Instruction Manual for the Volkswagen Transporter.

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January 1979 Edition

VOLKSWAGENWERK AKTIENGESELLSCHAFT · WOLFSBURG

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Among the publications supplied with your new vehicle are the:

Instruction Manual and the
Service Schedule

Both are to be found in the vehicle wallet.

The Instruction Manual contains important information on the use and treatment of your vehicle. You should read this booklet before using the vehicle so that you get to know your car quickly and can start the first trip with complete confidence. After reading the booklet you will know exactly how to drive and look after your vehicle properly.

Please note that some of the items of equipment described are fitted to certain models only or are optional extras.

The **Service Schedule** contains details of what has to be done at regular intervals to maintain the roadworthiness and value of the vehicle. When the servicing has been carried out, your V.A.G dealer confirms this by stamping the schedule.

You should always have the Service Schedule handy when you take your car to a dealer – it is the key to efficient service.

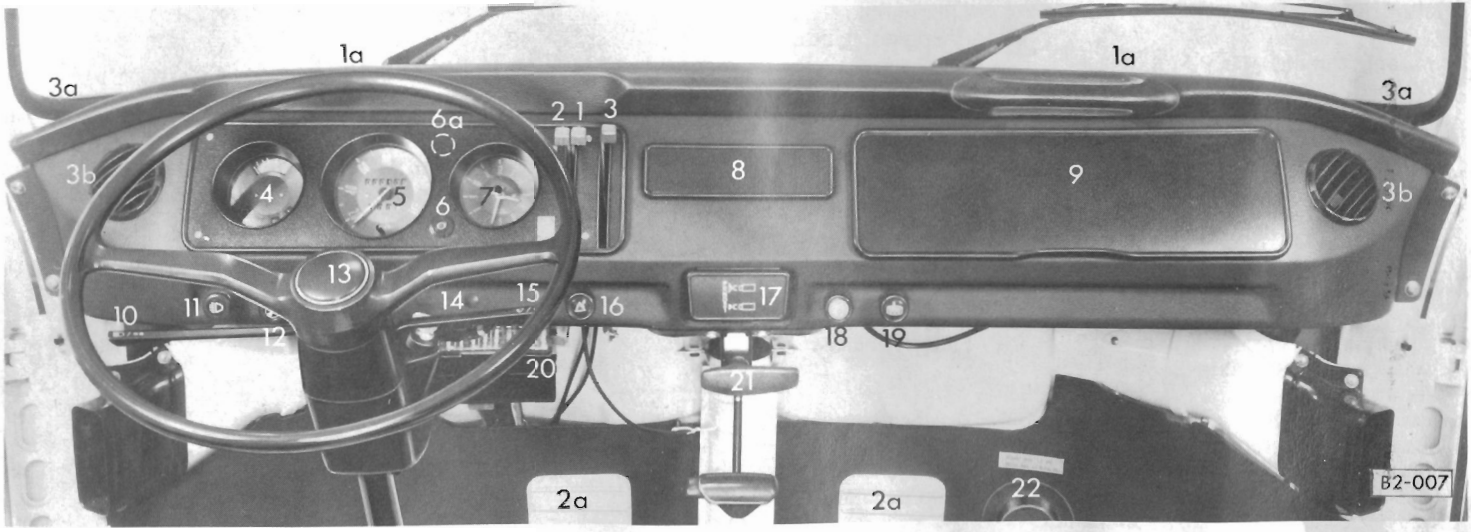
A word about the warranty conditions: Proper treatment and complete proof that all the specified Standard Services have been carried out by a V.A.G dealer are stipulations for the upholding of any warranty claims for damage to parts which are covered by the Standard Service system.

It is therefore in your interests to take your car in regularly for a Standard Service.

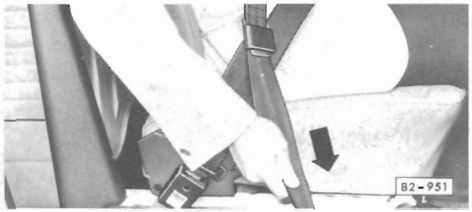
VOLKSWAGENWERK AKTIENGESELLSCHAFT

Contents

Instrument panel



* On right-hand-drive vehicles



Seat belts*
Vehicles with three-point static belts

Putting belt on

Take buckle off hook on door pillar and pass it across chest and hips. Push buckle into the lock part fitted on the seat inner side until it engages **audibly.**

The belt must fit tightly and not be twisted.

Adjusting belt

Lengthening belt before putting it on

Press metal part sticking out of adjuster and pull belt below the free end.

Slackening belt when on

Press metal part sticking out of adjuster and extend belt by pressing with chest.

Shortening belt

Pull the free end of belt down at adjuster.

After being adjusted, the belt must be pulled tight again.

Taking belt off

Release belt by pressing the orange button marked "PRESS" in the lock. The buckle will then spring out.

Hang the buckle up straightaway on the hook on the door pillar.

* In some export countries the belts used may differ slightly from those described here.

Vehicles with three-point inertia reel belts

The inertia reel belt adapts automatically to body size and seat position and gives complete freedom of movement when pulled slowly.
Sudden braking will cause the belt to lock. The locking mechanism will also lock the belt when driving down steep gradients or concerning hard.

Putting belt on

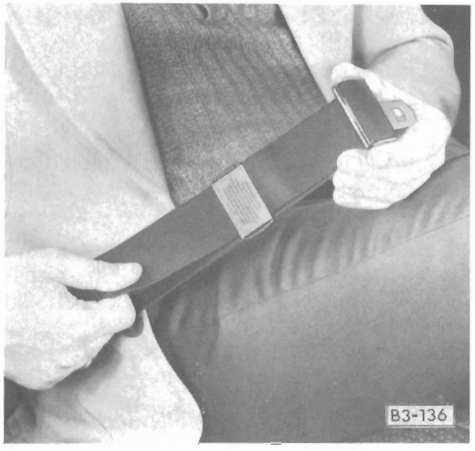
Pull the buckle slowly and smoothly across your chest and hips and push it into the lock part fitted on the seat until buckle engages audibly.

The belt must not be twisted

Taking belt off

To release belt, press the orange button marked "PRESS" in the lock. The buckle will then spring out.

Pass the buckle towards the relay fitting on the door pillar so that the retractor can roll the belt up properly. A plastic slide is fitted to hold the buckle in a convenient position. Adjust the slide to suit yourself.



Vehicles with lap belts

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

The length of the belt is very important: it must always fit rightly.

To adjust the belt, hold the tongue at right angles to the belt itself and pull the appropriate part of the belt in the required direction.

The surplus length of belt can be taken up by moving the plastic slide.

Instructions on the use of seat belts

Seat belts are only beneficial if they are worn at all times – particularly in town traffic.

Persons less than 4 ft. 10 in. tall should not wear normal three-point belts – this would increase the danger of injury in an accident.

Children under 12 years of age should always be carried on the rear seat: Small children in a special seat, older children should have a childs belt. Children over 6 years of age can use a lap belt and children over 4 ft. 10 in. tall can use a normal three-point belt.

Only one person is to be secured with each belt. Never secure two people (even children) with one belt.

- Ensure that the belt buckle engages properly and that the belt is not twisted.
- The correct adjustment of the static belt length is very important.

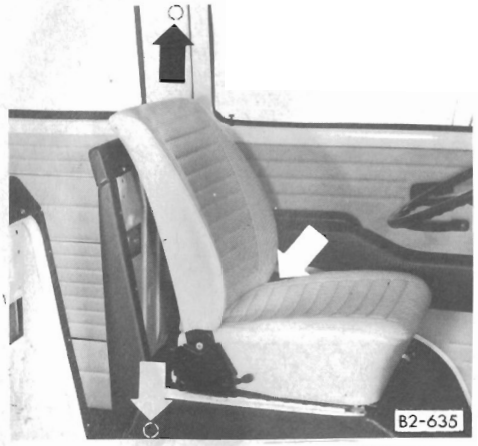
  The lap belt must always fit rightly. This is also valid for inertia reel belts.

  The shoulder part must be adjusted so that the hand can just be pushed between belt and chest.
  Inertia reel belts adjust automatically.
- When the seat position is altered, the adjustment of the belt must be checked and, rectified as necessary.
- Belts which are not in use should always be hung up on the hooks provided. This will prevent the buckles from swinging about when the brakes are applied suddenly.
- Ensure that the belt does not get jammed between seat and backrest or rub on any sharp edges.
- Do not let the centre seat belts slip down between seat cushion and backrest because belts which cannot be seen readily will not be used by the occupants.

Keep the 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. Inertia reel belts should be completely dry before they are allowed to roll up. Do not have the belts cleaned chemically because chemical cleaning compounds destroy the material. Ensure that the belts do not come into contact with corrosive fluids.

Check occasionally to see that the belt buckles and the retractors (inertia reel belts) are working properly. Inspect the belt material and the fittings for damage.

Seat belts which have been stressed in an accident and stretched must be replaced and the belt anchorages should be checked by a workshop.



Service installation of belts

All seats can be fitted with lap belts and the outer places can be fitted with 3 point static or inertia reel belts.

Belt anchorages

There are threaded holes in cab and rear compartment for the belts.

The holes shown marked with rings are covered by the trim material. They must be exposed when fitting the belts.

The plastic plugs must not be used to attach the belts.

V.A.G workshops have all the necessary information on the fitting of seat belts.

The installation of seat belts should therefore preferably be done by a V.A.G workshop.

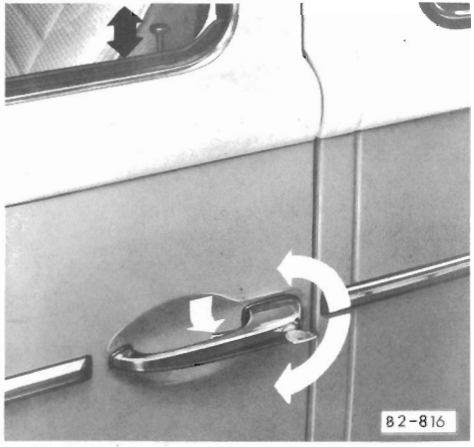
Vehicles with head restraints

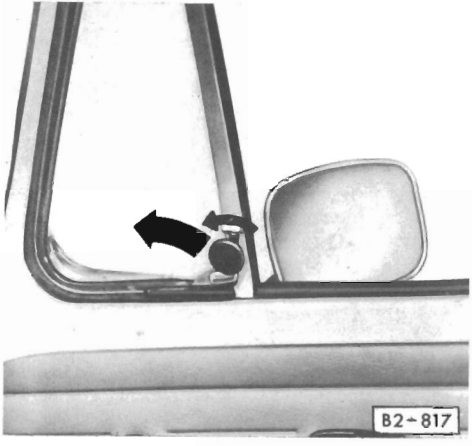
To remove:

Pull upwards.

To install:

Push in until the head restraint comes to a stop.





Keys

There is one key for the doors, the ignition/starter switch and the lockable engine bonnet, if applicable.

Vehicles with a lockable glove box and/or tank cap have additional keys.

It is advisable to note the key numbers. You can then order a key from your V.A.G. Dealer if you lose a key any time.

Doors

Locking cab doors with key – When doors are locked the locking knobs must move downwards.

Locking cab doors without key – Press locking knob down with door open and press trigger in handle when closing door.

When the locking knobs are depressed, the doors cannot be open from inside.

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.

We advise you to leave the doors **unlocked** when vehicle is in motion so that they can be opened from outside in an emergency.

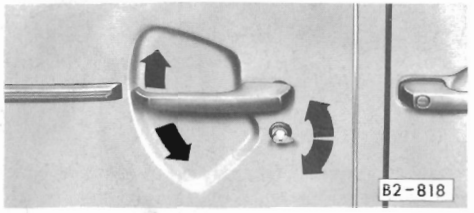
Vehicles with vent wings

To open – Press button in fastener and pivot fastener.

To close – Press vent wing against seal at front then pivot fastener to the rear.

Vehicles with sliding windows

The windows are locked when they are closed. To open them, press the fastener down and slide window along.



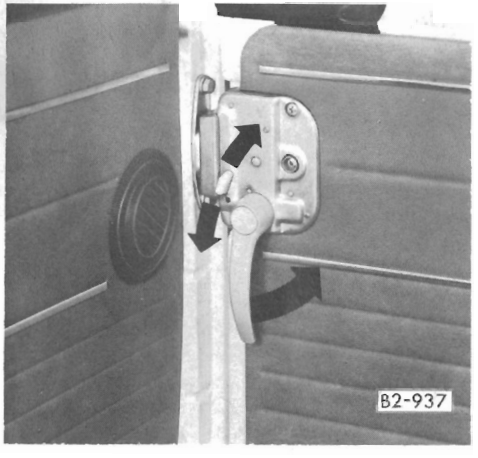
The sliding door can only be locked with the key from the outside.

To close from the outside

Press the door handle up to release the hook and slide the door forwards with momentum.

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

When fully open, the door is held by a hook.

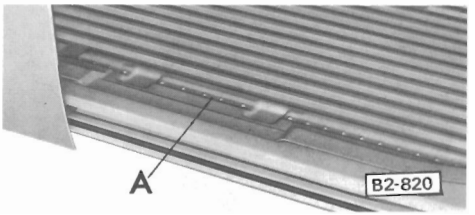


To unlock and lock from the inside

Push locking catch up or down when the door is properly closed.

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

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



Loading limit

Marks in the floor plates (A) show the limit to which cargo can be stowed without obstructing the door.

Rear flap

Opening the rear flap

Press the button and lift the flap.

Closing the flap

Swing downwards with slight momentum. The flap must close properly.

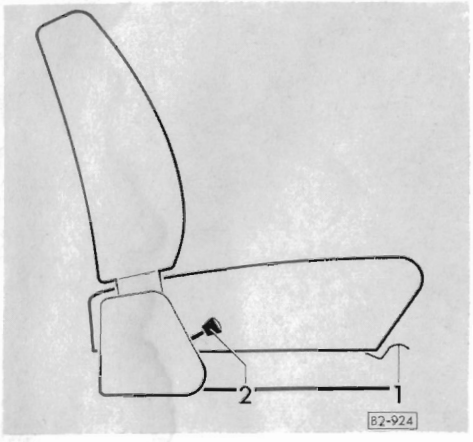
Cover (Pick-up)

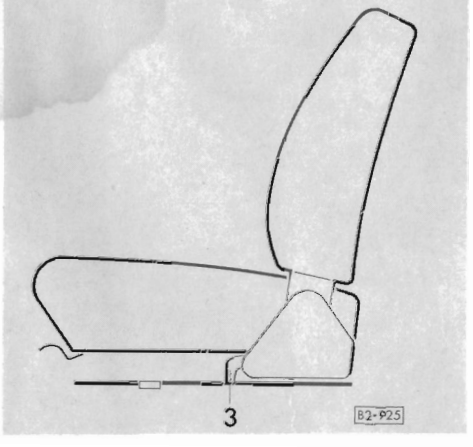
Ensure that the cover is secured properly behind the cab.

The rod supplied must be inserted through the seam at the lower edge of the cover and bolted to the body.

The flap is held in the fully opened position by spring pressure.

Do not drive with the rear flap open as exhaust gases are then able to enter the vehicle interior.





Seats

Driver's cab

To move driver's seat*

The seat can only be moved when the handle (1) at front of seat has been lifted or depressed.

- Move seat as required and release handle.
- Move seat further until catch engages in nearest slot.

To adjust backrest rake of drivers seat *

Take weight off backrest, press lever (2) on right side of seat frame down and move backrest to desired position by moving upper part of body and release lever.

