles. Furthermore, there are special LT Dealerships in some export countries. All these Dealerships work economically and professionally in accordance with factory guidelines.

The Volkswagen Dealers in most countries offer you, in addition, further warranty cover and a number of other services, such as for example:

- 1 years warranty on work done in the Dealerships
- 1 years warranty on all Genuine parts, Genuine accessories and Volkswagen accessories
- The quick, reasonably priced Express service for small repairs
- The Volkswagen accessory service
Tested, factory approved accessories and correct fitting – please read notes on page 82.

Volkswagen Dealers will inform you of the details of the above-mentioned services and of any possible deviations in various countries. Please refer also to the notes in the Service Schedule.

We wish you pleasant and safe motoring at all times.

Your VOLKSWAGEN AG

In the vehicle wallet you will find, in addition to this **Instruction manual,** a **Service Schedule** and a **List of Addresses.**

Also depending on vehicle model and equipment there can be various Supplements (e.g. car radio leaflet, "Florida" Camper, LT 4x4).

If one of these publications appears to be missing or you have the impression that the information on some equipment or model version is not complete, please contact your Volkswagen Dealer. He will be pleased to help you.

You can naturally also get in touch direct with our Service Department or with the Importer in your country. The telephone numbers and addresses are to be found in the appropriate list.

The instruction manual

should be read carefully as soon as possible so that you get to know your vehicle quickly.

Your special attention is drawn to the chapter "Driving tips" in this instruction manual. There you will see how you can drive **safely, economically and environment consciously.**

For safety reasons please note also the information on Accessories, modifications and the renewal of parts on page 82.

The other chapters are of course also important because the correct operation of the vehicle serves – in addition to regular care and maintenance – to maintain the value of the vehicle and is, in many cases, also one of the stipulations for upholding warranty claims.

At the end of this manual we have made a list of the checks which you should carry out regularly to keep your vehicle roadworthy at all times.

The Service Schedule

contains
- identification data for your car
- the Service intervals
- the Service operations
- important details about Warranty

Service work which has been carried out is also confirmed in the Service Schedule. This can be important when a claim is made under Warranty. You should always present the Service Schedule when taking the vehicle to a Volkswagen Dealership.

The List of Addresses

contains
- addresses and telephone numbers of Volkswagen Dealers in Europe and overseas;
- important information on the emergency services.

Notes on the layout of this manual:

It describes the largest possible range of equipment envisaged at the time of going to press. Some of the equipment may be available later on or not at all or will not be offered in certain Export markets.

Items of equipment marked with a * are only standard on certain model versions or are only available as optional extras on certain models.

All blocks of text which have this colour backing and the title "Attention" refer to potential accident or injury risks.

Texts following this symbol and printed in italics are important notes on environmental protection.

One final request:
When you sell your vehicle please give the complete Vehicle Wallet to the new owner because the vehicle literature belongs to the vehicle.

INSTRUMENT PANEL

OPERATION

DRIVING TIPS

OPERATING INSTRUCTIONS

DO-IT-YOURSELF

TECHNICAL DESCRIPTION

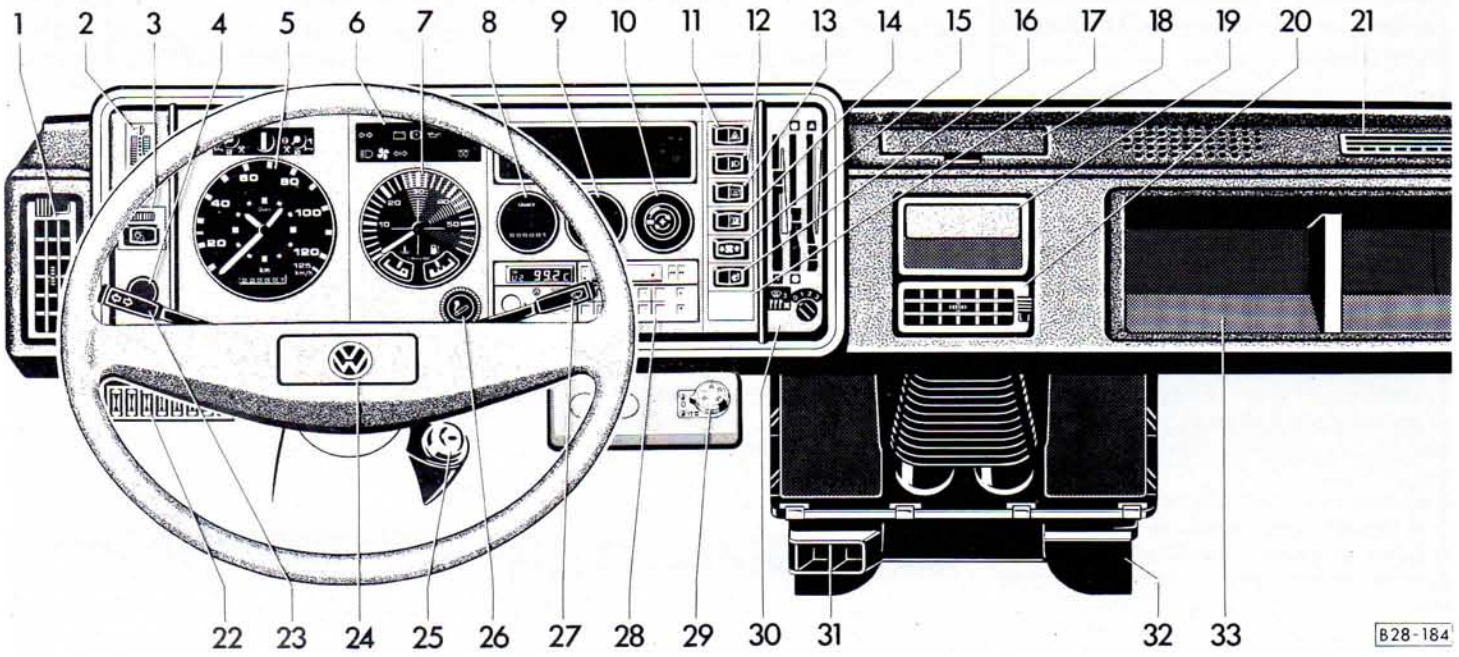
TECHNICAL DATA

SPECIAL INFORMATION

ALPHABETICAL INDEX

CHECKS WHEN FILLING TANK

INSTRUMENT PANEL



Notes

■ Some of the items of equipment listed are only fitted on certain models or are optional extras.

■ On righthand drive vehicles the arrangement of the switches differs slightly. The symbols on the switches are however the same as in vehicles with left hand drive.

[1] For vehicles with a factory fitted radio, an instruction leaflet is also supplied.
See remarks on page 95 of "Do-it-yourself" section when service installing a radio.

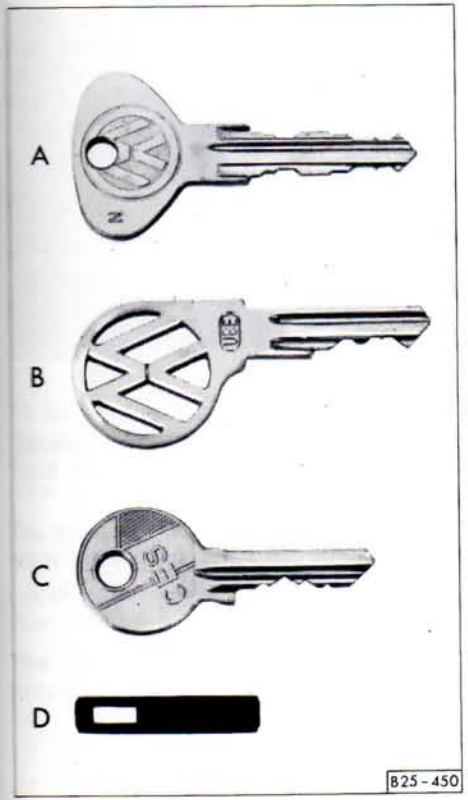
WARNING LAMPS

Symbol		Page
	Turn signals	28
	Trailer turn signals	29
	Generator	28
	Glow plugs-Diesel	29
	Engine oil pressure STOP	29
	Headlight high beams	29
	Coolant temperature/coolant level STOP	29
	Brake system STOP	28
	Emergency light system	34
	Rear window heating	34
	Fog lights/rear fog light	34

Notes

■ If one of the lamps marked with STOP comes on when driving, stop and switch engine off. Details can be found on the pages given.

■ Some of the lamps shown here are only on certain models or are optional extras. On the other hand there are lamps which are not listed here because they are installed on so few vehicles.



Up to six keys can be supplied with the vehicle:

- two keys A
- two keys B *
- two keys C *

This key fits all locks except:

- the lockable glove box
- sliding door and wing door with safety locks

Attention

When leaving the vehicle unattended – even only for a few moments – always take the key with you.

Key B

This key is for the lockable glove box *.

Key C

This key fits the safety locks in sliding door and wing door. It can only be withdrawn when the doors are locked.

Tag D

The number for key A is stamped on this plastic tag.

The numbers for keys B and C are stamped on the individual keys.

With the aid of the number a replacement key can be ordered from a Volkswagen Dealership.

The tag should be kept separately and safely (in your wallet for example) so that no unauthorised person can order a key.

In addition to the plastic tag there may also be a metal tag on which there is a part of the vehicle identification number. This tag is no longer required after vehicle has been delivered.

DOORS

Cab doors

From outside both cab doors can only be locked with the key A. When unlocking the locking knobs go up, when locking they go down.

Both doors can be locked without using the key. To do this press down the locking knob with the door open and operate the trigger in the outside door handle as the door is closed.

If the door closes on its own after the locking knob has been depressed, the knob springs up automatically so that you are not locked out with key inside the vehicle.

The rear door on the Double Cab pick-up is locked from outside in the same way as the front doors.

From inside the door can be locked by pressing down the locking knobs or by pressing down the inner lock lever (Double Cab).

As long as the knobs are pressed down the doors cannot be opened from inside or outside.

Attention
Locking the doors can prevent them from opening in an unusual accident situation.
Locked doors also prevent anyone from entering without permission – e.g. at traffic lights. However they make it difficult for anyone to get into the vehicle in an emergency.

Sliding door *

From outside the sliding door can be locked and unlocked with the key A or C. When fully open the door is held by a hook.

To close sliding door from outside – Press the door handle down to release the hook and slide the door firmly forwards.

Note
If door does not close the first time, move handle to stop in opening direction before trying to close it again.

Otherwise the door will be difficult to close and the lock mechanism may be damaged.

From inside the sliding door is locked by pushing down the locking knob near the door inner handle.

As long as the knob is in the lower position the door cannot be opened from inside or outside.

When the vehicle is moving, **the door must always be properly closed** but when carrying passengers the locking knob should be left in the upper position so that the door can be opened from outside in an emergency.

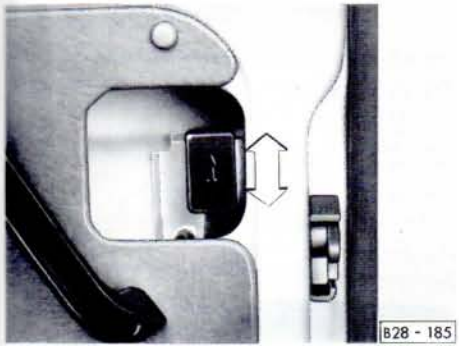
Wing door *

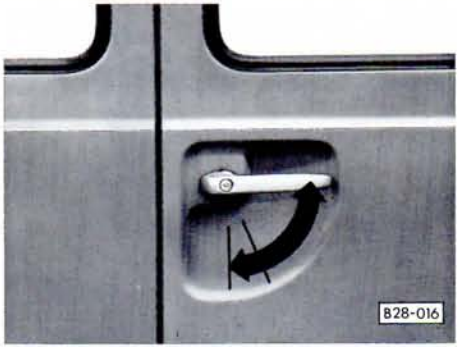
Low doors in Van and Combi with normal or high roof

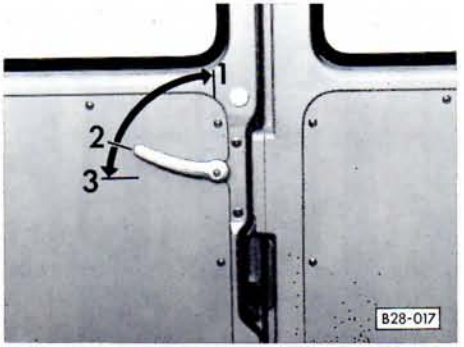
The wing door can be locked and unlocked with the key A or C.

To open **from outside –**
Open right hand half with handle, release left hand half with handle in end of door and open it.

To close – slam left hand half to. This engages lock to first catch. When the right hand half is closed, the door is locked fully.







To lock from outside without key – With the right hand half open, push inner lever up and press trigger in outside handle when closing door.

To open from inside – Press locking lever down and pull.

Locking right door wing after closing it – Press locking lever up.

The wing door must also always be properly closed when vehicle is moving.

High doors in Van and Combi with high roof

The rear door can only be locked from outside with the key A or C.

To open **from outside** – swing handle on right hand half right down and open door.

Release left hand half by pulling handle in end of door and open door.

To close – close left hand half and swing handle forward to secure it. Slam right hand half to so that it engages in the lock and swing handle up fully to secure it.

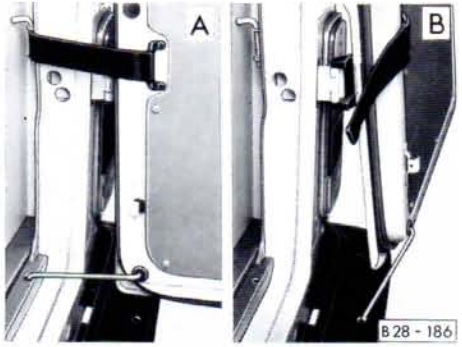
From inside

To lock – swing handle up to position 1 In this position the door can be opened from outside, provided that the outer door handle has not been locked.

To unlock – swing handle down to position 2

To open – swing handle down to position 3

Further instructions are on the next page.



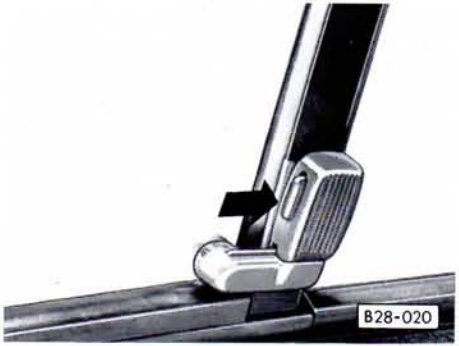
It is also possible to fix the doors in the open positions. To do this, the retaining rod at the bottom of the wing door is unhooked and hooked into the hole in the load compartment floor (A), to hold the door at 90°, and into the hole on bumper (B) to hold the door at 180°.

To enable the doors to be opened 180°, the toggles near the lower door hinges must be pulled up and the door check straps must be detached (B).

Note:

When the lights are switched on, the wing doors must not be opened so far because then the tail lights are no longer visible.

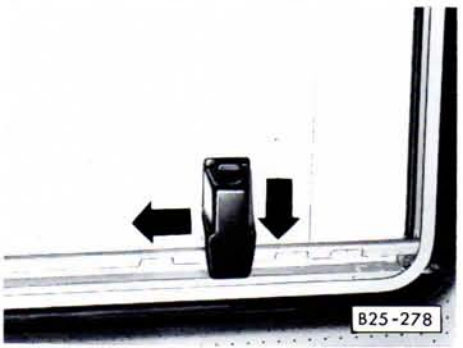
WINDOWS



Vent wings *

To open – Press button in fastener and swing fastener forwards.

To close – Press window against seal at front and turn fastener to the rear until button engages.



Sliding windows *

To open, press catch down and slide window along.

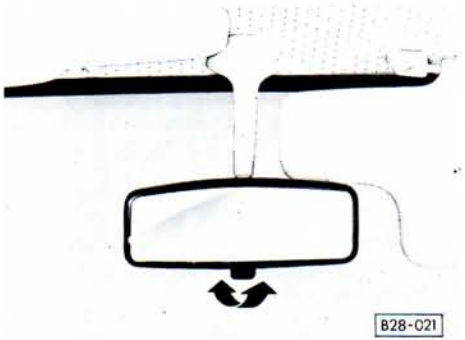
Door windows

These windows are opened and closed with the crank in the door trim.

MIRRORS

Adjusting mirrors

The rear view mirrors should always be adjusted property before moving off to ensure good vision to the rear.



Anti-dazzle interior mirror *

In the normal position the lever on lower edge of mirror must be pointing forward.

To set mirror to the anti-dazzle position, pull the lever to the rear.

Outside mirrors

The outside mirror should be adjusted so that the side of your own vehicle can just be seen. This setting ensures the best possible field of view, and in addition it serves as an instant check on the mirror setting.

The exterior mirrors are adjusted by moving the mirror housing.

Note for vehicles with convex outside mirror *

Convex (curved outwards) mirrors enlarge the field of view but they make objects look smaller. These mirrors make it difficult to estimate how far the vehicle behind is away.

SEAT BELTS

It has been proven that seat belts give good protection in accidents. In most countries therefore the wearing of seat belts is required by law.

Attention

The belts should be put on before every journey – even in town traffic. This applies also to the rear seats.

Even pregnant women should always wear a seat belt.

The routing of the belt is of major importance to the protective effect of the belt.

How the belt should be worn is described on the following pages.

How children can be carried safely in the vehicle is explained on page 15.

General notes

■ **The belt must not be twisted.**

■ Two persons **(including children)** must never be secured with **one** belt, It is particularly dangerous to put the belt round a child sitting on a person's lap.

■ The belt should not be worn over hard or breakable articles (glasses, ball pens, key rings, pipes, etc.) because this can cause injury to the body.

■ Loose, bulky clothing (e.g. overcoats over jackets) affects the fit and function of the belts.

■ The belt must not be jammed anywhere or rub on any sharp edges.

■ The lock tongue may only be inserted into the lock part belonging to the appropriate seat, otherwise the protective effect is impaired.

■ The slot for the belt tongue must not be blocked with paper or anything similar, otherwise the tongue cannot engage properly.

■ The belts must be kept clean otherwise the retractors may not work properly (see also "Care of car" section).

■ Seat belts which have become damaged or have been stressed in an accident and stretched must be renewed – preferably by a Volkswagen Dealership. The anchorages should be checked.

■ Belts can be service installed for all seating positions on vehicles not fitted with belts at the factory. The installation of belts should be done by a Volkswagen Dealership because these workshops have the information required to do the job properly.

■ In some export countries seat belts could be used on which the functions differ from those mentioned on the following pages.

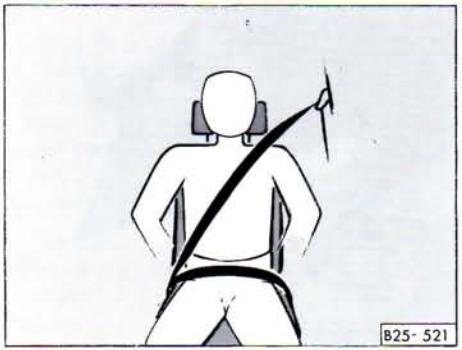
Note

On the Van there are no belt anchorage points in the load compartment.

Three-point inertia reel belts *

The inertia reel belt gives complete freedom of movement when pulled slowly. Sudden braking however will cause the belt to lock.

The retractor mechanism will also lock the belt when accelerating, driving down steep gradients or cornering hard.



Putting belt on

Pull the tongue slowly and smoothly across the chest and hips and push it into the lock part fitted on the seat until tongue engages audibly (pull to check).

The shoulder part of the belt must run roughly across the centre of the shoulder as shown – on no account against the neck – and be firmly in contact with the body.

On the front seats the routing of the shoulder belt can be altered by having a height adjustable seat * or, the service installation of an adapter[1] to alter the height of the belt anchorage. Details can be obtained from Volkswagen Dealerships.

The backrests of the front seats must not be inclined too far to the rear, otherwise the belts are no longer effective.

The lap part of belt must always fit tightly. Pull belt tight if necessary.

Particularly in the case of pregnant women the lap part of the belt should be as low across the pelvis as possible to ensure that no pressure is exerted on the abdomen.

[1] When installing such items attention must be paid to the relevant legal requirements. In Germany for example, such items require official legal approval.

Taking the belt off

To release the belt, press the orange coloured button in the lock. The tongue will then spring out.

Pass the tongue towards the door by hand so that retractor can roll the belt up properly.

A plastic button in the belt holds the tongue in a handy position.

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Lap belt *

The buckle is used in the same way as on the three-point inertia reel belts.

The belt must always fit tightly across the pelvis.

To lengthen belt hold the tongue at right angles to belt and pull belt through to the required length – see Fig.

The belt is easier to adjust if tongue and cap are pressed together.

To shorten belt it is only necessary to pull the free end of belt.

The surplus belt length is taken up by moving the plastic slide.

SAFETY FOR CHILDREN

Children under 12 years of age should normally travel on the rear seat[1]. Depending upon their ages, height and weight, they must be protected with either a child restaint system or the seat belts provided.

A child may also occupy the front passenger seat if the restraint system used has been expressly approved for this purpose by the manufacturer. One should bear in mind however that occupants are generally safer on the rear seat.

On no account should babies or small children travel on an adult's lap.

■ Babies up to about 9 month old/10 kg are best protected, in an accident, with a safety seat or a special safety carrier.

■ Experience has shown that babies and small children up to about 3 years/18 kg are best protected in child seats or safety carriers where they can lie or sit facing the rear of the vehicle.

■ Children up to about 7 years of age/25 kg, depending on their height, are safest when secured in a child seat or by a safety seat cushion.

[1] Observe any statutory regulations to the contrary.

■ Children over about 7 years of age may use the three point belts or the two point belts provided. It is important to ensure that the diagonal part of the belt fits over the centre of the shoulder – **and does not make contact with the neck.** The lap part of the belt must pass across the pelvis **and not over the child's stomach.**

If this cannot be guaranteed, a safety cushion should be used to raise the seating position.

When using the belt the section "Seat belts" should also be noted.

Note the following points when purchasing, installing and using a child restraint system:

■ For safety reasons always use a restraint system which conforms to the international safety standard ECE R 44. Restraint systems that can be connected to the seat belts provided in the car are recommended. If the existing belts are too short, one can use adapter belts which are available from Volkswagen Dealerships.

■ Only use child seats or safety carriers of the type which have a large, flat area in contact with the car's seat upholstery. Child seats which have feet or tubular frames and no flat base can easily penetrate into the car's upholstery, and are therefore not so safe.

■ We recommend that child restraint systems from the Genuine Accessory Programme at Volkswagen Dealerships are used. Under the name "Bobsy" restraint systems for all age groups are available there[2]. These systems fulfil all the requirements mentioned and were furthermore developed and tested by us for use in Volkswagen vehicles.

■ Special care must be taken if child restraint systems are used which are secured at the same point as the belts provided in the vehicle. One must ensure that the securing bolts are screwed fully into the threaded holes and tightened to a torque of 30 Nm.

Furthermore, one should ensure that the belt itself cannot become damaged by sharp edged buckles etc.

■ **For the installation and use, attention must be paid to the legal regulations and the instructions of the restraint system manufacturer.**

[2] Not in all export markets.

HEAD RESTRAINTS *

The head restraints are height-adjustable and should be set to suit the size of the person in the seat. Correctly adjusted head restraints together with the seat belts offer effective protection.

Adjusting height

■ Grip sides of head restraint with both hands and pull up or push down.

■ The best protection is obtained when the upper edge of restraint is roughly at eye level.

Removing and installing

Push spring clips out of slotted rings in backrest sideways with a small screwdriver and lift head restraint out.

To install, first press the spring clips into the guide rings so that the straight part of clip is at the rear. Then push head restraint rods into the guides until they engage audibly.

SEATS

The correct adjustment of the seats is important for:

- reaching the controls safely and quickly
- relaxed low-fatigue body position
- maximum protection from the seat belts

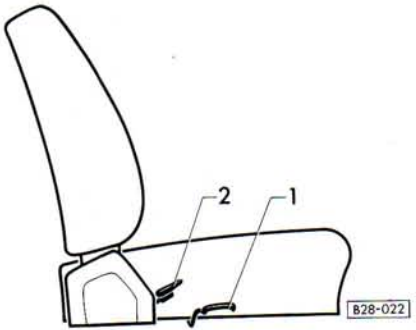
The front seats should be adjusted before putting on the seat belt. Do not place any articles under the seats because this can interfere with the seat adjustment.

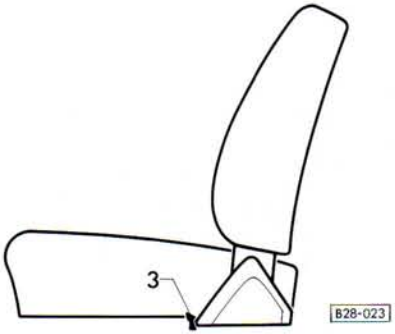
After every fore and aft or height adjustment of the seat check, by jerking with the body, that the retainers are properly engaged.

Attention

■ For safety reasons the driver's seat must only be moved backwards or forwards when the vehicle is stationary.

■ Do not lower the backrest too far when on the move because the seat belts are then no longer fully effective.





Left single seat without height adjustment

To move seat fore and aft

■ Lift lever (1) on the right hand side of seat and move seat as required.

■ Release lever and move seat slightly until the catch engages.

To adjust backrest angle

■ Take weight off backrest and press lever (2) on right hand side of seat down.

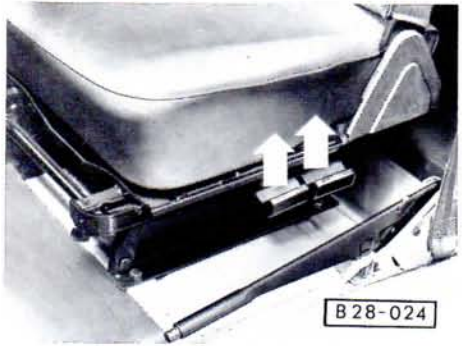
■ Move backrest to desired position by moving upper part of body then release lever.

To take seat out.

■ Slide seat forward to the first detent position.

■ Lift hook (3) against spring loading and at the same time lift lever (1), hold it and slide seat forward past stop.

■ When putting seat back ensure that it engages properly in the runners.



Single seat with height adjustment *

To adjust seat angle

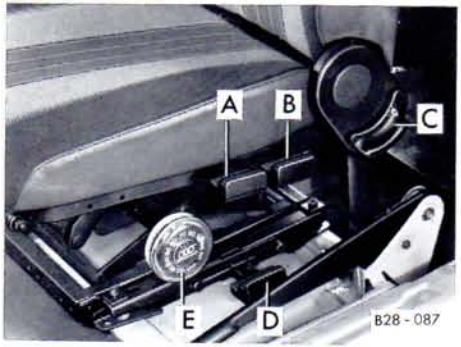
■ Lift front or rear lever on outer side of seat and adjust angle of seat by moving body weight.

■ Release the lever and let it engage in nearest slot.

To adjust seat height

Lift front and rear levers alternately and raise or lower seat by moving body weight to front or rear.

To move seat fore and aft, to adjust backrest angle and remove seat see previous page.



Seat with height and weight adjustment *

Adjusting seat angle and seat height is done as described under "Single seat with height adjustment". The front and rear levers are marked with A and B in the above illustration.

Adjusting backrest angle

■ Take weight off backrest and lift lever C on outer side of seat.

■ Adjust backrest to desired position by moving upper part of body and release lever.

To move seat fore and aft

■ Move lever D on outer side of seat and adjust seat.

■ Release lever and move seat slightly until catch engages.

To adjust seat to driver's weight

To ensure that the seat springing is comfortable regardless of the driver's weight the knob E must be turned to the appropriate weight on the scale.

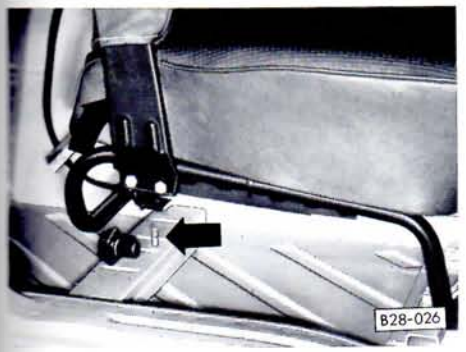
To take seat out

To take seat out the bolts in the runners must be removed.

Attention

■ For safety reasons the height * of the driver's seat must only be adjusted when the vehicle is stationary.

■ When service installing seat belts for the seat with height and weight adjustment *, only inertia reel belts may be used.