To take driver's seat* out

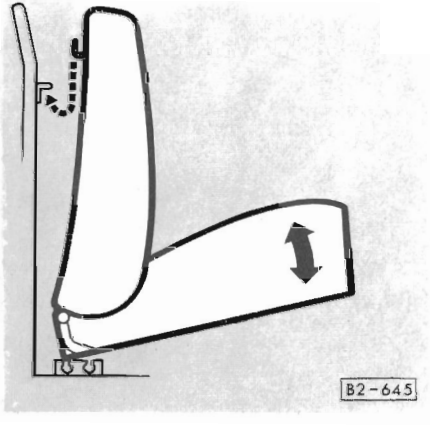
- Slide seat right forward.
- Lift hook (3) against spring-loading, hold it and slide seat past stop.
- Release hook and push seat forward out of runners.
- The hook need not be lifted when putting seat back as the seat can just be pushed past the stop.

Note

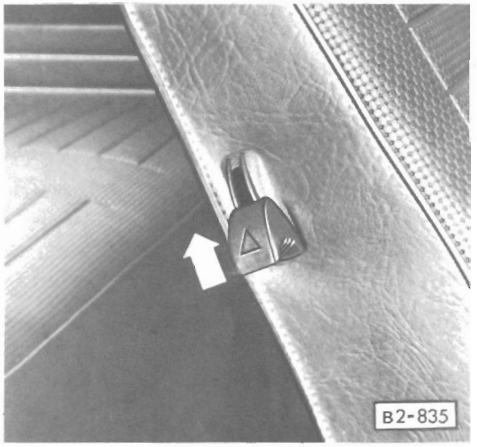
On vehicles **without** partition, the cab seats are the same.

To remove or adjust passenger's seat

(Vehicles with partition)
Lift the seat at the front until the backrest becomes unhooked from the retainer on the partition. Then lift the seat out of the retaining brackets. With the seat folded, insert it into the required position on the retainer brackets. When lowering the front of the seat, ensure that the backrest hooks properly into the retainer.



* Front passenger's seat also on vehicles without partition.



Passenger compartment

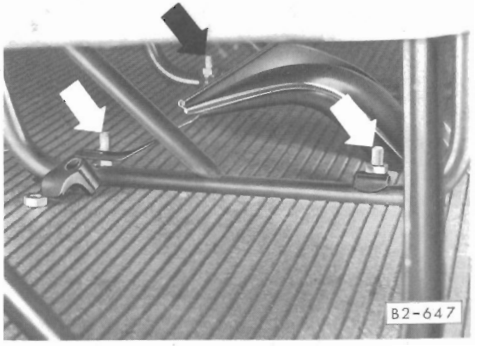
Releasing the centre seat backrest

Pull the release knob upwards and push the backrest forwards.

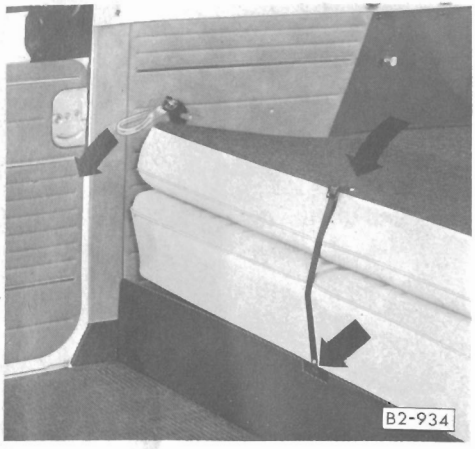
When the backrest is pushed backwards it will automatically lock into position.

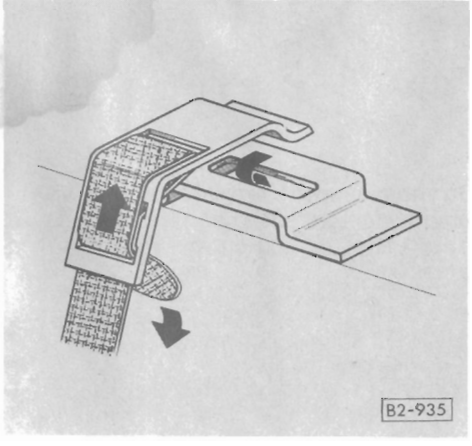
Removing the seats

Remove the side trim panels of the centre seat and the front trim panels of the rear seat by pulling them off. If necessary, remove the warm air outlet for the rear footwell from under the centre seat by removing the two centre nuts securing the seat, taking off the clamps and pulling outlet off. A spring-loaded flap closes the duct. Remove all seat securing nuts, take off the clamps and remove the seats.



The studs can also be removed by turning them 90°.





Luggage compartment

The luggage compartment is accessible through the rear flap. See section "Rear flap".

Vehicles with hinged rear seat backrest

To enlarge luggage space:

- Release backrest by pulling loop on right.
- Fold backrest down to seat.
- Pull strap out of trim panel under seat and hook it into the eye on the back at the top.

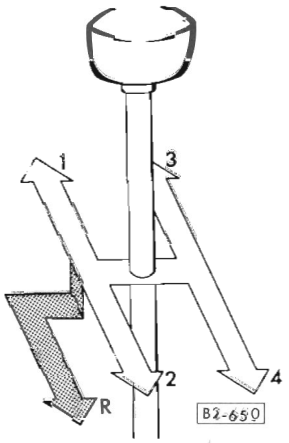
The length of the strap can be adjusted by moving the slide and hook on the strap.

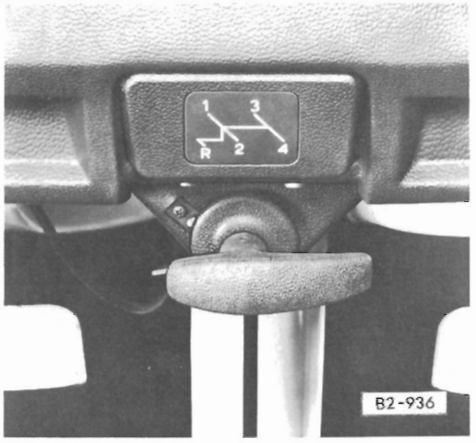
The backrest locks automatically when hinged to the rear.

When making full use of the load capacity of your vehicle the following should be noted:

- Secure the luggage to prevent it from sliding forward when braking suddenly, and
- Make sure that the heating element of the rear window will not be damaged by cases rubbing against it.

If head restraints are fitted they must be taken off before folding the backrest down.





Gear lever

The position of the gear lever in the various gears is shown in the diagram.

Manual gearbox

Select reverse gear only when the vehicle is standing still.

As the reverse gear is on a separate shaft, grating noises may occur if the gear is engaged too quickly with engine running – particularly when the gearbox is warm.

It is advisable therefore to wait a few seconds with clutch pedal fully depressed, before engaging reverse.

To engage reverse, press lever down firmly, move it to the left and pull it back to the stop.

The back-up lights come on when reverse gear is engaged.

Automatic gearbox

See page 66.

Handbrake

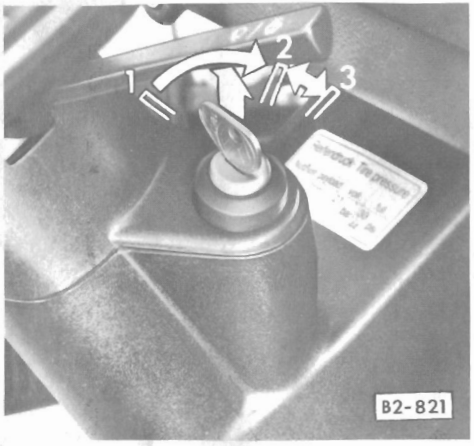
To apply: Pull the lever out.

To release: Turn lever clockwise and push in.

Do not make a habit of resting your hand on the lever when driving. The pressure of your hand is transmitted to the shift forks in the gearbox and can cause premature wear on the forks.

So don't forget – after changing gear take your hand off the lever.

On vehicles with a brake warning lamp the lamp should go out when handbrake is released after starting engine (see "Warning lamps").



Steering lock/ignition switch

1 – **Ignition off**

To lock the steering. When key has been withdrawn, turn the wheel until the locking pin is heard to engage.

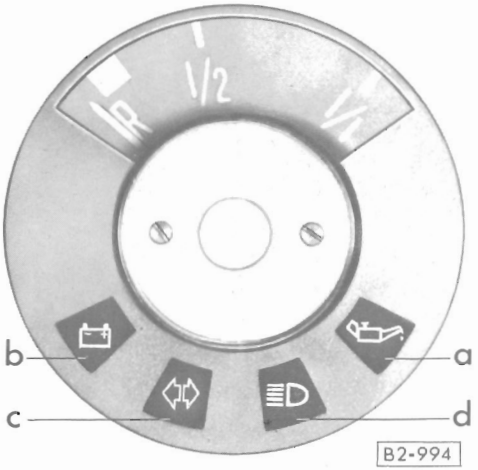
Caution. On vehicles with steering lock withdraw key only when vehicle is stationary.

2 – **Ignition on**

Warning lamps come on (see page 20) If the key is difficult to turn to position 2 or cannot be turned at all, move the steering wheel to and fro slightly to release the locking pin.

3 – **Starter** – see page 30.

At this position, the current to the headlights, wipers and the heated rear window is cut off.



The fuel gauge works when the key is in the "Drive" position (ignition on). It takes a few seconds however after switching on before the needle reaches the final position.

Fuel gauge

The tank holds about 56 litres. When the pointer is at the beginning of the reserve zone "R" there are about 5 litres of fuel left in the tank.

Warning lamps

a – Oil pressure
b – Alternator
c – Turn signals
d – High beams

The oil pressure and generator warning lamps come on when the ignition is switched on. They should go out when the engine is started.

If the oil pressure warning lamp come on or flickers when driving:

- Stop straight away, switch engine off and check the oil level (see page 32).
- If the cause of the trouble cannot be found, you must obtain expert assistance on the spot.

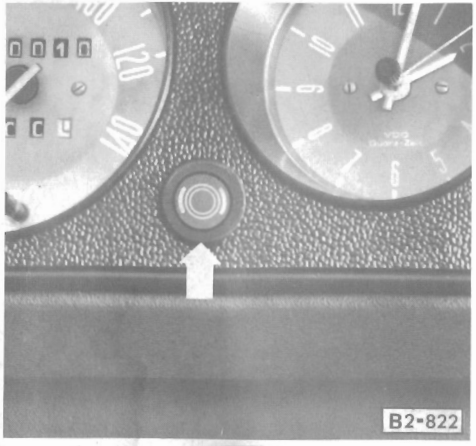
Occasional flickering of the warning lamp at idling speed after a long spell of fast driving is no cause for alarm as long as the lamp goes out when engine speed is increased.

If the generator warning lamp comes on when driving:

- Stop at once and check a) fan belt b) fuses in fuse box.

a) On the 1.6 litre engine cooling ceases when the belt breaks. Do not drive on until a new belt has been fitted. Details of belt size and tension are given under "Technical Data". If the alternator is not charging but belt is intact, take car to next V.A.G workshop because battery will soon run down. This applies to vehicles with 1.6 and 2.0 litre engines.

b) The fuse for the turn signals might be blown. Fit a new fuse. If the fuse blows again, do not drive on, get workshop assistance.



Brake warning lamp

On vehicles with a brake warning lamp the lamp should come on when the ignition is switched on and go out after the engine has been started when the handbrake is released. If the light does **not** come on when the ignition is switched on or when the handbrake is applied with the engine running, the cause of the trouble must be found and rectified immediately so that the light can fulfil its warning function.

If the light comes on when the foot brake is applied, one of the brake circuits may be faulty.

You will notice this by the increase in pedal travel. You can drive on to the nearest V.A.G workshop but allow for longer braking distances on the way.

Speedometer

Permissible speed ranges for the various gears in km/h:

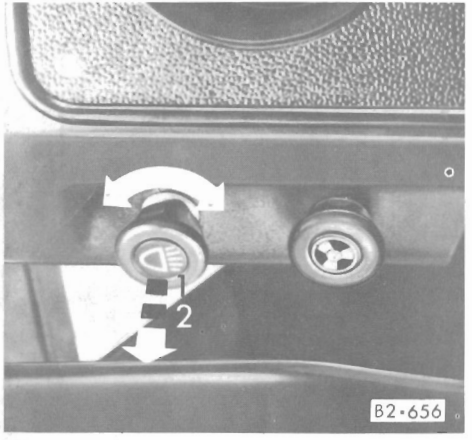
	1.6 litre engine	2.0 litre engine
1st gear	0– 20	0– 25
2nd gear	15– 40	15– 50
3rd gear	25– 70	25– 85
4th gear	40–110	40–127

Vehicles with trip recorder

The trip recorder is zeroed by pressing the knob below the speedometer.

Vehicles with a clock

The clock is electrically operated. The hands can be moved by pressing in and turning the knob in the dial centre.



Lighting switch

Pull knob out:

1st stop – Parking lights

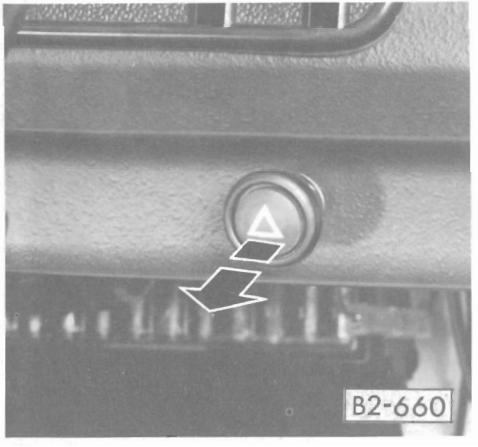
2nd stop – Driving lights.

Vehicles with variable instrument panel light

When the lights are switched on (parking lights, headlights), the brightness of the instrument panel lights can be regulated by turning the switch.

Please note:

- The headlights only work when the ignition is on or the engine running.
- When the starter is being used, the headlights are switched off automatically.



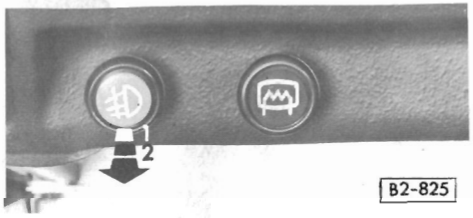
Emergency light switch

To switch system on – Pull switch out.
Warning lamp in knob flashes as well.

The emergency light system also works when ignition is switched off.

The four turn signals flash simultaneously.

Switch on only in an emergency when vehicle is moving, or when vehicle has broken down.
The regulations may differ in certain countries.



Vehicles with fog lights and/or rear fog light

To switch on – pull knob.

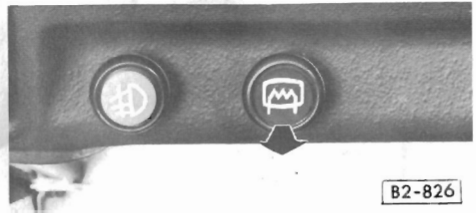
First stop – Fog lights on.

Second stop – Fog and rear fog lights on.

The fog lights work only when side or headlight low beams* are on. They go out when the headlights are switched to high beam. The warning lamp in the knob is on in both switch positions.

On vehicles which are only equipped with rear fog light, this comes on at the first switch position.

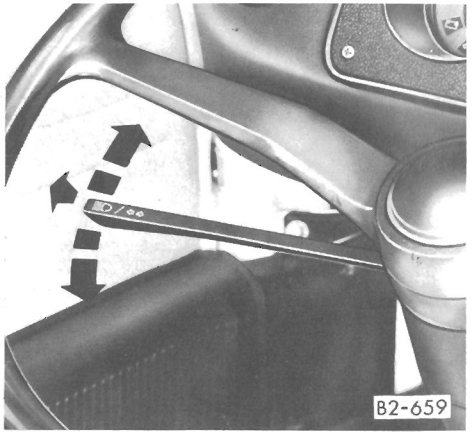
* On vehicles for export to certain countries the fog lights work only together with the side lights to comply with local regulations.