Seat heating *

The cushion and backrest of the driver's seat can be heated electrically when the ignition is on.
For further details, see "Switches", page 34.

Right single seat

To remove seat

- Remove securing nut at rear of seat frame.
- Lift seat at rear and take out forwards.

To move seat fore and aft *

- Press handle at front of seat and move seat as required.
- Release handle and move seat slightly until the catch engages.

"Adjusting backrest angle" see page 17.

Double front passenger seat *

Lifting seat up

In order to gain access to the engine bonnet the front two-seater bench must be lifted up:

- Open door on passenger side.
- Press seat backrest lock (1) down and hinge backrest forward.
- Release seat with handle (2) and lift it up.

Seats in passenger compartment *

(Double cab)

The seats and backrests can be taken out. The space under the seat can be used to stow items when cushion is hinged up.

To take seat cushion out

Release rubber loop, swing seat cushion up and take it out.

Head restraints *

The head restraints should be adjusted to body size – see page 16.

LOAD COMPARTMENT/LOAD SURFACE

Notes on loading the vehicle

In the interests of good handling ensure that the load (load, persons and luggage) is distributed evenly.
Heavy items should be placed as near as possible to the rear axle or better still between the axles. The permissible axle loads and GVW must on no account be exceeded – see pages 119–123.

To ensure satisfactory steerability the minimum front axle weight is:
LT 28 – 40: 1000 kg
LT 45 – 55: 25% of appropriate total vehicle weight.

Attention

■ Note that when carrying heavy loads the handling changes due to the alteration of the centre of gravity. Driving style and speed must be altered to suit.

■ The load must be stowed so that no articles can fly forward when brakes are applied suddenly.

Note

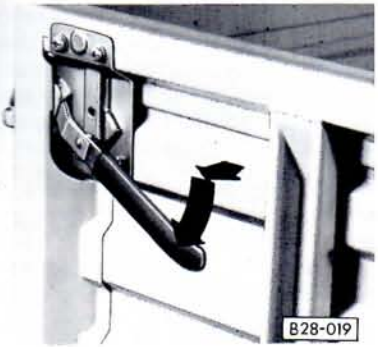
Vehicles with a bolted-on load platform must not be driven when platform has been taken off.
When this cannot be avoided, see the notes on page 132.

CANOPY *

Please ensure that the canopy is secured properly at the front behind the cab.

Pass the rod through the seam at the bottom of the canopy and bolt it to the head board at each end.

DROPSIDES



To lower the dropsides pull the handle outwards to release locking pin and swing lever down.

On vehicles with support cables for the tailboard do not place more than 150 kg on the tailboard when it is horizontal.

ROOF RACK

Roof loads raise the centre of gravity of the vehicle and lead to higher axle load variations as well as increasing vehicle roll on poor roads and when cornering. The handling is greatly impaired and for this reason, roof loads should be avoided as far as possible.

If despite this a roof rack still has to be used, note the following:

- Only use roof racks which have at least 5 supports on each side and are supported in the rain channel.
- The racks must be secured exactly in accordance with the rack manufacturer's instructions.
- Any damage which occurs to the vehicle due to the use of unsuitable roof racks or by incorrect fitting will not be covered by the warranty.
- Distribute load evenly. Do not exceed permissible roof load or permissible gross vehicle weight. Further details on pages 119–123.
- When carrying large objects on the roof, bear in mind that the vehicle handling also changes due to increased area exposed to the wind. Driving style and speed must be altered to allow for this.
- When the permissible roof loads are to be carried on vehicles with twin rear wheels, stabilizers must be fitted on both axles or, the stabilizers that are already fitted must be replaced by a stronger version of stabilizer. This should preferably be done by a Volkswagen Dealership (see also our "Body Guidelines").

PEDALS

The movement of the pedals must not be restricted. For this reason, do not put articles in the footwell which could roll or slide underneath the pedals.

Around the pedal area there should also be no foot mats or other additional floor covering materials:

- In the case of defects on the brake system, a greater pedal travel may be necessary.
- It should always be possible to depress the clutch and accelerator pedals fully.
- All pedals must be able to return, unhindered, to their rest positions.

For these reasons therefore, the only foot mats which may be used, are those which leave the pedal area completely free, and which are prevented from slipping.

BRAKES

The following points are important for the satisfactory operation of the brakes.

- New brake linings must also be run in and do not have the optimum friction properties during the first 200 km. The slightly reduced braking effect can be compensated for by slightly more pressure on the brake pedal. This also applies when new linings have been fitted.
- If the brake pedal travel increases suddenly, it may be that one of the two brake circuits has failed. You can still drive on to the next Volkswagen Dealership but be prepared to use more pressure on the pedal and allow for longer braking distances on the way.
- The brake fluid level must be checked regularly – see page 71.

A low brake fluid level will be indicated by the brake warning lamp * lighting up (see page 28 also).

- Brake lining wear depends to a large extent on the operating conditions and style of driving. On vehicles which are used mainly in town traffic and stop/start conditions or are driven hard it may be necessary to have the thickness of the brake linings checked in a V.A.G Dealership in between the intervals given in the Service Schedule.
- When driving downhill change down in good time to make use of the braking effect of engine. This relieves strain on the brake system. When brakes are applied do not keep them on continuously, apply and release alternately.
- In certain operating conditions, such as for example, after driving through water, after heavy rain or after washing the vehicle, the braking effect may be retarded by wet, or in winter iced up brake discs and pads. The brakes must be dried first by applying the footbrake.

The full braking force may also be retarded when vehicle has been driven for some time on heavily salted roads without using the brakes, because the layer of salt on discs and pads has to be removed first.

Brake servo

Attention

The servo is operated by vacuum which is only created when engine is running.

For this reason the vehicle should not be allowed to roll with the engine switched off.

When the brake servo is not working because, for example, the vehicle is being towed, or because a defect has occurred on the brake servo, the brake pedal must be pressed considerably harder to compensate for the absence of servo assistance.

Handbrake

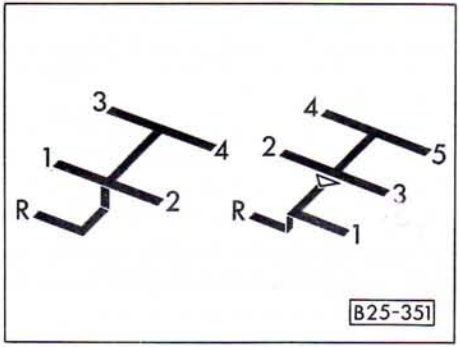
The handbrake is located next to the driver's seat.

To apply the handbrake, pull lever up firmly. On hilly roads the 1st gear should also be engaged. The handbrake should always be applied so firmly that it is not possible to drive off accidentally with handbrake slightly on.

When handbrake is applied with the ignition on, the brake warning lamp * comes on.

To release handbrake, pull lever up slightly, press locking knob in and push lever right down.

MANUAL GEARBOX



Shift pattern

4-speed box 5-speed box

Normally one would move off in 1st. gear. On vehicles with a 5 speed gearbox one can also move off in 2nd gear **provided the ground is flat and the vehicle is only lightly loaded.**

This does not apply to vehicles with the 51 kW Diesel or the 68 kW Turbo Diesel engine. On these vehicles 1st gear must always be used when moving off.

All forward gears are baulk synchronized. This synchronization makes it possible to engage the forward gears easily and without noise.

5-speed gearbox *

To engage 1st gear, move lever to left past the pressure point to stop and then **pull it back.**

Engaging reverse gear

Only engage reverse gear when vehicle is stationary. When engine is running, depress clutch fully and wait briefly before moving gear lever, to prevent grating noises when gear is engaged.

When reverse gear is engaged with ignition on, the reversing lights come on.

Note

When driving you should not rest your hand on the gear lever. The pressure of your hand is transmitted to the shift forks in the gearbox and can cause premature wear on the forks.

POWER TAKE-OFF ON GEARBOX *

The PTO can be used to drive auxiliary units from the gearbox.

Note operating instructions from the equipment manufacturer.

Depending on the conditions, the running time or the power transmitted must be restricted.

The lever for the PTO is behind the gear lever.

The speed of the PTO flange can be regulated with a hand throttle (on panel near clutch pedal).

Slow (idle) – Lever vertical
Fast – Lever to rear

The PTO must only be engaged and disengaged with vehicle stationary. Depress clutch first and wait about 6 seconds.

The PTO can be used when vehicle is moving but then the gears in the gearbox must not be shifted, to avoid excessive strain on the synchromesh units.

To engage PTO – Depress clutch, move lever forward
To disengage – Depress clutch, move lever back

To avoid damage to engine, gearbox or PTO the figures in the diagram must be adhered to.

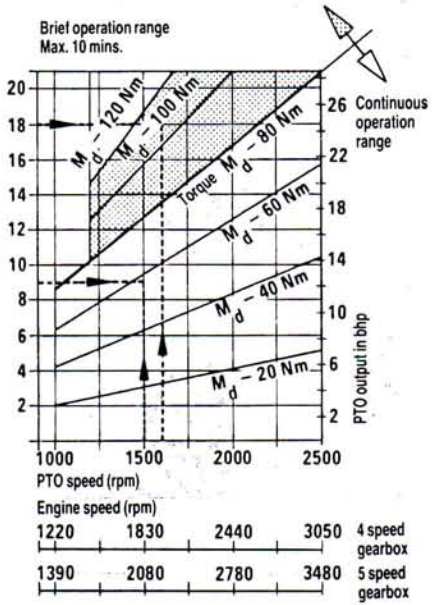
Example 1

Detail: Generator P – 9 kW (12.2 hp), speed n = 1500 rpm
Result: Drive torque m_d 57 Nm, continuous operation permissible

Example 2

Detail: Hydraulic pump P – 18 kW (24.5 hp), speed n = 1600 rpm
Result: Drive torque m_d 107 Nm, **only** brief operation up to a max. 10 minutes permissible.

Output, torque and speed figures for brief and continuous operation



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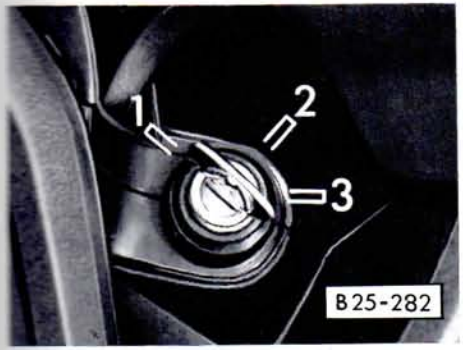
IGNITION SWITCH



Petrol engines

1 – Ignition off – Steering can be locked *.

2 – Ignition on

3 – Starting engine

Diesel engines

1 – Fuel supply cut off – Steering can be locked *.

2 – Glow and drive position
While the glow plugs are on, no other heavy current consumers should be switched on – avoids draining battery unnecessarily.

3 – Starting engine

All vehicles:

Position 1:

To lock the steering wheel, withdraw key and turn wheel until you hear the pin * engage.

Attention

Do not withdraw the key from the lock until the vehicle is stationary. The steering lock could otherwise engage unintentionally.

Position 2:

If the key is difficult to turn in the lock or cannot be turned to this position at all, the steering wheel must be rocked to and fro slightly to release the locking pin *.

Position 3:

In this position the headlights and other heavy current consumers are switched off.

Before the starter can be operated again the key must be turned back to position 1.

The non-repeat lock in the ignition switch prevents the starter from being operated when engine is running as this could damage the starter.

STARTING THE ENGINE

General notes

Attention

■ When running the engine in a confined space there is a danger of poisoning.

■ Before starting the engine, check that the gear lever is in neutral and apply the handbrake firmly.

■ Depress the clutch pedal when starting, so that the starter only has to turn the engine.

■ As soon as the engine starts, release the ignition key, so that the starter can disengage.

■ After starting a cold engine it may sound noisy for a few moments because the oil pressure has to build up in the hydraulic tappets * first. This is normal and no cause for alarm.

❀ ***Do not warm engine up by running it with vehicle stationary. Drive off straight away.***

■ Do not overrev or use full throttle until the engine has reached the normal operating temperature.

■ The engine must not be started when catalytic converter * is at operating temperature, by towing the vehicle a long distance, otherwise unburnt fuel can enter the catalytic converter and be burned there. This can cause overheating of the catalytic converter.

Fuel injection engine

This engine is fitted with a fuel injection system which automatically supplies the correct fuel/air mixture for all operating conditions. The starting procedure described here is applicable regardless of ambient or engine temperature.

■ Do not depress the accelerator pedal before operating the starter, or during the staring process.

If the engine does not start at once, stop using the starter after 10 seconds, wait about half a minute and then try again.

If the engine still does not start, the fuse for the electrical fuel pump may have blown – see pages 89 and 90.

■ When the engine is very hot, it may be necessary to open the throttle slightly once the engine has started.

Carburetor engine

Starting a cold engine

The carburetor is fitted with an automatic choke which is actuated the first time the accelerator pedal is depressed, when engine is cold.

■ Depress accelerator pedal slowly once (twice when it is freezing) and then release it.

■ If the engine does not start at once, stop using the starter after 10 seconds, wait about half a minute and then try again.

■ The increase in the idling speed which takes place as engine starts to warm up can be reduced by tapping the accelerator pedal.

Starting a warm or hot engine

■ Depress pedal slowly **while operating** starter and hold it in the full throttle position – do not pump the pedal!

In unfavourable circumstances, starting may take up to 9 seconds.

■ Release the pedal as soon as the engine starts.

Diesel engines

Glow plug system

The engine is fitted with glow plugs. The time the plugs are on is indicated by a lamp which is controlled by the coolant temperature – see page 29.

Cold starting aid

To facilitate starting from cold, there is a cold starting device in the injection pump.

This cold starting aid is actuated when the knob on the left of the dash under the light switch is pulled out **fully**.

Starting a cold engine

■ At ambient temperatures down to – **15° C**, pull the cold start knob out fully before operating the starter.

At lower temperatures, the knob should not be pulled out **until engine is firing evenly** – the engine will then start more readily.

■ Turn ignition key to position 2 (see page 25) the glow plug lamp comes on. It goes out when the ignition temperature is reached (see page 29).

To avoid draining battery unnecessarily, do not switch any other heavy current consumers on while glow plugs are on.

■ As soon as lamp goes out, start engine.

Do not depress accelerator when operating the starter.

If engine only fires irregularly, continue to operate starter a few seconds longer (30 seconds at maximum) until engine runs under its own power.

If engine does not start, switch glow plugs on again and try starting it again as described.

If the engine still does not start, the fuses for the glow plug system may have blown – see page 90.

■ Push the knob of cold starting aid in fully as soon as engine has reached normal operating temperature.

Starting a warm engine

The glow plug warning lamp does not come on – the engine can be started straight away. Do not pull cold starting aid knob and do not depress accelerator pedal.

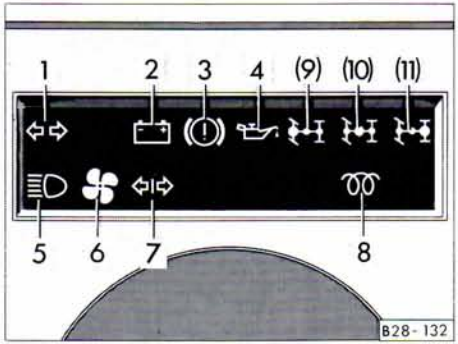
STOPPING ENGINE

■ **Applicable to all engines:**
When vehicle has been driven hard for a while do not switch engine off as soon as you stop. Let it idle for about 2 minutes to cool it down slightly.

■ **Applicable to carburetor engine:**
When the engine is hot the carburetor fan may continue to run for a while after engine has been switched off or it may switch on suddenly – even when ignition is off.

■ **Applicable to vehicles with catalytic converter *:**
The ignition must not be switched off as long as the vehicle is rolling with a gear engaged, otherwise, unburnt fuel can enter the catalytic converter and be burned there. This can cause overheating of the catalytic converter.

WARNING LAMPS



1 – Turn signals ⇦⇨

The warning lamp flashes when turn signals are switched on. If a turn signal fails, the warning lamp flashes twice as fast. Not when towing a trailer. Further details are on page 35.

2 – Generator

The lamp comes on when the ignition is switched on. It must go out again when the engine is started.

If this lamp comes on when driving, the battery is no longer being charged. This could be due to the generator V belt, so stop, switch engine off, check belt and fit a new one if necessary.

If the belt is broken however, it is not absolutely necessary to renew it immediately, one can normally drive on to the next Volkswagen Dealership. As the battery then discharges continuously all electrical components which are not absolutely necessary should be switched off.

3 – Brake system (!)

The warning lamp * comes on

- when handbrake is on
- when brake fluid level is too low

The ignition must be switched on first.

Attention

If the lamp does not go out when handbrake is released or comes on when driving, the fluid level in the reservoir is too low. If an increase in pedal free travel is noticed at the same time, one of the two brake circuits may have failed.

You can drive on to the nearest Volkswagen Dealership but allow for higher pedal pressures and longer braking distances on the way.

[1)] These warning lamps work only on the LT 4 x 4 (see Additional instruction leaflet)

4 – Engine oil pressure

The warning lamp flashes when ignition is switched on. The lamp must go out when engine has started.

If the lamp does not go out, or flashes, or comes on when driving, a buzzer also sounds at engine speeds above 2000 rpm – **stop, switch engine off,** check oil level and add oil if necessary – see page 62.

If the lamp flashes although the oil level is in order, **do not drive on.** Do not even run the engine at idling speed – call in expert assistance.

Notes

The oil pressure warning lamp is not an oil level indicator. The oil level should therefore be checked at regular intervals, preferably every time the fuel tank is filled.

Due to the way it is wired the brake warning lamp * also comes on when the oil pressure warning lamp lights up.

5 – High beams

The warning lamp comes on when high beams are on or headlight flasher is used.

6 – Roof ventilator

see page 34

7 – Trailer turn signals

The warning lamp * flashes when turn signals are switched on when towing a trailer.

If a turn signal fails on trailer or vehicle, the warning lamp does not flash.

Further details on page 46.

8 – Glow plugs

(Diesel engines only)

When engine is **cold** the warning lamp comes on when key is turned to Drive position (ignition on).

If the warning lamp flashes or does not come on, there may be a defect in the glow plug system – call in expert assistance.

When the lamp goes out, start engine immediately – see page 27.

When engine is **warm** the glow plug lamp does not come on – the engine can be started straight away.

In large round instrument on right:

– Coolant temperature/ Coolant level

The lamp in the coolant temperature gauge (see page 31) flashes for a few seconds as a functional check when ignition is switched on. If the lamp does not go out afterwards or flashes when driving, either the coolant the temperature is too high or the coolant level is too low.

Stop, switch engine off and check level. Add coolant if necessary.

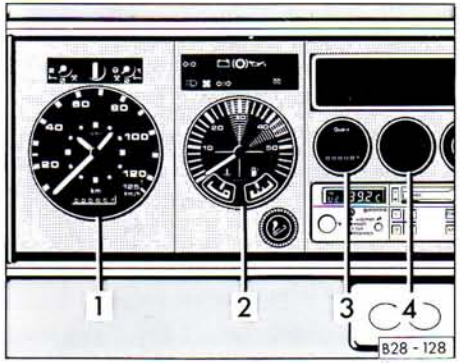
Attention

■ Be careful when opening the coolant expansion tank.
When the engine is hot the cooling system is under pressure – Danger of scalding! Let engine cool down therefore before unscrewing the cap.

For further details see page 70.

If the lamp does not go out although the coolant level is correct, **do not drive on** – call in expert assistance.

INSTRUMENTS



1 – Speedometer

If there are **gearshift points** * on the speedo dial, note the following:

■ The marks apply only to vehicles with a warm, **run-in** engine.

■ The next higher gear should be selected at the latest by the time the needle reaches the mark.

❀ ***Changing up in good time helps to save fuel and keeps the noise down.***

■ The next lower gear should not be selected until the vehicle speed has dropped below the mark.

During the running-in period the driving instructions on page 42 must be noted.

Mileage recorder

The upper counter records the total mileage covered and the lower one * the short trips.

The last figure of the upper or lower counter indicates 100 m or 1/10 mile.

The trip recorder can be set back to zero by pressing the knob in the speedometer dial.

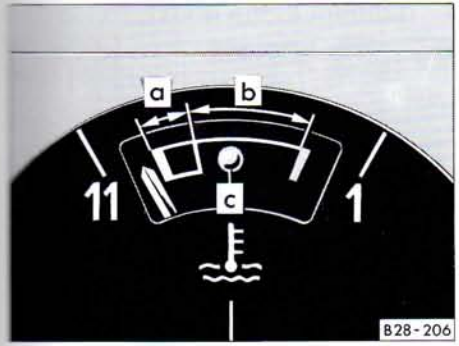
1 – Tachograph *

In many European countries the installation and use of a tachograph is compulsory for the following vehicles:

1. **Vehicles which are used for the commercial transport of goods and have a permissible total weight, including trailer or articulated trailer of more than 3.5 tons. It is immaterial whether the vehicle and** the trailer or **only one of the two** is used for commercial purposes.
2. Vehicles which are designed and equipped to carry more than 9 persons including the driver.

Details of the official regulations can be obtained from the local authorities.

The operation of the tachograph is explained in a leaflet from the tachograph manufacturers.



2 – Coolant temperature

The gauge starts to work when ignition is switched on, but it takes a few seconds before the needle reaches the final position.

When ignition is switched on the warning lamp (c) flashes for a few seconds as a functional check.

a – **Cold**

Avoid high engine speeds and do not work engine too hard yet.

b – **Normal**

When vehicle is driven normally the needle should settle down in this zone.

When engine is working hard and the ambient temperature is high, the needle may move well over to the right.

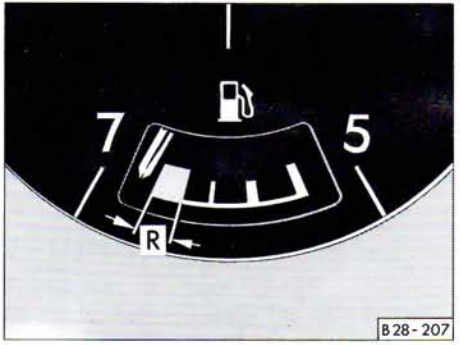
This is not serious as long as the warning lamp (c) does not flash.

c – **Warning lamp**

If the lamp flashes when driving, check first what coolant temperature is being indicated.

If the indication is in the Normal zone, add coolant at the next opportunity.

If indication is in the Warning zone, either the coolant level is too low or the coolant temperature is too high. **Stop, switch engine off** and try to find cause of trouble – see page 29.



2 – Fuel gauge

This gauge also works when ignition is switched on but it takes a few seconds for the needle to reach its final position.

The tank holds about 70 litres (15 Imp. gallons), with larger tank * 110 litres (24 Imp. gallons).

When the needle reaches the start of the reserve zone (R) there are about 12 litres (3 gallons) of fuel left in the tank.

2/3 – Clock *

To set the time, press knob in centre of dial and turn hands.

Adjusting the clock in the tachograph is described in a special instructions supplied by the tachograph manufacturer.

2 – Rev counter *

The beginning of the red zone on the scale shows the maximum engine speed permitted briefly when engine has been run in and is warm – see also page 42. Change up or reduce engine speed at the latest by the time the needle reaches this zone.

Changing up in good time helps to save fuel and keeps the noise down.

Change down to the next lower gear before the engine starts labouring or no longer runs smoothly.

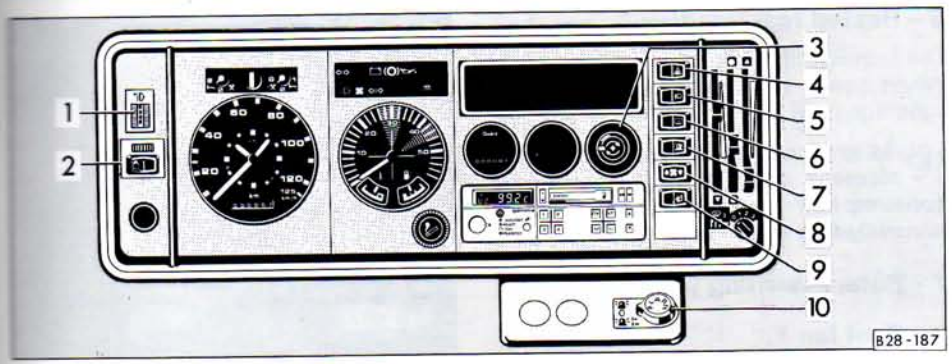
The green or green shaded zone on the scale shows the speed range in which the engine developes the most favourable torque.

Do not rev engine too high during the running-in period.

3 – Running hours meter *

This meter runs when the ignition is switched on. The last figure is tenths of an hour.

SWITCHES



Note

On vehicles with righthand drive the arrangement of the switches differs. The symbols on the switches are however the same as vehicles with lefthand drive.

1 – Headlight beam control *

With the electrical beam control the headlight settings can be matched exactly to the load condition of vehicle. This prevents oncoming traffic from being dazzled more than is unavoidable. At the same time the correct headlight beam setting provides the best possible visibility for the driver.
The headlights can only be regulated with the low beams switched on.
To lower the beams, turn knurled disc from the basic position (–) downwards.

On models which are registered as cars the knurled wheel is provided, in addition to the horizontal line for the basic setting, with adjustment positions 1, 2 and 3.

The adjustment settings correspond roughly with the following loads:

– All or some seating positions occupied, luggage area empty.

1 – All seating positions occupied, luggage area evenly loaded up to the maximum rear axle loading figure.

2 – Five seating positions occupied, luggage area fully laden.

3 – Driver's seat occupied, luggage area evenly loaded up to the permissible maximum load for the appropriate axle.

Intermediate settings can be selected to allow for various loads.

Note:

The basic headlight setting (only possible with a setting appliance) must always be carried out with the knurled wheel in the basic position (–).

2 – Lighting switch

First detent – side lights[1)]
Second detent – headlights high or low beams

The headlights only work when the ignition is switched on. When the engine is being started, the headlights are switched off automatically.

When the lights are on, the level of the instrument lighting can be regulated by turning the knurled disc * above the switch.

Dipping and flashing headlights – see page 35.

[1)] On vehicles for certain Export countries the headlight low beams also come on with reduced brightness (Dim-dip lighting) at the first detent when the ignition is switched on.

3 – Auxiliary heater *

see page 39.

4 – Emergency lights

When the emergency lights are on, a warning lamp in the switch flashes as well.

The system also works when the ignition is switched off.

5 – Fog lights */ rear fog light *

First detent – fog lights
Second detent – front **and** rear fog lights, or **only** rear fog lights.

At the second position a warning lamp in the switch comes on.

The front **fog lights** only work with the side lights (ignition on), low or high beams.

The **rear fog light** only works with the fog lights or with the low or high beams.

Due to the amount of dazzle it causes the rear fog light should only be switched on when the visibility is very poor (in Germany for example, below 50 metres).

Note

The electrical system of the factory fitted towing attachment * is wired so that when towing a trailer with rear fog light the fog light on the towing vehicle is automatically switched off.

6 – Heated rear window *

The heating only works when ignition is on. When heater is on a lamp in the switch lights up.

❀ ***As soon as window is clear, switch element off. The reduced current consumption helps to reduce the fuel consumption – see page 45 also.***

7 – Rotary warning light *

8 – Roof fan *

The fan can be used to ventilate the vehicle.
Switch to right – Extracting air
Switch to left – Drawing air in

9 – Seat heating *

The cushion and backrest of the driver's seat can be heated electrically when the ignition is on.

When heating is on a lamp in the switch lights up.

The temperature is controlled automatically by a thermoswitch and is switched off at about 40° C.

10 – Traffic warning system *

This switch can be pulled and turned. When system is switched on a lamp lights up in switch.

Switch to right:
Rotary warning light on

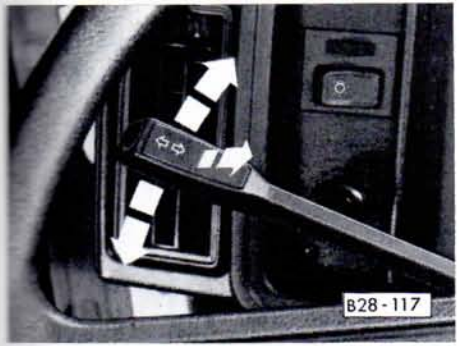
Switch to left:
Rotary warning light on, horn works twice when button in steering wheel is pressed briefly.

Switch turned to left and pulled out:
Rotary warning light on and continuous horn.

Note

The use of the signals and lighting described here is subject to local regulations.

TURN SIGNAL AND DIP LEVER



The turn signals only work when the ignition is switched on.

Right turn signals – lever up
Left turn signals – lever down

When turn signals are working the warning lamp flashes as well – see also page 28.

The turn signals cancel automatically after completing a turn.

To signal a lane change

Move lever up or down to pressure point and hold in position – the warning lamp must also be flashing.

To dip headlights

Pull lever past pressure point towards steering wheel. When high beams are on, a warning lamp in the dash lights up.

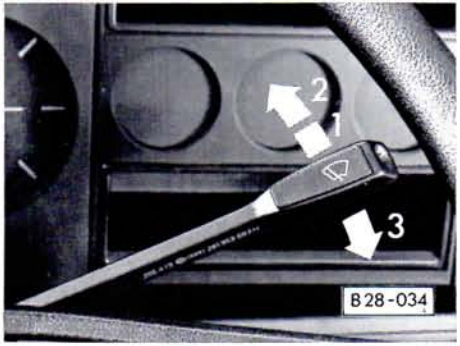
Headlight flasher

Pull lever towards steering wheel to pressure point – the high beam warning lamp lights up.

Note

When using the signal and lighting facilities described, attention must be paid to the legal requirements.

WINDSCREEN WIPER AND WASHER SYSTEM



Wipers and washers only work when ignition is switched on.

When it is freezing, check that the wiper blades are not frozen to the glass before switching wipers on for the first time.

Brief wipe
Lift lever to pressure point before stop 1.

Wiper slow
Lever at position 1

Wiper fast
Lever at position 2

Intermittent wipe *
Lever at detent 3 –
The wipers work about every 6 seconds.

Windscreen washer
Pull lever towards steering wheel –
the system works as long as lever is held in this position.

Automatic wash/wipe facility *
Pull lever towards steering wheel –
wipers and washer work.

Release lever –
The washer stops and the wipers carry on for about 4 seconds.

Headlight washer system *

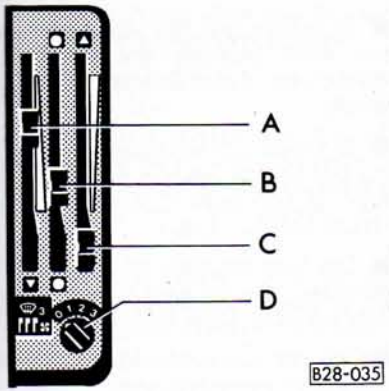
When the headlights are on, the lenses are washed every time the windscreen is washed.

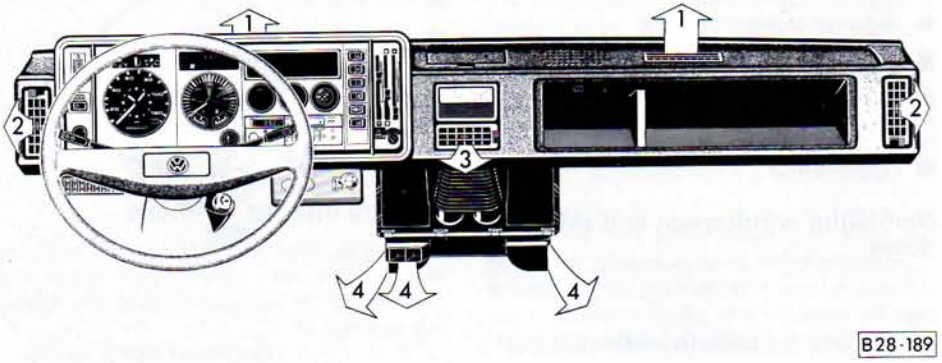
At regular intervals such as when filling the tank, caked on dirt and insects should be removed.

Filling washer container – see page 74.

Changing wiper blades – see page 75.

HEATING AND VENTILATION





Controls

Lever A and C – Air distribution

Lever A down – outlets 4 open
Lever C up – outlets 1, 2 and 3 open

Lever B – Temperature control

Lever up – increases heat output
Lever down – decreases heat output

Switch D – blower

The blower has 3 speeds.

Air outlets

Fresh unheated air flows from all outlets, heated fresh air also from outlets 1, 2 and 4.

The outlets 2 and 3 can be opened and closed individually with a lever on the outlet. The flow direction can be adjusted with tabs in the outlets.

Defrosting windscreen and side windows

- Move all levers upwards.
- Switch blower to stage 3 with switch D.
- Open vents 2 and adjust grilles so that the warm air flows to the side windows.
- Close vent 3.

Demisting windscreen and side windows

If the windows tend to mist up because of high air humidity e.g. when it is raining, we recommend the following setting:

- Move levers A and C fully upwards.
- Move lever B, if necessary slightly into the heating range.
- Set blower switch D to stage 2 or 3.
- Open vents 2 and adjust grilles so that the air flows to the side windows.
- Close vent 3.

Heating interior quickly

- Move lever A down.
- Move lever B and C fully upwards.
- Set blower switch D to stage 2.
- Open vents 2.
- Close vent 3.

Heating interior normally

When the windows have been demisted and the desired interior temperature has been reached, we recommend the following setting:

- Move lever A down.
- Move lever B to give desired amount of heat.
- Move lever C down.
- Set blower switch D to stage 1.
- Open vents 2.
- Vent 3 can be opened as required.

Ventilation

When the heating is switched off, unheated fresh air flows from all vents, when heating is on, only from vent 3.

Notes

- To ensure that the heating and ventila tion work properly, the blower shoul always be switched on when drivin slowly.
- To prevent contaminated air from ente ing the vehicle, lever A should be move fully up and lever C fully down. Vent should also be closed.
- The heat depends on the coolant tem perature – the full heat output is therefor only available when engine is warm.
- The controls A, B and C can be set t any intermediate position.
- The stale air escapes through slots i the front doors.

The slots can be closed and opened wit slides.

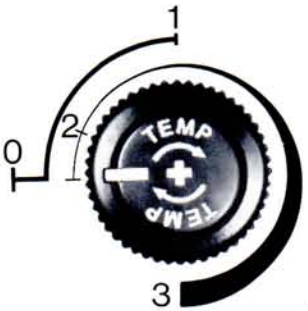
AUXILIARY HEATER *

The heater is supplied with fuel from the vehicle tank. It can use up to one litre per hour according to operating conditions.

The maximum heat output is about 7 kW (6000 kcal/h).
The warm air flows forward into the cab from an adjustable outlet under the passenger seat and to the rear into the passenger compartment from an outlet which cannot be closed.

When the vehicle is moving the heater can be used continuously. When engine is not running and ignition is switched off (stationary operation) the heater switches off after approx. 25 min. to avoid running the battery down.

The auxiliary heater is switched on and off with the knob shown here which is located in the instrument panel below the upper cubby hole. The heat output is also controlled with this knob.



Control knob positions

0 – Heater off

0 to 1 – Heating with engine stationary

2 – Heating when on the move

2 to 3 – Regulation of heat

Heating with engine stationary
(Ignition off)

Heater on
Press knob in at 0 and turn to right towards 1 (warning lamp comes on). Knob springs out again when released.
The amount of heat can be controlled as required between 2 and 3.

Note

On vehicles with a Diesel engine the heater takes approx. 40 seconds to warm up.

Heater off
The clockwork mechanism in the temperature regulating switch switches the heater off automatically after about 25 min. and the lamp goes out.

To switch heater off before clockwork has run down: Turn knob to left to 0. The lamp goes out and clockwork mechanism runs down.

Heating when driving

Heater on
Turn knob to right to position 2 (warning lamp in knob comes on)

The amount of heat can be controlled as required between 2 and 3.

Note

On vehicles with Diesel engine the heater takes about 40 seconds to warm up.

Heater off
Turn knob to left to 0 (warning lamp goes out)

Notes

■ Every time the heater is switched off, the blowers continue running briefly to cool the heater down quickly.

■ To avoid draining the battery, do not run the heater repeatedly when the engine is not running.

■ When the heater is running on the clockwork time switch, it must be switched off by hand before attempting to start the engine at low temperatures so that the full battery capacity is available to turn the engine.

■ **In enclosed spaces and when filling the fuel tank, the heater must be switched off.**

Maintenance

■ When driving through mud and snow, the exhaust pipe may tend to become blocked. Have a look at it occasionally to see that it is clear.

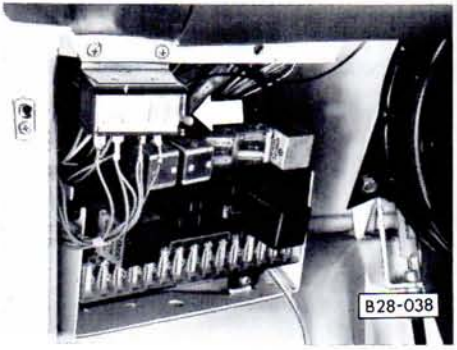
■ According to official German regulations the heat exchanger in the heater is only to be used for ten years. After this period the heat exchanger must be replaced by a new genuine heat exchanger in a Volkswagen Dealership. The year in which the heater is first put into operation is marked on the name plate on the heater.

The Volkswagen Dealership must mark the date of the repair on the plate.

Defects

When the heater has not been used for a long time it should be switched on to test it before the cold weather starts. If it does not work properly it is advisable to take the vehicle to a Volkswagen Dealership.

If the heater on **vehicles with Diesel engine** will not start or stops after operating for a while, an automatic cut-out switches the heater off. If the heater cannot be started by switching the rotary switch off and on, the heater is defective and must be repaired in a Volkswagen Dealership.



The heater on **vehicles with petrol engine** has a safety switch which is located on the left under the dash. If the heater does not start, or starts and then stops again, wait 3 minutes and then operate the red lever on the safety switch.

If the heater still does not work or if the safety switch stops it again, there is a defect in the heater which can only be repaired by a Volkswagen Dealership.

Fuses

See page 89.

INTERIOR LIGHTS

Front interior light

Switch positions:
Forward/Up – Door contacts
Centre – Off
To rear/Down – Light on all the time

Rear interior light *

Switch positions:
Forward – Sliding or wing door contacts.
Centre – Off
To rear – Light on all the time

ASHTRAY, GLOVE BOX

Ashtray

To empty – Open ashtray, press spring down and pull ashtray out.

To insert – Push ashtray into guides.

Glove box

Only key B fits the lockable flap * on right in dash – see page 7.

Attention

For safety reasons the flap should always be closed when the vehicle is moving.

CIGARETTE LIGHTER, SOCKET *

The **cigarette lighter** is switched on by pushing in the element.

When the heating element glows, the lighter springs out automatically – pull it out immediately and use it.

The **socket** can be used for a cigarette lighter or other electrical accessories with a capacity of up to 100 watts. When the engine is not running this will however soon discharge the battery.

Attention

Be careful when using the cigarette lighter!

Careless or uncontrolled use of the cigarette lighter can cause burns. The cigarette lighter and the socket also work when the ignition is switched off and the key removed. For this reason children should never be left in the vehicle on their own.

THE FIRST 1500 KM – AND AFTERWARDS

Running in

During the first few operating hours the engine internal friction is higher than later on when all the moving parts have bedded down. How well this running-in process is done depends to a considerable extent on the way the vehicle is driven during the first 1500 km.

Up to 1000 kilometers

the following general rules are valid:

- **Do not use full throttle.**
- **Do not drive faster than 3/4 of top speed [1].**
- **Avoid high engine speeds.**
- **Avoid trailer towing as far as possible.**

Attention

- **New tyres must also be "run in" because they do not have maximum adhesion at the start. This must be taken into account by driving carefully during the first 100 km.**

[1] In Germany vehicles with a permissible total weight of more than 2.8 tons have a speed limit of 80 km/h.

- **New brake linings must also be run in and do not have optimum friction properties during the first 200 km. The slightly reduced braking effect can be compensated for by slightly more pressure on the brake pedal. This also applies when new linings have been fitted.**

From 1000–1500 km

the speed can gradually be increased to the road or engine maximum.

During and after the running-in period:

- Do not overrev the engine when cold – either in neutral or in the gears.

All speeds and revs are only valid when engine is **properly warm.**

Do not drive with the engine speed unnecessarily high – changing up early helps to save fuel, reduces noise and protects the environment – see page 44.

- Do not let engine labour – change down when engine no longer runs smoothly.

After the running-in period

- On vehicles with gear change marks on the speedometer dial the gears must be changed up at the latest by the time the needle reaches the marks.
- On vehicles with a rev counter * the maximum permissible engine speed is shown by the beginning of the red zone on the rev counter scale. The rev counter needle must not move into this area.

The maximum permissible engine speeds for brief periods are:
with petrol engines ..... 5300 rpm
with Diesel engines ..... 4400 rpm

The engines are governed automatically to prevent very high speeds.

DRIVING SAFELY

Attention

The operational condition of your vehicle is essential to safe driving.

So before moving off, always check the following points:

- **lights and turn signals**
- **amount of fuel**
- **mirror settings**
- **cleanliness of headlight lenses and windows**

Also check at regular intervals – preferably when filling up with fuel:

- **tyre condition and pressures** – pages 76–78, 116–118
- **engine oil level** – page 62

The oil level should be checked every time fuel tank is filled, **or daily when operating under arduous conditions or with high engine loads.**

- **coolant level** – page 69
- **brake fluid level** – page 71
- **fluid level in windscreen washer** – page 74
- **condition of windscreen wiper blades** – page 75

Furthermore compliance with the specified Inspection intervals – in particular the brake fluid changing – is of great importance for driving safety – pages 57 and 71

Attention

Safety on the road depends to a large extent on the personal attitude and style of driving.

To be on the safe side you should:

- **Always put seat belt on before moving off – even in town traffic –** page 12.

In many countries the wearing of seat belts is compulsory anyway.

- **Ensure that all your passengers – including those on the rear seat – are wearing their belts in the proper manner** – page 12.

Passengers without seat belts not only endanger themselves, but also the driver.

- **Adjust head restraints to body size.**

The upper edge of head restraints must be approximately at eye level.

- **Ensure that no articles interfere with operation of pedals** – page 22.
- **Stow all goods correctly**
  - **in load compartment or on platform** – page 20
  - **on the roof** – page 21
- **Do not drive when you feel tired.**

Stop for a break at the latest after driving for two hours.

- **Never drive when your reactions are impaired in any way.**

Not only alcohol but also drugs and many medicines can be very detrimental to your reactions.

- **Adapt vehicle speed to traffic and road conditions.**

Remember that particularly on smooth slippery roads the handling and braking is limited by the adhesion of the tyres. On wet roads the front wheels can aquaplane at high speeds. The vehicle can then no longer be steered and braked properly.

- **Drive strictly in accordance with traffic regulations – particularly with regard to speed limits.**

Further instructions on safety are given in the various chapters in this manual.

DRIVING ECONOMICALLY AND ENVIRONMENT CONSCIOUSLY

Various factors contribute to fuel consumption, the environmental burden and the wear on the engine, brakes and tyres.

This sections deals with the points which are significantly important.

The personal style of driving

determines to a great extent the economical aspect and the exhaust and noise development:

❀ ***Do not warm up the engine with the vehicle stationary.***

At idling speed it takes a very long time until the engine becomes operationally warm. Moreover, in the warm-up phase, wear and the discharge of pollutants is particularly high. For this reason, drive off immediately the engine has started and avoid high engine speeds.

❀ ***Avoid full throttle acceleration.***

Not only is the fuel consumption reduced considerably if one accelerates with feeling, but also the disturbance to the environment and the wear are reduced.

❀ ***Change up as soon as possible and do not drive with unnecessarily high engine speeds. Change down only when engine no longer runs smoothly.***

The most favourable fuel consumption and the least disturbance to the environment are attained at low engine speeds and in the highest possible gear. The fuel consumption is for example more than twice as high in 2nd gear than it is in top gear. At the same time, the reduced engine speed means a reduction in engine noise. For these reasons, one should drive as often as possible, and as long as possible, in the highest gear. On the level this is normally possible at about 50 km/h.

❀ ***Try not to drive at maximum speed.***

The fuel consumption, exhaust pollution and noise increase disproportionately at high speeds. If approximately only 3 quarters of top speed is utilised, the fuel consumption will be reduced by about half. Experience has shown that the loss in time is only marginal.

❀ ***Drive as smoothly as possible and look well ahead***

Unnecessary accleration and braking must be paid for with higher fuel consumption and more disturbance to the environment.

❀ ***Switch the engine off during traffic hold-ups***

The individual operating conditions naturally also affect the fuel consumption.

The following factors for instance are not favourable to good fuel consumption:

- Traffic density, particularly large towns with numerous traffic lights.
- Frequent stop/start driving, particularly driving from house to house so that the engine is never properly warm.
- Driving in heavy, slow moving traffic in low gear so that the engine speed is relatively high in relation to the distance covered.

❀ ***One should therefore, plan trips in advance and try to avoid local traffic and overcrowded motorways as far as possible.***

Obviously the fuel consumption is also affected by factors over which the driver has no control. It is for example normal for the consumption to increase in the winter or in arduous conditions (bad roads, trailer towing etc.).

The technical prerequisites

for a low fuel consumption and economy were "built in" at the factory. Particular importance was placed on the lowest possible disturbance to the environment. To retain and make the best possible use of these characteristics attention should be paid to the following points:

Vehicles fitted with a catalytic converter may only be driven on unleaded petrol.

Even those vehicles which do not have a catalytic converter should be driven on unleaded petrol for the sake of the environment.

The prescribed maintenance operations should be carried out exactly as specified in the Service Schedule – see also page 57.

Having your vehicle regularly serviced by a Volkswagen Dealership not only ensures that it is always operationally fit, but it also ensures economy, lowest possible burden on the environment and a long service life.

Check the tyre pressures every 4 weeks

Low tyre pressures increase the rolling resistance. This not only increases the fuel consumption but also the tyre wear, and the handling is also impaired.

Do not carry unnecessary ballast in the load compartment/loading area

Particularly in town traffic when one has to accelerate often, weight has a great influence on the fuel consumption.

Remove roof rack immediately after use

Particularly at high speeds the increased air resistance makes itself felt strongly.

Electrical consumers should only be switched on when they are actually required

Heated rear windows, additional driving lights and heater blower consume a considerable amount of current. The higher generator load also increases the fuel consumption. For instance, over a period of 10 hours, the heated rear window will increase the fuel consumption by approximately 1 litre.

Check the fuel consumption regularly

The fuel consumption should be checked each time the tank is filled up. By doing this inconsistencies on the vehicle which lead to an increased fuel consumption can be discovered sooner.

■ Check the engine oil level each time the tank is filled up

The oil consumption depends to a great extent on the engine load and speed. Depending on the style of driving the consumption can be as much as 1.5 litres/1000 km.

It is normal for the oil consumption of a new engine to reach its lowest value after a certain mileage has been covered.

The consumption cannot be properly assessed until the vehicle has run approx. 5000 km.

This also applies to the fuel consumption and the engine output.

TRAILER TOWING

The vehicle is intended mainly for the transportation of goods and persons, but it can, with the appropriate technical equipment, also be used to tow a trailer.

Trailer towing not only places more stress on the vehicle, it also calls for more concentration from the driver.

For this reason, the operating and driving instructions on this page and the following page must be strictly adhered to.

Technical requirements

If the vehicle is supplied with a factory-fitted towing bracket, all that is technically and legally necessary for trailer towing will have been taken into account.

It should be noted that a 13 pin socket is fitted instead of the 7 pin one used previously. This new socket makes it possible to connect additional electrical components on the trailer for which there were no connections in the previous socket, such as interior lights, reversing lights etc.

In the following table the wiring of the terminals in the 7 pin socket is compared with that of the 13 pin socket.

Pin 7	Pin 13	Trailer electrical components
L	1	Turn signal left
54g	2	Rear fog light
31	3[1]	Earth for the circuits 1–8
R	4	Turn signal right
58R	5	Tail light, outline –, marker – and number plate light right
54	6	Brake lights
58L	7	Tail light, outline –, marker – and number plate light left
–	8[2]	Reversing light
–	9[3]	Power supply (cont. +)
–	10[2]	Charging wire + for battery in trailer
–	11	free
–	12	free
–	13[1]	Earth for circuits 9–12

[1] Both earth wires must not be connected together on the trailer side.
[2] Not connected at the factory.
[3] As [2]. Additional components for the trailer (e.g. interior lighting) can be connected here. Bear in mind that the battery in the towing vehicle will soon be discharged if these consumers are used with the engine not running.

If the trailer to be towed has a 7 pin plug, either a 13 pin plug can be fitted as shown in table or an adapter cable can be obtained from a Volkswagen Dealership.

If the vehicle is to be fitted with a towing bracket subsequently, the following must be noted:

■ The towing bracket is a safety part. Only a bracket which has been designed and type-approved for this vehicle may be used. It is advisable to use towing brackets from the Volkswagen range of accessories as these are identical to the ones fitted by the factory. The fitting instructions supplied with these brackets have also been approved by the factory.

■ The trailer socket must be connected properly to the electrical system of the vehicle. This applies to terminal 54g in the 7 pin socket or for terminals 2 and 8–13 in the 13 pin socket.

■ Volkswagen Dealerships have the necessary information on fitting towing brackets. The installation should therefore be done by them.

■ If, when towing a trailer for commercial purposes, the permissible total weight of vehicle and trailer exceeds 3500 kg it is necessary in most European countries to have a tachograph installed and used – see page 30.

Operating instructions

■ Due to the body overhang on dropside trucks and Double Cab vehicles with a wheelbase of 2950 and 3650 mm only trailers with a drawbar length of at least 1200 mm (distance from coupling to trailer body) may be towed. With shorter bars there is a risk that when the body swings out or pitches on uneven roads, the bodies will make contact and be damaged. Handbrakes, wheel cranks, etc. on the drawbar should be kept as low as possible.

■ When inserting the 13 plug into the socket on the vehicle, the ribbed sleeve on the plug must be turned fully to the right. The lid of the socket then engages over the boss on the sleeve.

■ The permissible trailer weight – see page 124 – must not be exceeded on any account.

■ When towing a trailer in mountainous regions, note that the trailer weights given in the "Technical Data" are only valid for gradients up to 12 %. If the vehicle and trailer weight is below the permissible maximum a correspondingly steeper gradient can be climbed.

■ The given trailer weights are only applicable for altitudes up to 1000 m above sea level. As the engine output and thus the climbing ability drops due to the decreasing air density above 1000 m the weight of vehicle and trailer must also be reduced by 10 % for each further 1000 m or part there of.

■ Where possible make full use of the maximum permissible drawbar weight on ball of the towing bracket – see page 124 – but do not exceed it.

■ While observing the permissible trailer and drawbar weight, distribute the load in the trailer so that heavy objects as are as near as possible to the axle. The objects must also be secured so that they cannot slip about.

■ Check the tyre pressures on the towing vehicle and on the trailer.

Driving instructions

To obtain the best possible handling of vehicle and trailer, the following should be noted:

■ Try to avoid driving with an unladen vehicle and a loaded trailer. If this cannot be avoided, only drive slowly to allow for the unfavourable weight distribution.

■ Since the driving stability of vehicle and trailer decreases as the speed increases do not drive at the maximum permissible speed in unfavourable road, weather and wind conditions particularly when going downhill.
In any case the speed must be reduced as soon as the trailer shows the slightest sign of snaking. On no account try to stop the snaking by accelerating.

■ For safety reasons one should not drive faster than 80 km/h (50 mph). This also applies in countries where higher speeds are permitted.

■ Always brake in good time. If the trailer has an overrun brake apply brakes gently at first then brake firmly. This will avoid the jerking caused by the trailer wheels locking. Change down before going down a steep hill so that the engine can act as a brake.

■ If the vehicle has to be driven up a long gradient in low gear with very high engine speed when the ambient temperature is very high, one should keep an eye on the coolant temperature gauge. If the gauge needle moves into the righthand part of scale, the speed must be reduced immediately. However if the warning lamp flashes, stop and let engine idle for a few minutes to cool it down.

General notes

■ During the running-in period avoid trailer towing as far as possible.

■ It is advisable to have the vehicle serviced between the Inspection intervals if it is used frequently for towing a trailer.

■ The trailer and drawbar load figures on the data plate of the towing bracket are for test certification only. The correct figure for the vehicle, which can be lower than the above figures, are given in the vehicle documents and in this manual.

■ The towing bracket increases the unladen weight of the towing vehicle and the payload must be reduced to correspond.

In some countries (for example Germany) the following additional legal requirements apply:

■ A special warning lamp must be fitted within the driver's range of vision to show that the trailer turn signals are working. Provision has been made for this in the warning lamp cluster – see page 28.

■ The maximum draw bar weight – see page 124 – must be shown on a clearly visible sticker at the rear of the towing vehicle.

■ The installation of a towing bracket must be passed by a legally approved test centre – e.g. Ministry of Transport (TÜV) – and then proof of installation is entered in the vehicle documents by the traffic authority.

■ The maximum speed permissible when towing a trailer is 80 km/h (50 mph).

■ On Sundays and public holidays it is forbidden to tow a trailer with a vehicle that is registered as a commercial vehicle.

■ If the total permissible weight of vehicle and trailer is more than 3.5 tons, a tachograph must be installed and used – see also page 30.

FILLING TANK

The filler neck is at the rear on the right hand side of the vehicle.

The lockable * tank cap is opened with key A – see page 7.

The fuel tank capacity is approx. 70 litres (110 litres with larger tank *).

Trouble-free refueling calls for correct use of filler nozzle.

- Insert nozzle fully into tank neck and do not tilt it.

On vehicle with a catalytic converter the spring-loaded flap below the filler opening must be pressed open with the filler nozzle. This should also be noted when using a petrol can to fill the tank.

❀ ***As soon as the correctly operated automatic nozzle switches off for the first time, the tank is full. Do not try to put more fuel in otherwise the expansion space in tank will be filled – the fuel can then overflow when it becomes warm.***

After filling the tank, place the cap on the filler neck and turn cap or key to the right to the stop.

Note

When carrying a spare can of petrol on the vehicle, official regulations must be observed.

For safety reasons we advise you not to carry a spare can of petrol. In an accident the can could become damaged and petrol escape.

FUEL

Petrol engines

Vehicles with catalytic converter
69 kW fuel injection engine

Unleaded regular petrol
RON[1]) not lower than 91.

Only unleaded petrol must be used in vehicles with a catalytic converter.

The use of leaded petrol is very detrimental to the functioning of the emission control system because the lead is deposited in the catalytic converter.

Even one tankful of leaded petrol will detract from the efficiency of the catalytic converter.

Although unleaded fuel may be used again afterwards the original efficiency of the catalytic converter is never fully attained.

On vehicles with Lambda probe[2]) the mixture formation is also negatively affected.

Vehicles without catalytic converter
66 kW carburetor engine

Unleaded or leaded **regular petrol RON[1]) not lower than 91.**

Notes

■ Unleaded petrol must comply with DIN[3]) 51607 and leaded petrol with DIN 51600.

In the interests of our environment unleaded petrol should be used whenever possible.

■ Only good quality petrol containing additives should be used – see "Petrol Additives" also.

■ If the octane rating of the available petrol is lower than that required by the engine, drive only with medium engine speeds and low engine loading. High engine loading by full throttle or high revs can cause engine damage. Fill tank with petrol of correct octane rating as soon as possible.

Petrol additives

The quality of the fuel has a decisive influence upon the running behaviour, performance and service life of the engine. The additives which are added into the petrol are of particular significance. One is advised therefore to use **good quality petrol containing additives.**

If such fuel is not available, or if engine troubles such a starting difficulties, stalling during idling, vibration and loss of power occur, the appropriate additives should be mixed with the petrol when filling up the tank. At temperatures between 0° and 15° C, these additives prevent possible icing up of the carburetor, have an anti-corrosion effect, clean the fuel system and prevent deposits building up in the engine.

Additives which have been tested for Volkswagen engines are available from Volkswagen Dealerships in Germany and in many export countries. The Volkswagen Dealerships are also informed with regard to the use of additives, and they know what to do in cases where deposits have already built up.

[1] **R**esearch **O**ctane **N**umber, indicates anti-knock properties of the petrol.
[2] Lambda = Air/petrol relationship.
[3] Standards issued by the German Standards Institution.

Diesel engines

Diesel fuel to DIN 51 601

CN*) not lower than 45.

Driving in winter

When using summer Diesel trouble may be experienced at temperatures below 0° C because the fuel thickens due to wax separation.

For this reason, winter Diesel which is more resistant to cold is sold during the winter in Germany, and this works satisfactorily – depending on brand of fuel – down to between −15° and −22° C.

In countries with different climatic conditions the Diesel fuels offered have a different temperature behaviour. Check with Volkswagen Dealerships or filling stations in the country concerned regarding the availability of Diesel fuels.