Vehicles with heated rear window

To switch on – pull knob.

The heater element only works when the ignition is on. There is a warning lamp in the knob. As soon as window is clear, switch element off to reduce consumption.



Turn signal and dip switch

To signal a turn
Lever forward – Right signals
Lever to rear – Left signals

The warning lamp in the left instrument dial flashes as well. The turn signals are self-cancelling.

When a turn signal fails, the warning lamp flashes faster.

To signal a lane change

Move lever to front or rear until resistance is felt

When a turn signal fails, the warning lamp flashes faster.

To signal a lane change

Move lever to front or rear until resistance is felt

The turn signals work as long as lever is held in position.

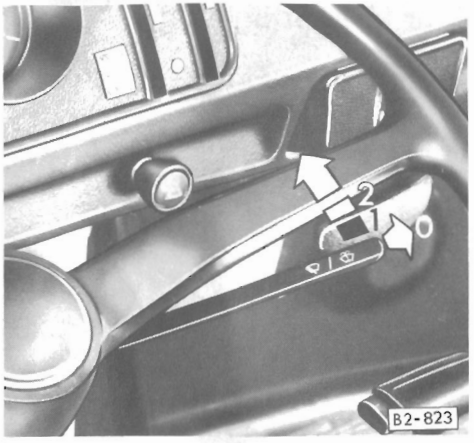
Dipping

When vehicle lights are on:
Pull lever past pressure point towards steering wheel.

When headlights are on high beam, a blue warning lamp in the left instrument comes on.

Headlight flasher:

With vehicle lights off:
Pull lever up to **pressure point** towards steering wheel.



Windscreen washer

Lift lever towards steering wheel – Washer operates.

Water is sprayed as long as lever is held.

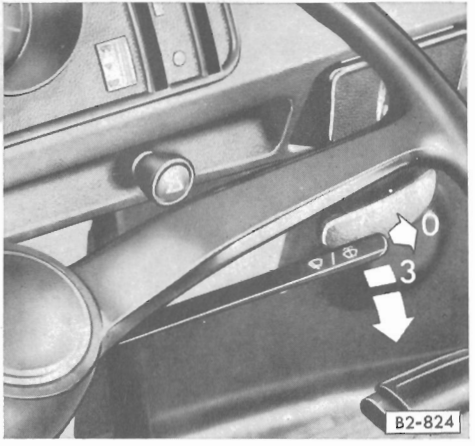
Filling the container is described in the section "Operating instructions" under "Windscreen washer system".

Vehicles with headlight washer

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

Note

At regular intervals, such as when filling tank with fuel, caked-on dirt (insects, etc.) should be removed from the lenses.



Windscreen wipers

Lever in O position – Wipers off

Move lever forward:

Briefly to pressure point of 1st stop – Wipers work until lever is released again.

To 1st stop – Wipers slow
To 2nd stop – Wipers fast

Caution

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

Vehicles with intermittent wiper and wash-wipe device

Move lever to the rear:

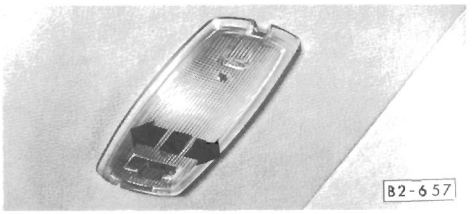
To 3rd stop – Wipers work **intermittently**

The wipers work once about every five to ten seconds.

With lever in O position:

Lift it towards steering wheel – (wash-wipe device) – water is sprayed onto windscreen, wipers start working.

Release lever – wipers work two or three times.



Front interior light

Switch positions:

Front – Door contacts, light comes on when driver's door* is opened.

Centre – Off

Rear – Light on all the time.

* Passenger door as well on Ambulance and on vehicles with L equipment.

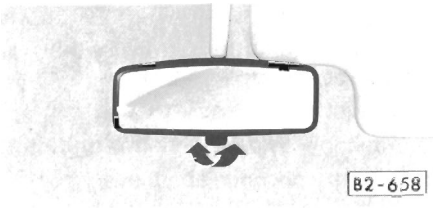
Rear interior light

Switch positions:

Up – Sliding door contacts, light comes on when the sliding door is opened.

Centre – Off

Down – Light on all the time.



Interior mirror

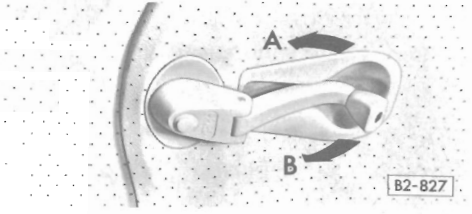
On vehicles with an anti-dazzle mirror there is a small lever on the mirror:

Normal position – Lever forward

Anti-dazzle position – Lever to rear

For safety reasons the mirror springs out on impact.

It can be installed again by pressing it in firmly.



Vehicles with sliding roof

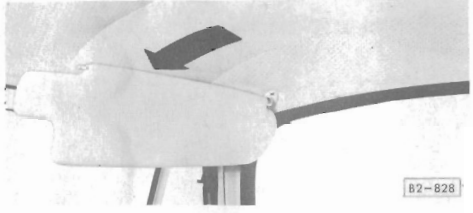
A – To open sliding roof

Fold crank down and turn anti-clockwise.

B – To close sliding roof

Turn the crank clockwise until it comes to a stop, then turn it back slightly until it can be folded into the recess.

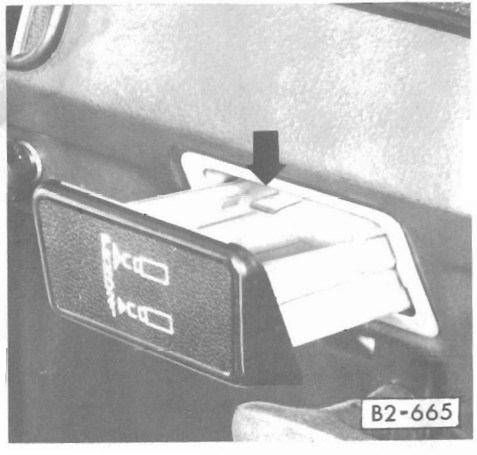
For safety reasons the crank should always be folded into the recess.



Sun visors

The driver's sun visor can be lifted out of the bracket and swung round towards the door.

On vehicles with a make-up mirror the mirror is fitted in the passenger's sun visor.



Ashtrays

Ashtray in instrument panel

To take out – Press leaf spring down (arrow) and pull ashtray out.

Ashtray in passenger compartment

To empty – Open ashtray, press down and take it out.

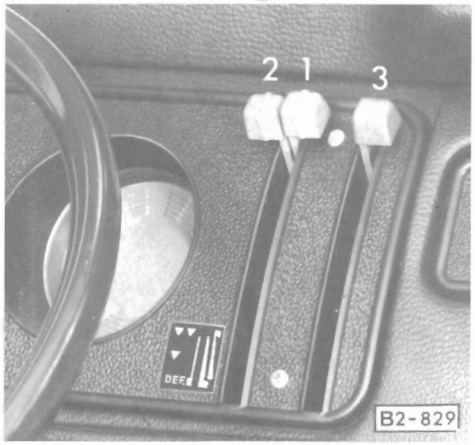
To replace – Insert it at the top first and then push it back in.

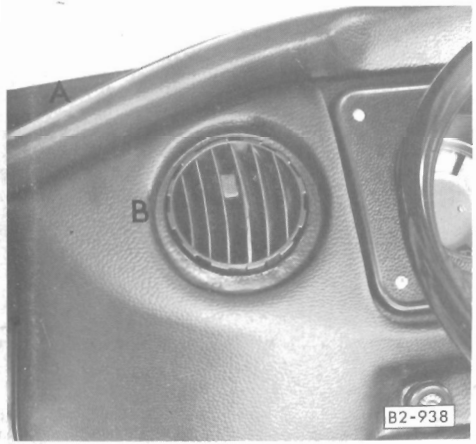
Glove box

Glove box lid

To open – Lift up with the finger grip.

To open lockable lid – unlock and turn knob to left.





Heating and ventilation*

Heating (lever 1)

Heater off – lever up
Heater on – lever down

Vehicles with warm air fan

with the lever in the lowest position a fan increases the warm air flow when the engine is running or when the ignition is on and the engine is not running.

Warm air distribution (lever 2)

Warm air to the windscreen – lever down (DEF) (△).
Cab footwell vents open – lever in centre (▽).
Cab **and** passenger compartment footwell-vents open – lever up (▽▽).

Ventilation (lever 3)

Fresh air ventilation open – lever down
Fresh air ventilation closed – lever up

Fresh air outlets (cab)

A – Air vents to the windscreen

B – Air vents for side windows and cab

Defrosting the windscreen

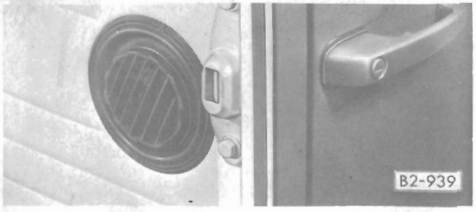
- Lever 1 – down
- Lever 2 – down
- Lever 3 – Fresh air ventilation – up

Open the footwell heating as soon as the windscreen is clear – Lever 2 – up – to heat the interior quickly and uniformly.

On vehicles with a heater booster, the instructions for the heater are in an insert to this manual.

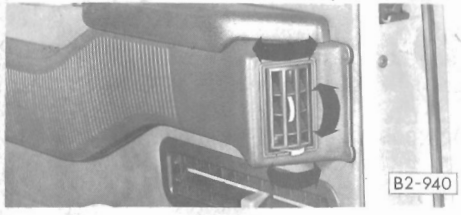
The direction of air flow can be altered by turning the round vents B and the flaps which are incorporated allow the quantity of air to be regulated.

* On RHD vehicles the lever sequence is 3-2-1 – Ventilation – warm air distribution – heating (from left to right)



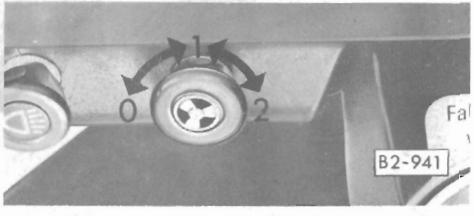
Fresh air outlets (passenger compartment)
Outlets on vehicles **with partition**

To alter direction of flow – turn outlet
To control amount of air – move flap in outlet



Outlets on vehicles without partition

To close outlets:
Left outlet – upper lever to right
Right outlet – lower lever to left
To direct flow sideways – move grille sideways
To direct flow up or down – Swing lever in grille up or down

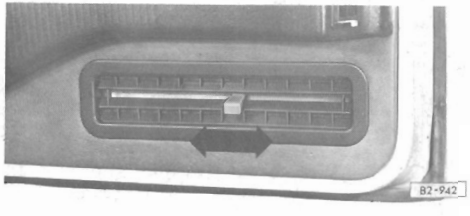


Vehicles with fresh air fan

Rotary switch for fan

Position 0 – fan off
Position 1 – fan slow
Position 2 – fan fast

The fan circulates the air properly when driving slowly or when the vehicle is standing stil.



Ventilation

When travelling with the windows closed the ventilation can be regulated with slides in the cab door ducts.

Slide forward – ventilation grille open
Slide to the rear – ventilation grille closed.

Stale air is extracted through the oval opening in the end faces of the front doors.

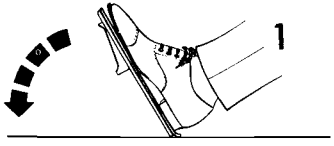
Starting the engine

Be careful when running the engine in a confined space. Danger of poisoning.

- Check that gear lever is in neutral. (On vehicles with automatic gearbox: Selector lever at "P" or "N") and apply handbrake before starting.
- 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.
- 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 the engine is running as this could damage the starter.
- Do not try warm engine up by running it with vehicle stationary. Drive off straight away.

Only when it is very cold is it advisable to let the engine run for about 30 secounds at a fast idle before moving off. This gives the lubrication system time to circulate the oil properly.

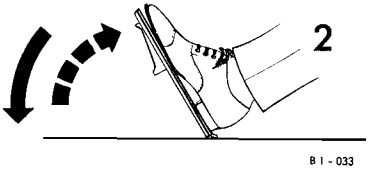
- On vehicles with an automatic gearbox, run engine at a fast idle for about 1 minute before selecting a gear.
  The increase in the idling speed which takes place as the engine starts to warm up can be reduced by just tapping the accelerator pedal briefly.
- A starting boost may only be given with the **battery connected** and a **special** quick charging appliance.



- **At temperatures above freezing point (1)**

Depress accelerator pedal slowly while operating the starter.

If the engine tends to stall when warming up at ambient temperatures below 15° C the cause may be carburetor icing. See "Driving in winter" under "Fuel".

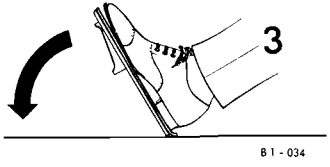


- **At temperatures below freezing point (2)**

Before operating starter, depress accelerator pedal fully once and let it return slowly – this actuates the automatic choke.

Depress clutch pedal so that the starter can turn the engine more easily, then start the engine.

Before operating starter at very low temperatures, switch the hot air blower off (2.0 litre engine) by moving the heater lever up.



- **When engine is very warm (3)**

Depress accelerator pedal fully while operating starter but do not "pump" the pedal.

The condition of a car is closely bound up with road safety.

So before driving off check the following:

the fuel level
the lights and turn signals
the brakes
the windscreen washer

and at regular intervals

the engine oil level
the brake fluid level
the tyre pressures

You will have less to worry about while driving!

Type of fuel

The **1.6 litre** and **2.0 litre engines:** Regular petrol; RON* not lower than 91.

If regular petrol with adequate anti-knock properties is not available, use premium petrol or an appropriate mixture.

Additives should nor normally be put in the petrol.

Only if the engine tends to stall repeatedly when warming up in the cold season due to carburetor icing, do we recommend that **Volkswagen AUDI Petrol Additive** is mixed with the petrol.

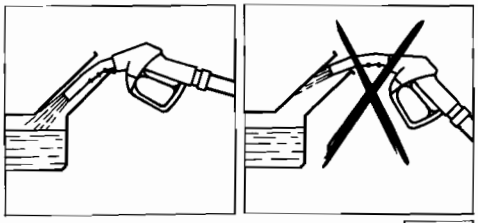
Further details are given in the section on "Driving in winter", page 39.

* RON – indicates anti-knock properties of the petrol.

Filling tank

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

Vehicles with a lockable tank cap have a special key.



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

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

- Do not try to fill tank too quickly, otherwise the fuel will foam and this may cause pistol to switch off to soon.

The fuel tank capacity is approx. 56 litres, of which approx. 5 litres are reserve.

To prevent the fuel from overflowing as it warms up when tank is full, an expansion space is provided **which must not be filled when refueling.** The tank is full when the automatic filling nozzle switches off.

"Fuel gauge", see section "Operation".