Filter preheating

The vehicle is fitted with a filter preheater. This will ensure that the fuel system remains operational down to about −25° C provided that winter Diesel which is cold resistant to −15° C is used.

Dilution with petrol under these conditions is no longer necessary.

If, at temperatures below −25° C the fuel has waxed to such an extent that the engine will not start it is sufficient to place the vehicle in a warm room for a while.

Fuel additives (anti-waxing agents and similar fluids) must not be mixed with the Diesel fuel.

*) **C**etane **N**umber, indicates the ignitability of Diesel.

VEHICLE CARE

Regular and careful care helps to maintain the value of the vehicle.

Furthermore it can be one of the stipulations for the upholding of warranty claims should corrosion damage and paint defects occur.

Every Volkswagen Dealership carries stocks of suitable car care materials. The instructions for use on the container should be followed.

Attention

■ **If misused, car care materials can be injurious to health.**

■ **Car care materials must always be stored in a safe place where children in particular cannot reach them.**

❀ ***When buying car care materials one should select products which do not damage the environment. Empty containers which these materials were in do not belong with household waste.***

Washing

The best protection against environmental influences is frequent washing and waxing.

How often this treatment is required depends, amongst other things on how much the vehicle is used, how it is parked (shed, in the open under trees etc.), the seasons, weather conditions and environmental influences. The longer bird droppings, insects, tree resin, road and industrial grime, tar spots, soot, road salt and other aggressive materials remain on the vehicle paint the more lasting their destructive effect will be. High temperatures e.g. from strong sun light intensifies the corrosive effect.

In certain circumstances weekly washing can be necessary, in other conditions monthly washing with appropriate waxing may be fully adequate.

After the period when salt is put on the roads the underside of the vehicle should always be washed thoroughly.

Automatic wash plants

The vehicle paint is so durable that the vehicle can normally be washed without problems in an automatic wash plant. However the influence on the paint depends to a large extent on the design of the plant, the filtering of the wash water, the type of wash and care material, etc. If the paint has a matt appearance after going through the wash plant or is even scratched this should be brought to the notice of the plant operator immediately. If necessary a different wash plant should be used.

Notes

■ There are also automatic wash plants for large vehicles in certain areas, for example at transport firms. Ask the plant operator if your vehicle can be washed there.

■ Before going through the wash plant apart from the usual precautions (closing windows, retracting the automatic aerial) there is nothing further to note.

■ If there are special fittings on the vehicle – such as a roof rack, two-way radio aerial etc. also speak to the plant operator.

Washing the vehicle by hand

In the interests of environmental protection the vehicle should only be washed in specially provided wash bays. In some districts, washing cars elsewhere may even be forbidden.

First soften the dirt with plenty of water and rinse off as good as possible.

Then clean the car with a soft sponge, glove or brush starting on the roof and going from top to bottom using only slight pressure. Paint shampoo should only be used for very persistent dirt.

Rinse the sponge or glove out thoroughly at short intervals.

Wheels and sill panels should be cleaned last, using a different sponge if possible.

After cleaning the vehicle, rinse thoroughly with water and leather it off.

Notes

- The vehicle should not be washed in strong sunshine.
- If the vehicle is rinsed with a hose, do not direct the jet of water at the lock cylinders – they can otherwise freeze up in the winter.
- After cleaning the load compartment on the Van and Combi the lower runner for the sliding door must also be cleaned and then regreased.

After washing vehicle the hinges of wing doors, the double cab door and the dropsides must be regreased.

Washing vehicle with high pressure cleaner

When using high pressure cleaners the following points must be noted:

- The operating instructions for the high pressure cleaner must be strictly complied with – particularly with regard to pressure and working distance.
- Do not use a concentrated spray jet!
- The water temperature must not be above 60° C.

Attention

Tyres must never be cleaned with a concentrated jet! Even at a relatively large working distance and with a very short spraying time, damage can be caused.

Waxing

A good coat of wax protects the vehicle paintwork to a large extent against the environmental influences listed under "Washing" on the previous page and even against light mechanical damage.

At the latest when water on the clean paint does not form small drops and roll off, the vehicle should be protected by applying a coat of good hard wax. Even when a wax solution is used regularly in the washing water it is advisable to protect the paint with a coat of hard wax at least twice a year.

Polishing

Should only be done if paint has lost its shine and gloss cannot be brought back with wax. If the polish used does not contain preservative compounds, the paint must be waxed afterwards.

Note

Matt painted and plastic parts should not be treated with polish.

Paint damage

Small marks in the paint such as scratches or stone damage should be touched up immediately with paint (Volkswagen touch-up brushes or spray cans) **before** the metal starts to rust.

However, should rust be found at any time it must be removed thoroughly and then the area treated first with an anti-corrosion primer and then the correct paint applied. You can of course have this work done at a Volkswagen Dealership.

The number of the original vehicle paint is given on the data sticker (see page 129).

Windows

Remove snow and ice from windows and mirrors with a plastic scraper only. To avoid scratches due to dirt on the glass, the scraper should only be pushed in one direction and not moved to and fro.

Traces of rubber, oil, grease or silicone can be removed with window cleaner or a silicone remover.

The windows should also be cleaned on the inside at regular intervals.

Do not dry the windows with the leather used for the paintwork because traces of paint cleaner will cause streaks to appear on the glass.

To avoid damaging the **heating element wires** in the rear window do not put stickers over the wires on the inside.

Door and window weatherstrips

The weatherstrips will remain flexible and last longer if they are rubbed lightly with a rubber protective compound from time to time. This will also stop the weatherstrips from freezing on in the winter.

Plastic parts and leatherette

Exterior plastic parts are cleaned with normal washing and interior parts with a damp cloth. If this is not sufficient, plastic parts and leatherette may only be cleaned with **special solvent-free** plastic cleaners.

Cleaning cloth upholstery

Upholstery cloth and similar materials must be cleaned with special cleaners or dry foam and a soft brush.

Cleaning seat belts

Keep belts clean because they may not retract properly if very dirty.

Dirty belts can be cleaned by washing with a mild soap solution without taking the belts out of the vehicle.

Note

Inertia reel belts should be completely dry before they are allowed to roll up.

Attention

Do not have the belts cleaned chemically because the cleaning compounds damage the webbing material. Ensure that the belts do not come into contact with corrosive fluids.

Steel wheels

The wheels and the wheel trims should be cleaned thoroughly at regular intervals when the vehicle is being washed. This will prevent brake dust, dirt and road salt from accumulating on the wheel. Persistent, ingrained brake dust can be removed with an industrial grime remover. Paint damage should be repaired before rust can form.

Cleaning and anti-corrosion treatment of engine compartment

Attention

Before working in the engine compartment, attention must be given to the instructions on page 59.

The engine compartment and the outside surface of the power unit are given anti-corrosion treatment at the factory.

In the winter when the vehicle is being driven frequently on salted roads, good anti-corrosion treatment is very important. For this reasons the entire engine compartment should be thoroughly cleaned before and after the salting period and then preserved so that the salt cannot have a damaging effect.

The ignition should always be switched off before the engine is washed.

If the engine compartment is cleaned at any time with grease removing solutions[1] or if one has the engine washed, the anti-corrosion compound is nearly always removed as well. It is therefore essential to ask for durable preservation of all surfaces, seams, joints and components in the engine compartment to be carried out. This applies also when corrosion protected parts are renewed.

As traces of petrol, grease and oil are washed off when the engine is washed, the dirty water must be cleaned in an oil separator. For this reason engine washing must only be done in workshop or filling station.

Volkswagen Dealerships have stocks of the cleaning and preservation solutions recommended by the factory for this purpose and have the equipment necessary to apply them.

Undercoating

The underside of the vehicle is coated with a special compound to protect it from chemical and mechanical influences.

However, as this protective layer becomes damaged when the vehicle is in use, the coating under the body and on the running gear should be examined at certain intervals – preferably before and after the winter season – and any damage made good.
Volkswagen Dealerships have stocks of the correct compound, have the necessary equipment and are familiar with the application procedure. We advise you therefore to have the patching up or additional coating done at a Volkswagen Dealership.

Note for vehicles with a catalytic converter.

Due to the high temperatures which occur in the afterburning process, additional heat shields are fitted over the catalytic converter. Underbody sealant must not be applied to these shields, the catalytic converter or the exhaust pipes. Removal of the heat shields is also not permissible.

Cavity preservation

All cavities which have a risk of corrosion are permanently protected during production.

The preservation needs neither checking nor touching up. If a small amount of wax runs out of the cavities during high ambient temperatures, it can be removed with a plastic scraper and white spirit.

If the wax which has run out is removed with white spirit, the environmental protection regulations must be noted.

[1] Only the correct cleaning solutions may be used – on no account petrol or Diesel.

MAINTENANCE

As the vehicle is fitted with reliable low maintenance technical components only a small amount of regular maintenance is required in order to maintain the roadworthiness, economy and reliability.

The high manufacturing quality and the selection of high-class materials have made it possible to dispense with a special service immediately after the running-in period. After 1000 km the First Service must be carried out on vehicles with a Diesel engine, and on vehicles with the 66 kW carburetor engine, the valve clearances must be adjusted.

The Inspection Service offered by the Volkswagen Dealerships takes into account to a large extent the individual annual mileage covered and helps to keep operating costs down.

❀ ***Regular maintenance helps to ensure that the emission values – and thus the environmental burden – are kept as low as possible.***

The Inspection Service is required every 12 months or **every 30000 km,** whichever occurs first.

If a mileage of 15000 km (petrol engines) or 7500 km (Diesel engines) is reached before 12 months has elapsed, the **Oil Change Service** must be carried out. See also page 63 and the Service Schedule.

The Service Schedule also shows what work is done at the Inspection and Lubrication Services.

In arduous operating conditions, e.g. extremely low ambient temperatures, very dusty conditions, building site work, frequent use of the PTO * etc. certain service operations should be carried out between the intervals given.

This applies in particular to:

- Changing the engine oil
- Cleaning or changing the air cleaner element
- Emptying the dust trap of the cyclone filter *
- Draining water from or renewing the fuel filter on the Diesel engine.
- Lubricating the hinges of double cab and wing doors, the dropsides and the centre and lower sliding door runners.

The service operations should be carried out in a Volkswagen Dealership because this work requires special knowledge, workshop appliances and special tools. Furthermore this work must be done in accordance with our instructions.

Complete proof of servicing by a Volkswagen Dealership can be one of the stipulations for the upholding of any warranty claims during the 1 years warranty period.

Attention

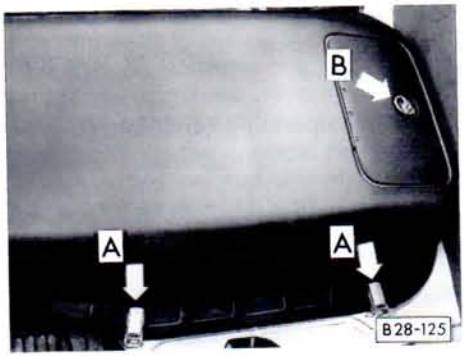
Safety regulations place very strict limits on the amount of repairs and adjustments to engine and running gear parts which can be done by the owner. By tinkering with parts which affect the safety of a motor vehicle one can endanger oneself and other road users.

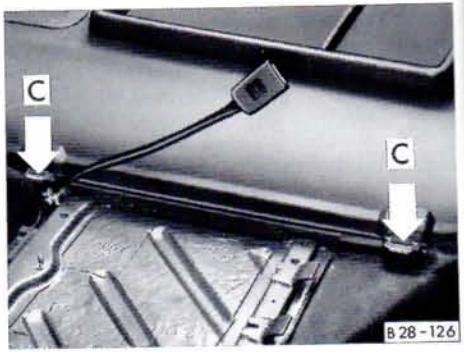
❀ ***Altering the engine settings is detrimental to the exhaust values. This means that the environment is burdened unnecessarily. In addition the fuel consumption also increases.***

The disposal of old oil, used brake fluid, old batteries or worn-out tyres etc. must be done according to environmental protection regulations.

It is even better to have used operating materials and worn parts recovered in an environment protecting way. By "Recycling" valuable raw materials and energy are saved and the load on the special waste dumps reduced. Volkswagen Dealerships collect all reuseable materials and parts correctly and pass them to the proper places for Recycling.

ENGINE BONNET





To open the **bonnet**, release the clips (A) on the left side. Before the bonnet can be swung over to the right side the right seat must be taken out or the double seat bench * lifted up (see page 19).

Before taking the bonnet out, the earth wire for radio interference suppression * must be detached from cylinder head cover through the maintenance flap.

To open the **maintenance flap**, lift the fastener (B), turn it to right and open flap.

When flap is open the engine oil level can also be checked and oil added if necessary – see page 62.

Attention

The engine bonnet and the maintenance flap must always be properly closed when the vehicle is moving so that no engine noise, odours, fumes etc. can pass into the interior.

The following should therefore be noted when installing the bonnet:

- The seal must be clean and properly located.
- No articles should be trapped between the bonnet and the floor.

Correct sealing of the bonnet can only be obtained if the hinge hooks (C) are hooked on properly and the clips (A) are closed correctly.

ENGINE COMPARTMENT

The following items are not in the engine compartment but they are located at other points in the vehicle:

Attention

When working on the vehicle particular care should be taken.

■ Switch off the engine and remove the ignition key.

■ Pull the hand brake on firmly.

■ Move the gearshift lever into neutral.

■ Allow engine to cool off.

As long as the engine is at operating temperature, do not open the coolant reservoir because the system is under pressure.

■ Avoid causing short circuits in the electrical system – particularly at the battery –.

■ If tests have to be carried out with the engine running, there is an additional danger present from rotating parts – e.g. V-belts, generator, radiator fan etc. – and from the high voltage ignition system.

Attention must be paid to the warnings given in this Instruction Manual and to generally applicable safety regulations.

When topping up fluids, one should ensure that they are not mistaken one for the other, under any circumstances, otherwise serious functional defects will result.

To ensure that leaks are detected in good time the ground under the vehicle should be examined regularly. If there are spots of oil or other fluids on the ground, the vehicle should be taken to a workshop for checking.

ENGINE OIL

Viscosity and specification

A special, high quality multigrade oil is put in the engine at the factory and this can be used all the year round – except in very cold climates.

As a good engine oil is a prerequisite for trouble free operation and long engine service life, only a correspondingly high quality oil may be used for topping up and at oil changes.

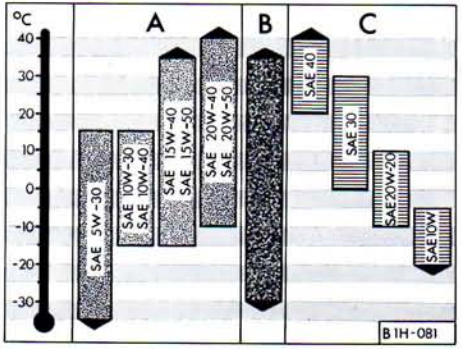
The specifications shown on this page must be marked either separately or together with other specifications, on the containers.

When topping-up, the oils can be mixed with one another.

The **viscosity class** of the oil must be selected in accordance with the illustration. If the ambient temperature exceeds the given range briefly, the oil does not need to be changed.

Important note

Quite naturally engine oils are also being continually developed. For this reason the statements in this Instruction Manual are only in line with the current state at the time of going to press.
Volkswagen Dealerships are kept up-to-date by the factory regarding changes. For this reason therefore the oil change should preferably be done in a Volkswagen Dealership.



Petrol engines

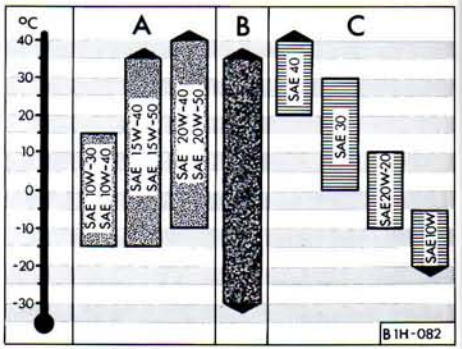
A – Multigrade oils, specification VW 501 01

– Multigrade branded oils, specification API-SF[1] or SG[1]

B – Improved lubricity oils, specification W 500 00

C – Single grade branded oils, specification API-SF[1] or SG[1]

[1] These oils may be only be used if the approved engine oils are not available.



Diesel engine

A – Multigrade oils, specification W 505 00 (suitable for **all** Diesel engines, without restriction)

– Multigrade branded oils, specification API-CD (for topping-up in emergencies only)

B – Improved lubricity oils, specification W 500 00 (not for Turbo Diesel)

C – Single grade oils, specification API-CD only (for topping-up in emergencies only)

Oil characteristics

Multigrade oils to VW Standard 501 01 are reasonably priced oils with the following properties:

– All year round use in temperate climate areas

– Excellent cleaning ability

– Efficient lubrication at all engine temperatures and load conditions

– High resistance to ageing.

The improved lubricity oils as per VW Standard 50000 have in addition the following advantages:

– All year round use at practically all temperatures

– Low frictional losses in engine

– Best possible starting even at very low temperatures.

Single grade oils

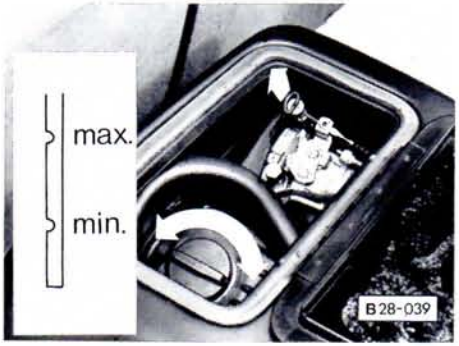
Due to their limited viscosity ranges these oils are not generally acceptable for all year round use.

In the case of petrol and turbocharged Diesel engines these oils should only be used in an emergency – see previous page.

For the NA Diesel engine (not turbocharged) this oil can be economical, in the case of high annual mileage and provided that oil changes are carried out frequently.

When using SAE 10 W single grade oil or SAE 5 W-30 multigrade oil, continuous high engine speeds and engine loading should be avoided.

This restriction does not apply when using improved lubricity oils.



Checking oil level

Every engine uses a certain amount of oil. The **oil consumption** can be up to 1.5 litres per 1000 km – see also page 45.

The engine oil level must therefore be checked at regular intervals, preferably when filling the tank and before a long journey. **Under arduous conditions, and/or when the engine is working hard, it should however be checked daily, before driving off.**

The dipstick and filler hole can be reached through a flap in the engine bonnet.

The vehicle must be on a level surface when checking oil level. After stopping the engine wait a few minutes for the oil to drain back to the sump.

Then pull the dipstick out, wipe it with a clean cloth and insert again. Then pull dipstick out again and check the oil level.

The level must be between the two marks.

If level has dropped to the MIN. mark, oil must be added.

The difference in quantity between the min. and max. marks is 1 litre.

When the engine is working hard such as in sustained motorway cruising in summer, when towing a trailer or when climbing mountain passes, the oil level should be kept up to the max. mark (not above).

Topping up

Unscrew the cap from the oil filler opening in the cylinder head cover and add oil. It is essential to **always use a funnel.** Then check the level with dipstick.

The level must not be above the "MAX" mark, if it is, oil can be sucked out via the crankcase breather and pass out into the atmosphere via the exhaust system. On vehicles which are fitted with a catalytic converter, the oil can burn in the converter causing it to become damaged.

Attention

When topping-up, no oil should be allowed to drip onto hot engine components – danger of fire.

Carefully close the oil filler cap and push the dipstick in as far as it will go.
Otherwise oil could leak out when when the engine is running.

Carefully secure the maintenance flap.

Changing the engine oil

The engine oil deteriorates not only due to use when engine is running but also due to ageing. The engine oil changing times depend therefore on the mileage and also the time elapsed.

Petrol engines

Engine oil change every 15000 km or every 12 months (whichever comes first).

Diesel engines

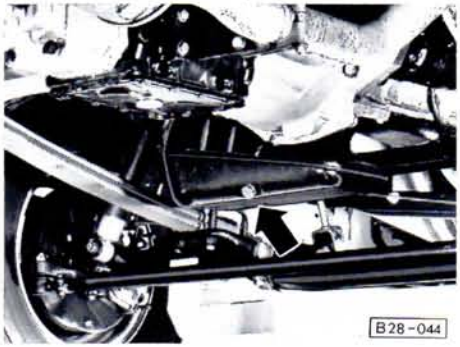
Engine oil change every 7500 km or every 12 months (whichever comes first).

For further details, see Service Schedule.

For petrol and Diesel engines

If the vehicle is used continuously in arduous conditions, the engine oil must be changed at shorter intervals – see page 80 also.

Recommended oils and viscosity classes – see pages 60 und 61.



- Drain oil when warm and catch in a suitable container.
- The washer under the drain plug (arrow) should always be renewed.
- Tighten plug firmly but do not overtighten.
- The amount of oil required is:
  7 litres with filter change
  6 litres without filter change

Attention!

Until it can be disposed of in the prescribed manner, old oil must be stored out of the reach of children.

On no account may oil be poured down drains or onto the ground. Due to the problems of disposal, the requirement for special tools and the necessary expert knowledge, the engine oil and filter changes should best be carried out in a Volkswagen Dealership.

Engine oil additives

No additives should be mixed with the engine oil.

Any damage caused by the use of such additives will not be covered by the warranty.

Changing oil filter

The filter is renewed at the intervals given in the Service Schedule.

- Remove appropriate noise damping pan *.
- Remove filter.

If the filter cannot be removed by hand, a special wrench is required.

- Clean contact surface on engine.
- Lightly oil the seal on the new filter and screw the filter on by hand only.
- Install noise damping pan * again.

GEARBOX OIL

Specifications

Manual gearbox

- Gear oil, API-GL 4, SAE 80 or
- Gear oil, G 50, SAE 75 W-90

Final drive

- Gear oil, API-GL 5, SAE 90

Checking oil level

With the manual gearbox and final drive the oil level does not need checking.

Oil changing

The oil in the manual gearbox and final drive does not need changing.

Notes

- **When there is no lubricant in the gearbox the engine must not be started and the vehicle may only be towed with driving wheels lifted.**
- **No additives should be mixed with the lubricants.**

FUEL FILTER

Diesel engines

The filter is on the left hand side of the engine. It is renewed or the water drained at the mileages given in the Service Schedule.

Draining water

The filter only needs draining if the separate water trap * has not been drained for a long time.

- Lift the valve slightly after pulling out the retaining clip (arrow). The hoses do not need to be detached.
- Open knurled screw at bottom of filter and let about 100 cc of fluid escape. **Catch the escaping fluid.**
- Close knurled screw.
- Press the valve down onto its seat again and push the retaining clip in.

Renewing filter

- Fill the new filter bowl with fuel and moisten rubber seal with fuel before screwing filter on.
- The fuel system is **bled automatically** when engine is started.

Carburetor engine

The filter in the fuel line should be renewed at the mileages given in the Service Schedule.

The arrow on the filter should point towards the carburetor.

Before starting any work on the fuel system which could result in fuel escaping, disconnect the battery earth strap so that an accidental short circuit cannot start a fire.

Fuel injection engine

The filter does not need changing.

WATER TRAP *

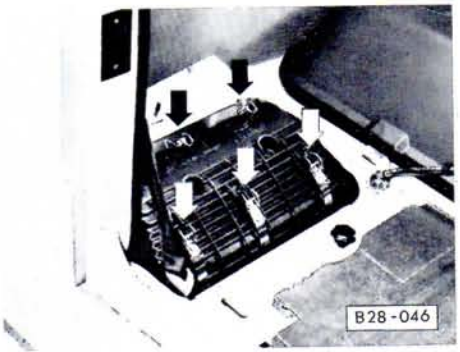
Diesel engines

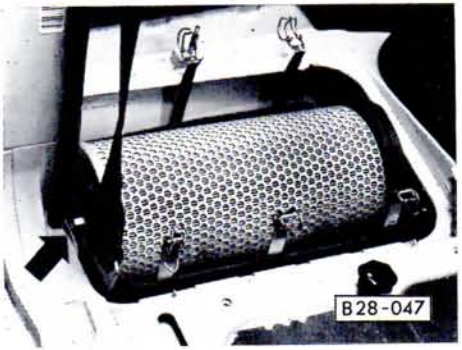
The water trap is located in the left hand front wheel housing on the frame side member. The trap is serviced at the mileages given in the Service Schedule.

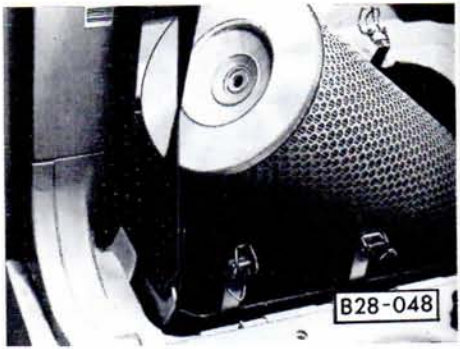
To drain water, loosen vent screw on the top of filter. Then open knurled screw at bottom and let water drain out into a suitable container. When fuel appears, close vent and knurled screws.

The fuel system is **bled automatically** when engine is started.

AIR CLEANER







The paper filter element in the air cleaner is normally renewed at the intervals given in the Service Schedule. In very dusty conditions the element must be cleaned or renewed at shorter intervals.

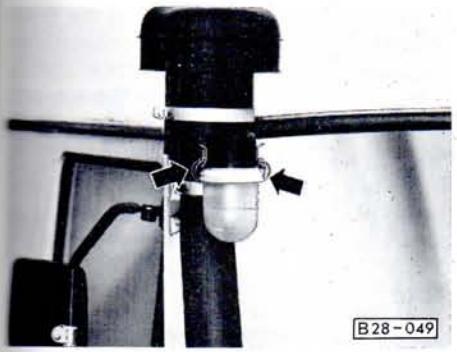
The element should also be renewed if it or the gasket is damaged.

Cleaning or renewing filter element

- Remove right single seat, or lift up two-seater bench (see page 19).
- Lay back the floor covering behind the seat.
- Unscrew nut of air cleaner cover, lift cover up and take it out.
- Release the six clips (arrows in left illustration) of the air cleaner housing upper part and take upper part off.
- Unscrew retaining nut (arrow in centre illustration) of filter element.
- Lift filter element up and take it out at an angle.
- Blow filter out with compressed air from inside outwards or renew.

The filter element must not be washed with petrol or moistened with oil.

The filter element is installed in the reverse sequence, ensure that retaining nut is tightened.



Cyclone air cleaner *

The combustion air is pre-cleaned by passing through a dust separator. The dust which is removed is collected in the transparent container shown above which is then emptied as and when required.

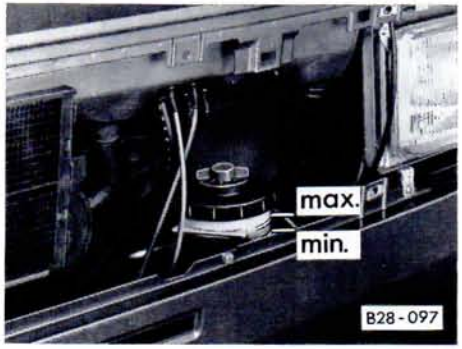
To remove the container, release the clips.

ADDITIONAL POINTS TO BE LUBRICATED

Additional points to be lubricated during the Inspection Service are given in the Service Schedule.

The hinges on the double cab and wing doors, the dropsides and the centre and lower sliding door runners should be greased at the intervals given in the Service Schedule. This interval should be shortened when the vehicle is operating in bad conditions and/or after the vehicle has been fully cleaned inside.

POWER ASSISTED STEERING *



The reservoir is behind the radiator grille on the left looking forward.

The power assisted steering is filled with ATF Dexron® fluid.

To ensure satisfactory operation of the system it is essential that the fluid level in reservoir is correct.

Before the grille can be taken off, the two headlight trim frames must be removed. This is done after turning the two quick release retainers in each frame 90° with the flat blade of the screwdriver from the vehicle tool kit – see also page 91.

To remove the grille the screwdriver blade must be changed round and the three upper Phillips screws unscrewed but only so far that the plastic nuts can be taken off together with the screws.

The fluid level must only be checked with the engine running and the wheels in the straight ahead position.

The fluid level should always be between the "max" and "min" marks. When the level has dropped down to the MIN mark the power assisted steering should be checked at a Volkswagen Dealership. It is not sufficient merely to top up with ATF.

To install the radiator grille again the three retaining lugs on the grille are hooked over the lower metal edge, the three special nuts with screws inserted at the top and the three screws tightened.

The two headlight trim frames are hooked on at the outer sides, the screwdriver blade turned round and the two quick release retainers turned 90° to secure the frames.

Note

If the power assisted steering fails at any time or when engine is not running (vehicle on tow) the vehicle can still be steered but more force will be required to turn the steering wheel.

COOLING SYSTEM

Under normal conditions the cooling system is almost maintenance free.

The cooling system is filled at the factory with a permanent coolant which is not changed. The coolant consists of water and a 40 % concentration of our coolant additive G 11 V8B (anti-freeze on glycol basis with anti-corrosion additives). This mixture not only gives the necessary frost protection down to –25– C but also protects the alloy parts in the cooling system against corrosion. In addition it prevents scaling and raises the boiling point of the coolant.

The concentration of the coolant therefore must not be reduced in the summer or in warm countries by topping up with plain water. **The coolant additive proportion must be at least 40 %.**

If greater protection against frost is required, the proportion of G 11 V8B additive can be increased, but only up to 60 % otherwise the anti-freeze protection is reduced and furthermore the cooling effect is impaired.

Vehicles for export to cold countries usually have frost protection down to –35° C.

Only our **G 11 V8B** or an additive with the **specification TL-VW 774 B** (marked on container) should be added to the coolant. These additives can be obtained from Volkswagen Dealerships.

Other additives can be very detrimental to the anti-corrosion effect in particular.

The corrosion damage thus caused can lead to loss of coolant and consequently to serious engine damage.

Checking coolant level

The correct coolant level is essential to the satisfactory operation of cooling system. For this reason, the coolant level should be checked regularly, and this is best done when refueling,

The coolant level can be checked in the expansion chamber when engine is not running.

The expansion chamber is in the engine compartment in front of the engine. How the bonnet is removed is explained on page 58.

The coolant level must be between the min. and max. marks on tank when engine is cold and can be slightly above the max. mark when it is warm.

The cooling system is fitted with an automatic coolant level monitoring device. When level is too low the warning lamp for coolant temperature/coolant level flashes continuously (see page 29).

Coolant losses

Coolant loss normally indicates leakage in the system. In this case the cooling system should be checked at a Volkswagen Dealership without delay. It is not sufficient to merely add coolant.

In a water-tight system losses can only occur if the boiling point of the coolant is exceeded as a result of overheating.

Overheating can occur if:

- The flow of cooling air is reduced, e. g. by a radiator muff or very dirty radiator fins (leaves, dust, insects)
- The boiling point of the coolant has been lowered by incorrect mixing proportions – see previous page.

If the cause of the overheating cannot be found and eliminated, contact a Volkswagen Dealership as soon as possible otherwise serious damage may be done to the engine.

Topping up coolant

Switch engine off and let it cool down. Then cover expansion tank cap with a cloth and turn cap carefully **one** turn to the left and let pressure escape first. Then take cap off.

Attention

Do not remove expansion tank cap when engine is hot – Danger of scalding.

System is under pressure.

If, in an emergency only water can be added, the correct mixture concentration must be restored with the specified coolant additive (see previous page) as soon as possible.

To avoid damaging the engine, add cold coolant only when engine is cold if a lot of coolant has been lost.

Do not fill above the max. mark.
The excess coolant will be forced out through the valve in the radiator cap when engine becomes hot.

Screw cap on again tightly.

Attention

The coolant additives and the coolant are a danger to health.

The additive must therefore only be stored in the original container well out of reach of children. If the coolant has to be drained at any time it must be caught and also stored in a safe place.

Drained coolant should not normally be reused, it must be disposed of, bearing in mind environmental protection regulations.

Cleaning radiator fins

Insects, leaves and dust which collect in or in front of the fins can prevent the radiator from working properly.

From time to time the radiator fins should therefore be cleaned with a jet of water.

Driving in winter

In order to ensure that the frost protection is adequate, the concentration of the coolant should be checked before the cold season begins and, if necessary, corrected.

BRAKE FLUID

The brake fluid reservoir is in the centre of the dash under a cover.

Checking fluid level

The correct fluid level is essential to the satisfactory operation of the brake system. The fluid level must always be between the "max" and "min" marks.
The level of fluid tends to sink slightly when the vehicle is used due to the automatic adjustment of brake linings. This is quite normal.

However, if the level sinks noticeably in a short time or drops below the "min" mark the system may be leaking. Take the vehicle to a Volkswagen Dealership at once and have the brake system checked.

A low fluid level in the reservoir is indicated by the brake warning lamp * lighting up (see also page 28). When this happens take the vehicle to a Volkswagen Dealership immediately and have the brake system checked.

Renewing the brake fluid

Brake fluid absorbs moisture. In the course of time it takes up water from the ambient air. Too high a content of water in the brake fluid can cause corrosion damage in the system in time. Furthermore the boiling point of the brake fluid is reduced considerably.

For this reason the brake fluid must be renewed every two years.

Attention

When the brake fluid gets too old vapour bubbles can form in the brake system when the brakes are used hard. The efficiency of the brakes and thus the vehicle safety is then seriously affected.

Only use our genuine brake fluid (specification to US standard FMVSS 116 DOT 4). The fluid must be new.

Attention

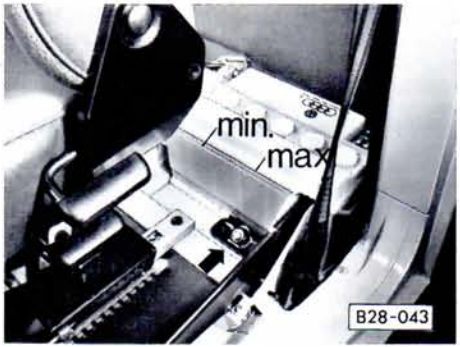
Brake fluid is poisonous.
It must therefore only be stored in the original container out of reach of children.

Remember also that brake fluid will attack the paintwork.

Because of the disposal problems, the special tools necessary and the specialist knowledge required, the brake fluid changing should preferably be done by a Volkswagen Dealer.

It is advisable to have the fluid change carried out during an Inspection Service.

BATTERY



The battery is behind the left hand seat.

When handling the battery or working on the electrical system the following general remarks should be noted:

Attention

■ Battery acid is corrosive and must not get into the eyes or onto skin and clothing.

Any acid splashes must be washed off thoroughly with water. See a doctor if necessary.

■ Never short the battery terminals (e.g. with a tool) as this causes the battery to heat up very quickly and it may burst.

■ To prevent any possibility of short circuiting, detach battery earth cable before doing any work on the electrical system. When changing a bulb, it is sufficient to switch off the lamp concerned.

■ When separating the battery from the vehicle system, disconnect the minus cable first and then the plus cable.

When the engine is running the battery must not be disconnected as this will damage the electrical system (electronic components).

■ When connecting the battery again, attach the plus cable first and then the minus cable. The cables must on no account be interchanged – Can cause wiring to burn out!

Starting by connecting an additional battery is described in the Do-it-yourself section.

Checking acid level

In normal operating conditions the battery requires hardly any maintenance. At high ambient temperatures however it is advisable to check the acid level from time to time. It should always be between the min. and max. marks on the side of the battery.

When the level has dropped to below the min. mark the battery cells concerned must be topped up to the max. mark with distilled water.

It is advisable to have the acid level checked and corrected by a Volkswagen Dealer.

Winter driving

Winter weather is particularly hard on the battery. Furthermore at low temperatures it has only a part of the capacity it has at normal temperatures. We recommend therefore that the battery be checked preferably in a Volkswagen Dealership before the onset of cold weather and charged if necessary. At the same time, the terminals will be cleaned and special grease applied. This will not only result in quicker, more reliable starting but will help to prolong the life of the battery.

If the vehicle is not driven for several weeks when temperatures are very low, the battery should be taken out and stored in a frost-free room, so that it does not freeze up and become damaged.

Attention

Store the battery out of reach of children.

To take battery out, first disconnect the two wires (see "Battery charging – Quick charging") and then remove retainer.

To remove battery on vehicles with a tool box on the panel behind the left single seat the tool box * must be opened and unhooked first.

Charging battery

When charging with a low current e.g. with a small charger the connecting cables need not normally be taken off. The instructions from the charger manufacturer must however be noted.

Before **Quick charging**, that is charging with a high current, both connecting cables must be disconnected – see previous page.

Note the following:

A discharged battery can freeze at –10° C. It is essential to thaw out a frozen battery before it is given a quick charge otherwise it may explode!

The mains cable of the charger should not be connected until after the clips of the charger have been properly secured to the battery terminals:

Red = plus (or positive)
Black = minus (or negative)

After charging, connect the battery again correctly.

Attention

The gas given off during the charging process is highly inflammable so keep sources of ignition (naked flames, burning cigarettes etc.) well away from the battery.

Renewing a battery

If the battery has to be renewed, the new battery must have the same capacity, voltage (12 Volts) current strength and shape. Volkswagen Dealers have stocks of suitable batteries.

Because of the problem of disposing of the old battery the renewal of a battery should preferably be done by a Volkswagen Dealer. Batteries contain, amongst other things, sulphuric acid and lead and must on no account be put with normal household waste.

WINDSCREEN WASHER SYSTEM

The container for the windscreen washer fluid is on the right underneath the dash. The container holds approx. 2 litres of fluid. On vehicles with a headlight washer system * the capacity is about 8 litres.

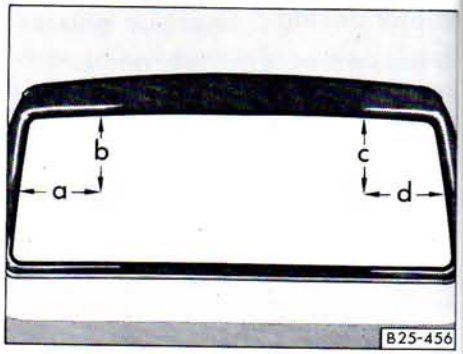
Filling container

Unscrew cap, fill to the brim with fluid and screw cap back on again. Switch ignition on to check operation of system.

It is advisable to add a window cleaner solution (with anti-freeze additive in winter) to the water because plain water is not usually sufficient to clean the glass and headlight lenses quickly and thoroughly.

Note:

If at any time a window cleaning agent with frost protection is not available, methylated spirits can also be used. On no account should cooling system anti-freeze or other additives be used.



Adjusting washer jets

When vehicle is stationary, the water should hit the windscreen at the following points:

a = 540 mm, b = 200 mm/50 mm[1)]
c = 200 mm/50 mm[1)], d = 480 mm
The jets can be adjusted with a needle.

The jets for the **headlight washer system** * can only be adjusted with a special tool. When adjustment is necessary, contact your Volkswagen Dealership.

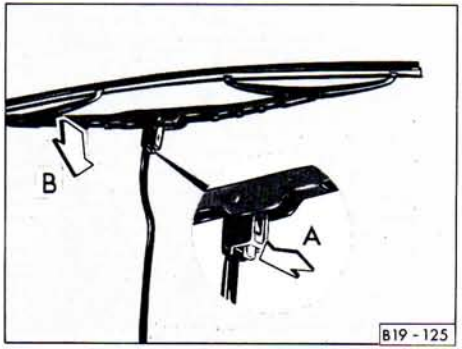
[1)] Footpump

WINDSCREEN WIPER BLADES

Good wiper blades are essential for clear vision.

To prevent streaks from forming on the glass the wiper blades should be cleaned regularly with a window cleaning solution. When very dirty and full of insect remains, the blades can be cleaned with a sponge or brush.

For safety reasons the wiper blades should be renewed once or twice a year. Wiper blades can be obtained from all Volkswagen Dealerships.



Changing windscreen wiper blades

Taking wiper blade off

- Hinge wiper arm up and position blade horizontally.
- Press retaining spring (arrow A) and push blade towards screen at the same time (arrow B).

Securing wiper blade

The retaining spring must engage audibly in the wiper arm.

WHEELS

General notes

■ New tyres do not give maximum grip straight away and should therefore be run in at moderate speeds and a careful style of driving for about the first 100 km. This will help to make the tyres last longer.

■ Check tyres for damage from time to time (cuts, splits, cracks and lumps) and remove any foreign bodies embedded in the treads.

■ To avoid damage to tyres and wheels drive over curbs and similar obstacles very slowly and as nearly at right angles as possible.

Damage to wheels and tyres is not always easy to see, so if you think that a wheel is damaged, it must be checked by a Volkswagen Dealership.

■ Keep grease, oil and fuel off the tyres.

■ Replace missing dust caps as soon as possible.

■ Mark wheels before taking them off so that they rotate in the same direction when put back on again.

■ When taken off, the tyres should be stored in a cool, dry and preferably dark place. Tyres which are not on wheels should be stored in a vertical position.

Tyre life

Tyre life depends to a considerable extent on the following factors:

Inflation pressure

Particularly at high speeds the tyre pressures are very important. The inflation pressures should therefore be checked at least once a month and always before a long journey.

At this opportunity do not forget the spare wheel – should always be inflated to the highest pressure required on the vehicle.

Always check the pressures when the tyres are cold. **When warm, the pressure is higher but do not reduce**. The pressures are given on pages 116 to 118 and on the LT 28 and 31 on a sticker at the side of the dash panel on the driver's side.

Pressures which are too high or too low shorten tyre life – quite apart from the detrimental influence on vehicle handling.

Attention

At continuous high speeds a tyre in which the pressure is too low flexes more and heats up excessively. This can cause tread separation and tyre blow out.

A tyre pressure which is too low increases the fuel consumption. This in turn places an unnecessary burden on the environment.

Mode of driving

Fast cornering, hard acceleration and violent braking also increase tyre wear.

Balancing wheels

The wheels on new vehicles are balanced. However when vehicle is running various influences can cause the wheel to become unbalanced and this causes steering vibration.

As imbalance also increases steering, suspension and tyre wear the wheels should be balanced again. Furthermore a wheel should always be rebalanced when the tyre has ben repaired or when a new tyre has been fitted.

Incorrect wheel alignment

Incorrect wheel alignment not only causes excessive, usually uneven tyre wear but it can also impair the vehicle's safe handling. If unusual tyre wear is noticed, contact a Volkswagen Dealership.

Wear indicators

At the bottom of the tread of the original tyres there are 1.6 mm high "wear indicators" running across the tread – see Fig. There are 6 – 8 of these indicators – according to make – evenly spaced round the tyre circumference. Marks on the flanks of the tyre (for example the letters "TWI" or triangles) show the locations of the wear indicators.

Attention

■ When the tyres have worn down to the wear indicators, at the latest they must be renewed without delay.

■ Worn tyres have a detrimental effect on roadholding, particularly at high speeds on wet roads. In addition the vehicle tends to aquaplane sooner.

We strongly recommend therefore that the tyres are renewed when the remaining tread depth is down to 3 mm.

Note

When tread depth is down to 1.0 mm (from 1.1.92 1.6 mm) – measured in the tread groove next to the wear indicator bar – the official permissible minimum tread depth has been reached (in export countries this figure may differ).

Renewing wheels/tyres

Wheels and tyres are important design features. The wheels and tyres approved by us should be used. They are specially matched to the model concerned and contribute largely to the excellent roadholding and safe driving characteristics.

■ Fitting and repairing tyres requires expert knowledge and special tools. This work may only be carried out by specialist personnel.

Because of the problem of disposing of the old tyres, the special tools necessary and the specialist knowledge required the tyre changing should preferably be done by a Volkswagen Dealer.

Furthermore, many Volkswagen Dealerships stock an attractive range of tyres and wheels.

■ For safety reasons the tyres should be renewed in pairs and not singly.

■ Only radial ply tyres of the same type, size and the same tread pattern may be combined.

■ Never fit used tyres where their previous history is not known.

■ Knowing the **tyre lettering** and its meaning makes the selection of the correct tyres easier. Radial ply tyres have the following lettering:

e.g.: 195 R 14 C 8 PR-106/104 N

Tyre width in mm (in inches on LT 4x4)

Radial construction code letter = **R**adial

Wheel dimension in inches

C = Commercial (tyres for light commercial vehicles)

Old carrying capability code:

New carrying capability codes:
1 Figure for single tyres
2 Figures fo twin tyres

Speed code letter

The manufacturing date is also to be seen on the tyre wall (possibly only on inner side of wheel):
DOT ...120... means that the tyre was produced in the 12th week of 1990.

Attention

Tyres which are older than 6 years of age should only be used in an emergency and then with a particularly careful style of driving.

If you wish to fit your vehicle with non-standard wheels or tyres please note:

Attention

■ For technical reasons it is not possible in every case to use wheels from other vehicles – in certain conditions not even wheels from the same vehicle model.

■ Wheels and wheel bolts are matched to one another.

On changing to a different type of wheel (e.g. alloy wheels or wheels with winter tyres) the correct bolt with the proper length and conical shape must be used. The security of the wheels and the functioning of the brake system depend on this.

■ Using types of wheel and/or tyre which have not been approved by us for your vehicle model can be detrimental to the safety of the vehicle. It can also affect the vehicle under the construction and use regulations.

■ If wheel trim discs or a front spoiler are subsequently installed, ensure that the air flow remains adequate to cool brakes.

Volkswagen Dealerships are fully informed about the possible conversions of tyres, wheels and wheel trims.

Winter tyres

In winter conditions the handling of the vehicle can be improved considerably by winter tyres.

When fitting winter tyres, note the following:

- Only radial ply winter tyres may be used. The factory recommended tyre sizes are given on pages 116 to 118.
- With winter tyres the PR figures and/or the carrying capability code on the sidewalls should also be noted. The tyres must not be below the specified carcass strength.
- To obtain the best possible handling characteristics, winter tyres must be fitted on all four wheels.
- Winter tyres are no longer fully effective when the tread has worn down to a depth of 4 mm.
- If winter tyres are specified in certain areas, this also applies to vehicles with four wheel drive.

❀ ***As winter tyres are normally noisier when driving and the fuel consumption with these tyres can be higher, one should put the normal tyres back on as soon as possible.***

Snow chains

Snow chains may be used on all the tyre sizes listed on pages 116 to 118. **The chains may only be fitted on the rear wheels.**

Only chains which do not stand clear more than 18 mm (tensioner 25 mm) should be used.

When driving over roads which are free of snow you should remove the chains. On such roads they are detrimental to vehicle handling, damage the tyres and wear out quickly.

In Germany the maximum permissible speed with snow chains is 50 km/h.

ARDUOUS OPERATING CONDITIONS

The vehicle construction and equipment is designed for normal operating conditions. This also applies to the frequency and the extent of the maintenance laid down in the Service Schedule.

If the vehicle is used under arduous operating conditions (e. g. continuous trailer towing, exceptionally high or low ambient temperatures, very dusty conditions, poor quality fuel, etc.) it may be necessary to carry out special technical preparations, such as using oil of the appropriate viscosity, installing special air cleaners, modifying the ignition timing etc. Furthermore the maintenance must also be matched to the operating conditions – see page 57 also.

Driving abroad

If the vehicle is to be taken abroad, the following must also be borne in mind:

■ If the vehicle has a catalytic converter, one must ensure that unleaded petrol will be available during the journey – see page 50. The automobile clubs offer information about the unleaded filling station network.

■ In many countries there is a large network of Volkswagen and/or LT workshops where your vehicle can be serviced. Despite this there are a few countries in which there is only a limited amount of Volkswagen service or even none at all.

■ In certain countries it is also possible that your vehicle model is not sold so that certain spare parts are not available for your vehicle or that the Volkswagen Dealership personnel is not familiar with the repair procedure should anything go wrong.

The Volkswagen Sales Centres in Germany or the Importer concerned will be only too pleased to give advice on the necessary technical preparation of the vehicle, on the maintenance required and on the repair possibilities.

■ When the vehicle is used in a country which drives on the opposite side of the road to the home country the wedge shaped areas on the headlight lenses must be masked – see page 94.

Long distance driving

Before starting off note the following points:

■ The roadworthiness and driving safety are particularly important when driving long distances – see page 43.

■ With a fully loaded vehicle and/or roof rack, the handling changes. The driving style must be adapted to the changed conditions – more information on loading is given on page 21.

The tyre pressures must be checked – see pages 116 to 118.

■ When a trailer is to be towed, there are many special points to note – see page 46.

■ If an oil change or an Inspection Service is probably going to become necessary during the trip, it is advisable to have this work done before going on the trip if possible.

DRIVING IN WINTER

In winter the following points should be noted:

- Winter weather is particularly hard on the battery and it should therefore be checked before the onset of cold weather, preferably by a Volkswagen Dealership.
- If the vehicle is not driven for several weeks when the temperatures are very low, the battery should be taken out – see page 73.
- On vehicles with a Diesel engine, winter Diesel must be used at temperatures below 0°C – see page 51.
- The water should be drained out of the Diesel fuel filter before the onset of winter. This operation is also included in the Lubrication Service.
- The anti-freeze in the cooling system should be checked before the cold season starts – see page 69.
- The engine oil viscosity must be correct for the ambient temperature – see page 60.
- Particularly in winter, frequent washing and waxing of the vehicle is the best way to protect it against damage from environmental influences.
- The windscreen washer system should always be filled with a window cleaning solution with anti-freeze additive in the winter.
- To remove snow and ice from the windows and mirrors, a plastic scraper should be used – see page 54.
- In winter road conditions winter tyres should be used – see page 79.
- When driving in mountainous districts it is advisable to take snow chains with you in the winter. On some such roads, snow chains are obligatory – see page 79.

ACCESSORIES, MODIFICATIONS AND RENEWAL OF PARTS

In order to ensure that the active and passive safety of your Volkswagen LT is retained, the vehicle as delivered by the factory must not modified without careful consideration.

If your LT is to be subsequently fitted with accessories, be modified technically, or later, when parts have to be renewed, the following points must be noted:

■ **Before** buying accessories and **before** making technical modifications a Volkswagen Dealership for Volkswagen Commercial vehicles should be consulted because the close cooperation with us makes the Volkswagen Organization fully competent in such matters.

Attention

In your own interests we recommend that only expressly approved Volkswagen accesories[1] and genuine Volkswagen parts are used on your LT. The reliability, safety and suitability of these accessories and these parts has been specially determined for the LT.

Despite continuous market observation we cannot assess or accept responsibility for other products even through in some cases a TÜV approval or an official permit has been issued.

■ Approved Volkswagen accessories[1] and Genuine Volkswagen Parts can be obtained from Volkswagen Dealerships for Volkswagen Commercial vehicles and they will of course carry out the fitting correctly.

■ If technical modifications are to be made, our "Body Guidelines" must be observed. This is to ensure that no damage occurs to the vehicle, the traffic and operating safety is retained and that the modifications are permissible. Volkswagen Dealerships for Volkswagen Commercial vehicles will also carry out this work correctly or will recommend a specialist workshop.

[1] Not available in all export markets.

MOBILE TELEPHONES AND TWO-WAY RADIOS

Mobile telephones or two-way radios must **not** be operated inside the vehicle without a separate external aerial.

When transmitting, these appliances radiate high frequency energy. This energy can, for physical reasons hardly pass through the sheet metal body and is reflected inside the vehicle body.

Notes

■ **Mobile telephones or two-way radios operated inside the vehicle without a separate external aerial can cause bodily harm.**

■ **The high frequency transmitting energy radiated inside the vehicle can interfere with the functioning of the vehicle electronics.**

For these reasons and in order to avoid restriction of the operating range of the mobile telephone or two-way radio a special external aerial must be used.

FIRST AID KIT AND WARNING TRIANGLE

First aid box and warning triangle can be stowed under the left single cab seat or in a tool box * behind left single cab seat on the LT 28–35.

Note:

The first aid box and the warning triangle are not part of the vehicle equipment!

TOOLS

The vehicle tools are located behind the left single seat in cab. They are either tied together with the jack or they are secured in a tool box *.

On the Double Cab they are under the rear seat, on the Van without partition they are in the load compartment at rear left.

The screwdriver has a reversible blade.

CHOCKS *

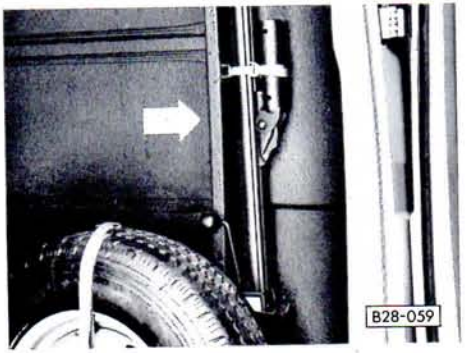
The chocks are inserted in a bracket in front of right rear wheel.
On the Van with partition the chock is behind the right single cab seat (see illustration).
On Van without partition the chocks are stowed in the load compartment on rear left.

VEHICLE JACK

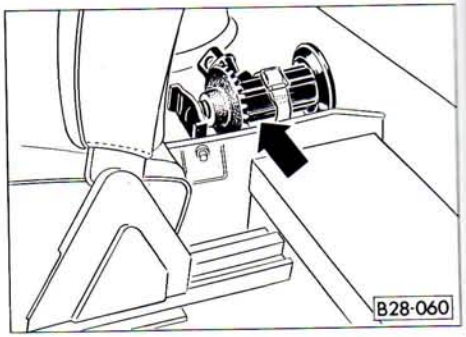
Attention

- **The jack supplied by the factory is only designed to lift your particular vehicle model. On no account should heavier vehicles or other loads be lifted.**
- **Never start up the engine when the vehicle is lifted – danger of accident.**
- **If work has to be done underneath, the vehicle should be supported on suitable stands.**

The jack is either a special socket type jack, or a normal screw type jack.



The **socket type jack** is stowed behind the left single seat in the cab on the rear panel or on the Van and Combi in the load/passenger compartment at rear (left illustration).



The **normal screw type jack** is secured near the battery box (centre illustration) or on the Double Cab it is under the rear seat.

On the Van and Combi it is in the load/passenger compartment at the rear.

SPARE WHEEL

Depending on vehicle model the spare wheel is either stowed at side or rear under the body or secured in the load compartment.

Spare wheel under body floor

■ Depending on the position of the vehicle it may be necessary to lift it slightly with the jack to remove the spare wheel.

■ Before removing the spare wheel the hook should be moved several times to check that it moves easily. After being moved it should drop back to the original position on its own.

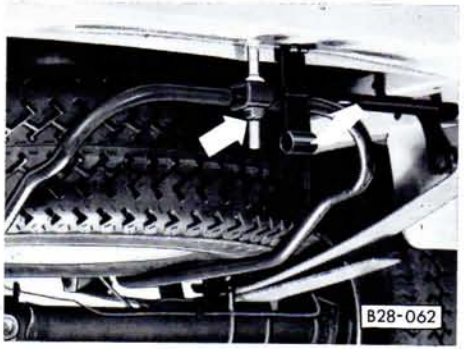
Spare wheel at side

■ Loosen retaining nut (on Van – 2 screws) until the spare wheel can be supported on the pivoting hook.

■ Remove nut or screws and retaining plate.

■ Lift spare wheel with one hand slightly and with the other hand press the hook inwards, swing spare wheel down and take it out.

■ The wheel taken off is placed in the holder with the dished side upwards, then swung up, supported on the hook and secured with the retaining nut or screws and plate.

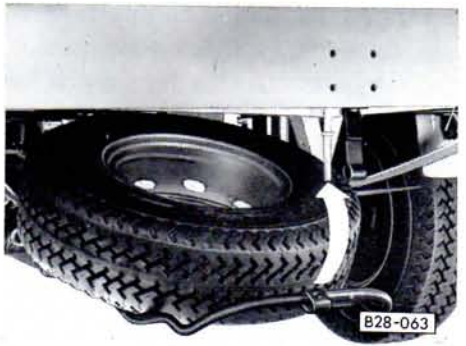


Spare wheel at rear (illustration)

■ Loosen retaining nut until the tubular frame holder is resting on the metal hook.

■ Take nut off completely.

■ With one hand lift the spare wheel support slightly and with the other hand pull the hook to the rear. Then swing holder with wheel down and take wheel out.



■ The wheel taken off is placed in the holder with the dished side down, swung up, supported on the hook and then secured with the retaining nut.

WHEEL CHANGING

Spare wheel in load compartment

The wheel is secured with a strap.
For safety reasons, the defective wheel must be secured inside the vehicle as follows:

14 inch wheel

Stand the wheel in position with the convex side towards the outer body panel, and pass the securing strap through the opening in the centre of the wheel.

16 inch wheel *

Stand the wheel in position with the convex side facing into the vehicle, and pass the securing strap through one of the outer ventilation holes.

Attention

■ If the vehicle is to be subsequently fitted with wheels or tyres which differ from those fitted by the factory, it is essential to read the remarks in the centre and righthand columns on page 78.