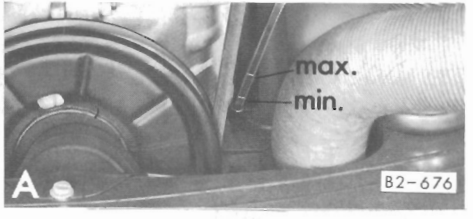
Checking oil level

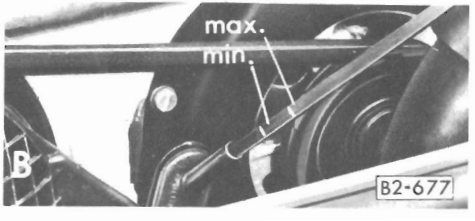
The vehicle must be on a level surface when the oil level is checked. Do not check the oil immediately after stopping the engine, as the oil in circulation takes a few minutes to drain down into the sump.

Open the flap in the bonnet.

Pull the dipstick (on left side of engine) out and wipe it with a clean non-fluffy cloth. Push the dipstick in fully, pull it out again and check the level.

The engine oil level must be between the two marks on the dipstick.





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

A – on the 1.6 litre engine – 1.25 l (2.1 pints)
B – on the 2.0 litre engine – 0.5 l (0.875 pints)

If the level is down to the MIN mark, it is not necessary to top up right up to the MAX mark. Add sufficient oil to ensure that the vehicle will run to the next oil level check without the level falling below the min. mark.

Permissible oil consumption, see "Technical Data".

When engine is working hard, the oil level should be kept near to the max. mark.

Topping up

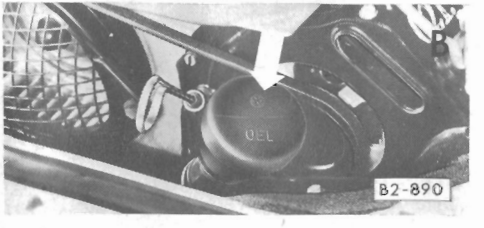
Unscrew the cap from the oil filler

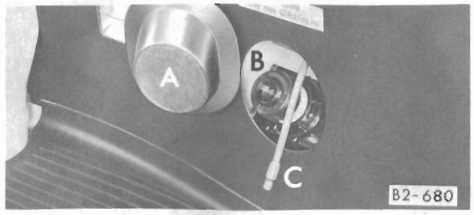
A – 1.6 litre engine B – 2.0 litre engine

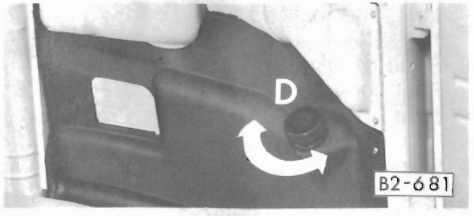
Add oil.

Check the level with the dipstick – the oil should not be above the max. mark. Screw the cap back on tightly.

Notes on the use of oils of different types and viscosity grades are given under "Lubricants".







Windscreen washer container

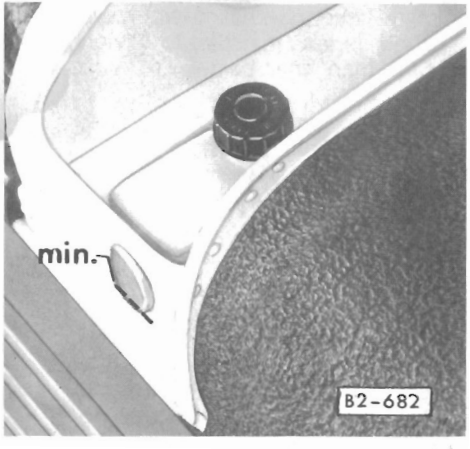
- Remove the cover – A.
- Unscrew the cap – B – and fill container to the top with water.
- Pressurize the container to a maximum of 3 bar (43 psi) at the valve – C –.

Vehicles with headlight washer:

- Remove cap – D – and fill container to the top with water.

The fluid is pumped to the windscreen and headlights by an electric pump.

The water should contain a glass cleaning solution to clean the windscreen better. Refer to "Care of car" section in "Care and maintenance".



The brake fluid reservoir

is located under the driver's seat, and it is fitted with a small window for checking the fluid level.

The fluid level can be checked through a cut-out in the floor covering. The level should always be between the upper and lower edge of the window. If it drops below this level, consult a V.A.G dealer

Nothing which is liable to damage the brake fluid reservoir should be stowed underneath the driver's seat.

Attention: The brake fluid should be changed every two years. Visit a V.A.G workshop where this operation will be carried out correctly.

Use only fresh (unused) Volkswagen or Audi brake fluid (to US FMVSS 116 DOT3 specifications) which is available at all V.A.G dealerships.

Caution

Brake fluid is corrosive and will damage the paintwork.

Brake servo

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

When vehicle is rolling or being towed with the engine not running, the brake pedal must be pressed harder.

Tyres and wheels

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

Before fitting any non-standard wheels or tyres to your car, have a word with your V.A.G dealer.

Using types of wheel and/or tyre which have not been approved by us can affect the vehicle under the construction and Use regulations.

See "Wheel changing".

Here are a few general notes on tyres

New tyres

- New tyres can be "run in'. (See section "Driving rules")

Tyre pressures

- The tyre pressures are given under "Technical data".
  The inflation pressures for the tyres fitted at the factory are given on a sticker on the steering column bracket.

- The pressures are for cold tyres. The pressures must not be reduced if tyres are checked when hot and pressure is higher than specified.

Tyre care

- Check tyres occasionally for damage and remove foreign bodies.

- Keep petrol and oil off the tyres.

- Try to avoid exposing the tyres to strong sunlight for weeks on end.

- Replace missing valve caps as soon as possible.

Tubeless tyres

- All factory fitted tyres are tubeless.

- Tubeless tyres must only be fitted to safety (hump) rims.

- Tubes should only be used in tubeless tyres in emergencies. When this is done, ensure that air trapped between tube and tyre can escape at the valve.

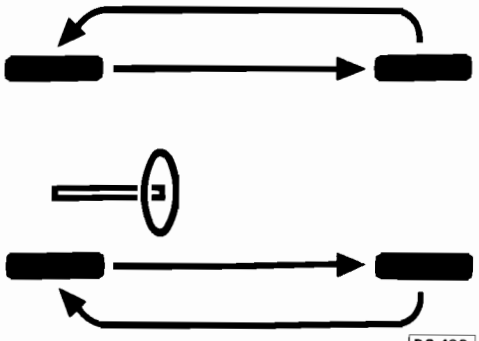
Tyre wear

Tyre life depends considerably on the following factors:

- **Inflation pressures**
  Pressures which are too high or too low shorten tyre life and also have a detrimental influence on vehicle handling. Low pressure can also cause a tyre to fail suddenly. At high speeds such tyres flex much more and this in turn creates excessive heat. This can cause tread separation and tyre blow-out. The pressures should therefore be checked at regular intervals, preferably when filling the fuel tank, and rectified as necessary.

- **Style of driving**
  Fast cornering, violent acceleration and hard braking all increase tyre wear.

- **Season of year and weather**
  The tyre treads wear more at high ambient temperatures on dry roads than at lower temperatures on wet roads. The rubber is less resistant to friction when warm than when cold.



- **Wheel alignment errors**
  Incorrect adjustment of wheel alignment causes increased, usually one-sided wear and also detracts from vehicles safety.

In order to avoid having to replace tyres earlier than necessary in case of **uneven tyre wear** it is advisable to change the tyres round as shown below – without altering the direction of rotation.

When the tread has worn down to a depth of 1 mm* measured at any point on the tread, the tyre has reached the limit for safe usage. We advise you however not to let the tyres wear down to this extent as tyres with treads in this condition cannot grip the road surface properly when driving at high speeds on wet roads.

* In other countries this figure may differ.

Wear indicators. At the bottom of the tread grooves of the original tyres on your vehicle there are a number of 12 mm wide and 1.6 mm high bars running across the tyre.

When these bars appear in two or more adjacent grooves so that there is no longer any tread at these points the tyres concerned should be replaced as soon as possible.

Replacing tyres

- For safety reasons it is advisable to renew tyres on all four wheels at the same time or to renew them at least in pairs on the axles.
- Vehicles which are fitted in production with radial ply tyres must be fitted with the same type of tyre when replacements are made.
- Only tyres of the same type and tread pattern may be combined.
- A combination of radial ply and normal tyres (cross ply) is not permitted.
- For safety reasons a **new** valve should always be fitted when a new tubeless tyre is being installed.

Winter tyres see "Winter driving".

The first 1000 km – and afterwards

Careful choice of materials, quality workmanship and modern production methods guarantee the high precision and smooth operation of all the engine components. Nevertheless, during the first few hours of its working life the engine will be more subject to the effects of internal friction than later on when all the moving parts have bedded down. How well the parts bed down depends primarily on the way you drive during the first 1000 km or so.

Varying the engine speed and the load on the transmission will help to produce a well run-in vehicle.

The following points apply to new **and** run-in vehicles:

- Never over-rev a cold engine – either in neutral or in the gears.
- Letting the engine labour is just as bad as thrashing it at full revs.
- Never let vehicle labour up a gradient with the accelerator pedal pressed right down; change down a gear or two in good time. During the running-in period you should make especially good use of the gearbox.
- Changing up in good time helps to save fuel and keeps the noise down.

Safe driving

The following points are of particular importance to safe operation of the vehicle.

Tyres

- New tyres do not give maximum grip straightaway and should therefore be run in at moderate speeds for about the first 60 miles (100 kilometers). This will help to make the tyres last longer.

Brakes

- Brake lining must bed themseves in and do not have the maximum frictional properties at first. To compensate for the slightly reduced braking effect, be prepared to use more pressure on the pedal during the first 150 miles (200 km). This also applies when new linings have been fitted.
- Use engine braking when going down steep hills: Change down before starting to go down the hill and use brakes as a reserve. When brakes are applied, do not keep them on continuously, apply and release alternately.
- After driving through water, driving in heavy rain or washing the car, the braking effect can be retarded slightly: The pads must be dried first by applying the brakes.

- 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 workshop in between the normal visits to the workshop.

- **The movement of the pedals, particularly the brake pedal, must not be restricted in any way.**
  If trouble occurs in the brake system, the full range of pedal movement may be required. For this reason, floor mats etc. should not be placed in the footwell if they are likely to interfere with pedal travel.
  Do not put articles in the footwell which could roll or slide under the pedals when the brakes are applied.

- If the pedal travel increases suddenly, it may be that one of the two brake circuits has failed. On vehicles which are fitted with a brake warning lamp, the failure of a brake circuit will also be shown by the lighting up of the warning lamp when brakes are applied. You can still drive on to get to the next V.A.G workshop but be prepared to use more pressure on the pedal and allow for longer braking distances on the way.

Driving economically

The technical conditions for economy are built into your vehicle at the factory. The engine is adjusted to use the minimum amount of fuel. It is now up to you to maintain the properties obtained by modern technology: If you have your vehicle serviced in a V.A.G workshop at the intervals laid down in the Service Schedule you will obtain optimal economy plus constant reliability and long service life.

Economical vehicle operation naturally depends to a large extent on your personal style of driving.

Anyone who wishes to drive as economically as possible, which means keeping fuel consumption and tyre and brake lining wear to a minimum, should avoid high speeds and full throttle acceleration and always drive in a smooth controlled manner.

In addition, however, it is essential to bear in mind that the individual conditions in which the vehicle is operating also affect the fuel consumption and these factors cannot be influenced to any extent by the driver. Factors which are unfavourable to fuel consumption are for example:

- The density of traffic, particularly city traffic with numerous traffic lights.
- Stop-start operation which involves driving short distances with frequent stops so that engine is continually cooling down and warming up.
- Condition of road surface, particularly loose sand and snow.
- Driving in long colums of vehicles in low gear with a relatively high engine speed (in relation to distance covered).

A low fuel consumption is obtained when driving for long distances with hardly any stops at a medium speed and with medium engine speed. At a reasonable speed on a motorway it is possible to obtain consumption figures which are below the specifications.

Engine oil consumption is also largely dependent on the way you drive, i.e. on engine load and engine speed. Depending on the way you drive the oil consumption can be up to 1.4 litres per 1000 km (4 pints per 1000 miles).

It is well-know that a new engine does not give its most favourable oil consumption until after a certain period of operation. Because of this, oil consumption cannot be judged accurately until after about 5000 km. Up to then the consumption may be somewhat higher than indicated in the previous paragraph.

It will be apparent that optimum performance of the vehicle and optimum economy are closely linked.

Winter driving

The vehicle will always be ready for use in snow and ice if a few simple measures are taken to "winterproof" it before the cold weather starts.

Air cleaner / intake air preheating

The intake air preheating is controlled automatically and no "winter measures" are necessary on the air cleaner.

Fuel

At ambient temperatures between 0° C and 15° C, carburetor icing can occur when the air humidity is high even though the intake air preheating system is working properly. The result is that the engine tends to stall at idling speed during the warming-up phase. Even the anti-icing additives contained in some fuels in the cold season cannot entirely prevent carburetor icing. When a properly tuned engine stalls repeatedly in the conditions described above it is advisable to mix **Volkswagen Audi V.A.G Petrol Additive** with the fuel. This additive is obtainable from V.A.G workshops in Germany and in many export countries under the Part No. AOS 150 000 03.

Winter tyres

only have advantages when road conditions are really wintry. Vehicles fitted with radial ply tyres can often manage without winter tyres if conditions are not too severe.

If vehicles fitted with radial ply tyres at the factory are equipped with winter tyres only radial ply winter tyres should be used.

When fitting normal winter tyres (cross ply), note the PR figures on the tyre walls. The specified carcass strength (PR number) must be adhered to.

Winter tyres must always be fitted on all four wheels.

Due to the specific characteristics of winter tyres, it is necessary to inflate them to 0.2 bar (3 psi) above the pressure for normal tyres.

Winter tyres are no longer fully effective when the tread has worn down to a depth of 4 mm.

Snow chains

Thin chains which do not stand clear of the tread more than 15 mm, including tensioner, can be used on all wheels except in the case of 205/70 HR 14 or 205/70 VR 14 tyres where the chains can only be fitted on the driving wheels. (Rear wheels)

When driving over long streches of road which are free of snow, the chains should be removed. On dry roads the chains wear very quickly and can damage the tyres as well.

Engine oil

tends to thicken at low temperatures and may cause starting difficulties. As soon as winter temperatures are expected, change over in good time to a thinner grade of oil. If you use multigrade oil you should not need to change to a different grade of oil.

The various viscosity grades are described under "Lubricants".

Hypoid gear oil (Manual gearbox)

The SAE 80 or SAE 80 W-90 hypoid gear oil to Mil-L-2105 API/GL 4 specifications is used all the year round.

Lubrication of the automatic gearbox is described in the section "Automatic gearbox", paragraph "Maintenance and lubrication".

Battery

A really cold battery has only a fraction of its normal capacity, particularly if it is not fully charged to start with. In order to ensure that the engine starts readily in all conditions:

Have battery checked at a V.A.G workshop frequently and charged if necessary. (Instructions on quick charging are given under "Battery care".)

The spark plugs

should not have excessively large gaps, particularly in the winter. The correct gap is 0.6–0.7 mm.

Handbrake

If there is a danger of frost, do not apply the handbrake but engage 1st (automatic gearbox: range "P") or reverse gear instead. Brake linings which have become wet due to splashing or condensation can freeze on to the drums in the winter when the handbrake is left on. When parking on steep hills, turn the front wheels in towards the kerb as well.

The windscreen and headlight washer

can be frostproofed and kept working by the addition to the water of a large dose of window cleaner solution with an anti-freeze agent.

Door locks

can freeze up if water gets into the cylinder when the vehicle is washed, for instance, so do not aim the water jet directly at the locks. It is a good idea to cover up the keyholes beforehand. A frozen door lock can be thawed out easily, even when it is very cold, with the help of a lock defreezing agent.

Frozen windows

can be cleared with defroster spray. After the spray has worked for a short period, the ice can be wiped off.

It is a good idea to carry a shovel or a short-handled spade in the car during the winter so that you can clear away snow if you get stuck. A small hand-brush for sweeping snow off the vehicle and a plastic scraper for the windscreen are also useful.

Trailer towing*

If you are going to tow a trailer with your vehicle, it must be specially equipped for this purpose.

When a new vehicle is ordered with a towing bracket, the following is taken into account:

- The towing bracket and the electrical connections for the trailer are installed correctly.
- In Germany the vehicle documents are endorsed.

When a towing bracket is service installed, the following should be noted:

- The towing bracket is a safety part. Only a bracket which has been developed for your vehicle is to be used and it must be fitted in accordance with our instructions. Details are usually given in the fitting instructions supplied with the bracket.
- A special warning lamp must be fitted within the driver's range of vision to show that the trailer turn signals are working.

The service installation should preferably be carried out by a V.A.G Dealer.

Please note the following points:

- One pin in the 7 pin trailer socket on the vehicle is usually left free (terminal 54 g). This can be used to connect additional electrical components in the trailer to the vehicles electrical system.
- If traffic conditions behind the trailer cannot be seen properly with the normal mirrors, a second outside mirror must be fitted. If necessary, both outside mirrors should be on folding extending telescopic arms.
- Ensure that the tyres have good treads and that the inflation pressures are correct. If the vehicle is fitted with winter tyres, trailers with brakes should also be equipped with winter tyres.

* Instructions for towing with vehicles with automatic gearbox are given in section "Automatic gearbox".

Towing a trailer places a considerable strain on the body, transmission, clutch and brakes of the towing vehicle.

In order to avoid damage to the towing vehicle, please note the following instructions and driving rules

- Do not exceed the maximum trailer weight specified for the vehicle (see Technical Data).
- The weight of the trailer draw bar on the ball of the towing bar must not exceed 50 kg (110 lbs.). The permissible rear axle load must not be exceeded.

The minimum nose weight must not be less than 4 % of the actual trailer weight but it need not be more than 25 kg.

- Use the clutch carefully when towing. Do not accelerate more than necessary when moving off and never slip the clutch longer than necessary.
- Always drive at a moderate speed. In many countries there are speed restrictions for vehicles towing trailers.
- Use brakes in good time and as gently as possible. Practise braking properly with a trailer with over-run brakes: In this way you can avoid the jerking which is caused by locked trailer wheels.
- Change down in good time before going downhill.
- Trailer towing always puts the fuel consumption up. This is due to the extra weight and the higher rolling and air resistance.

The following points should be noted when towing a trailer in mountainous regions:

- The trailer weights given in the "Technical Data" section in conjunction with the 16 % gradient are only applicable up to an altitude of **1000 m** above sea level.
  When driving above **1000 m,** the engine output and thus the climbing ability decreases due to the lower air density. The maximum combined weight (vehicle and trailer loaded to permissible total weight) given for altitudes up to 1000 m must therefore be reduced by 10 % for each further 1000 m if the gradients mentioned above are to be climbed.
  If the combined vehicle and trailer weight is below the permissible maximum a correspondingly steeper gradient can be climbed.

Car care can be done by every car owner. All that is required is interest and pride in one's own car, a supply of suitable car care materials and a quick glance at our instructions which must be followed exactly.

Maintenance is more than car care. It requires specialist knowledge, workshop appliances and special tools. Even oil changing and lubricating require specialist knowledge and cannot be done properly without the equipment available in a lubricating plant*. This work must be done in accordance with our instructions.

Present day safety regulations and environmental protection place very strict limits on the amount of repairs and adjustments which even a technically skilled and experienced handyman can undertake on the engine and running gear.

Tinkering with the vital parts of a motor vehicle can endanger the life and health of all roads users. Alteration of the factory settings of carburetor, ignition or valves invariably changes the emission values and increases fuel consumption and such alterations are forbidden in most countries today.

If you have your vehicle serviced at a V.A.G dealership you can rest assured that everything possible will be done to maintain the roadworthiness, economy and reliablility of the vehicle.

The Service Schedule issued with your vehicle tells you in detail what has to be checked and when and what advantages this brings you.

* In most countries there are environmental protection laws governing the disposal of old oil.

Care of car

Regular and careful care helps to maintain the value of the vehicle. Every V.A.G workshop carries stocks of suitable car care materials. The instructions for use on the container should be followed.

Washing

The best protection against environmental influences is frequent washing and waxing. The longer dust and industrial grime, salt, insects and bird droppings are left on the paintwork the more damage they are liable to do to the finish.

Wash the vehicle frequently from top to bottom with clear water, but not in direct sunshine.

Rinse out the sponge thoroughly at frequent intervals in order to avoid scratching the paint.

If clear water does not suffice to remove dirt, add shampoo to the water and use a sponge or a soft brush. Afterwards rinse the vehicle and dry it with a leather.

Some shampoos leave a protective film of wax on the cleaned surface so that subsequent waxing is not necessary.

Waxing

Wax as often as possible. This will prevent dirt from sticking to the paint and industrial grime from penetrating into the paint. Either apply wax to the vehicle after washing and then polish it or simply add a wax solution regularly to the second lot of washing water. Rinse the vehicle with this solution and dry with a leather.

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.

Matt painted surfaces should not be treated with wax or polish because this will spoil the matt finish. This also applies to trim strips of plastic with a matt finish.

Touching up paint damage

Small marks in the paint such as scratches or stone damage should be touched with Volkswagen touch-up brushes or spray cans before the metal starts to rust. A sticker on the left cab lock pillar gives the colour designation and number of the original finish.

Removing industrial grime

Treat the paint surface with an industrial grime remover as soon as possible. Do not apply directly to black plastic parts. The solution should be allowed to work for a few minutes and then rinsed off very thoroughly. Pay particular attention to all seams and joints.

Removing tar spots

Treat the paint surface with a tar remover as soon as possible. After treatment rinse away all traces of the tar remover with a detergent solution (water and shampoo).

Removing insects

Dried-on insects should be removed as soon as possible with an insect remover. Wash the paint surface afterwards. Clean dirty windscreens with an insect sponge.

Care of chromed parts

Before applying any chrome cleaner, wash the chrome plated parts throughly and dry them. Remove spots and marks with a suitable chrome cleaner.

These materials usually contain a preservative which protects the parts from the weather.

A chrome protective compound can be sprayed on to give long-term protection.

Care of plastic parts

Plastic parts and adhesive strips which are exposed to the weather should be cleaned as explained in the section "Washing".

If normal washing is not sufficient, these parts may only be cleaned with special plastic cleaners. The cleaner manufacturers instructions for use should be followed closely. No other cleaning compounds or paint polish should be used because these may attack the plastic parts and strips.

Cleaning cloth upholstery

Clean with a vacuum cleaner or a medium hard brush. Spots or very dirty patches can be removed with a suitable cleaner.

Moisten a clean, non-coloured cloth with the cleaner and rub the spot with a circular motion, working inwards.

Cleaning and preserving leatherette

Apply plastic cleaner and rub dry with a soft cloth.

Cleaning windows

Windows can normally be cleaned with a sponge and lukewarm water and then dried with a leather.

Do not use the same leather for the paintwork since traces of paint cleaner and polish cause streaks to appear on the windscreen.

Insects can be removed with an insect sponge.

Traces of rubber, oil, grease or silicone can be removed with window cleaner or a silicone remover, depending on how dirty the glass is.

Both solutions can be put into the water in the windscreen washer. In the winter a window cleaner with an anti-freeze agent should be used in the water.

Windscreen wiper blades

Blades which are clogged with insects or oil deposits should be removed and cleaned with a hard brush and a detergent solution. New blades should be installed once or twice a year according to condition.

Door, hood 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.

Cleaning and anti-corrosion treatment of engine compartment

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

If the engine compartment is cleaned at any time with grease removing solutions 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.

Your V.A.G dealer has stocks of the high-quality preservation compound recommended by the factory.

Airing the interior

If the vehicle is left in a closed garage for a long time, the garage and car doors should be opened occasionally to prevent the formation of mould and damp stains.

Driver's seat

If the seat becomes hard to move, clean the runners with a cloth and grease lightly at top and bottom.

Removing driver's seat, see section "Operation", paragraph "Seats".

Pick-up cover

When the canvas is wet from rain or from cleaning, it should be put on the bows and strapped securely so that the material does not shrink.

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 gets damaged when the vehicle is in use, the undercoating should be examined at certain intervals – preferably before and after the winter season – and any damage made good.

Not all the materials available are suitable for this purpose so we advise you to have the patching up or additional coating done by a V.A.G workshop.

Every V.A.G workshop has stocks of the correct compound, has the necessary equipment and is familiar with the application procedure.

They know, in particular, what precautions have to be taken in respect of the braking system and the exhaust system to ensure that additional undercoating is applied properly.

Cavity preservation

Various cavities in the body are also protected against corrosion and this protection can be intensified by repetiton of the preservation. The best results are obtained when the first subsequent treatment is done about one year after the vehicle is put on the road. All V.A.G workshops know how and where this treatment has to be carried out and have the factory approved compound and the equipment required.

Battery

The battery is in the engine compartment on the right side. It is easily accessible and can be removed and installed very quickly.

As the starting ability of the engine and the functioning of the entire electrical system depend to a great extent on the condition of the battery, it is essential to check and service the battery regularly.

Checking the acid level

The acid level should always be between the two marks on the side of the battery. If it is low, remove the plugs and add distilled water.

Do not fill above the max. mark because the acid will overflow when the battery is being charged and cause damage.

How often the battery has to be checked depends on the operating conditions and the time of year.

If a vehicle is often used for long runs in the daytime when next to no current is being used, the battery will need topping up with distilled water much more often than in the case of a vehicle operating under different conditions. As a general rule the battery acid level should be checked more often in the summer than in the winter.

When driving in hot countries it is advisable to check the battery at least once a week.

If you do not intend to use your vehicle for a long period, the battery should be taken out and charged about every 4 weeks, otherwise it will discharge itself in time and this can cause permanent damage to the plates.

Removing

On vehicles with the 1.6 l engine the air cleaner must be removed first.

Loosen terminals. Remove earth strap first then the positive cable. Detach battery securing bracket. Pull battery forward a little and lift it out.

Installing

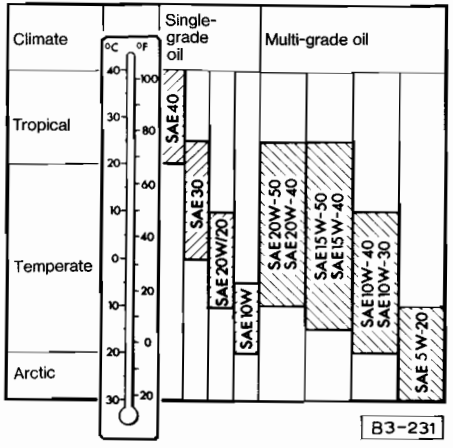
When installing the battery, first fix the positive cable, then the earth strap. Keep the terminals clean and coat them with terminal grease after fitting the clamps.

Some more points:

Never short the battery terminals as this causes the battery to heat up very quickly and it may burst. Furthermore, the sparks can ignite the gas generated during the charging process. Never use a naked flame near the battery. Battery acid is corrosive and must not get into the eyes or into skin and clothing. It will also mark or destroy painted surfaces, trim panels and seat belts.

Never run the engine with the battery disconnected as this will damage the electrical system. On the other hand, both terminals must be taken off before the battery is given a quick charge while in the vehicle.

Emergency starting with a second battery – see Do-it-yourself section.



Do not drive with full throttle for long periods when using SAE 10W single-grade oil or SAE 5W-20 multi-grade oil if temperature is above the range shown.

Lubricants

Engine oil

Use only reputable brands of **HD engine oil** marked "SE" according to the API system.

As the operating ranges of neighbouring SAE grade oils overlap, there is no need to change the oil if the temperature varies for short periods.

Gearbox oil and ATF

(all the year in all climatic zones)

Manual gearbox and final drive:

Hypoid oils marked "GL 4" according to the API system or oils which fulfil Mil-L-2105 specifications – SAE 80 or 80 W-90.

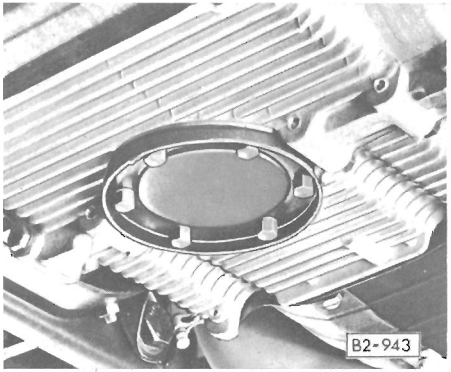
Automatic gearbox:

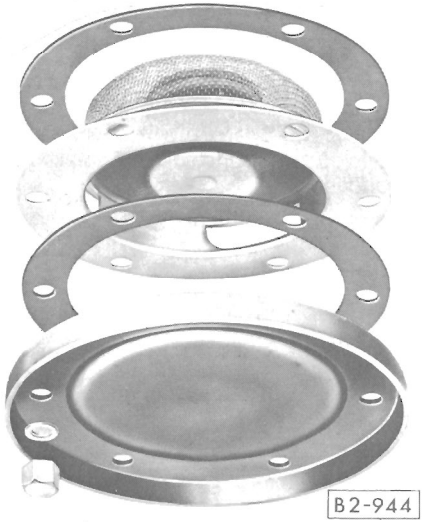
- Converter and gearbox:
  ATF Dexron
- Final drive:
  Hypoid oils marked "GL 5" according to the API system or oils which fulfil Mil-L-2105 **B** specifications – SAE 90.

Lubricant additives

No additives of any kind should be mixed with the lubricating oils.

Details of oil changing are given on the next pages.





Lubrication

Engine

The engine oil must be changed at least twice each year

Engine oil not only deteriorates when it is in use, the lubricating properties are also impaired by ageing. The oil should, therefore, be changed every 6 months or not later than at the mileages specified in the Service Schedule.

If the vehicle is used continuously in very dusty areas or in countries with arctic climates where the temperature is normally below about –20° C, the engine oil should be changed at shorter intervals.

If you are not sure whether your engine oil should be changed at shorter intervals or not, ask your V.A.G dealer.

Due to the cleansing properties of the HD oils, the fresh oil tends to look dirty after being in use only a short time. This has nothing to do with its lubricating properties and need not worry your.

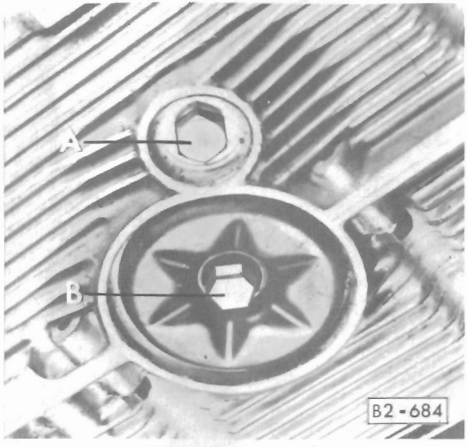
1.6 litre engine

- The old oil should only be drained when warm.
- Clean oil strainer at every oil change.

Loosen all six cap nuts but only remove five. Detach strainer plate on one side with a screwdriver and let oil drain out. Remove strainer and clean thoroughly. Use new gaskets and washers when installing.