■ To ensure that the wheel is secured properly the contact surfaces for the hub or drum and for the wheel nuts/bolts must not be dirty or rusty.

■ Park the vehicle as far as possible away from the traffic flow. If necessary switch on emergency warning lights and place the warning triangle in position – note legal requirements.

■ All vehicles occupants should leave the vehicle and move to a safe area (e.g. behind the barrier).

■ Apply handbrake firmly. If the vehicle is on a slope, place a chock or stone or some similar object behind one of the wheels on the opposite side.

■ Push the wheel spanner as far as possible onto the wheel bolt/nut and turn the spanner anti-clockwise. When doing this, grip the spanner as far as possible towards the lever end.

If the bolts cannot be slackened off, one can in an emergency, carefully push the spanner down by placing a foot on the end of the lever. One should ensure that one is standing properly and that one has a good grip on the vehicle.

Slacken off the wheel bolts/nut about one full turn.

Vehicles with socket type jack

■ Insert jack into the appropriate lifting socket (Fig.) as far as possible. If necessary, clean the socket beforehand. Place jack vertically.

If ground is soft, place a large strong piece of packing under the jack base plate.

■ Lift vehicle until the wheel is clear of the ground.

■ Remove bolts, place them on a clean surface (hub cap, cloth, paper) next to the jack and take the wheel off.

■ Fit spare wheel and tighten all bolts lightly first. The bolts must be clean and easy to screw in – do not, under any circumstances, grease or oil the bolts.

■ Lower vehicle to ground and fully tighten the bolts in a diagonal sequence.

■ Install trim cap.

Notes

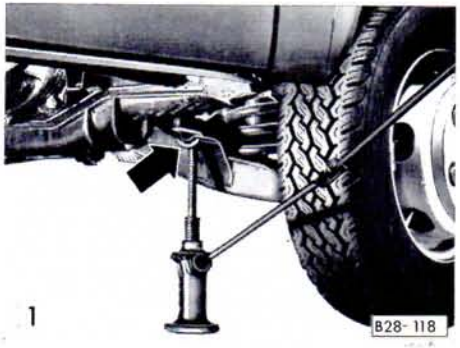
Pay attention to the following after changing a wheel:

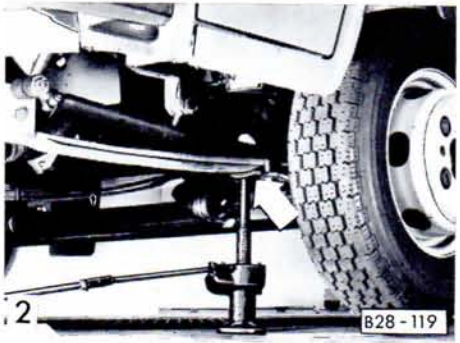
– Check the tyre pressure immediately the spare wheel which has been fitted.

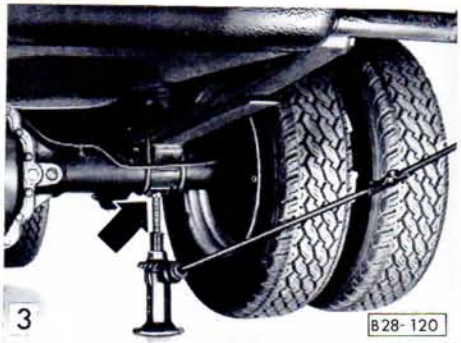
– Have the tightening torque of the wheel bolts checked with a torque wrench as soon as possible. The torque for the factory fitted wheels is 200 Nm.

If it is noticed when changing the wheel that wheel bolts are corroded and hard to screw in, they must be renewed before checking the tightening torque.

Until these checks have been carried out one should, for safety reasons, only drive at a moderate speed.







Vehicles with normal screw type jack

■ Place jack in position:

front

On vehicles with independent suspension – Under the bracket at the rear of the lower wishbone (1).

On vehicles with rigid axle – Under the leaf spring in front of front axle beam (2).

rear

Under the axle tube between the spring U bolts (3).

■ If ground is soft, place a large strong piece of packing under the jack base plate.

■ Lift vehicle until the wheel is clear of the ground.

■ Take wheel nuts off, place them on a clean surface (cloth, paper) near the jack and remove wheel.

■ Install spare wheel and tighten wheel nuts with spanner **by hand**. Secure the wheel trims at front as well. The nuts must be clean and easy to screw on – do not under any circumstances oil or grease them.

■ Lower vehicle and fully tighten nuts in diagonal sequence.

Notes

After changing a wheel, note the following:

– Check the tyre pressure immediately in the wheel which has been fitted.
– Have the tightening torque of the nuts checked with a torque wrench as soon as possible. The torque for the factory fitted wheels is:
with single wheels ..... 200 Nm
with twin wheels ..... 320 Nm

If it is noticed when changing the wheel that the nuts are corroded and hard to screw on, they must be renewed before checking the torque.

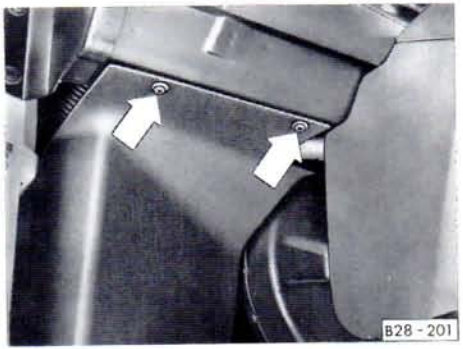
Until these checks have been carried out one should, for safety reasons, only drive at a moderate speed.

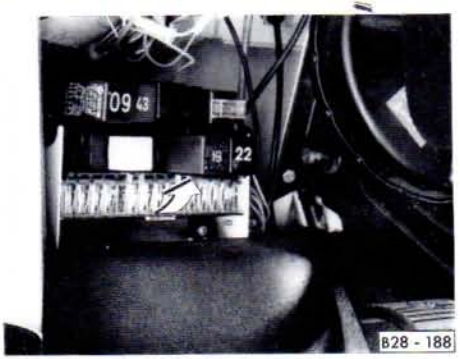
FUSES

The individual current circuits are provided with fuses.

The fuse box is under the dash on the left.

It is advisable to always have a few spare fuses in the vehicle. These can be obtained from any Volkswagen Dealership.





Notes:

■ If the newly inserted fuse blows again after a short time, the electrical system must be checked at a Volkswagen Dealership to find the cause of the short circuit and rectify it.

■ **On no account should fuses be patched up because this can cause serious damage elsewhere in the electrical system.**

■ Some of the components listed are only found on certain models or are optional extras.

Changing a fuse

■ Switch off the component concerned.

■ Remove fuse box cover * (left Fig.), after unscrewing the two Phillips srews.

■ Swing fuse cover upwards (right Fig.).

■ With the list of fuses, find out which is the fuse for the component that has stopped working.

■ Take the appropriate fuse out.

■ Replace the defective fuse – can be recognized by the break in the metal strip – with a new fuse of the same capacity.

■ Swing fuse cover down again and fit fuse box cover *. Secure cover with the two screws.

For fuse layout, see next page

Fuse layout

as numbered on the plastic lid.

No.	Component	Amps.
1	Low beam left, Headlight range control, left	8
2	Low beam right, Headlight range control, right	8
3	High beam left, high beam warning light	8
4	High beam right	8
5	Heated rear window	16
6	Emergency light system, radio, clock, cigarette lighter	8
7	Interior lights, brake lights	8
8	Turn signals	8
9	Horn, reversing lights	8
10	Blower, lighting switch light	16
11	Windscreen wiper and washer	8
12	Number plate light (dropside truck), fog lights and rear fog light	8
13	Tail and side lights right, tachograph	8
14	Tail and side lights left, number plate light (Van)	8
15	Electric fuel pump (petrol engines), Carburetor (automatic choke, bypass air valve) with manifold preheating, Lambda probe	8

Additional fuses

in separate holders

Component	Amps.
Carburetor fan	10
Auxiliary heater	16
Overheating protection fuse for auxiliary heater	8
Seat heating	16
Rear fog lights	8
Instrument lighting	10
Glow plug system[1]	50

[1] The two 50 Amp fusible links are in a holder on left in engine compartment. These fuses should only be changed by a Volkswagen Dealership.

Fuse colour codes

Old standard

White = 8 Amperes
Red = 16 Amperes

New standard

Red = 10 Amperes

CHANGING BULBS

Before starting to replace a bulb, switch off the light concerned.

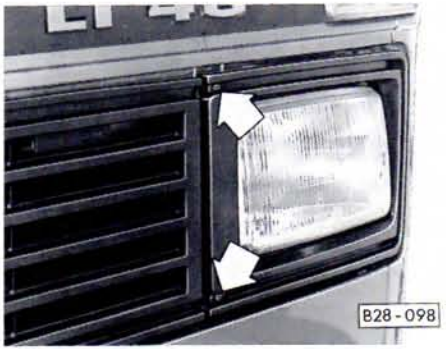
Do not touch the glass part of the new bulb with bare fingers because the finger marks left on the glass evaporate when the bulb gets hot, the vapour settles on the reflector and dims it.

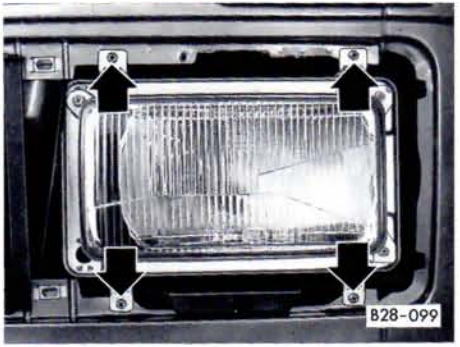
Always use the same type of bulb. The designation is marked on the base of the bulb.

It is advisable to always carry a box of spare bulbs in the vehicle. This can be obtained from Volkswagen Dealerships.

It should contain at least the following bulbs which are essential for traffic safety:

12 V 60/55 W	Main headlight (H4)
12 4 W	Side and number plate lights
12 V 10 W	Tail light (Dropside Truck)
12 V 21 W	Brake and turn signal lights (Dropside Truck)
12 V 21/5 W	Brake/tail light (Van)
12 V 10 W	Outline light on cab roof



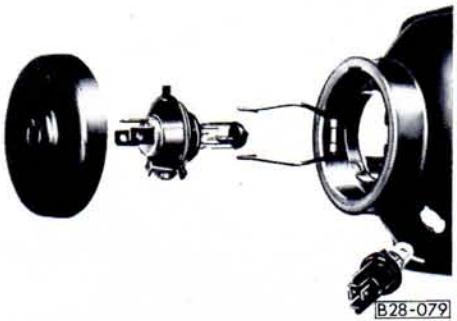


Removing headlight

To change a main headlight bulb or side light bulb the headlight must be taken out:

Turn clips (arrows) in trim 90° – and take trim off.

Then remove four screws (arrows) and take headlight out.



Main headlight bulb

- Pull connector off.
- Take cap off.
- Squeeze spring clip of the bulb holder together and fold it clear.
- Take bulb out and insert new bulb so that the locating lug on the bulb plate engages the recess in the reflector. The centre of the three terminals on bulb base is then at the top.
- Fold spring clip over bulb base. Squeeze clip together and engage it in the retaining lugs.
- Press cap back on.
- Attach connector.
- Install headlight and trim again.
- Have headlight beam alignment checked.

Side light bulb

The side light bulbs are located in the headlight reflectors.

- Turn bulb holder fully to the left and take it out of reflector.
- Press defective bulb into holder, turn it to left and take it out.
- Insert new bulb.
- Insert bulb holder in reflector and turn holder fully to the right.

Fog lights (H3) *

- Remove screw on underside of fog light.
- Take insert out.
- Pull wire for bulb out of cable connector.
- Unhook spring clip and fold it away.
- Take bulb out. Insert new bulb so that locating lug on reflector engages recess on bulb plate.
- Swing clip over bulb plate. Squeeze ends together and engage in retaining lugs.
- Insert bulb wire in cable connector.
- Install insert – upper side first – in the housing and secure with screw.
- Have setting of light checked.

Rear lights

- Remove screws and take off lens.
- Press bulb in, turn it to left and take it out.
- Fit new bulb.
- Install lens.
- Tighten screws uniformly but do not overtighten. Ensure that seal is located properly.

Front turn signals

- Take lens off.
- Press bulb in, turn it to left and take it out.
- Fit new bulb.
- Do not overtighten lens and ensure that seal is located properly.

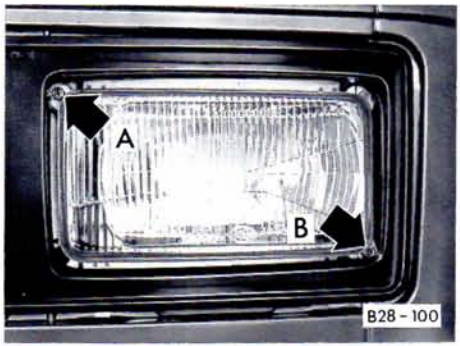
Number plate light

- Take housing off.
- Press bulb in, turn it to left and take out.
- Press new bulb in and turn it to the right until the lugs on the bulb base engage in the recesses in bulb holder.
- Attach housing again.

Interior light

- Insert screwdriver between light and headlining at opposite end to switch.
- Take bulb out.
- Install bulb.
- Install light at switch end first and then press in until clip engages.

ADJUSTING HEADLIGHTS



The illustration shows the adjusting screws for the left headlight. The screws for the right headlight are symmetrically opposite.

A – Lateral setting

B – Vertical setting

Turning screw to right lowers the headlight beam.

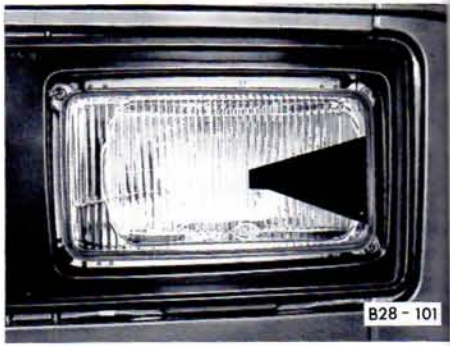
Correct headlight adjustment is very important for vehicle and traffic safety. The adjustment should therefore only be done with a special appliance.

When carrying out the adjustment, attention must be paid to the legal requirements.

On vehicles which have headlight range control * the knurled disc on the instrument panel must be in the basic position (–).

The headlights are adjusted from the front through the trim with a Phillips screwdriver.

MASKING HEADLIGHTS



When the vehicle is used in a countr which drives on the opposite side of the road to the home country, the asymmetric headlights will dazzle oncoming traffic.

To prevent this, the wedge-shaped secto on the headlight lenses must be covered up with an opaque adhesive strip.

The illustration shows the strip installed fo the change from right hand to left hand traffic.

NSTALLING A RADIO

hen service installing a radio or replacing set installed by the factory the following nts should be noted:

- The connection * already in the vehicle for Genuine Volkswagen radios[1] from odel year 1988.

he supply plug has the following cable colrs and connections:

ed/White – Permanent positive (+)
rown – Negative (–) (vehicle earth)
rey/Blue – Instrument panel lighting
rown/Red[1] – Control wire for "Ignition key" switching on/off of radio.[2] On no account use this connection for operating voltage supply.

- Radios with other connections must be onnected with an adapter wire which can lso be obtained from a Volkswagen Dealerhip.

Not available in all exports markets.
Only with factory fitted radio.

Attention
On no account cut wires off and leave them without insulation.
If necessary, use a proper adapter. Otherwise the wiring can be overloaded or short circuits can occur – Fire Danger!

In addition important electronic components can be destroyed or their function impaired.

- It is advisable therefore to have the installation of the radio system done by a Volkswagen Dealership. They are fully informed about the technical features of the vehicle, have the Genuine radios[1], the necessary fitting parts from the Genuine Volkswagen Accessory Programme[1] and work in accordance with the guidelines developed by the factory.

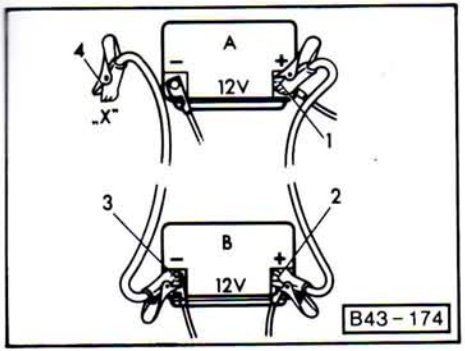
- The radios from the Genuine Volkswagen Accessory Programme[1] are similar to those used in the factory and ensure trouble-free installation. These sets also contain advanced technical details and have a well-planned easy-to-operate design. In Germany there is also an Exchange Service for these radios so that even after years of use a set requiring repair can be exchanged cheaply for a completely reconditioned, good-as-new set by a Volkswagen Dealership.

- Loudspeakers, fitting parts, aerials and suppression kits should also be taken from the Genuine Volkswagen Accessory Programme[1]. These parts have all been specially developed for each vehicle model.

- When installing the aerial it is essential to ensure that the hole provided by the factory where the aerial enters the body is sealed very carefully. In addition the aerial cable, the connecting wires and the loudspeaker wires must be routed so that they cannot chafe, rattle or become tangled up with moving parts (e. g. pedals, steering, heating controls etc.). Otherwise the operation of the controls may be affected or vehicle safety impaired.

In cases of doubt, exact information can be obtained from Volkswagen Dealerships.

EMERGENCY STARTING



A – Flat battery
B – Boosting battery

The battery is behind the left hand seat in cab.

If the engine will not start because the battery is flat, **jumper cables** can be connected to the battery of another vehicle to start the engine. The following points should be noted:

■ Both batteries must be 12 Volt types. The capacity (Ah) of the boosting battery must not be a lot lower than that of the flat one.

■ The jumper cables must be heavy enough to carry the load. Note cable manufacturer's data.

■ Only use jumper cables with insulated clips.

■ A flat battery can freeze at – 10° C and if a battery is frozen it must be thawed out before connecting a jumper cable otherwise it could explode.

■ There must be no contact between the vehicles otherwise current can flow as soon as the plus terminals are connected.

■ The flat battery must be properly connected to the electrical system.

■ The engine of the boosting vehicle must be running.

■ Connect jumper cables as follows:

1. One end of (+)cable (usually red) to the (+)terminal of flat battery.
2. Other end of red cable to (+)terminal of boosting battery.
3. One end of (–)cable (usually black) to (–)terminal of boosting battery.
4. Other end of black cable (X) to the bolt securing earth wire to body.

Do not connect the cable to the battery minus terminal. The sparks could ignite the explosive gas flowing out of the battery.

Attention

■ The non-insulated parts of the cable clips must not touch one another on any account. Furthermore the jumper cable attached to the battery positive terminal must not come into contact with electrically conductive vehicle parts – Short circuit danger!

■ Do not stand with your face over the battery – danger of acid burns.

■ Keep ignition sources (naked flames, burning cigarettes etc.) well away from the battery – Explosion danger!

■ Start the engine as described in the "Starting and Stopping Engine" section.

■ If the engine does not start at once, stop using the starter after 10 seconds, wait about half a minute and then try again.

■ When engine is running, disconnect cables in reverse sequence.

TOW STARTING/TOWING

General remarks

■ Towing eyes or towing couplings * are provided at front and rear.

Towropes or bars should be attached at these points only.

■ The towrope should be slightly elastic to reduce the risk of damage to both vehicles. It is advisible to use synthetic fibre ropes, or ropes of similar elastic material. **It is however safer to use a tow bar.**

Avoid excessive towing effort and do not jerk. During towing operations on other than surfaced roads there is always the danger that the attachment points will be overloaded and damaged.

■ **Before trying to start engine by towing, the battery from another vehicle should be used for starting if possible** – see previous page.

If the vehicle has to be tow started or towed at any time, the following must be noted:

■ Check whether there are any local traffic regulations concerning the towing of vehicles. In Germany for instance vehicles over a GVW of 4 tons may only be towed with a bar.

■ Both drivers must be familiar with towing procedures. Inexperienced drivers should not attempt to tow start or tow.

■ When using a towrope the driver of the towing vehicle must engage the clutch very gently when moving off and changing gear.

■ The driver of the vehicle being towed must ensure that the towrope is always taut.

■ The emergency lights must be switched on on both vehicles – unless local regulations differ.

■ Turn ignition key to "Drive" position so that the steering wheel is free and the turn signals, horn, and, if necessary, the windscreen wiper and washer can be used.

■ As the brake servo only works when the engine is running, considerably more pressure is required on the brake pedal when the engine is not running.

■ On vehicles with power assisted steering, more force is required to steer when the engine is not running.

■ If a vehicle has to be towed more than 30 km with engine not running or with no oil in the gearbox, either the rear axle must be lifted or the propshaft detached from rear axle flange and tied up securely to the chassis frame.

■ If the vehicle cannot be driven at any time there may be a defect in the power train. It is no use removing the propshaft because the defect may be in the rear axle. The vehicle must in any case be towed with suspended rear axle.

Tow starting

The following points must be noted when tow starting:

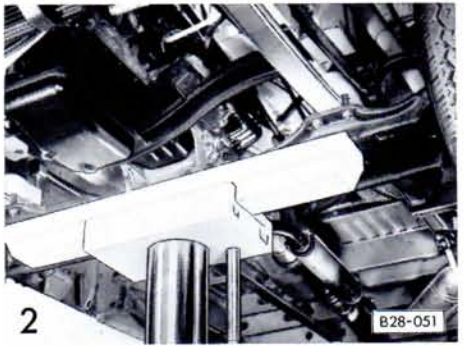
■ **Before** moving off, engage 2nd or 3rd gear.

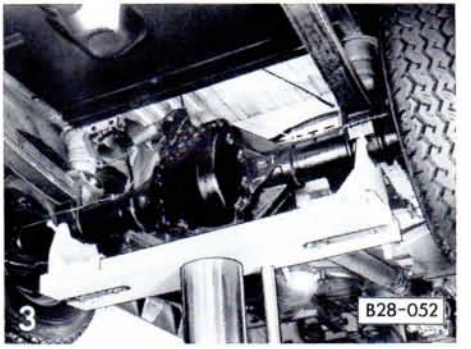
■ Switch ignition on

■ As soon as engine starts, depress clutch and move gear lever into neutral to avoid running into the towing vehicle.

■ **On vehicles with a catalytic converter the engine must not be started when the catalytic converter is at operating temperature by towing the vehicle a long distance. Unburnt petrol can otherwise get into the catalytic converter and be burned there. This can cause overheating of the catalytic converter.**

LIFTING THE VEHICLE





Two pillar hoist

(e. g. V.A.G 1372)

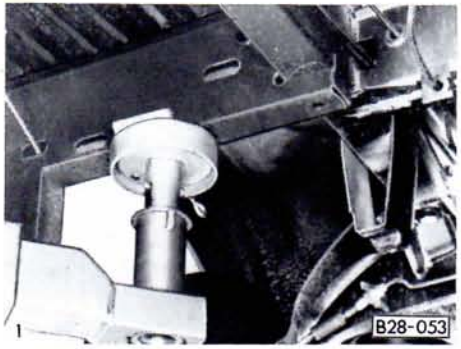
The lifting capacity of this hoist is 6000 kg. All LT vehicles can therefore be lifted with this hoist even when loaded but the lift must be placed at the lifting points shown here:

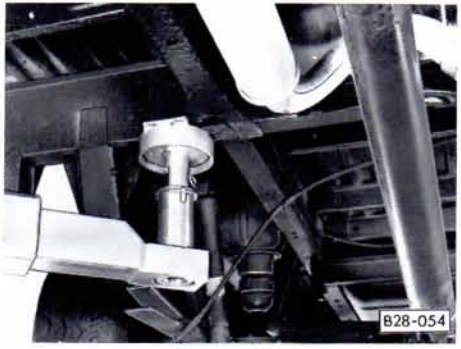
Front:

Under the transverse arm axle (Fig. 1) or under the rigid axle (Fig. 2)

Rear:

Under the rear axle (Fig. 3)





Two pillar hoist
(e. g. VW 1299)

This hoist has a maximum lifting capacity of 4000 kg.

The following vehicles can therefore be lifted:

Unladen – all vehicles except 3650 mm wheelbase
Loaded – LT 28 to 40 except 3650 mm wheelbase

Before driving on to the lift, ensure that there is sufficient clearance between low parts of vehicle and lift.

The vehicles may only be lifted at points shown here:

Front:
Under the cross member (Fig. 1)

Rear:
With single tyres under the cross member inside at gusset plate (Fig. 2)

With twin tyres, under the outer cross member (Fig. 3)

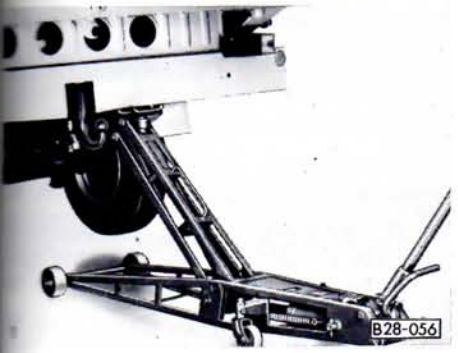
Notes

Vehicles with an auxiliary heater must be lifted carefully to avoid damaging the heater.

On Combi and Van (2500 mm wheelbase) with spare wheel mounting outside the vehicle, the spare wheel and mounting must be removed before lifting.

Lift the LT 40 Van carefully at the rear left cross member in order to avoid damaging the exhaust pipe.

Vehicles with mud flaps at front should be lifted so that the mud flaps are not damaged.



Trolley jack

Notes

- **Ensure that lifting capacity of jack is adequate.**
- **On no account should the vehicle be lifted under the engine sump or the gearbox as this can cause serious damage.**

Attention

If work has to be done underneath the vehicle, the vehicle should be supported on suitable stands.

- **With the vehicle lifted, never start the engine and engage the gear as long as even one driving wheel is in contact with the ground – danger of accident.**

2

Lifting at front

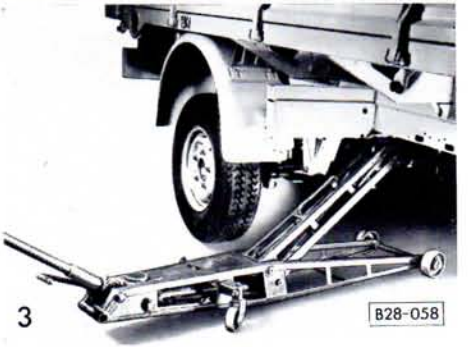
LT 28 to 35 (only unladen) under the cross member behind the bumper. LT 40 to 55 under the rigid axle.

Lifting at rear

LT 28 to 35 (only unladen) under the rear cross member (Fig. 1)
When loaded, vehicle must only be lifted with packing plates on the jack.
LT 40 to 55 (only unladen) under the differential, ensure that cover and gasket are not damaged.

Lifting from side at front

LT 28 to 35 under the cross member (Fig. 2).
Vehicles with an auxiliary heater must be lifted carefully to avoid damaging the heater.
LT 40 to 55 must not be lifted under the frame.



3

Lifting from side at rear

Under the side member:
LT 28 to 35 (only unladen)
Under the rear cross member:
LT 28 and 31 under the gusset plate of side member/cross member at rear
LT 35 (only unladen) on rear cross member (Fig. 3)
LT 40 to 55 must not be lifted under the frame.

Vehicle jack

See pages 87 and 88.