Oil quantitiy: 2.5 l.

Oil filler



2.0 litre engine

- The old oil should only be drained when warm.
- Remove oil drain plug "A".
- Remove central nut "B" and take out strainer at the intervals specified in the Service Schedule.

Use new gaskets and washers.

Tighten nut "B" to 10–13 Nm (7–9 lb ft) with a torque wrench.

Oil quantity: with filter change – 3.5 l
Oil quantity: without filter change – 3.0 l

The oil filter element

is changed at the intervals specified in the Service Schedule. That is at least at every second oil change.

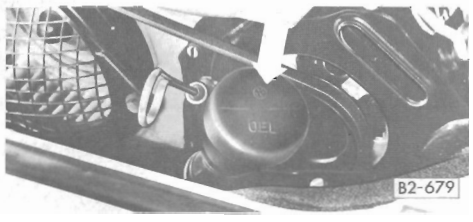
Loosen and tighten the filter by hand with the special wrench. Oil sealing ring on new filter element.

General

(1.6 and 2.0 litre engines)

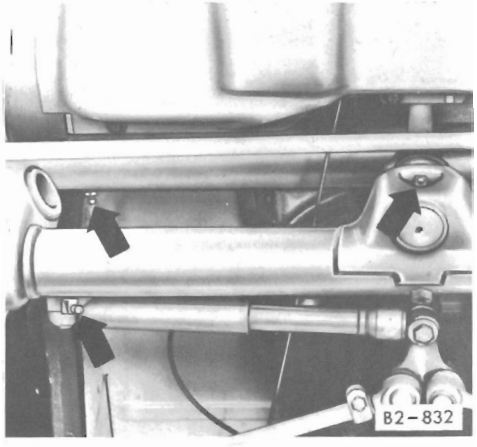
See "Lubricants" page for engine oil specifications. Always check level with dipstick after changing oil: The oil must be near the maximum mark but not above it on any account. See "Checking oil level".

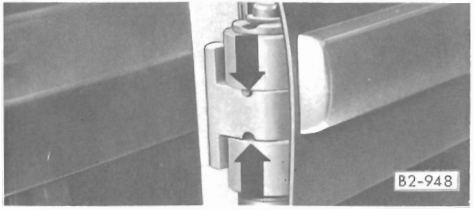
Oil filter



Gearbox oil

The gearbox oil does not need changing.





Front axle

The arrows show the location of the grease nipples.

The grease nipples on the left side are symmetrically opposite.

- The front axle can only be lubricated properly when axle is free of load, that is with the front end lifted.
- Clean grease nipples and grease gun nozzle carefully.
- Inject grease until fresh grease starts to come out at the torsion arm sealing rings.
- Clean all traces of grease off the tyres and brake hoses immediately.

The front axle must be lubricated once a year or at least at the mileages specified in the Service Schedule.

Use only multi-purpose grease with a lithium base.

Additional points to be lubricated

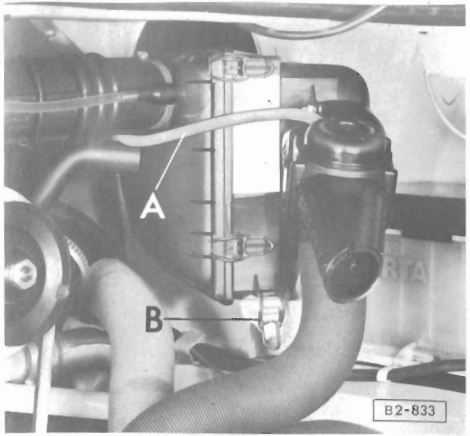
The sliding door link and the rear flap hinges should be oiled at the mileages specified in the Service Schedule or at least once a year. The double cab door hinges and other flap hinges should be oiled at shorter intervals depending on conditions of use.

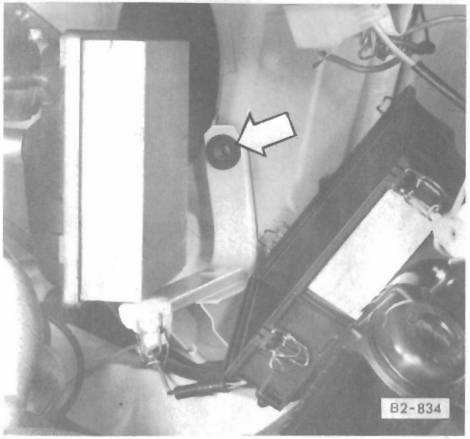
Lubricant: SAE 30 engine oil.

Catch surplus oil drops and wipe off carefully.

The battery terminals and posts are coated with **terminal grease.**

The **lock cylinders** in the doors should be lubricated as required with graphite. The key can be dipped in graphite and then turned to and fro in the lock a few times.





Air cleaner

General (1.6 and 2.0 litre engines)

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.

1.6 litre engine

Cleaning or renewing the element

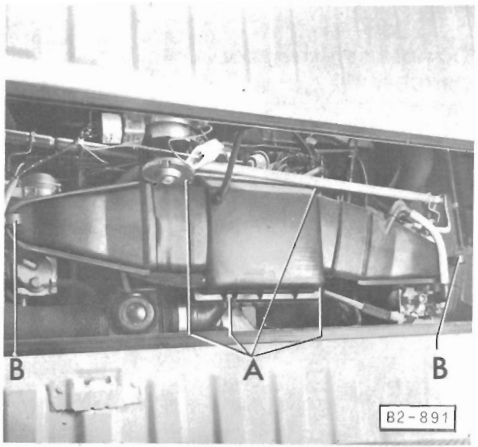
- Pull vacuum hose A off.
- Release clip B.
- Lift cleaner out of lower mounting and pull it out of front mounting.
- Release 4 clips and take housing apart.
- Take element out and clean or replace.

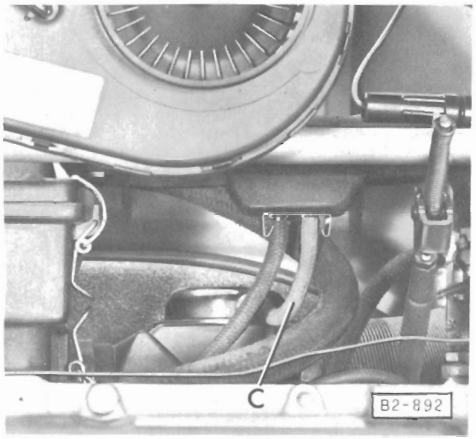
Insert paper element again carefully and ensure that seal is located properly.

When installing cleaner, insert housing in grommet of front mounting and push it forward to engage it in the lower mounting.

Close clip and connect vacuum hose.

Do not let element come into contact with petrol or oil.





2.0 litre engine

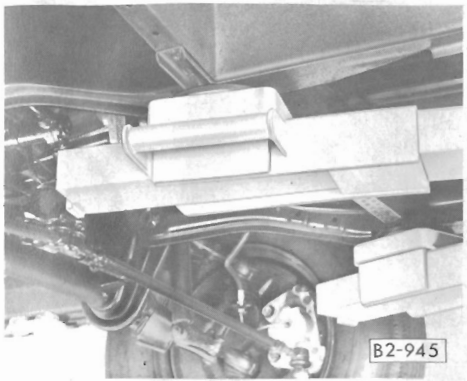
Cleaning or renewing the element

Through access flap inside vehicle:

- Open clips **A.**
- Detach all hose connections on top part of cleaner.
- Pull back spring clips **B** on both carburetors, pull side parts of cleaner off carburetor connections and take cleaner top part off.
- Take element out of bottom part and clean or renew it.

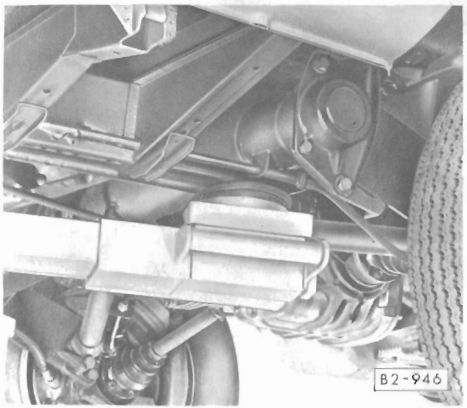
When installing, ensure that the seals are located properly on both carburetors. Connect all hoses again.

In order to ensure satisfactory operation of the temperature and load sensitive intake air preheating it is essential that the two hoses under right side of cleaner are connected correctly. The red hose must be on the brass connection **C.**



Lifting with a vehicle lift

The vehicle must be lifted only at the positions shown here, otherwise damage will occur and there is a risk of accident.



Rear: Side member or outer ends of cross tube

Lifting with a trolley jack (not illustrated)

When lifting the front or rear end with a trolley jack, the jack must only be placed under the front axle beam or the rear cross beam.

Always use a suitable adaptor: To avoid damage, ensure that pressure is not applied to unsuitable parts near the lifting point.
The adaptor must be shaped so that there is no danger of the vehicle slipping off.

As a general rule: Never lift under the engine or gearbox as this will cause serious damage.

Changing wheels

The **spare wheel** is in the rear compartment. On some models it is covered with a plastic cap. On vehicles with a bench seat in the cab, the wheel is under the seat. Taking the seat out is described in section "Operation", paragraph "Seats".

Taking wheel out of rear compartment: Take cap off and release strap.

Putting wheel back: Secure strap so that the plastic part prevents wheel from damaging strap (arrow).

The **jack** and **tools** are together under the passenger seat.

Note:
Before fitting non-standard wheels or tyres, see the remarks at the beginning of the "Wheels and tyres" section.

Preparation
On the side opposite to that on which the wheel is to be removed, scotch a wheel at front and rear so that vehicle cannot roll away when lifted.

Apply handbrake firmly.

Place spare wheel, jack and tools ready for use.

The following are required out of the tool roll: Box spanner, bar and hook.

Remove the wheel cap with puller hook and bar. Hook the puller into the holes in the edge of the cap and lever against the rim with the bar.

Loosen all wheel nuts one turn with box spanner and bar.

Insert jack arm into square hole under the body nearest to wheel with flat. Clean hole thoroughly beforehand if necessary. The jack should be vertical.

If the ground is so soft that the jack can sink into it, place a large strong support under the baseplate.

Lift the vehicle until the appropriate wheel is off the ground.

a – Lifting b – Lowering

Remove wheel nuts and take wheel off.

Fit new wheel and tighten nuts by hand with box spanner.

Lower vehicle.

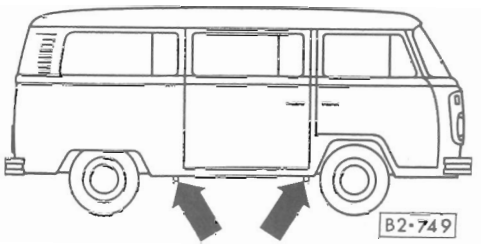
Tighten nuts uniformly and diagonally by placing bar in spanner so as to obtain the maximum leverage.

The wheel nuts can be tightened adequately by any normal healthy adult using the tools provided in the proper way. In case of doubt have the tightening torque checked with a torque wrench at the first opportunity.

Tightening torque: 130 Nm (94 lb ft).

Install wheel cap.

Stow jack, wheel and tools away again.



The jack is only designed to lift the vehicle for wheel changing. When working under the vehicle, ensure that it is supported on blocks or trestles.

Check inflation pressure of wheel fitted at the next opportunity and rectify if necessary.

Have the damaged tyre repaired as soon as possible.

Fuses

To prevent damage to the electrical system due to short-circuiting or overloading, each individual current circuit is provided with a fuse.

The fuses are housed in a box with a plastic lid under the dash.

Fuse layout

As numbered on the plastic lid:

1 – Tail light left, shift console light (Automatic gearbox), rear fog light [2])
2 – Side light right and left, tail light right, license plate light.
3 – Dipped beam left.
4 – Dipped beam right.
5 – High beam warning lamp, high beam left.
6 – High beam right.
7 – Fresh air blower*, rear fog light [1]), fog lamps [2]).
8 – Interior lights, emergency warning lights.
9 – Vacant.
10 – Wipers, intermittent wipers*, headlight washer* (switch current), heated rear window*.
11 – Horn, brake lights, brake warning lamp*, reversing lights* (Automatic gearbox).
12 – Warning lamps for all oil pressure, fuel gauge, turn signals and generator.

Fuses 9 and 10 = 16 Amp
all others = 8 Amp

[1]) on vehicles without fog lights
[2]) on vehicles with rear fog light **and** fog lights

* if fitted

Changing a fuse

- Switch component concerned off.
- Remove the lid of the fuse box.
- Take defective fuse out of the clips carefully.
- Insert new fuse of same capacity so that the metal strip is visible, but do not grip the metal strip or bend the retaining clips. The fuse must fit tightly between the clips.

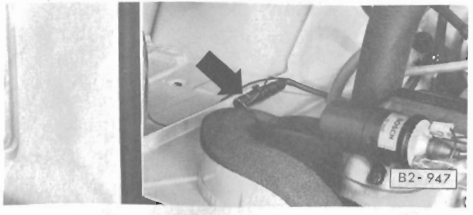
Note:

- A blown fuse can be recognized by the break in the metal strip.
- If the newly inserted fuse blows again after a short time, the electrical system must be checked by a V.A.G workshop 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.
- Always carry a few spare fuses on the vehicle.

Relays

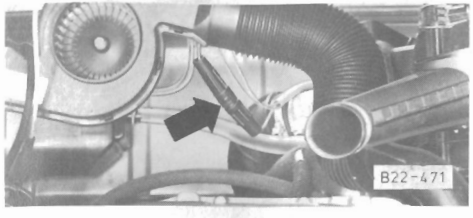
Relays for various electrical components are located above the fuse box.

Checking and replacing relays should be done by a V.A.G workshop.



Additional fuses in separate holders

On vehicles with manual gearbox the fuse (8 A) for the reversing lights is in the engine compartment near the coil (1.6 litre engine, not shown) or on the metal lip in front of wheel housing (2.0 litre engine, upper Fig.).

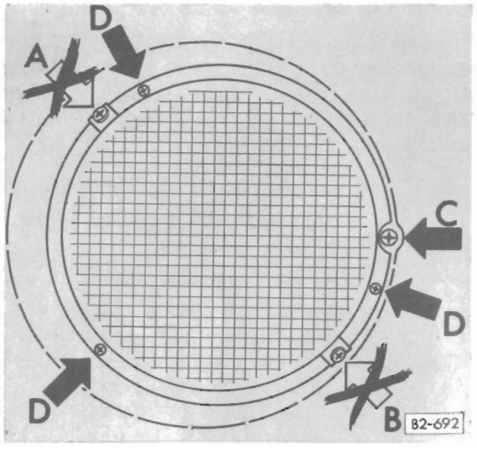


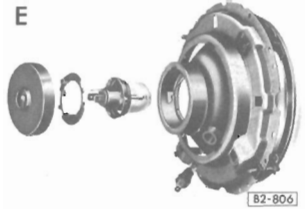
The fuse (16 A) for the warm air blower (2.0 litre engine only) is in the engine compartment near the blower motor.

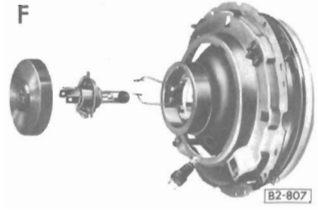
Changing separate fuses

Press two halves of holder together and turn in opposite directions to take apart. Replace blown fuse. Press holder halves together again and turn to engage the spring-loaded catch.

On vehicles with a heater, details of the heater fuses are given in an insert to the manual.







Changing bulbs

Before fitting a new bulb, switch off the lamp concerned. Do not touch the glass part of the new bulb with the bare fingers because the finger marks left on the glass evaporate when the bulb gets hot, the vapour settles on the refelctor and dims it.

Remove headlights

- Take trim ring off:
  Remove screw – C. Lift ring off near securing screw first then lift it off the lug on the opposite side.
- Remove three screws – D – and take off support ring with headlight. **Do not turn adjusting screws A and B.**

Screw A = Lateral aim
Screw B = Vertical aim
Screw C = Secures trim ring
Screws D = Secure support ring

Correct headlight adjustment is very important for vehicle safety. The adjustment should therefore only be done with a special appliance.

Headlight bulb

(Normal and halogen H 4)

- Pull connector and cap off headlight.
- Normal headlight (E):
  Press ring in in slightly and turn it to the left to take it out of reflector.

  Halogen headlight (F):
  Squeeze retaining clip together and fold away.
- Take bulb out.
  Ensure that bulb designations tally.
- Fit new bulb in reflector so that the centre terminal is at the top. (On normal headlights the lug on the bulb plate must engage the recess at the bottom of the reflector.)
- Normal headlight
  Install ring, press it against the reflector and turn it to the left.
- Halogen headlight
  Swing clip over bulb base, squeeze it together and engage in the retaining lugs.

- Fit cap properly – it must contact the reflector – and attach connector.
- Install headlight.
- Have alignment checked.

Side light bulb (Normal and halogen headlights)

- Remove headlights as described on previous page.
- Take headlight rim off and remove ring with headlight (as explained on previous page).
- Turn bulb holder to the left and take it out of reflector.
- Turn bulb to left and take it out. Ensure that bulb designations tally.
- Press new bulb into holder and turn it to the right.
- Press holder into reflector and turn bulb to the right.
- Install headlight
- Have alignment checked.

It is always advisable to carry a box of spare bulbs in the car. These can be obtained from any V.A.G workshop.

Sealed-Beam headlights
(Export models only)

Seven inch units with twin filaments are used.

- Remove screw in trim ring and take ring off.
- Remove three short screws in the retaining ring and take ring off.
  Caution! Do not alter the setting of the three long screws.
- Take Sealed-Beam unit out and pull cable connector off.
- When installing the new unit, ensure that the lugs engage properly in the support.
- Screw trim ring securing screw in 2 or 3 turns.
- Press opposite side of trim ring over the metal lug on the edge of the headlight recess and then tighten screw.

If no other parts of the headlight have been altered, the headlight alignment will not have changed.

Rear lights

- Remove lens.
- Press defective bulb into holder, turn to left and take out.

Bulb positions:
Top – Turn signal light
Centre – Brake/tail light
Bottom – Back-up light

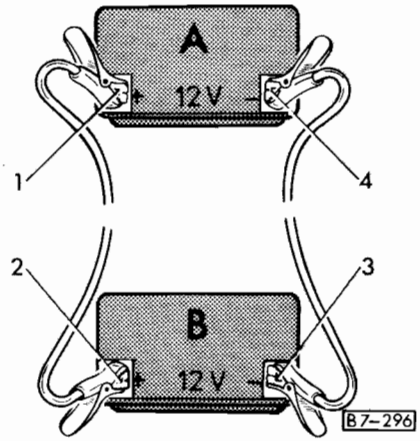
- When installing a twin-filament brake/tail light bulb, the pin nearest to glass must be downwards.
- Install lens.
- Tighten screws uniformly but do not overtighten.

Front turn signal and license plate lights

- Remove lens.
- Press defective bulb into holder, turn to left and take out.
- Fit new bulb.
- Check that seal is located properly and do not overtighten lens securing screws.

Interior light

- Place screwdriver carefully between housing edge and headlining and lever light out.
- Take bulb out.
- Install new bulb.
- Insert retaining lug first and then press lamp in until spring engages.



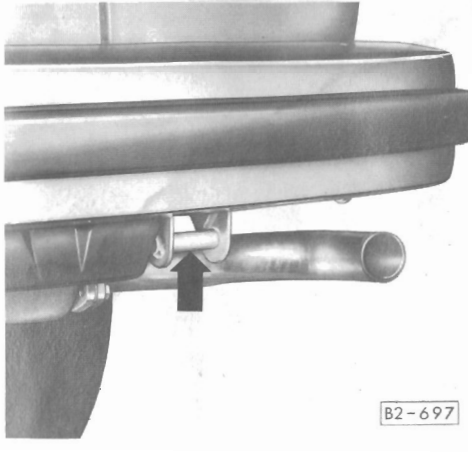
A – Flat battery
B – Boosting battery

Emergency starting

If the engine will not start because the battery has insufficient power in the winter or is flat because the vehicle has not been used for some time, a **jumper cable** 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 cable must be heavy enough to carry the load. Note cable manufacturers data.
- A flat battery can freeze at – 10° C and if a battery is frozen it must be thawed out before connecting a jumper cable.
- There must be no contact between the vehicles as otherwise current can flow as soon as the plus terminals are connected.
- The flat battery must be properly connected to the electrical system.
- Remove all cell plugs and lay them loosely on the holes.
- The engine of the boosting vehicle must be running.
- Connect jumper cable 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 to (–) terminal of flat battery.

  Take great care to ensure that the jumper cable clips do not touch one another and that the plus cable does not touch current conducting vehicle parts – short circuit danger.
- Do not stand with your face over the battery – danger of acid burns.
- Start the engine in the normal way.
- When engine is running, disconnect cables in reverse sequence.
- Screw cell plugs in again.



Towing

The Transporter has towing eyes at front and rear. In order to avoid damage when towing or being towed, note the following points:

- Towropes must only be attached to the towing eyes.
- The towrope must be slightly elastic to reduce the risk of damage to both vehicles. Use only plastic towropes or towropes with spring links.
- Do not use excessive force when towing and avoid jerking.
- The driver of the towing vehicle must use his clutch very carefully when moving off and when changing gear. The driver of the vehicle being towed must ensure that the towrope is always taut.

If your vehicle has to be towed at any time note the following points.

- Switch the **ignition on** 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, more pressure is required on the brake pedal when the engine is not running.
- If the vehicle has an **automatic gearbox,** see the instructions in the "Automatic gearbox" section.

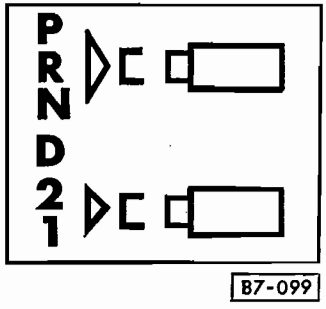
Check whether there are any local traffic regulations concerning the towing of vehicles.

Hints on fault finding

Some hints on fault finding are given in various parts of this manual.
These hints are summarized again here.

Fault	Possible cause	Remedy
Engine is hard to start or will not start at all	Incorrect starting procedure	Use correct procedure (page 30)
	Battery flat (starter not turning)	● Start with booster battery (page 62) ● Have battery charged (page 48) ● Push or tow start vehicle
Engine tends to stall when warming up	Carburetor icing	Mix Volkswagen-Audi Petrol Additive with the fuel (page 39)
Oil pressure warning lamp comes on or flickers when engine is running	Oil pressure too low	Stop engine immediately and check oil level. Further notes on page 32
Generator warning lamp comes on when engine is running	V belt slack or broken	a) 1.6 l engine: Adjust or renew belt. 2.0 l engine: See under b). Further notes on page 20
	If belt is in order the generator may be defective	b) Drive to next V.A.G Dealer. Battery will discharge continuously.

Fault	Possible cause	Remedy
Brake pedal travel suddenly increases considerably. Warning lamp comes on.	Failure of a brake circuit	Drive carefully to next V.A.G Dealer Caution! more pedal pressure will be required and stopping distance will be longer (page 37)
Turn signal warning lamp flashes quicker	One signal bulb has failed	Renew bulb (page 61)
Electrical component failed	Fuse blown	Renew fuse (page 58/59)
	If lights are involved: Bulb defective	Renew bulb (page 60/61)
Vehicle pulls to one side	Tyre pressure differ considerably	Check pressures, inflate if necessary (page 73)



The Automatic Gearbox

consists of an automatic three-speed planetary gearbox which is connected to the engine by a hydro-dynamic torque converter. In the normal driving range – D – all the forward gears are shifted automatically according to engine load and vehicle speed.

The selector lever has 6 positions:

P – Parking lock
R – Reserve
N – Neutral
D
2 } Forward ranges
1

A safety catch is provided for selector lever positions P, R and 1.

The catch is released by pressing the button on the side of the selector lever.

Description

Basic driving rules

- **When moving off, always apply footbrake or handbrake before selecting a driving range.**

  Reason: The torque converter, which also serves as a moving off "clutch", always transmits a certain amount of power even when the engine is only idling. This means that the vehicle tends to move slowly or "creep"as soon as a driving range is selected. The higher the engine speed is, the stronger is the tendency to creep.

- **When selecting a driving range before moving off, do not depress the accelerator pedal. If the lever has been accidentally moved into "N" from a driving range when vehicle is moving, release accelerator pedal and let engine speed drop to idling before moving lever back into a driving range.**

  Reason: When engaged at high engine speeds, the shift clutches in the gearbox are subjected to an excessive amount of strain.

Selector lever positions

"D" The three forward driving ranges are shifted up and down automatically according to the throttle opening (engine load) and the vehicle speed. "D" is therefore the position for normal driving.

"2" The vehicle moves off in 1st gear and changes into 2nd gear automatically but does not change into 3rd gear. The maximum speed in "2" is 90 km/h (56 mph).
When vehicle is in motion, the lever can be moved from "D" into "2", with accelerator pedal depressed if necessary. However, as the shift into 2nd gear takes place immediately, this must only be done at speeds **below 85 km/h (63 mph).**
This is the correct gear for hilly stretches.

"1" The vehicle moves off in 1st gear and remains in this gear. It does not shift into 2nd or 3rd gear.
This is the gear for steep gradients.
This range can also be selected when vehicle is in motion, **but this must not be done at speeds above 45 km/h (28 mph) (Press button on lever). If this instruction is not noted, the engine may be damaged by excessive speed.**
The maximum speed in 1st gear is 50 km/h (30 mph).

"R" The reverse range must only be selected with the vehicle stationary and the engine idling. Press button on selector lever to engage reverse.

"N" This corresponds to neutral in a normal manual gearbox. Nothing happens in the automatic gearbox.

"P" This is equivalent to engaging a gear with a normal manual gearbox with engine switched off. In "P" the driving wheels are locked = Parking lock. **The parking lock may only be engaged when vehicle is standing still.** To move the lever into or out of "P", the safety catch must be depressed.

Kick-down:
Pressing the accelerator pedal right down past the full throttle operates the kickdown switch. The kickdown switch alters the points at which the automatic gearbox works. There are two variations:

- Maximum acceleration by delaying upshift until engine is at full throttle (forced throttle).
- Bringing about an immediate downshift at speeds below 90 km/h (56 mph) for fast overtaking and when on hills, that is to say, in those situations where a downshift would appear necessary with a manual gearbox.

If the vehicle is driven with the accelerator pedal fully depressed in this way and with the selector lever at "D", the gearbox shifts into the next gear at the following speeds:

from 1 to 2 approx 50 km/h (30 mph)
from 2 to D approx 90 km/h (56 mph)

Driving tips

Starting
The engine can only be started in "N" or "P". (Other points on starting are as given in section "Operation", paragraph "Starting the engine".)

Moving off
When the lever is moved from "P" to "N" with engine running or into a driving range when moving off, the brakes must be applied at "P" because the reverse gear is engaged briefly (see "Basic driving rules").

Stopping

To stop vehicle temporarily such as at traffic lights, all that is necessary is to apply the brakes. It is not necessary to move the lever to "N" while stationary. The engine should only run at idling speed and the vehicle is held with the brakes.

Parking

In general, applying the handbrake will be sufficient to prevent the vehicle from rolling away. This is, of course, assuming that the handbrake is working properly.

However, when additional security is called for, such as when parking on a gradient, the parking lock should be engaged as well.

Basic rules:

- Engage the parking lock **after** applying the handbrake.
- Release the parking lock **before** releasing the handbrake.

When it is freezing, it is advisable to use only the parking lock to secure the vehicle because the brake shoes can freeze on to the drums if the handbrake is applied.

Note:

When a vehicle has been parked on a gradient, using only the parking lock, it may be found that a fair amount of force is required on the lever to release the parking lock. This is caused by the load on the parking lock mechanism and is quite normal.

Driving in mountains

On hilly stretches and particularly in mountainous areas the driver of a vehicle with automatic gearbox should be prepared to use the selector lever.

On steep roads with lots of sharp corners it is, however, advisable to select driving range "2". This prevents the gearbox from shifting up and down unnecessarily. On downhill stretches the selection of a lower range is even more important: Safety can be improved and the strain on the brakes relieved by the increased engine braking available in 2nd gear.

On very steep downgrades, select range "1" in good time so that the maximum engine braking force is available.

Emergency starting

On vehicles with an automatic gearbox the engine **cannot** be started by towing or pushing the vehicle.

If the engine will not start because the battery is flat, it is possible to start it by connecting a jumper cable to the battery of another vehicle.

See further detail under "Emergency starting in D-I-Y" section.

Towing

- Selector lever at "N"
- **Do not tow faster than 30 mph (50 km/h).**
- **Do not tow further than 30 miles (50 kilometers).**
- If the vehicle has to be towed long distances it must be lifted at the rear or the drive shafts must be removed.

  Reason: When the engine is not running, the gearbox oil pump is not working and the gearbox is not adequately lubricated for high speeds or long distances.

Trailer towing

When towing a trailer in flat country, it is only necessary to note what has already been said about driving a vehicle with automatic gearbox. The general instructions under "Trailer towing" also apply in this case.

In the interests of safety, however, and taking into account the additional load placed on the automatic gearbox and the brakes when driving in hilly districts, the following points should be given special attention:

- On steep hills and in traffic situations where it is obvious that only low speeds are possible, it is better to select driving range "2". In range "2" the driver can control the vehicle and trailer better.
- For long downhill stretches it is essential to select range "1" in order to get maximum benefit from engine braking and relieve strain on the brakes. If the gradient is only slight, sufficient braking effort may possibly be obtained in range "2".

Maintenance and lubrication

Lubricants

The torque converter and the automatic gearbox are both lubricated by a common supply of ATF.

The final drive housing is filled with hypoid gearbox oil.

See "Care and maintenance" section, para. "Lubricants" for specifications.

Checking ATF level

The correct ATF level is essential to the service life and operation of the gearbox. The level should therefore be checked at frequent intervals, for instance, when the engine oil has been checked.

In the engine compartment is a dipstick which is attached to the filler tube cap.

Note the following points when checking:

- The ATF must be lukewarm. Do not check level when oil is hot or cold.
- The vehicle must be on a level surface.
- The selector lever must be at "N" and the handbrake applied.
- During the check the engine must be running at idling speed.
- Use only clean lint-free rag to wipe the dipstick.
- The level must be between the two marks on the dipstick.

If level is too high or too low do not just add or drain oil. Consult a V.A.G Dealer as soon as possible so that the cause of the deviating level can be ascertained.

Changing the ATF

The ATF is changed regularly at long intervals as detailed in the Service Schedule. This requires specialist knowledge and should preferably be done by a V.A.G Dealer.

Please note that in arduous operating conditions (trailer towing, stop/go and city traffic, continuous mountain driving, high ambient temperatures) the ATF is changed more frequently.

Details of these intervals are also given in the Service Schedule.