ENGINE

Generally valid:

- Four stroke engine, installed longitudinally above front axle in cab, inclined 27.5°
- 6 cylinder in line
- Cast iron cylinder block
- 7 bearing crankshaft
- Sheet metal sump
- Light alloy cylinder head
- Valves operated by toothed belt and overhead camshaft with bucket tappets
- Liquid cooling system filled with coolant to last life of vehicle
- Radiator with separate expansion tank.
- Radiator fan on crankshaft, with viscous drive *
- Optical and acoustic oil pressure monitor
- Low maintenance battery with high starting capacity
- Long life, low maintenance vee belts
- Dry air cleaner with filter cartridge, or cyclone filter * for dusty countries

Additionally valid for:

- **Carburetor engine** (66 kW):
  - Long life spark plugs
  - Carburetor cooling fan
  - Down-draft twin barrel carburetor with automatic choke
  - Thermostatically controlled intake air preheating
  - Electrical mixture preheating
- **Diesel engines** (51, 55/57[1], 68, 75/80[1] kW):
  - Maintenance-free valve gear with hydraulic tappets
  - Distributor type injection pump with cold starting aid
  - Filter preheating
  - Self-bleeding fuel system
  - 68 and 75/80[1] kW engines with exhaust turbocharger
- **Fuel injection engine** (69 kW):
  - Maintenance-free valve gear with hydraulic tappets
  - Long life spark plugs
  - Thermostatically controlled intake air preheating
  - Fully electronic engine management (combined control of injection and ignition systems)

Ignition system with

- stored characteristics
- knock control (brief retardation of firing point when combustion knocking occurs)
- Also with automatic adaptation of ignition timing to the anti-knock properties of the petrol
- Emission control sytem * with Lambda probe (see next page)

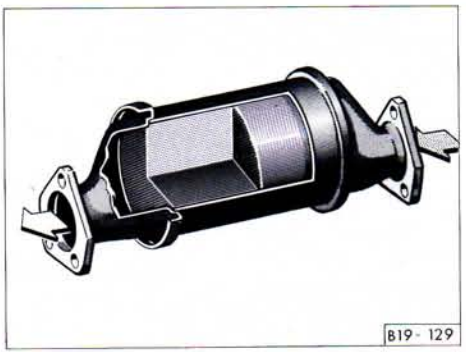
[1] With viscous fan *

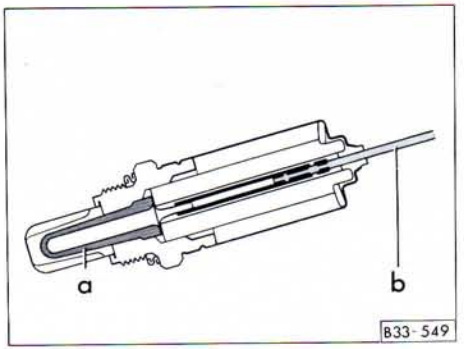
EMISSION CONTROL SYSTEM *

The exhaust emission control system effectively reduces the amount of pollutants in the exhaust gas.

The main parts of the emission control system are

- A mixture formation system which guarantees very exact composition of the air/petrol mixture at all engine speeds
- the catalytic converter
- the Lambda probe[1)]





The catalytic converter is installed in the exhaust pipe. It consists of a steel-cased ceramic body containing a multitude of longitudinal passages which are vapour coated with a thin layer of platinum or rhodium.

The exhaust gas flows through the catalytic converter and reacts with an afterburning process when it contacts the precious metal coating.

In this process three pollutants (three-way catalytic converter) are converted as follows.

- Carbon monoxide to carbon dioxide
- Hydrocarbons to water
- Nitrogen oxide to nitrogen (four fifths of the air we breathe is nitrogen).

A stipulation for the proper functioning of the catalytic converter however, is that the exhaust gas has a certain specific composition and minimum temperature when it enters the catalytic converter. To obtain this composition, exact regulation of the fuel/air mixture is required. A very exact regulation is obtained with the Lambda probe.

a – Sensor with precious metal coating
b – Connecting wire

The Lambda probe is fitted in the exhaust pipe where it measures the exhaust gas composition continuously. The information signal is fed to an electronic control unit which in turn regulates the mixture formation system so that the mixture is kept constantly correct.

The exhaust emission control system technology is so well developed that no additional maintenance whatsoever is required. However, it is absolutely imperative that the tank is only filled up with **unleaded fuel.**

Further details on next page.

1) Lambda = Air/petrol relationship

Attention

Due to the high temperatures which can occur in the catalytic converter in very unfavourable conditions, the vehicle should not be parked so that the catalytic converter can come into contact with inflammable materials.

If whilst driving, the engine misfires, loses power and runs unevenly, this could be due a fault in the ignition system. In a case like this, unburnt fuel can enter the exhaust system and then escape to atmosphere. Furthermore, the catalytic converter could become damaged due to overheating. The vehicle speed must be reduced immediately, and the defect should be eliminated at the nearest Volkswagen Dealership.

Note

Even when the exhaust emission control system is working properly there can, under certain engine operating conditions, be a sulphur-type exhaust smell. This depends upon the sulphur content in the fuel being used.
Quite often this can be remedied by selecting another brand of fuel or, filling up with unleaded premium petrol.

ACTIVATED CHARCOAL FILTER *

Vehicles with a regulated catalytic converter, in Germany and many export countries, have a fuel system which includes an activated charcoal filter (petrol vapour accumulator).

The activated charcoal filter prevents the fuel vapour escaping into the atmosphere.

These vapours pass into a container filled with activated charcoal and, when the engine is stationary they are accumulated in the activated charcoal. When the engine is running, a valve opens, the container is ventilated automatically and the fuel vapour is fed into the engine for combustion.

The system is maintenance-free.

POWER TRANSFER

Gearbox

- Mechanically operated dry clutch
- Fully synchronized 4 or 5 speed gearbox
- Propshaft to final drive in rear axle
- Rear wheel drive

Power take off

- Clutch controlled power take off from countershaft of gearbox via a sliding idler gear.
- Mechanical control.

STEERING, AXLE

Steering

- Worm and roller steering, with servo steering * ball and nut steering.

Front axle

- Independent suspension with double wishbones and coil springs on LT 28 to 35
- Rigid axle with leaf springs on LT 40 – 55
- Telescopic dampers
- Anti-roll bar *

Rear axle

- Rigid axle with leaf springs with auxiliary plastic buffers on LT 35.
- Radius rod on LT 28 and 31
- Telescopic dampers
- Anti-roll bar * on LT 35 – 55
- Brake pressure regulator, load sensitive

BRAKES, BODY

Brakes

- Hydraulic dual circuit brake system
- Disc brakes at front
- Self-adjusting drum brakes at rear
- Load sensitive brake pressure regulator for rear axle
- Brake servo
- Mechanical handbrake effective on rear wheels

Body

- Integral body
- Floor plates reinforced by side members
- Rigid cab construction
- Extended deformation element and front cross member

General notes

Where not otherwise indicated or listed separately, all the following technical data is for standard vehicles in Germany.

For special vehicles and vehicles for other countries these figures may be different.

Please note that the details in the official vehicle documents can be taken as the correct figures.

ENGINE DATA

	Output[1] kW at rpm	Maximum torque Nm at rpm	Number of cylinders	Capacity cm^3	Stroke mm	Bore mm	Compression	Fuel[2]
Fuel injection engine with regulated catalytic converter	69/4200	170/2200	6	2383	86.4	76.5	8.1	91 RON regular unleaded
Carburetor engine without catalyst	66/4500	162/2200	6	2383	86.4	76.5	8.1	91 RON regular unleaded/leaded
Diesel engines	51/3400	145/1600-1800	6	2383	86.4	76.5	23.0	Diesel
	55/4300 57/4300[3]	140/2200 144/2200[3]	6	2383	86.4	76.5	23.0	Diesel
	68/3500	195/1800-3100	6	2383	86.4	76.5	23.0	Diesel
	75/4300 80/4300[3]	195/2500-2600 200/2500-2600[3]	6	2383	86.4	76.5	23.0	Diesel

[1] According to ECE or DIN regulations. Due to different methods of measuring, slight deviations are possible.
To convert kW to bhp: Multiply kW by 1.36.

[2] Further details – see pages 50 and 51.
[3] With viscous fan *

PERFORMANCE

Depending on vehicle equipment, body type and vehicle condition the figures obtained in actual practice can differ from the figures which have been determined.

All figures were measured with the "highest" final drive ratio. On vehicles with other ratio axles the figures will vary accordingly.

Petrol engines

Top speed (km/h)[1] / Climbing ability (%)[2]	66 kW Carburetor			69 kW Fuel injection	
	km/h	% 4 speed	% 5 speed	km/h	% 5 speed
LT 28					
Van/Combi	125	37	39	130	41
High roofed Van/Combi	123	37	42	128	41
all Dropside Truck models[3]	117	37	42	122	41
LT 31					
Van/Combi	125	32	33	130	34
High roofed Van/Combi	123	32	36	128	34
all Dropside Truck models[3]	117	32	34	122	34
LT 35 E[4]					
Van/Combi	124	28	32	129	31
High roofed Van/Combi	122	28	34	127	31
all Dropside Truck models[3]	116	28	34	121	31
LT 40a[5]					
Van	124	29	31	129	30
High roofed Van	122	29	34	127	30
all Dropside Truck models[3]	116	29	35	121	30

[1] In Germany vehicles with a permissible total weight of more than 2.8 tons have a speed limit of 80 km/h.

[2] With full load on good roads, climbing non-stop in 1st gear.

[3] Without canopy

[4] E = Rear axle with single tyres. For the LT 35 with twin tyres slightly different performance figures are produced.

[5] a = derated

Top speed (km/h)[1] / Climbing ability (%)[2]	66 kW Carburetor			69 kW Fuel injection	
	km/h	% 4 speed	% 5 speed	km/h	% 5 speed
LT 40					
Van	120	–	31	–	–
High roofed Van	118	–	34	–	–
all Dropside Truck models[3]	112	–	35	–	–
LT 45					
Van	120	–	30	–	–
High roofed Van	118	–	30	–	–
all Dropside Truck models[3]	112	–	29	–	–
LT 50					
all models	112	–	27	–	–
LT 55					
all Dropside Truck models[3]	–	–	–	–	–

[1] In Germany vehicles with a permissible total weight of more than 2.8 tons have a speed limit of 80 km/h.

[2] With full load on good roads, climbing non-stop in 1st gear

[3] Without canopy

Diesel engines

Top speed (km/h)[1] / Climbing ability (%)[2]	51 kW Diesel		55/57[3] kW Diesel		68 kW Turbo Diesel		75/80[3] kW Turbo Diesel	
	km/h	% 5 speed	km/h	% 5 speed	km/h	% 5 speed	km/h	% 5 speed
LT 28								
Van/Combi	118	33	120	35	129	47	135	46
High roofed Van/Combi	113	33	115	35	127	47	127	46
all Dropside Truck models[4]	108	33	110	35	120	47	125	46
LT 31								
Van/Combi	118	28	120	30	129	39	135	39
High roofed Van/Combi	113	28	115	30	125	39	127	39
all Dropside Truck models[4]	108	28	110	29	120	39	125	38
LT 35 E[5]								
Van/Combi	117	24	117	32	128	34	133	37
High roofed Van/Combi	112	24	113	32	124	34	127	37
all Dropside Truck models[4]	107	24	107	32	119	33	122	36
LT 40a[6]								
Van	117	24	117	28	128	34	133	37
High roofed Van	112	24	113	28	124	34	127	37
all Dropside Truck models[4]	107	24	107	27	119	34	122	35

[1] In Germany vehicles with a permissible total weight of more than 2.8 tons have a speed limit of 80 km/h.

[2] With full load on good roads, climbing non-stop in 1st gear

[3] With viscous fan *. On these engines (only offered on the LT 28–35 in a few export countries) slightly different performance figures are produced.

[4] Without canopy

[5] E = Rear axle with single tyres. For the LT 35 with twin tyres slightly different performance figures are produced.

[6] a = derated

Top speed (km/h)[1] Climbing ability (%)[2]	55/57[3] kW Diesel engine		75/80[3] kW Turbo Diesel engine	
	km/h	% 5 speed	km/h	% 5 speed
LT 40				
Van	115	28	122	37
High roofed Van	110	28	122	37
all Dropside Truck models[4]	105	27	115	35
LT 45				
Van	115	25	122	32
High roofed Van	110	25	122	32
all Dropside Truck models[4]	105	23	115	30
LT 50				
all Dropside Truck models[4]	105	24	115	30
LT 55				
all Dropside Truck models[4]	90	25	115	30

[1] In Germany vehicles with a permissible total weight of more than 2.8 tons have a speed limit of 80 km/h.

[2] With full load on good roads, climbing non-stop in 1st gear

[3] With viscous fan*. On these engines slightly different performance figures are produced

[4] Without canopy

FUEL CONSUMPTION

Passenger models

The consumption figures were determined in accordance with a recommendation from the EEC. The tests are carried out in three different conditions:

- The measurements for **90 km/h (56 mph)** and
- **120 km/h**[1] **(75 mph)** are carried out at a constant test speed.
- For the **urban** measurement, normal town traffic driving is simulated.

The figures behind the stroke (UTAC figures) were determined by a slightly different method of measuring.

Depending on driving style, road and traffic conditions, environmental influences, body type, vehicle equipment and condition, the figures obtained in actual practice can differ from these figures.

All figures were measured with the final drive ratios mentioned below. On vehicles with other ratio axles the figures will vary accordingly.

To get mpg. divide 282.5 by the DIN or UTAC figure.

Petrol engines

Figures in l/100 km	66 kW Carburetor engine						69 kW Fuel injection engine		
	4 speed			5 speed			5 speed		
	90 km/h	120 km/h	Urban	90 km/h	120 km/h	Urban	90 km/h	120 km/h	Urban
LT 28									
Combi	13.1/12.9[3]	–/–	16.8/18.9[3]	11.2/12.2[4]	–/–	13.9/14.4[4]	13.3/[5]	–/–	19.1/[5]
High roofed Combi	13.6/13.9[3]	–/–	16.8/18.9[3]	11.6/13.1[4]	–/–	13.9/14.4[4]	13.3/[5]	–/–	19.1/[5]
LT 31[2]									
Combi	[2]/13.1[3]	–/–	[2]/18.9[3]	[2]/12.0[4]	–/–	[2]/14.4[4]	[2]/[5]	–/–	[2]/[5]
High roofed Combi	[2]/14.1[3]	–/–	[2]/18.9[3]	[2]/13.5[4]	–/–	[2]/14.4[4]	[2]/[5]	–/–	[2]/[5]
LT 35[2]									
Combi	[2]/12.8[3]	–/–	[2]/18.3[3]	[2]/11.9[4]	–/–	[2]/14.3[4]	[2]/[5]	–/–	[2]/[5]
High roofed Combi	[2]/14.3[3]	–/–	[2]/18.3[3]	[2]/13.6[4]	–/–	[2]/14.3[4]	[2]/14.5[5]	–/–	[2]/13.6[5]

[1] Valid only for vehicles with a top speed of more than 130 km/h

[2] As the LT 31 and LT 35 E models are not classified as passenger vehicles in Germany there are no DIN consumption figures.

[3] Rear axle ratio 4.44 : 1

[4] Rear axle ratio 3.79 : 1

[5] The values were not available at the time of going to press.

[6] Rear axle ratio 4.10 : 1

Diesel engines

Figures in l/100 km	51 kW Diesel engine 5 speed			55/57[1] kW Diesel engine 5 speed			68 kW Turbo Diesel engine 5 speed			75/80[1] kW Turbo Diesel engine 5 speed		
	90 km/h	120 km/h	Urban	90 km/h	120 km/h	Urban	90 km/h	120 km/h	Urban	90 km/h	120 km/h	Urban
LT 28												
Combi	9.6/[6]	–/–	11.1/[6]	10.3/10.1[4]	–/–	9.2/9.1[3]	11.1/[6]	–/–	13.0/[6]	8.9/9.5[4]	14.5/15.2[4]	9.7/8.3[4]
High roofed Combi	10.5/[6]	–/–	11.1/[6]	10.7/9.2[4]	–/–	9.2/9.1[3]	11.5/[6]	–/–	13.0/[6]	10.9/10.5[4]	–/–	9.7/8.3[4]
LT 31[2]												
Combi	[2]/[6]	–/–	[2]/[6]	[2]/9.6[3]	–/–	[2]/9.1[3]	[2]/[6]	–/–	[2]/[6]	[2]/9.8[4]	[2]/15.5[4]	[2]/8.3[4]
High roofed Combi	[2]/[6]	–/–	[2]/[6]	[2]/10.4[3]	–/–	[2]/9.1[3]	[2]/[6]	–/–	[2]/[6]	[2]/10.6[4]	–/–	[2]/8.6[4]
LT 35 E[2]												
Combi	[2]/[6]	–/–	[2]/[6]	[2]/10.7[7]	–/–	[2]/ 9.3[7]	[2]/[6]	–/–	[2]/[6]	[2]/9.9[4]	[2]/15.7[4]	[2]/8.3[4]
High roofed Combi	[2]/[6]	–/–	[2]/[6]	[2]/11.7[7]	–/–	[2]/9.3[7]	[2]/[6]	–/–	[2]/[6]	[2]/10.8[4]	–/–	[2]/8.3[4]

[1] With viscous fan *. On these engines slightly different consumption figures are produced.
[2] As the LT 31 and LT 35 E models are not classified as passenger vehicles in Germany there are no DIN consumption figures.
[3] Rear axle ratio 4.10 : 1
[4] Rear axle ratio 3.79 : 1
[5] Rear axle ratio 4.08 : 1
[6] The values were not available at the time of going to press.
[7] Rear axle ratio 4.44 : 1

The figures behind the stroke (UTAC figures) were determined by a slightly different method of measuring.

Commercial vehicles

The consumption figures were obtained with half payload at a constant ¾ of the top speed (but not more than 80 km/h (50 mph) plus 10 %.

Depending on driving style, road and traffic conditions, environmental influences, body type, vehicle equipment and condition, the consumption figures obtained in actual practice can differ from these figures.

All figures were measured with the highest final drive ratio. On vehicles with other ratio axles the figures will vary accordingly.

	66 kW Carburetor engine		69 kW Fuel injection engine	51 kW Diesel	55/57 kW[1] Diesel	68 kW Turbo Diesel	75/80[1] kW Turbo Diesel
	4 speed	5 speed	5 speed	5 speed	5 speed	5 speed	5 speed
LT 28							
Delivery Van	14.2	13.2	16.1	10.5	11.3	13.1	11.7
High roofed Van	14.8	13.8	16.6	11.5	12.2	14.9	13.8
All Dropside Truck Models[2]	15.3	14.3	17.4	11.8	12.4	15.2	14.2
LT 31							
Delivery Van	11.9	11.1	12.9	9.6	9.6	10.2	8.8
High roofed Van/Combi	13.6	12.8	13.2	10.8	10.8	12.6	10.9
All Dropside Truck Models[2]	13.1	12.2	14.6	10.8	10.5	12.9	11.2
LT 35 E[3]							
Delivery Van	13.2	12.4	12.9	9.2	10.4	9.6	9.2
High roofed Van/Combi	13.9	13.1	13.5	9.8	11.1	11.6	11.2
All Dropside Truck Models[2]	14.5	13.6	14.5	10.4	11.8	12.6	12.1
LT 40a[4]							
Delivery Van	[5]	13.2	[5]	9.6	11.9	10.7	10.6
High roofed Van/Combi	[5]	14.6	[5]	10.2	12.3		11.2
All Dropside Truck Models[3]	[5]	14.5	[5]	10.9	13.1		12.1

[1] With viscous fan *. On these engines (only offered for LT 28–35 in certain export countries) slightly different consumption figures are obtained.

[2] Without canopy

[3] E = Rear axle with single tyres. For the LT 35 with twin tyres slightly different consumption figures are obtained.

[4] a = derated

[5] These figures were not available at the time of going to press.

	66 kW Carburetor engine 5 speed	55/57[1] kW Diesel 5 speed	75/80[1] kW Turbo Diesel 5 speed
LT 40			
Delivery Van	14.6	12.0	11.8
High roofed Van	14.8	12.5	12.4
All Dropside Truck Models[2]	16.1	13.3	13.1
LT 45			
Delivery Van	14.7	12.3	12.1
High roofed Van	15.1	12.8	12.7
All Dropside Truck Models[2]	16.2	13.6	13.4
LT 50			
All Dropside Truck Models[2]	16.5	14.1	13.7
LT 55			
All Dropside Truck Models[2]	–	15.1	14.3

[1] With viscous fan *. On these engines slightly different consumption figures are produced.
[2] Without canopy

SPARK PLUGS

Genuine Part Numbers

66 and 69 kW . 101 000 006 AC/W 7 DCO
or 101 000 002 AB/14-7 DUO
or 101 000 000 AB/N7-YCX

Notes

The spark plugs are renewed during the Inspection Service.

If the spark plugs have to be renewed between the Inspection Services, the following should be noted:

■ Engine, spark plugs and ignition system are matched to one another. To avoid faulty operation and even engine damage only the Genuine Volkswagen spark plugs for the engine concerned should be used. Important, among other things, are the number of electrodes and the heat value.

■ Since the plugs may be altered at short notice for technical reasons during the current model year, the plugs used can differ from those listed here. It is therefore advisable to obtain plugs only from Volkswagen Dealerships – they have the latest information.

V BELT

Alternator
Genuine Part Number of V belt
035 903 137 B
Belt size: 9.5 × 800

PAS hydraulic pump
Genuine Part Number of V belt
075 145 271
Belt size: 12.5 × 800

Notes

■ The vee belts are among the most severely stressed parts of a vehicle. The belts must therefore be subject to very high quality requirements. When renewing a belt it is not sufficient to use just any belt of the same size. For safe operation only the special Genuine Volkswagen belt for the vehicle concerned should be used.

■ Since the vee belts may be altered at short notice during the current model year, the belts used can differ from those listed here. It is therefore advisable to obtain belts only from Volkswagen Dealerships – they have the latest information.

CAPACITIES

(in litres)

Petrol tank . . . . . approx. 70
with larger tank * . . . . . approx. 110

Windscreen washer . . . . . approx. 2
with headlight washer . . . . . approx. 8

Engine oil (all engines)
with/without filter
change . . . . . approx. 7.0/6.0
The oil level must be checked from time to time while topping up. Do not fill above the MAX. mark.

Difference in quantity between MIN und MAX marks on engine dipstick . . . . . approx. 1.0

Cooling system . . . . . approx. 12.0

WHEELS

The table contains the tyres and wheels supplied by the factory. The tyre sizes given are also valid for winter tyres.

Attention
If you wish to fit the vehicle with tyres or wheels of types different to those fitted by the factory, (e. g. wheels with winter tyres) you must pay attention to the instructions given on page 78.

Snow chains may be used on the rear wheels in conjunction with all the tyres listed – see page 79 also.

These pressures are for cold tyres.

The spare should always be inflated to the highest pressure.

On the LT 28 and 31 the inflation pressures are also given on a sticker at the end of the dash panel on the driver's side. As the fact that the pressures may be altered at short notice for technical reasons cannot be excluded there can be differences between sticker and Instruction Manual. Should this be the case the values concerned can be obtained from a Volkswagen Dealer.

Model	Tyres[1]	Wheels	Permissible front axle load in kg	Permissible rear axle load in kg	**Tyre pressures** in bar front	rear
LT 28						
(High roofed) Combi	185 R 14 C 8 PR	6 J x 14 H 2 – B	1600	1680	4.5	4.5
	195 R 14 C 8 PR	6 J x 14 H 2 – B	1600	1680	4.5	4.5
all other models	185 R 14 C 8 PR	6 J x 14 H 2 – B	1500	1680	3.6	4.5
	195 R 14 C 8 PR	6 J x 14 H 2 – B	1500	1680	3.6	4.5
	185 R 14 C 8 PR	6 J x 14 H 2 – B	1650	1680	4.5	4.5
	195 R 14 C 8 PR	6 J x 14 H 2 – B	1650	1680	4.5	4.5
LT 31						
(High roofed) Van/Combi	195 R 14 C 8 PR	6 J x 14 H 2 – B	1500	1860	3.6	4.5
	205 R 14 C 8 PR	6 J x 14 H 2 – B	1500	1860	3.6	4.5
	195 R 14 C 8 PR	6 J x 14 H 2 – B	1650	1860	4.5	4.5
	205 R 14 C 8 PR	6 J x 14 H 2 – B	1650	1860	4.5	4.5
	195 R 14 C **6** PR	6 J x 14 H 2 – B	1700	1700	3.8	3.8
Rescue Truck	205 R 14 C 8 PR	6 J x 14 H 2 – B	1500	1940	3.6	4.5
all other models	205 R 14 C 8 PR	6 J x 14 H 2 – B	1650	1940	4.5	4.5

[1] The full tyre designation is:
185 R 14 C 8 PR – 102/100 N
195 R 14 C **6** PR – 102/100 N
195 R 14 C 8 PR – 106/104 N
205 R 14 C 8 PR – 109/107 N

Model	Tyres[1]	Wheels	Permissible front axle load in kg	Permissible rear axle load in kg	Tyre pressures in bar front	rear
LT 35 E[2]						
High roofed) Van/Combi	205 R 14 C 8 PR	6 J x 14 H 2 – B	1500	2060	3.0	4.5
	215 R 14 C 8 PR	6 J x 14 H 2 – B	1500	2060	3.0	4.5
	215 R 14 C 8 PR	6 J x 14 H 2 – B	1650	2060	3.5	4.5
	215 R 14 C 8 PR	6 J x 14 H 2 – B	1650	2060	3.5	4.5
Fire truck	205 R 14 C 8 PR	6 J x 14 H 2 – B	1600	2060	3.5	4.5
all other modells	215 R 14 C 8 PR	6 J x 14 H 2 – B	1500/1650	2240	3.0	4.5
LT 35						
Double Cab	185 R 14 C 8 PR	5 J x 14 H 2 – B	1500	2350	3.6	3.0
	185 R 14 C 8 PR	5 J x 14 H 2 – B	1650	2350	4.5	3.0
all other models	185 R 14 C 8 PR	5 J x 14 H 2 – B	1500	2300	3.6	3.0
	185 R 14 C 8 PR	5 J x 14 H 2 – B	1650	2300	4.5	3.0
LT 40a[3]						
Double Cab	185 R 14 C 8 PR	5 J x 14 H 2 – B	1700	2350	4.5	3.0
	195 R 14 C 8 PR	5 J x 14 H 2 – B	1900	2350	4.5	3.0
all other models	185 R 14 C 8 PR	5 J x 14 H 2 – B	1700	2300	4.5	3.0
	195 R 14 C 8 PR	5 J x 14 H 2 – B	1900	2300	4.5	3.0
Double Cab	195 R **16** C 8 PR	5½ J x **16** H 2 – TL	1900	3350	4.5	3.0
all other models	195 R **16** C 8 PR	5½ J x **16** H 2 – TL	1700	2300	4.0	3.0
	195 R **16** C 8 PR	5½ J x **16** H 2 – TL	1900	2300	4.5	3.0

[1] The full tyre designation is:
185 R 14 C 8 PR – 102/100 N
195 R 14 C 8 PR – 106/104 N
205 R 14 C 8 PR – 109/107 N
215 R 14 C 8 PR – 112/110 N
195 R **16** C 8 PR – 107/105 M

[2] Rear axle with single tyres

[3] a = derated

TECHNICAL DATA

Model	Tyres[1]	Wheels	Permissible front axle load in kg	Permissible rear axle load in kg	Tyre pressures in bar front	rear
LT 40						
Dropside Truck	185 R 14 C 8 PR	5 J x 14 H 2 – B	1700	2800	4.5	4.0
all other models	195 R 14 C 8 PR	5 J x 14 H 2 – B	1900	2800	4.5	3.5
all models	195 R **16** C 8 PR	5½ J x **16** H 2 – TL	1700/1900	2800	4.5	3.5
LT 45						
Double Cab	195 R 14 C 8 PR	5 J x 14 H 2 – B	1900	3500	4.5	4.5
all other models	195 R 14 C 8 PR	5 J x 14 H 2 – B	1900	3100	4.5	4.0
Double Cab	195 R **16** C 8 PR	5½ J x **16** H 2 – TL	1900	3500	4.5	4.5
all other models	195 R **16** C 8 PR	5½ J x **16** H 2 – TL	1900	3100	4.5	4.0
LT 50						
all Dropside Truck models	195 R 14 C 8 PR	5 J x 14 H 2 – B	1900	3500	4.5	4.5
	195 R **16** C 8 PR	5½ J x **16** H 2 – TL	1900	3500	4.5	4.5
LT 55						
all Dropside Truck models	195 R **16** C 8 PR	5½J x **16** H 2 – TL	1950	3700	4.5	4.5

[1] The full tyre designation is
185 R 14 8 PR – 102/100 N
195 R 14 8 PR – 106/104 N
195 R **16** 8 PR – 107/105 M

WEIGHTS

Figures (in kg) are for vehicles with 51 kW Diesel engine[1]