When there is no ATF in the converter and gearbox, the engine must not be started or the vehicle towed.

The oil in the final drive does not need changing.

Technical data

Numerous European countries are starting to use the new international units for technical measurements.
Examples of these units are as follows:

	Old unit	New unit	Remarks
Output	bhp	kW (Kilowatt)	1 bhp = 0.736 kW
Torque	lb ft	Nm (Newtonmeter)	1lb ft = 1.36 Nm
Revolutions	rpm	1/min[1])	new way of writing
Pressures	psi	bar pressure	1 psi = 0.07 kg/cm² = 0.07 bar

[1]) For example 2700/min

Engine

4 cylinder, 4 stroke, horizontally opposed engine at rear ● Air cooled by fan ● Pressure oil feed gear type pump, with oil cooler, cleaned by strainer (and on the 2.0 litre engine by a full flow oil filter as well).

Mechanical fuel pump ● Downdraft carburetor (2.0 litre engine: twin carburetors) with automatic choke and accelerator pump ● Paper element air cleaner with temperature and load sensitive intake air preheating ● Speed limiter in distributor.

Engine data	1.6 litre engine	2.0 litre engine
Bore (mm)	85.5	94
Stroke (mm)	69	71
Capacity (cm³)	1584	1970
Compression ratio	7.5*	7.3
Maximum output in kW (bhp) DIN 70 020	37 (50) at 4000 rpm	51 (70) at 4200 rpm
Maximum torque in Nm (lb ft) DIN	108 (78) at 2800 rpm	143 (14.3)/2800 rpm
Fuel consumption** in litre/100 km	11.4 (24.8 mpg)	11.8/23.9 (13.0/21.7 mpg)***
according to DIN 70030 (as at 1968):		
Urban mpg	24.6	20.5 (22.6)***
l/100 km	11.5	13.8 (12.5)***
56 mph mpg	23.7	27.7 (27.2)***
l/100 km	11.9	10.2 (10.4)***
Fuel rating (RON Res F 1)****	91*	91
Max. oil consumption in litre/1000 km	1.4	1.4

* Engines with recessed crown pistons (for certain export countries): compression ratio – 7.3; fuel rating (RON) – 87
** See "Driving economically" in "Driving tips" section
*** Vehicles with automatic gearbox
**** See remarks under "Filling tank" in "Operating instructions" section

Power transmission

Manual gearbox:
Single plate dry clutch ● Clutch pedal free play 10–25 mm ● Baulk synchronized four-speed gearbox and differential in one housing ● Common lubrication for gearbox and final drive ● Double joint axle.

Automatic gearbox:
Hydrodynamic torque converter and planetary gear train with 3 forward gears and one reverse. Final drive in same housing but with separate lubrication. Double joint axle.

Body and chassis

Unitary body ● Frame plates reinforced with side and cross members ● Engine/gearbox assembly fitted on bonded rubber mountings

Front axle, steering

Front axle beam bolted directly to the two frame side members. Independent suspension on twin cranked trailing links with ball joints ● Torsion bars ● Stabilizer ● Worm and roller steering.

Rear axle

Independent suspension with semi-trailing arms ● Torsion bars ● Drive transmitted via double joints shafts.

Brakes

Hydraulic dual system ● Discs at the front. Drums with brake pressure regulator at the rear ● Brake servo unit (2.0 litre engine) ● Mechanical handbrake effective on rear wheels.

Chassis data

Wheelbase (mm)	2400
Front track (mm)	1395
Rear track (mm)	1455
Turning circle (m)	aprox. 12.3

Wheels and tyres

Perforated steel discs wheels with hump, drop-centre rims ● Size 5½ J x 14'.

If you wish to fit non-standard tyres or wheels to your car at any time we advise you to see your VW-AUDI Dealer first because the use of wheels and/or tyres not approved by the factory may affect the registration of the vehicle under the Construction and Use regulations.

Tyre pressures in bar (psi)	Micro bus[1]) L-Models		Delivery van Kombi Pick up[1])	Ambulance	Fire truck
Tyres[2])	185 R 14 C 6 PR	7.00 14 8 PR 93 P	7.00 14 8 PR 93 P	185 R 14 C 6 PR	185 R 14 C 6 PR
Front	2.1 (30)	2.1 (30)	2.1 (30)	2.1 (30)	201 (30)
Rear, fully loaded	3.1 (44)	3.1 (44)	3.25 (46)	2.2 (31)	3.1 (44)
Spare wheel	3.1 (44)	3.1 (44)	3.25 (46)	2.2 (31)	3.1 (44)

[1]) When these vehicles are driven with less than ¾ of the permitted load, the rear tyre pressures should be reduced 0.3 kg/cm².
[2]) If your vehicles has been fitted with different tyres at the factory and for vehicles with 1.2 ton payload, use the pressures given on the sticker on the steering column bracket.

Electrical system	**1.6 litre engine**	**Part No.**	**2.0 litre engine**	**Part No.**
Voltage (V)	12		12	
Battery (Ah)	45		45	
Starter (kW/hp)T0.8 (1.1)		0.8 (1.1)		
Alternator with voltagregulator (W)	700		770	
V belt (mm)	11.3 x 912 LA "XDA"	**111 903 137 D**	9.5 x 965	**021 903 137 A**
Belt tension:				
Deflector (mm)* new	9–11			
Deflector (mm)* used	11–14			
Spark plugs				
For normal operation	Bosch W 145 T1·1/W8a	N 17 801.13	Bosch W 145 T2/W8C	N 17 811.26
	Beru 145/14/14-8a	N 17 802.13	Beru 145/14/3/14-8c	N 17 812.24
	Champion L88A	N 17 803.7	Champion N7	N 17 813.14
For heavy duty operation at above 25° C	Bosch W 145 T1	N 17 801.1		
	Beru 175/14	N 17 802.1		
Plug thread (mm)	14		14	
Electrode gap (mm)	0.6–0.7		0.6–0.7	

* Measured with a firm thumb pressure (7.5 kg) in the centre between the pulleys.

Dimensions and weights

All given in mm or kg

	Micro bus De luxe	Micro bus	Kombi	Delivery Van	High roofed Delivery Van
Length	4545	4505	4505	4505	4505
Width	1760	1720	1720	1720	1720
Height, unladen	1955	1955	1955	1960	2290
Ground clearance, laden	200	200	200	200	200
Unladen kerb weight	1360[1])	1360[1])	1305[2])	1300[3])	1350[3])
Payload	890	890	995	1000	950
Unladen kerb weight*	1380[1])	1380[1])	1325[2])	1320[3])	1370[3])
Payload*	870	870	975	980	930
Total permissible weight	2250	2250	2300	2300	2300
Permissible front axle load	1010	1010	1010	1010	1010
Permissible rear axle load	1270	1270	1300	1300	1300
Permissible roof weight[4])	100	100	100	100	–

	Pick-up without cover	Pick-up with cover	Double Cab pick-up with cover	Double Cab pick-up without cover	Pick-up with large platform
Length	4505	4505	4505	4505	4525
Width	1720	1720	1720	1720	1980
Height, unladen	1960	2245	1960	2220	1960
Ground clearance, laden	200	200	200	200	200
Unladen kerb weight	1300[3])	1335[3])	1350[3])	1375[3])	1380[3])
Payload	1000	965	950[7])	920	920
Unladen kerb weight*	1320[3])	1355[3])	1370[3])	1395[3])	1400[3])
Payload*	980	945	930[7])	905[7])	900
Total permissible weight	2300	2300	2300	2300	2300
Permissible front axle load	1010	1010	1010	1010	1010
Permissible rear axle load	1300	1300	1300	1300	1300
Permissible roof weight[4])	–	–	75	75	–

	Fire truck	Ambulance	Kombi	Delivery Van **with higher payload**	Fire truck
Length	4460	4505	4505	4505	4460
Width	1720	1720	1720	1720	1720
Height, unladen	2250[6])	2250[6])	1955	1960	2250[6])
Ground clearance, laden	210	200	200	200	210
Unladen kerb weight	1440[3])	1515[1])[8])	1305[2])	1300[3])	1440[3])
Payload	955	585	1195	1200	1060
Unladen kerb weight*	–	1535[1])[8])	1325[2])	1320[3])	–
Payload*	–	565	1175	1180	–
Total permissible weight	2395	2100	2500	2500	2500
Permissible front axle load	1045	1010	1100	1100	1100
Permissible rear axle load	1350	1090	1400	1400	1400
Permissible roof weight[4])	–	–	100	100	–

Permissible trailer weights[5])	with **1.2 ton payload**		all other models	
in kg	1.6 litre	2.0 litre	1.6 litre	2.0 litre
with brakes	800**	1000**	1000**	1200**
without brakes	all models 600			
without/with brakes	models with automatic gearbox 600**/800**			
Permissible nose weight max.	50			

[1]) Without driver
[2]) Without driver, with seats
[3]) With driver
[4]) Use only roof racks supported in rain channel. Distribute load uniformly. The permissible total weight must not be exceeded.
[5]) Subject to local regulations which may differ
[6]) With emergency light
[7]) When carrying passengers, reduce load accordingly and distribute it in cab and on platform so that permissible axle load is not exceeded.
[8]) According to DIN 75 080

* With 2.0 litre engine
** On gradients up to 16 %

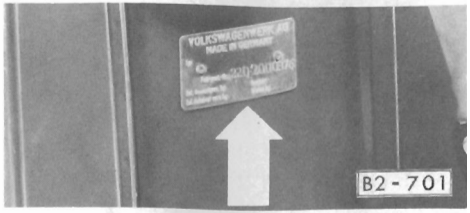
Capacities

	1.6 litre engine	2.0 litre engine
Fuel tank	about 56 l (12 galls) (5 of which are reserve)	about 56 l (5 of which are reserve)
Engine oil	2.5 l * (4.3 pints)	3.5 l (6.1 pints) with oil filter change * 3.0 l (5.2 pints) without filter change *
Windscreen washer	about 1.5 l (2.6 pints)	about 1.5 l
With headlight washer	about 8.9 l (14 pints)	about 8.0 l

Performance

Maximum and cruising speed:		
Manual gearbox:		
Bus, Kombi	110 km/h	127 km/h
Pick-up, double cab pick-up	110 km/h	123 km/h
High-roofed delivery van, high-roofed kombi	105 km/h	122 km/h
Pick-up, double cab pick-up with cover	105 km/h	120 km/h
Pick-up with large platform	105 km/h	120 km/h
Automatic gearbox:		
Bus, Kombi	–	122 km/h
Pick-up, double cab pick-up	–	120 km/h
High-roofed delivery van, high-roofed kombi	–	115 km/h
Pick-up with large platform	–	116 km/h
Pick-up, double cab pick-up with cover	–	116 km/h
Hill climbing ability with full load on good roads:		
Manual gearbox: 1st gear	26 %	29.3 %
Automatic gearbox: Forward range	–	27 %
Automatic gearbox: Reverse range	–	27 %

* HD oil. Further details are given in "Lubricants" section.

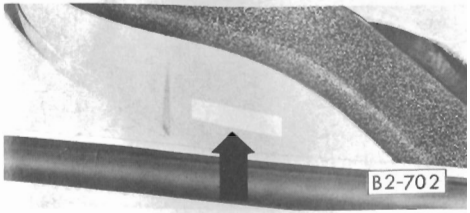


Identification Plate*

The Identification Plate is on the right-hand side of the cab rear panel.

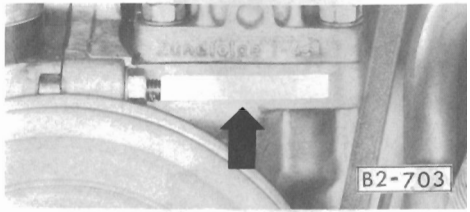
* Vehicles for export to certain countries have no identification plate.

On vehicles with no cab rear panel on the right-hand side, the identification plate is on the passenger or load compartment side at the bottom on the wheel housing reinforcement.



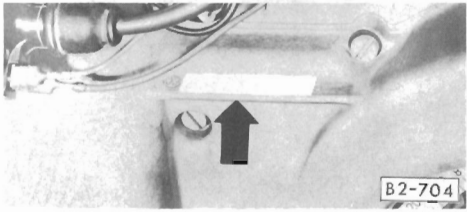
Chassis Number

The Chassis Number is stamped on the lefthand side of the engine cover plate.



Engine Number

The Engine number – 1.6 litre engine – is on the generator support flange.



On the **2.0 litre engine, the Engine Number** is on the housing of the cooling air duct near the coil.

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What sort of fuel does your vehicle require?	**Regular fuel** with a minimum rating of 91 octane. Further detail is given on page 25.
What sort of engine oil?	Reputable brands of HD engine oil marked "SE" according to the **API system.** SAE grade (viscosity) according to time of year. See also "Lubricants" section.
What is the difference in quantity between the minimum and maximum marks on the dipstick?	1.6 litre engine – 1.25 l 2.0 litre engine – 05 l
How often should the engine oil be changed?	Twice a year, or at least at the mileages specified in the Service Schedule. Amount required: 1.6 litre engine – 2.5 l. Amount required: 2.0 litre engine – 3.5 l when filter is changed: Amount required: 2.0 litre engine – 3.0 l without filter change Amount required: 2.0 litre engine – The filter element must be replaced Amount required: 2.0 litre engine – at the mileages specified in the Service Schedule. See also "Lubricants" section.
How often should the air cleaner element be cleaned or renewed?	Normally as stated in Service Schedule, or more often in very dusty conditions.
What sort of oil is used in manual gearbox and final drive?	Hypoid oil marked GL 4 according to the API system or oil to Mil-L-2105 specification SAE 80 or SAE 80 W-90 all the year.
What is used in the automatic gearbox?	a – Torque converter and planetary gearbox: **ATF,** Dexron all the year. b – Final drive: Hypoid oil marked GL 5 according to the API system or oil to Mil-L-2105 **B**, specification SAE 90.
How often should the front axle be greased?	At the mileages specified in the Service Schedule. If you do less than 30 000 km per year, grease once a year.

Vehicle data quiz

How much brake fluid should there be in the reservoir?	The fluid level should always be between the upper and lower edges of the window.
Do you need anti-freeze in the winter?	Yes, but only for the windscreen washer. The washer will work satisfactorily below freezing point if enough anti-freeze is added to the water. Container capacity approx. 1.5 l, or 8 l if headlight washer is fitted.
Which spark plugs should be used?	Details about spark plugs are given in section "Technical data", paragraph "Electrical system". Plugs should be changed at the mileages specified in the Service Schedule. Gap 0.6–0.7 mm.
What is the correct "V" belt tension?	1.6 litre engine only; It should deflect 11–14 mm when pressed firmly with the thumb in the centre between the pulleys. A newly fitted belt should only deflect 9–11 mm because it stretches slightly after running a while. The belt designation is 11.3 x 912 LA "XDA", Part No. 111 903 137 D
Are the wheels properly secured?	The nuts/bolts should be tightened to a torque of 130 Nm (94 lb ft).
What are the correct tyre pressures?	The correct tyre pressures are shown in "Technical data". For winter tyres, the normal tyre pressures must be increased by 0.2 bar (0.2 kg/cm²). These pressures are for **cold** tyres. The pressures must not be reduced if tyres are checked when hot and pressure is higher than specified.
Where are the fuses?	Under the plastic cover on the left below the instrument panel. Additional fuses for optional extras are in a fuse box in the engine compartment.

The factory is working continuously on the development of all models. We trust, therefore, that you will appreciate that we must reserve the right to alter, without notice, any part of the vehicle or equipment. No legal commitment is thus implied by the data, illustrations or descriptions in this manual.

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