Model	Wheelbase	GVW	Unladen weight with driver	Payload[2]	Permissible front axle load	Permissible rear axle load	Permissible roof load[3]
LT 28							
Van	2500	2800	1750	1050	1500/1650	1680	300
	2950	2800	1830	970	1500/1650	1680	300
High roofed Van	2500	2800	1800	1000	1500/1650	1680	100
	2950	2800	1880	920	1500/1650	1680	100
Combi	2500	2800	1780[4]	1020	1600	1680	300
	2950	2800	1860[4]	940	1600	1680	300
High roofed Combi	2500	2800	1830[4]	970	1600	1680	100
	2950	2800	1910[4]	890	1600	1680	100
Dropside Truck	2500	280	1745	1055[5]	1500/1650	1680	–
	2950	2800	1800	1000[6]	1500/1650	1680	–
Low loader	2500	2800	1735	1065[5]	1500/1650	1680	–
Chassis with cab	2500	2800	1515	1285	1500/1650	1680	–
	2950	2800	1550	1250	1500/1650	1680	–
Double Cab	2950	2800	1940	860[7]	1500/1650	1680	75
Double Cab Low loader	2950	2800	1930	870[7]	1500/1650	1680	75
Double Cab without platform	2950	2800	1725	1075	1500/1650	1680	75
LT 31							
Van	2500	3200	1800	1400	1500/1650	1860	300
	2950	3200	1880	1320	1500/1650	1860	300
High roofed Van	2500	3200	1850	1350	1500/1650	1860	100
	2950	3200	1930	1270	1500/1650	1860	100
Combi	2500	3200	1830[4]	1370	1500/1650	1860	300
	2950	3200	1910[4]	1290	1500/1650	1860	300
High roofed Combi	2500	3200	1880[4]	1320	1500/1650	1860	100
	2950	3200	1960[4]	1240	1500/1650	1860	100

Footnotes see page 123

Figures (in kg) are for vehicles with 51 kW Diesel engine[1]

Model	Wheelbase	GVW	Unladen weight with driver	Payload[2]	Permissible front axle load	Permissible rear axle load	Permissible roof load[3]
LT 31 (continued)							
Dropside Truck	2500	3200	1795	1405[5]	1500/1650	1940	–
	2950	3200	1850	1350[6]	1500/1650	1940	–
Low loader	2500	3200	1785	1415[5]	1500/1650	1940	–
Chassis with Cab	2500	3200	1565	1635	1500/1650	1940	–
	2950	3200	1600	1600	1500/1650	1940	–
Double Cab	2950	3200	1970	1230[7]	1500/1650	1940	75
Double Cab Low loader	2950	3200	1960	1240[7]	1500/1650	1940	75
Double Cab without platform	2950	3200	1755	1445	1500/1650	1940	75
LT 35 E[9]							
Van	2500	3500	1820	1680	1500/1650	2060	300
	2950	3500	1900	1600	1500/1650	2060	300
High roofed Van	2500	3500	1870	1630	1500/1650	2060	100
	2950	3500	1950	1550	1500/1650	2060	100
Combi	2500	3500	1850[4]	1650	1500/1650	2060	300
	2950	3500	1930[4]	1570	1500/1650	2060	300
High roofed Combi	2500	3500	1900[4]	1600	1500/1650	2060	100
	2950	3500	1980[4]	1520	1500/1650	2060	100
Dropside Truck	2500	3500	1815	1685[5]	1500/1650	2240	–
	2950	3500	1870	1630[6]	1500/1650	2240	–
Low loader	2500	3500	1805	1695[5]	1500/1650	2240	–
Chassis with Cab	2500	3500	1585	1915	1500/1650	2240	–
	2950	3500	1620	1880	1500/1650	2240	–
Double Cab	2950	3500	1990	1510[7]	1500/1650	2240	75
Double Cab Low loader	2950	3500	1980	1520[7]	1500/1650	2240	75
Double Cab without platform	2950	3500	1775	1725	1500/1650	2240	75

 Footnotes see page 123

Figures (in kg) are for vehicles with 51 kW Diesel engine[1)]

Model	Wheelbase	GVW	Unladen weight with driver	Payload[2)]	Permissible front axle load	Permissible rear axle load	Permissible roof load[3)]
LT 35							
Dropside Truck	2500	3500	1850	1650[5)]	1500/1650	2300	–
	2950	2500	1905	1595[6)]	1500/1650	2300	–
Chassis with Cab	2500	3500	1620	1880	1500/1650	2300	–
	2950	3500	1655	1845	1500/1650	2300	–
Double Cab	2950	3500	2025	1475[7)]	1500/1650	2350	75
Double Cab without platform	2950	3500	1810	1690	1500/1650	2350	75
LT 40a[10)]							
Van	2950	3500	2080	1420	1700/1900	2300	300
High roofed Van	2950	3500	2130	1370	1700/1900	2300	100
Dropside Truck	2950	3500	2050	1450[6)]	1700/1900	2300	–
	3650	3500	2455	1045[8)]	1700/1900	2300	–
Chassis with Cab	2950	3500	1800	1700	1700/1900	2300	–
	3650	3500	1995	1505	1700/1900	2300	–
Double Cab	2950	3500	2135	1365[7)]	1700/1900	2350	75
	3650	3500	2355	1145[6)]	1700/1900	2350	75
Double Cab without platform	2950	3500	1920	1580	1700/1900	2350	75
	3650	3500	2105	1395	1700/1900	2350	75
LT 40							
Van	2950	4000	2080	1920	1900	2800	300
High roofed Van	2950	4000	2130	1870	1900	2800	100
Dropside Truck	2950	4000	2050	1950[6)]	1700	2800	–
	3650	4000	2455	1545[8)]	1900	2800	–

Footnotes see page 123

Figures (in kg) are for vehicles with 55 or 57 kW Diesel engine[1]

Model	Wheelbase	GVW	Unladen weight with driver	Payload[2]	Permissible front axle load	Permissible rear axle load	Permissible roof load[3]
LT 40 (continued)							
Chassis with Cab	2950	4000	1800	2200	1900	2800	–
	3650	4000	1995	2005	1900	2800	–
Double Cab	2950	4000	2135	1865[7]	1900	2800	75
	3650	4000	2355	1645[6]	1900	2800	75
Double Cab without platform	2950	4000	1920	2080	1900	2800	75
	3650	4000	2105	1895	1900	2800	75
LT 45							
Van	2950	4600	2080	2520	1900	3100	300
High roofed Van	2950	4600	2130	2470	1900	3100	100
Dropside Truck	2950	4600	2050	2550[6]	1900	3100	–
	3650	4600	2455	2145[8]	1900	3100	–
Chassis with Cab	2950	4600	1800	2800	1900	3100	–
	3650	4600	1995	2605	1900	3100	–
Double Cab	2950	4600	2235	2365[7]	1900	3500	75
	3650	4600	2355	2245[6]	1900	3500	75
Double Cab without platform	2950	4600	2020	2580	1900	3500	75
	3650	4600	2105	2495	1900	3500	75
LT 50							
Dropside Truck	2950	5000	2155	2845[6]	1900	3500	–
	3650	5000	2455	2545[8]	1900	3500	–
Chassis with Cab	2950	5000	1905	3095	1900	3500	–
	3650	5000	1995	3005	1900	3500	–
Double Cab	2950	5000	2235	2765[7]	1900	3500	75
	3650	5000	2355	2645[6]	1900	3500	75
Double Cab without platform	2950	5000	2020	2980	1900	3500	75
	3650	5000	2105	2895	1900	3500	75

 Footnotes see page 123

Figures (in kg) are for vehicles with 55 or 57 kW Diesel engine[1)]

Model	Wheelbase	GVW	Unladen weight with driver	Payload[2)]	Permissible front axle load	Permissible rear axle load	Permissible roof load[3)]
LT 55							
Van	2950	5600	2155	3445[6)]	1950	3700	–
	3650	5600	2455	3145[8)]	1950	3700	–
Chassis with Cab	2950	5600	1905	3695	1950	3700	–
	3650	5600	1995	3605	1950	3700	–
Double Cab	3650	5600	2355	3245[6)]	1950	3700	75
Double Cab without platform	3650	5600	2105	3495	1950	3700	75

1) On vehicles with petrol engines the unladen weight is reduced and the payload increased by about 55 kg.
On vehicles with Turbo Diesel engines the unladen weight is increased and the payload reduced by about 15 kg.

2) When carrying heavy loads, the load should, in the interests of good handling, be placed where possible, between the axles. The permissible axle and gross vehicle weights must not be exceeded on any account. Bear in mind also that heavy weights will alter the vehicle handling. Driving style and speed must therefore be adapted to suit.

3) Only use roof racks which have at least 5 supports on each side and are supported in the rain channel. Distribute load uniformly and do not exceed the GVW. For further details see page 21.

4) Without driver and without seats.

5) On vehicles with canopy the payload is reduced by approx. 60 kg.

6) On vehicles with canopy the payload is reduced by approx. 70 kg.

7) On vehicles with canopy the payload is reduced by approx. 55 kg.

8) On vehicles with canopy the payload is reduced by approx. 190 kg.

9) E = Rear axle with single wheels.

10) a = Derated.

TRAILER WEIGHTS

Permissible trailer weights (Detailed information on trailer towing is given on page 46):
Trailer without brakes: 750 kg
Trailer with brakes:

		66 and 69 kW Petrol engines			51 kW Diesel engine			55/57 kW Diesel engine			66 kW Turbo Diesel engine			75/80 kW Turbo Diesel engine		
		kg	%	Remarks	kg	%	Remarks	kg	%	Remarks	kg	%	Remarks	kg	%	Remarks
LT 28	1)	2000	12	–	2000	12	4)	2000 1500	12 12	– 9)	2000	12	11)	2000 1500	12 12	– 9)
	2)	2500	8	–	2500 2500	12 10	5) 6)	2500 2500	12 10	10) 6)	2500 2500	12 10	5) 12)	2500	12	–
LT 31	1)	2000	12	–	1800 2000	12 12	6) 5)	2000 1500	12 12	– 9)	1800 2000	12 12	12) 5)	2000 1500	12 12	– 9)
	2)	2500	8	–	2500 2500 2500	12 10 8	7) 8) 6)	2500 2500	12 10	10) 6)	2500 2500 2500	12 10 8	7) 8) 12)	2500 2500	12 10	15) 9)
LT 35 E	1)	2000	12	–	1300 2000	12 12	6) 5)	2000 1500	12 12	– 9)	1500 2000	12 12	12) 5)	2000 1500	12 12	– 9)
	2)	2500	8	–	2500 2500 2500	12 10 8	7) 8) 6)	2500	12	–	2500 2500 2500	12 10 8	7) 8) 12)	2500 2500	12 10	15) 9)
LT 35 Z	1)	2000	12	–	1800 2000	12 12	6) 5)	2000	12	–	1800 2000	12 12	12) 5)	2000	12	–
	2)	2500	8	–	2500 2500	12 8	5) 6)	2500 2500	12 10	10) 6)	2500 2500	12 8	5) 12)	2500	12	–
LT 40 a	1)	2000	12	–	1500 2000 1200 1600 1800	12 12 12 12 12	6) 13) 5) 13) 6) 14) 8) 14) 7) 14)	2000	12	–	1800 2000 1500 1800 2000	12 12 12 12 12	12) 13) 5) 13) 12) 14) 8) 14) 7) 14)	2000	12	–
	2)	2500	8	–	2500 2500 2500 2500 2500	12 10 8 10 8	7) 13) 8) 13)	2500 2500	12 10	10) 6)	2500 2500 2500 2500 2500	12 10 8 12 8	7) 13) 8) 13) 12) 13) 7) 14) 8) 14)	2500	12	–
LT 40-55	1)	2500	12	–	–	–	–	2500	12	–	–	–	–	2500	12	–
	2)	3000	8	3)	–	–	–	3000	12	3)	–	–	–	3000	12	3)

1) Normal trailer weight
2) Increased trailer weight (With special certificate)
3) ■ On vehicles with 2950 mm wheelbase the rear axle load must be at least 1100 kg
■ On LT 45, 50 and 55 when towing a trailer of this weight the vihicle payload must be reduced so that the total weight is not higher than 7000 kg
4) With rear axle ratios 4.10:1/4.44:1/4.88:1
5) With rear axle ratios 4.44:1/4.88:1
6) With rear axle ratio 4.10:1
7) With rear axle ratio 4.88:1
8) With rear axle ratio 4.44:1
9) With rear axle ratio 3.79:1
10) With all rear axle ratios except 4.10:1
11) With rear axle ratios 4.08:1/4.44:1/4.88:1
12) With rear axle ratio 4.08:1
13) With 14 inch tyres
14) With 16 inch tyres
15) With all rear axle ratios except 3.79:1

Permissible weight of trailer drawbar on towing hitch
Ball type: max. 75 kg (100 kg if towing hitch is designed for this)
min. 4% of actual trailer weight, but not more than maximum permissible
Jaw type: max. 100 kg

DIMENSIONS

Figures in mm Model	Wheel-base	Length	Width	Width across mirrors	Height[2] without canopy	Height[2] with canopy	Ground clearance[3]
LT 28/31/35 E[1]							
Van/Combi	2500	4855	2040	2358	2160/2155	–	180
	2950	5305	2040	2358	2160/2155	–	180
High roofed Van/Combi	2500	4855	2040	2358	2570/2560	–	180
	2950	5305	2040	2358	2570/2560	–	180
Dropside Truck	2500	4875	2140	2522	2105	2790	180
	2950	5630	2140	2522	2105	2790	180
Low loader	2500	4875	2140	2522	2105	2590	180
Chassis with Cab	2500	4795	2040	2522	2110	–	180
	2950	5245	2040	2522	2110	–	175
Double Cab	2950	5330	2140	2522	2140	2795	180
Double Cab Low loader	2950	5330	2140	2522	2140	2640	180
Double Cab without platform	2950	5245	2040	2522	2140	–	180
LT 35							
Dropside Truck	2500	4875	2140	2522	2110	2800	160
	2950	5630	2140	2522	2110	2800	160
Chassis with Cab	2500	4795	2050	2522	2115	–	160
	2950	5245	2050	2522	2115	–	160
Double Cab	2950	5330	2140	2522	2085	2835	160
Double Cab without platform	2950	5245	2050	2522	2085	–	160

1) E = Rear axle with single wheels
2) Measured at unladen weight, without driver
3) Measured at GVW

DIMENSIONS

Figures in mm Model	Overhang Front	 Rear	Track Front	 Rear	Turning circle in m approx.
LT 28/31/35 E[1]					
Van/Combi	1110	1245	1750	1740	12
	1110	1245	1750	1740	13
High roofed Van/Combi	1110	1245	1750	1740	12
	1110	1245	1750	1740	13
Dropside Truck	1110	1265	1750	1740	12
	1110	1570	1750	1740	13
Low loader	1110	1265	1750	1740	12
Chassis with Cab	1110	1185	1750	1740	12
	1110	1185	1750	1740	13
Double Cab	1110	1270	1750	1740	13
Double Cab Low loader	1110	1270	1750	1740	13
Double Cab without platform	1110	1185	1750	1740	13
LT 35					
Dropside Truck	1110	1265	1750	1500	12
	1110	1570	1750	1500	13
Chassis with Cab	1110	1185	1750	1500	12
	1110	1185	1750	1500	13
Double Cab	1110	1270	1750	1500	13
Double Cab without platform	1110	1185	1750	1500	13

[1] E = Rear axle with single wheels

DIMENSIONS

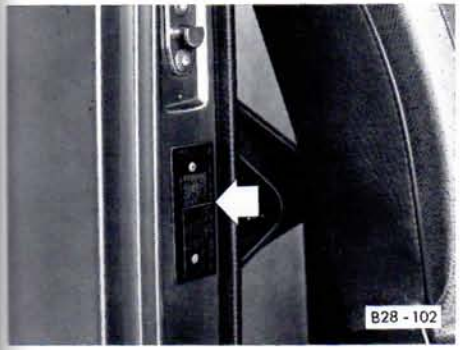
Figures in mm Model	Wheel-base	Length	Width	Width across mirrors	Height[2] without canopy	Height[2] with canopy	Ground clear-ance[3]
LT 40 a[1]/40/45							
Van	2950	5305	2050	2358	2250	–	150
High roofed Van	2950	5305	2050	2358	2660	–	150
Dropside Truck	2950	5630	2140	2522	2110	2875	150
	3650	6545	2370	2754	2115	2910	150
Chassis with Cab	2950	5245	2050	2522	2120	–	150
	3650	6160	2050	2522	2115	–	160
Double Cab (LT 40 a/40)	2950	5330	2140	2522	2100	2865	150
(LT 45)	2950	5330	2140	2522	2115	2915	150
(LT 40 a/40/45)	3650	6560	2140	2522	2115	2905	160
Double Cab without platform							
(LT 40 a/40)	2950	5245	2050	2522	2100	–	150
(LT 45)	2950	5245	2050	2522	2115	–	150
(LT 40 a/40/45)	3650	6160	2050	2522	2115	–	160
LT 50/55							
Dropside Truck	2950	5630	2140	2522	2115	2925	150
	3650	6545	2370	2754	2115	2910	150
Chassis with Cab	2950	5245	2050	2522	2120	–	150
	3650	6160	2050	2522	2115	–	160
Double Cab (LT 50)	2950	5330	2140	2522	2115	2915	150
(LT 50/55)	3650	6560	2140	2522	2115	2905	160
Double Cab without platform							
(LT 50)	2950	5245	2050	2522	2115	–	150
(LT 50/55)	3650	6160	2050	2522	2115	–	160

a = Derated
Measured at unladen weight, without driver
Measured at GVW

Figures in mm Model	Overhang Front	 Rear	Track Front	 Rear	Turning circle in m approx
LT 40 a[1]/40/45					
Van	1110	1245	1750	1500	13
High roofed Van	1110	1245	1750	1500	13
Dropside Truck	1110	1570	1750	1500	13
	1110	1785	1750	1500	15
Chassis with Cab	1110	1185	1750	1500	13
	1110	1400	1750	1500	15
Double Cab (LT 40 a/40)	1110	1270	1750	1500	13
(LT 45)	1110	1270	1750	1500	13
(LT 40 a/40/45)	1110	1800	1750	1500	15
Double Cab without platform					
(LT 40 a/40)	1110	1185	1750	1500	13
(LT 45)	1110	1185	1750	1500	13
(LT 40 a/40/45)	1110	1400	1750	1500	15
LT 50/55					
Dropside Truck	1110	1570	1750	1500	13
	1110	1785	1750	1500	15
Chassis with Cab	1110	1185	1750	1500	13
	1110	1400	1750	1500	15
Double Cab (LT 50)	1110	1270	1750	1500	13
(LT 50/55)	1110	1800	1750	1500	15
Double Cab without platform					
(LT 50)	1110	1185	1750	1500	13
(LT 50/55)	1110	1400	1750	1500	15

[1] a = Derated

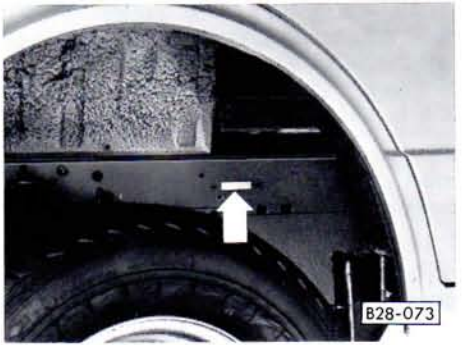
VEHICLE IDENTIFICATION DATA



The identification plate

is in the door frame of the right hand front door.

Vehicles for export to certain countries have no identification plate.

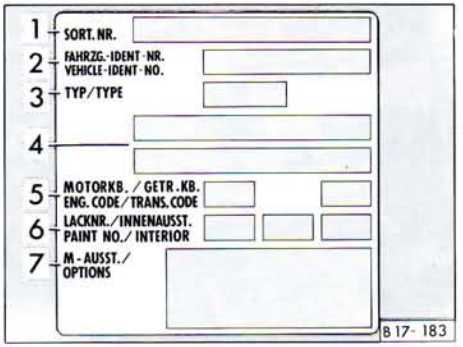


The Vehicle Identification Number

(Chassis number)

is on the side member in the right hand front wheel housing.

From LT 40a the number is about 20 cm to the left of the position shown here.

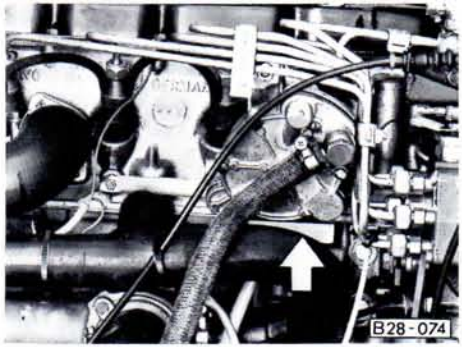


The sticker

is stuck on the hinge pillar on the left under the dash. It contains the following vehicle data:

1. Production control number
2. Vehicle Identification Number
3. Model code number
4. Model explanation
5. Engine and gearbox code letters
6. Paint number/interior trim code
7. Optional extra numbers

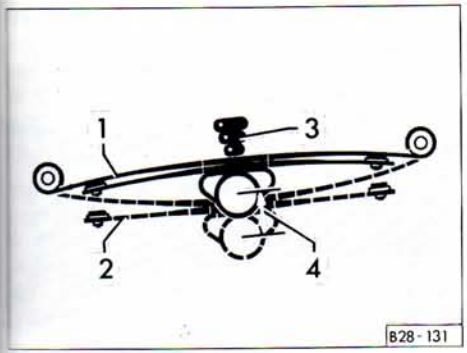
The vehicle data 2 – 7 is also given in the Service Schedule.



The Engine number

is on the left hand side of the crankcase.

SPRINGING ON THE LT 28/31/35 E/35



1 – Full load
2 – No load
3 – Additional plastic buffer (LT 35)
4 – Spring travel

The springing of the LT offers a ride comfort which is extremely good for a commercial vehicle under all load conditions. This has been achieved mainly by the use of long travel springs on the front and rear axles.

The independently suspended **front wheels** are mounted on double wishbones with coil springs and rubber buffers.

The **rear axle** is mounted on light, responsive, single-leaf springs. The desired progressive spring characteristics are obtained by an additional spring support and, on the LT 35 by an additional plastic buffer.

The construction and working principles of the rear axle springing are shown in the illustration on the left.

As one can see, the spring bends upwards under full load. This is a design feature.

This condition does not indicate that the spring is overloaded because the vehicle is carrying more than the specified load.

Please note the following:
The springing of the LT is so designed that the vehicle is slightly higher at the rear when unladen as is usually the case with trucks.

When carrying a full, evenly distributed load the vehicle is slightly lower at the rear. This is also a design feature and an absolutely normal condition.

WELDING ON VEHICLE

The battery should always be disconnected before any welding is done on the vehicle. If this is not done and concealed wires are damage by welding, the resultant short circuit can cause severe damage.

When electric welding, the earth terminal should be attached directly to the part being welded. Otherwise the high current and voltage peaks can cause damage to mechanical and electronic vehicle parts.

BOLTED-ON LOAD PLATFORM

Vehicles with a bolted-on load platform must not be driven when platform has been taken off. When this cannot be avoided, the following must be noted:

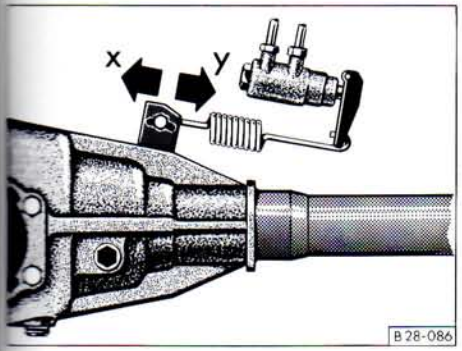
- Vehicles may only be driven with a ballast weight with at least the same weight as the platform. This weight must be securely attached to the chassis near the rear axle.
- Furthermore, the rear wheels must be covered up if the vehicle is to be driven on public roads.

ADJUSTING THE BRAKE PRESSURE REGULATOR

The LT is fitted with a load sensitive brake pressure regulator (brake pressure limiter) which restricts the brake pressure at the rear axle to the set value. The regulator is set at the factory so that normally the brakes are satisfactory after a body has been installed.

Only in special cases when it is noted during the road test that the braking force at the rear axle is either too low or too high, must the brake pressure regulator be adjusted in a Volkswagen Dealership.

Checking pressure and adjusting – see next page.



Checking pressure and adjusting:

Connect pressure gauge V.A.G 1310 to a rear wheel cylinder by removing the bleeder screw and screwing in adaptor from gauge.

Apply pressure to the brake pedal until no further pressure increase is shown on the gauge. Read off pressure and with aid of table check if the pressure is correct according to axle load. With pedal released the brake pressure can be increased by adjusting spring in direction "x", or reduced in direction "y".

After checking the pressure, bleed the brake system (Tighten bleeder screw to 4.9 Nm).

Note

For axle loads which are between the figures given the regulating pressure can be worked out: e. g. LT 31/commercial vehicle: 900 kg axle load = 31.5 ± 7.5 bar

Rear axle load (kg)	Pressure (bar)
LT 28 – 35 E Passenger models[1)]	
700	22 ± 5
800	26 ± 6
1000	32 ± 6
1400	46 ± 8
1680	56 ± 9
1860	62 ± 10
1940	65 ± 10
2060	69 ± 11
2240	75 ± 11

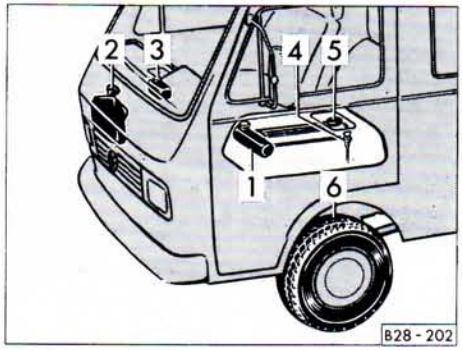
Rear axle load (kg)	Pressure (bar)
LT 28 – 35 Commercial vehicles	
400/500	12 – 11
600	12 ± 6
700	18 ± 6
800	25 ± 7
1000	38 ± 8
1400	63 ± 11
1680	80 ± 14
1860	91 ± 15
1940	97 ± 16
2240	112 ± 18
2300	116 ± 18
2350	119 ± 19
LT 40a – 55	
650	12 – 11
700	12 ± 10
800	25 ± 10
850	30 ± 10
900	35 ± 10
950	40 ± 10
1000	45 ± 10
1500	88 ± 13
2000	125 ± 16
2300	147 ± 18
2350	150 ± 18
2800	180 ± 22
3100	200 ± 25
3500	225 ± 26
3700	238 ± 27

[1)] In Germany only LT 28.

ALPHABETICAL INDEX

CHECKS WHEN FILLING THE TANK

In order to ensure that your vehicle remains ready for the road at all times between Inspections you should carry out a few checks regularly – preferably when filling the tank.



We have listed the most important points to be checked here.
How to open the bonnet is explained on page 58.

Attention

Take particular care when working in the engine compartment – see page 59.

1 – Coolant container
If the level is below the Min. mark, top it up with coolant additive G 11 V8B and water – see page 69. When unavoidable plain water can be used temporarily.

2 – Windscreen washer container
Always fill with water and a glass cleaner. Think about frost precautions in winter.

3 – Brake fluid reservoir
The fluid level must always be between the min. and max. marks – see page 71.

4 – Engine oil level
Every engine uses a certain amount of oil. If the level is too low however this can cause serious engine damage. For this reason the level must be checked regularly. The oil level must be between the min. and max. marks on the dipstick – see page 62.

5 – Engine oil filter opening
The approved types of oil are given on page 60.

6 – Tyre inflation pressures
Check the pressures at least once a month. The pressures are given on pages 116–118 and, on the LT 28 and 31, on a sticker at the end of the dash panel on the driver's side. For further details, see page 76.

You can enter the most important data for **your** vehicle here. If you have any questions, every Volkswagen Dealer will be pleased to help.

Vehicle identification number[1] .....

Model

Engine output[1] ..... **kW** **Code number**[1] .....

Carburation[2]

☐ Fuel injection ☐ Diesel
☐ Carburetor ☐ With catalyst

Fuel[2]

☐ Regular unleaded[3] 91 RON
☐ Premium unleaded 95 RON
☐ Premium plus[3] unleaded 98 RON
☐ Diesel

[1] This data is given in the Service Schedule
[2] Insert X
[3] Leaded also for vehicles without catalyst
[4] For factory fitted tyres

Engine oil specifications[2]

☐ To VW Standard 501 01
☐ To VW Standard 500 00
☐ To VW Standard 505 05

Viscosity: SAE .....

Tyre size[4] .....

Tyre pressures (in bar)	front	rear
With half load		
With full load		

Printed in Germany

How you can help the environment

The fuel consumption of your Volkswagen LT – and thereby the pollutant content in the exhaust gas – are also determined by the way you drive.

Noise and wear are also influenced by the way the vehicle is used.

This Instruction Manual explains how to drive your Volkswagen LT in a way that is compatible to the environment – and save money at the same time. Just turn to the heading "Environment" in the alphabetical index.

Furthermore note all the texts in this manual marked with this symbol ❀

Please do your bit – for the sake of the environment